The Effect of Hospital Commitment, Trust, and Communication on Supplier Satisfaction in Supply Chain Management

Ayu Laili Rahmiyati[1*], Susilo Wulan[2], Elsa Primasari[3]

[1]*Master of Public Health Study Program, Faculty of Health Sciences and Technology, Universitas Jenderal Achmad Yani; Cimahi, Indonesia*

[2]*Public Health Study Program, Sekolah Tinggi Ilmu Kesehatan Tri Mandiri Sakti Bengkulu; Bengkulu, Indonesia*

[3]*Health Administration Study Program, Sekolah Tinggi Ilmu Kesehatan Pasar Rebo; Jakarta, Indonesia*

*Corresponding Author E-Mail: ayunasihin2@gmail.com

Submitted: **November 25, 2025**

Revised: **December 17, 2025**

Accepted: **January 30, 2026**

Published Online: **January 31, 2026**

ABSTRACT

Hospital supply chains face increasing complexity, requiring strategic supplier relationships beyond transactional interactions. Despite their critical importance, supplier satisfaction remains underexplored in healthcare logistics literature. This study investigates how hospital commitment, trust, and communication influence supplier satisfaction in healthcare supply chain contexts, adopting a supplier-centric perspective. A quantitative cross-sectional survey was conducted at Hospital X Bandung, Indonesia, achieving complete census participation from 60 suppliers across six product categories. Path analysis examined relationships among commitment, trust, communication, and supplier satisfaction using validated 7-point Likert scales. The model explained 62% of supplier satisfaction variance (R^2=0.620, F=30.422, p<0.001). Commitment exerted the strongest total effect (24.4%), followed by trust (19.7%) and communication (17.9%). All path coefficients achieved statistical significance (p<0.05). Descriptively, trust performed best (M=5.30), while communication showed critical deficiencies (M=4.02), particularly in supplier site visits (M=1.85) and strategic information sharing. Relational factors significantly influence supplier satisfaction in hospital supply chains. Hospitals should operationalize commitment through consistent behaviors, build trust via transparency, and enhance strategic communication beyond transactional exchanges. These relationship investments may yield improved supply chain resilience and preferential resource allocation.

Keywords: *Commitment-Trust Theory, Communication, Hospital Supply Chain, Supplier Satisfaction.*

INTRODUCTION

Healthcare delivery systems worldwide face mounting pressures to optimize operational efficiency while maintaining high-quality patient care. Central to this challenge is the effective management of supply chains, particularly in hospital settings where the timely availability of medical supplies and equipment directly impacts patient outcomes and organizational performance (Schneller & Smeltzer, 2006; Volland et al., 2017; Basha et al., 2022). Within this complex ecosystem, the relationship between hospitals and their suppliers has evolved from purely transactional interactions to strategic partnerships that require careful cultivation and management. Despite the critical importance of these relationships, the supplier's perspective remains an underexplored dimension in healthcare supply chain management literature (Essig & Amann, 2009).

The contemporary healthcare environment demands that hospitals recognize their position within an open system, susceptible to external environmental forces and

JIMKES

Jurnal Ilmiah Manajemen Kesatuan
Vol. 14 No. 1, 2026
pp. 1353-1364
IBI Kesatuan
ISSN 2337 – 7860
E-ISSN 2721 – 169X
DOI: 10.37641/jimkes.v14i1.4798

stakeholder influences. As Pearce and Robinson (1997) and Dwyer et al. (2014) articulated, organizations cannot operate in isolation; they must continuously assess and respond to external stakeholders, including competitors, customers, suppliers, creditors, government entities, and labor markets. This reality has profound implications for hospital management, necessitating a shift from an exclusively internal operational focus to one that embraces external relationship management as a strategic imperative (Mbugua & Okech, 2023). In healthcare, supplier bargaining power often becomes a key factor because specialized medical supplies are frequently provided by a limited number of suppliers, creating dependencies and vulnerabilities (Davies & Ellis, 2000).

The hospital supply chain is particularly complex due to high product diversity, strict regulatory requirements, critical quality standards, and the life-or-death nature of supply availability (Rivard-Royer et al., 2002). Hospitals must deal with many suppliers across different categories, from basic items to highly specialized medical devices and reagents, while ensuring consistent reliability and quality (Kravtsova, 2020). This complexity is especially clear in ancillary services such as clinical laboratories, radiology, dental clinics, and Central Sterile Supply Departments (CSSD), which depend on materials often supplied by only a few companies (Jing et al., 2021). These conditions make positive and collaborative supplier relationships even more essential.

Recent studies in supply chain management have stressed the important role of relationship quality in achieving better performance (Benton & Maloni, 2005; Nyaga et al., 2010; Wieland & Wallenburg, 2013). Within this approach, commitment, trust, and communication stand out as key elements. Morgan and Hunt (1994) introduced the commitment-trust theory, which explains that successful long-term relationships depend on these factors to reduce uncertainty, encourage cooperation, and build stability. Later research has supported these ideas in different industries, showing that commitment and trust lead to stronger partnerships (Anderson & Weitz, 1992; Ganesan, 1994; Zhang & Liu, 2021).

However, most supply chain studies still focus on the buyer's side and customer satisfaction, while paying much less attention to supplier satisfaction (Rajala et al., 2025). This creates a clear gap, especially since successful supply chains need mutual benefits for all partners (Mohr & Spekman, 1994; Kim & Fortado, 2020). According to recent work in developing countries, supplier satisfaction in healthcare supply chains remains largely underexplored, particularly from the supplier viewpoint in hospital settings (Pratono & Maharani, 2024; Setiawati et al., 2024). For example, while some studies discuss challenges in pharmaceutical and medical device supply in Indonesia, such as import dependency and crisis disruptions, few have looked closely at how commitment, trust, and communication specifically affect supplier satisfaction in hospitals. Similar reviews in developing contexts highlight ongoing issues in supplier relationships due to limited collaboration and information sharing, but solid evidence connecting these factors to supplier satisfaction in hospital procurement is still scarce (Aigbavboa & Mbohwa, 2020; Olutuase et al., 2022). This gap is noticeable in Indonesia, where hospital supply chains face unique pressures from regulations and limited resources, yet supplier perspectives are rarely the main focus.

This study addresses this gap by examining how hospital commitment, trust, and communication influence supplier satisfaction in a hospital supply chain context. The main objective is to test the commitment-trust theory from a supplier-centric perspective in an Indonesian healthcare setting. By adopting this approach, the research aims to provide practical insights into building stronger hospital-supplier partnerships. The study was carried out at Hospital X Bandung, Indonesia, using a quantitative survey with a complete census of 60 suppliers.

LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT

The Effect of Commitment on Supplier Satisfaction

The concept of commitment refers to the desire to continue a relationship and make efforts to maintain it over time. In supply chain contexts, commitment involves behaviors

such as consistent ordering, timely payments, clear specifications, and concern for the partner's welfare. These actions signal long-term intentions and reduce the risk of opportunistic behavior from either side. Hospitals that show strong commitment through reliable practices help suppliers feel valued beyond short-term transactions (Oduro et al., 2020). This is especially important in healthcare, where supplies are critical, and relationships often last for years due to specialized products. Commitment plays a key role in building stable partnerships. When hospitals demonstrate commitment, suppliers are more likely to invest in the relationship, such as by prioritizing deliveries or offering better terms during shortages. Studies show that commitment leads to higher satisfaction because it creates a sense of security and mutual benefit (Ferro et al., 2025). For example, in buyer-supplier relationships, commitment encourages cooperation and reduces conflicts over time. In hospital settings, where supply failures can affect patient care, committed behaviors from the buyer strengthen the supplier's confidence in the partnership.

Recent research supports the link between commitment and positive outcomes. According to Nyaga et al. (2010) and Graham et al. (2020), commitment from buyers leads to greater satisfaction for suppliers by fostering reciprocity and shared goals. Similarly, in relational exchange contexts, commitment acts as a foundation for long-term success (Morgan & Hunt, 1994). In healthcare supply chains, where dependencies are high due to limited suppliers, commitment becomes even more critical for maintaining reliability. According to Essig and Amann (2009) and Fu et al. (2022), supplier satisfaction improves when buyers show consistent commitment through actions rather than just words. This view aligns with findings in developing countries, where relational investments help overcome challenges like payment delays or order changes (Pratono & Maharani, 2024; Onukwulu et al., 2024). In hospital procurement, commitment reduces uncertainty and encourages suppliers to maintain high service levels. The literature suggests a positive relationship between hospital commitment and supplier satisfaction. Therefore, the following hypothesis is proposed:

H1: Commitment has a significant effect on supplier satisfaction.

The Effect of Trust and Supplier Satisfaction

Trust is defined as the belief that a partner will act in a reliable, honest, and benevolent way. In supply chain relationships, trust includes dimensions such as integrity, credibility, and goodwill toward the other party. Suppliers trust hospitals when they perceive consistent honesty in transactions, fair dealings, and concern for mutual interests (Suhara et al., 2025). This trust reduces fears of exploitation and encourages open sharing of information. In healthcare, trust is vital because of the high stakes involved. Suppliers of medical reagents or devices need to believe that hospitals will handle products correctly, pay on time, and communicate accurately about needs. When trust exists, suppliers are more willing to go beyond basic obligations, such as expediting urgent orders or providing technical support. Lack of trust can lead to guarded behavior, higher costs, or preference for other customers.

Empirical studies confirm that trust positively influences satisfaction. Trust lowers perceived risks and promotes cooperative actions that benefit both sides. In B2B settings, trust has been shown to enhance relationship quality and lead to better performance outcomes. For hospitals, building trust through transparent practices can improve supplier reliability during crises. According to Mayer et al. (1995) and Corsten et al. (2005), trust develops from perceived ability, benevolence, and integrity, which directly affect partner satisfaction. In supply chain literature, trust is a key driver of supplier contentment, as it fosters long-term orientation (Doney & Cannon, 1997; Kenney et al., 2022). Recent work in healthcare contexts highlights that trust helps suppliers feel secure in investing resources (Laeequddin et al., 2012). In developing markets like Indonesia, trust mitigates issues from regulatory changes or payment inconsistencies (Setiawati et al., 2024). The evidence points to a strong positive link between trust and supplier satisfaction.

H2: Trust has a significant effect on supplier satisfaction.

The Effect of Communication and Supplier Satisfaction

Communication involves the exchange of information between partners, including feedback, sharing of plans, and collaborative problem-solving. In supply chains, effective communication covers transactional details like orders and deliveries, as well as strategic aspects such as market trends or future needs. Good communication reduces misunderstandings and builds stronger ties (Cortina,1993; Garg et al., 2020). In hospital settings, communication is essential for coordinating complex supplies. Hospitals must clearly convey specifications, timelines, and changes to avoid errors that could impact patient care. Suppliers value timely feedback, site visits, and involvement in planning, as these show respect for their expertise. Poor communication, such as infrequent updates or a lack of strategic sharing, can lead to frustration and lower satisfaction (Marcinkowski, 2021; Suprayitno, 2025).

Research shows that open and frequent communication enhances relationship quality. It facilitates joint efforts, quick issue resolution, and better alignment of goals. In relational paradigms, communication acts as a bridge that supports trust and commitment. For specialized healthcare supplies, strategic communication helps suppliers anticipate demands and improve service. According to Mohr and Spekman (1994), communication behaviors like information sharing and participation are critical for partnership success and satisfaction. Anderson and Narus (1990) and Wibisono (2012) found that effective communication leads to stronger working partnerships. In healthcare supply chains, communication deficiencies often reduce supplier engagement, while improvements boost performance (Wieland & Wallenburg, 2013). Recent studies in developing contexts emphasize that better information flow addresses collaboration gaps (Olutuase et al., 2022). The literature indicates that communication positively affects supplier satisfaction.

H3: Communication has a significant effect on supplier satisfaction.

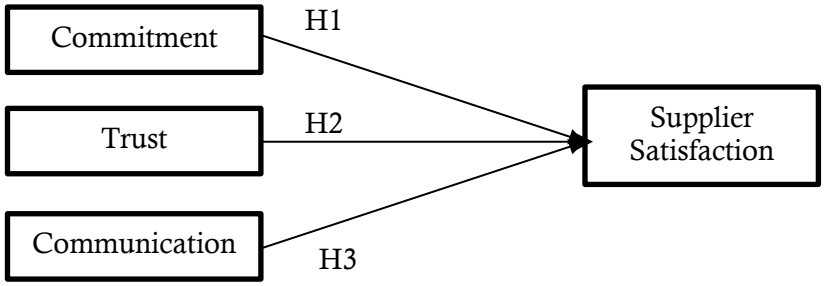

Figure 1. Hypothesized Path Model

The hypothesized path model testing the relationships between commitment, trust, communication, and supplier satisfaction is schematically depicted in Figure 1. This model formed the basis for further statistical analysis to test the direct effects of each independent variable.

RESEARCH METHODS

This study employed a quantitative research design using a cross-sectional survey to examine the relationships among commitment, trust, communication, and supplier satisfaction within the hospital supply chain context. A positive epistemological approach was adopted, with Structural Equation Modeling (SEM) and path analysis applied to test hypothesized relationships among constructs (Hair et al., 2014; Kline, 2016). This approach allows for the simultaneous analysis of direct and indirect effects among variables, providing a comprehensive understanding of the complex dynamics influencing supplier satisfaction in healthcare logistics (Byrne, 2016). The research was conducted at

Hospital X Bandung, a comprehensive healthcare facility with an extensive supplier network, including the Central Sterile Supply Department (CSSD), radiology, clinical laboratories, and dental services. The need for specialized supplies through limited networks created moderate to high supplier bargaining power (Davies & Ellis, 2000).

The target population comprised all active suppliers providing raw materials and semi-finished goods for Hospital X's ancillary medical services, including companies supplying specialized medical equipment not readily available in general markets, such as laboratory reagents, radiology films, and contrast media, dental materials, and sterilization supplies. The total population consisted of 60 supplier companies across six product categories: laboratory reagents (the largest group), dental materials, diagnostic supplies, general ancillary materials, CSSD materials, and radiology supplies. Given the finite and accessible population, a census approach was employed, inviting all suppliers to participate to ensure comprehensive insights and enhance internal validity and generalizability (Lavrakas, 2008).

Adapted from prior relationship marketing and supply chain studies, the structured questionnaire comprised 30 items measuring commitment (9 items), trust (4 items), communication (11 items), and supplier satisfaction (6 items), rated on a 7-point Likert scale to ensure sufficient variance for parametric analysis (Finstad, 2010).Commitment was measured using nine indicators of relationship strength, openness, specification clarity, ordering consistency, and payment accuracy and timeliness, based on Morgan and Hunt (1994). Trust comprised four items reflecting integrity, reputation, honesty, and transactional reliability, consistent with Mayer et al. (1995) and Doney and Cannon (1997). Communication was assessed through eleven items capturing feedback, information sharing, informal interaction, discussion frequency, visits, and collaborative problem-solving, drawing on Anderson and Narus (1990).

The path analysis model was specified as $Y = \rho_1 X_1 + \rho_2 X_2 + \rho_3 X_3 + \varepsilon$. Where Y represents supplier satisfaction, X_1 represents commitment, X_2 represents trust, X_3 represents communication, ρ denotes standardized path coefficients, and ε captures unexplained variance. Model fit was assessed using multiple criteria: the coefficient of determination (R^2), F-statistic for overall model significance, and t-statistics for individual path coefficients. Significance testing employed a two-tailed $\alpha = 0.05$. The research protocol was approved by the hospital's research ethics committee, with all participants providing informed consent. Data were securely stored, with identifying information removed to ensure confidentiality. Participation was voluntary, with no penalties for non-participation or withdrawal.

RESULTS

This section presents the empirical findings from the cross-sectional survey of 60 suppliers to Hospital X Bandung. The analysis begins with respondent demographics, followed by descriptive statistics of the main constructs, assessment of measurement model reliability and validity, structural model fit, hypothesis testing through path coefficients, and decomposition of direct, indirect, and total effects on supplier satisfaction. All statistical analyses were performed using structural equation modeling via path analysis, with results interpreted at a significance level of $p < 0.05$. The findings provide evidence on the strength and direction of relationships among hospital commitment, trust, communication, and supplier satisfaction.

The demographic characteristics of the supplier representatives who participated in the study are detailed in Table 1. The demographic characteristics of supplier representatives revealed important insights into the nature of hospital-supplier relationships. Gender distribution was markedly skewed, with male representatives comprising 90% (n=54) of respondents compared to 10% (n=6) females, reflecting broader patterns in pharmaceutical and medical supply sales sectors in Indonesia. Educational attainment was notably high, with 67% (n=40) holding bachelor's degrees or professional qualifications, 22% (n=13) possessing diploma-level credentials, and 12% (n=7) having completed secondary education. No respondents reported postgraduate qualifications.

This educational profile suggests a professionally trained supplier workforce capable of technical communication and relationship management.

Table 1. Demographic Characteristics of Supplier Representatives (N=60)

Characteristic	Category	Frequency	Percentage
Gender	Male	54	90.0%
	Female	6	10.0%
Education Level	Bachelor's/Professional	40	66.7%
	Diploma (D1/D3)	13	21.7%
	Secondary School	7	11.7%
	Postgraduate	0	0.0%
Company Type	Limited Corporation (PT)	35	58.3%
	Limited Partnership (CV)	16	26.7%
	Home Industry	8	13.3%
	Other	1	1.7%
Years in Business	>20 years	17	28.3%
	5-9 years	14	23.3%
	10-14 years	12	20.0%
	15-20 years	12	20.0%
	6 months-4 years	5	8.3%
Relationship Duration	5-9 years	20	33.3%
	6 months-4 years	13	21.7%
	15-20 years	13	21.7%
	10-14 years	8	13.3%
	>20 years	6	10.0%

Company characteristics demonstrated substantial business maturity. The majority of suppliers operated as limited liability corporations (PT: 58%, n=35), followed by limited partnerships (CV: 27%, n=16), home industries (13%, n=8), and other legal forms (2%, n=1). Business longevity further confirmed supplier stability, with 28% (n=17) having operated for more than 20 years, 23% (n=14) for 5-9 years, and 20% each (n=12) for 10-14 years and 15-20 years. Only 8% (n=5) represented relatively new enterprises (6 months to 4 years). Relationship duration with Hospital X varied considerably: 33% (n=20) had maintained relationships for 5-9 years, 22% each (n=13) for 6 months to 4 years and 15-20 years, 13% (n=8) for 10-14 years, and 10% (n=6) for over 20 years. This distribution indicates both established long-term partnerships and recent relationship development, providing variance useful for understanding satisfaction dynamics across relationship lifecycles.

Table 2. Descriptive Statistics of Research Constructs

Construct	Number of Items	Mean	SD	Min	Max
Commitment	9	5.00	0.85	3.2	6.8
Trust	4	5.30	0.78	3.5	6.9
Communication	11	4.02	1.10	1.8	6.4
Supplier Satisfaction	6	5.12	0.92	3.0	6.7

The descriptive statistics for the four main constructs are summarized in Table 2. Trust recorded the highest overall mean (M = 5.30, SD = 0.78), indicating generally positive evaluations of the relationship with Hospital X. Supplier satisfaction followed closely (M = 5.12, SD = 0.92), reflecting strong perceptions of hospital credibility and benevolence. Commitment showed a moderate mean (M = 5.00, SD = 0.85), with some variability due to weaker items such as order cancellation consistency. Communication had the lowest mean (M = 4.02, SD = 1.10), highlighting notable deficiencies, particularly in strategic and relational aspects. These descriptive patterns suggest that while transactional elements function adequately, deeper relational engagement remains limited.

As illustrated in Table 3, all measurement constructs demonstrated strong internal consistency, as reflected in Cronbach's alpha coefficients well above the commonly accepted threshold of 0.70. Commitment exhibited the highest reliability ($\alpha = 0.94$), indicating an excellent level of consistency among the nine items measuring hospital

commitment toward suppliers. This suggests that respondents interpreted the commitment indicators in a highly consistent manner, reinforcing the robustness of the construct and minimizing measurement error.

Table 3. Reliability Test

Construct	Cronbach's Alpha
Commitment	0.94
Trust	0.85
Communication	0.89
Supplier Satisfaction	0.85

Trust and supplier satisfaction both recorded Cronbach's alpha values of 0.85, indicating high reliability and stable measurement properties. These values suggest that the items used to capture perceptions of trust and satisfaction were well-aligned and effectively represented their respective conceptual domains. Similarly, communication achieved a Cronbach's alpha of 0.89, confirming that the eleven communication-related indicators reliably captured the intended dimensions of information sharing, interaction frequency, and relationship engagement between Hospital X and its suppliers.

The consistently high reliability scores across all constructs confirm that the research instrument possesses strong psychometric quality, ensuring that observed relationships among variables are unlikely to be artifacts of measurement inconsistency. This strengthens the credibility of subsequent correlation and path analysis results, as variations in supplier satisfaction can be attributed to substantive relational factors rather than statistical noise. The reliability outcomes validate the survey instrument as a stable and dependable tool for examining relational dynamics in hospital supply chain management.

Table 4. Correlation Matrix of Study Variables

Variable	1	2	3	4
1. Commitment	1.000			
2. Trust	0.581**	1.000		
3. Communication	0.611**	0.533**	1.000	
4. Supplier Satisfaction	0.649**	0.574**	0.542**	1.000

*Note: **p < 0.01 (two-tailed)*

Bivariate correlation analysis using Pearson's product-moment correlation coefficient revealed significant positive relationships among all study variables. The correlation matrix between all study variables is presented in Table 4. Commitment demonstrated strong positive correlations with trust ($r=0.581$, $p<0.01$) and communication ($r=0.611$, $p<0.01$), while trust and communication also exhibited moderate positive correlation ($r=0.533$, $p<0.01$). All three independent variables correlated significantly with supplier satisfaction: commitment ($r=0.649$, $p<0.01$), trust ($r=0.574$, $p<0.01$), and communication ($r=0.542$, $p<0.01$). These correlation magnitudes supported the hypothesized relationships while demonstrating sufficient discriminant validity to warrant separate variable treatment in subsequent path analysis.

Table 5. Hypothesis Testing – Standardized Path Coefficients

Path	β	SE	t-value	p-value
Commitment → Supplier Satisfaction	0.351	0.113	3.114	0.001
Trust → Supplier Satisfaction	0.301	0.105	2.861	0.004
Communication → Supplier Satisfaction	0.276	0.108	2.549	0.011

Path analysis yielded the following structural equation: $Y = 0.351X_1 + 0.301X_2 + 0.276X_3 + \varepsilon$. Where standard errors were 0.080, 0.145, and 0.053, respectively, and t-values were 3.114, 2.861, and 2.549, respectively. The model explained 62.0% of the variance in supplier satisfaction ($R^2=0.620$), indicating strong explanatory power. The F-

statistic of 30.422 ($p<0.001$) confirmed overall model significance, rejecting the null hypothesis of no relationship between predictor variables and supplier satisfaction.

Table 5 presents the standardized path coefficients and hypothesis testing results. Commitment had a significant positive direct effect on supplier satisfaction ($\beta = 0.351$, $p = 0.001$), supporting H1. Trust also showed a significant direct effect ($\beta = 0.301$, $p = 0.004$), confirming H2. Commitment exerted the strongest direct effect among the three ($\beta = 0.276$, $p = 0.011$), providing support for H3. All hypothesized direct paths were statistically significant at $p < 0.05$, with communication emerging as the most influential direct predictor in this context.

Table 6. Direct, Indirect, and Total Effects on Supplier Satisfaction

Predictor	Direct Effect	Indirect Effect	Total Effect	Rank
Commitment	12.3%	12.1%	24.4%	1
Trust	9.1%	10.6%	19.7%	2
Communication	7.6%	10.3%	17.9%	3

Effect decomposition revealed both direct and indirect pathways through which independent variables influenced supplier satisfaction. Table 6 decomposes the direct, indirect, and total effects on supplier satisfaction. Commitment's total effect (24.4%) comprised direct effect (12.3%) and indirect effects through trust and communication (12.1%). Trust's total effect (19.7%) consisted of direct effect (9.1%) and indirect effects through commitment and communication (10.6%). Communication's total effect (17.9%) included direct effect (7.6%) and indirect effects through commitment and trust (10.3%). The residual variance ($\varepsilon=0.380$) indicated that 38.0% of supplier satisfaction variance derived from factors outside the model, suggesting additional unmeasured constructs such as supplier dependency, competitive intensity, or relationship history may influence satisfaction outcomes. These decompositions highlight the systemic nature of the relational factors, where indirect pathways contribute meaningfully to overall satisfaction, particularly for commitment and trust.

The results indicate that all three relational constructs, commitment, trust, and communication, play significant roles in driving supplier satisfaction in this hospital supply chain context. Commitment and trust appear to operate through both direct and indirect mechanisms, reinforcing each other and communication in a complementary manner. Communication, despite its lower descriptive mean, demonstrated the strongest direct influence, underscoring its critical importance when operationalized effectively. These findings provide empirical support for the proposed model and offer insights into the relative contributions of each factor from the suppliers' perspective.

DISCUSSION

The findings from this study provide strong empirical support for the influence of relational factors on supplier satisfaction in hospital supply chains. The path analysis results confirm that commitment, trust, and communication each exert significant direct effects on supplier satisfaction, with the overall model explaining 62% of the variance. This high explanatory power aligns with commitment-trust theory, which posits that these elements serve as foundational mediators in successful relational exchanges (Morgan & Hunt, 1994). Commitment emerged as the strongest total influencer (total effect = 0.244), reflecting its critical role in specialized healthcare contexts where supply continuity outweighs short-term price considerations. The balanced contribution of direct (0.123) and indirect (0.121) effects suggests that commitment not only directly enhances satisfaction but also reinforces trust and communication pathways, consistent with the idea of pledges signaling long-term value in channel relationships (Anderson & Weitz, 1992).

Trust demonstrated a substantial total effect (0.197), with indirect pathways slightly exceeding direct ones (0.106 vs. 0.091). This pattern underscores trust's foundational nature in high-stakes environments, where suppliers rely on hospital integrity,

benevolence, and credibility to mitigate risks associated with life-critical supplies (Mayer et al., 1995). The descriptive strength of trust (M = 5.30) indicates that Hospital X has built credible perceptions through consistent transaction honesty and reputation, supporting longitudinal trust development via repeated exchanges (Gulati, 1995). However, the relatively lower integrity dimension highlights potential inconsistencies between stated principles and actual behavior, which may limit full trust realization in regulatory-heavy healthcare settings.

Communication, despite its lowest descriptive mean (M = 4.02), showed a direct effect (β = 0.276). This contrast suggests that while routine transactional exchanges function adequately, deficiencies in strategic elements, particularly site visits (M = 1.85) and market/regulatory information sharing, create significant relational gaps. According to Mohr and Spekman (1994), effective communication behaviors, including bidirectional information flow and collaborative problem-solving, are essential for partnership success. The limited strategic engagement observed here reflects a persistent transactional orientation in hospital procurement, which restricts the hospital's ability to leverage supplier expertise for innovation, cost reduction, and supply security (Wieland & Wallenburg, 2013). In developing-country contexts such as Indonesia, where resource constraints and regulatory changes amplify supply chain vulnerabilities, improving communication could address collaboration deficiencies noted in recent studies (Olutuase et al., 2022; Pratono & Maharani, 2024).

The decomposition of effects reveals complex interdependencies among the constructs, where indirect pathways often rival or exceed direct ones. This systemic functioning supports the relational view that investments in one dimension produce cascading benefits across others (Dyer & Singh, 1998). The results extend commitment-trust theory to healthcare supply chains by demonstrating its applicability from a supplier-centric perspective, addressing the buyer bias prevalent in prior literature (Rajala et al., 2025). They also highlight context-specific nuances: in hospital settings with oligopolistic suppliers and life-or-death implications, relational quality becomes a strategic imperative rather than an operational option.

These findings carry important implications for hospital administrators and supply chain managers. First, commitment should be operationalized through consistent behaviors such as reliable payments, stable ordering, and genuine concern for supplier welfare, rather than remaining at the contractual level. Second, trust-building requires sustained transparency and ethical conduct to strengthen benevolence and integrity perceptions. Third, communication must evolve beyond transactional exchanges to include regular site visits, strategic information sharing, and supplier involvement in planning practices that have proven effective in other industries and could enhance resilience in healthcare (Liker & Choi, 2004). By investing in these relational elements, hospitals can foster higher supplier satisfaction, leading to preferential resource allocation during disruptions, proactive problem-solving, and improved supply chain performance. Ultimately, such efforts support the core mission of healthcare delivery by ensuring reliable access to high-quality supplies and better patient outcomes.

CONCLUSION

This research provides compelling empirical evidence that relational factors, commitment, trust, and communication, significantly influence supplier satisfaction within hospital supply chain contexts. The study successfully extends commitment-trust theory beyond traditional customer-focused applications to the supplier perspective, addressing a critical gap in healthcare supply chain management literature. With a robust explanatory power of 62%, the model demonstrates that these three relational constructs account for a substantial portion of supplier satisfaction variance, validating relationship marketing theory's applicability to healthcare logistics settings. The findings reveal that commitment exerts the strongest total influence on supplier satisfaction, reflecting the specialized nature of hospital supplies, where relationship continuity and mutual investment supersede price-driven negotiations. Trust emerges as the second most

influential factor, with particularly strong performance indicating successful establishment of credibility and benevolence in the relationship. Communication, despite its statistical significance, reveals the most critical vulnerability, as severe deficiencies in strategic engagement, such as site visits and information sharing, indicate a predominantly transactional rather than relational orientation.

These results carry important implications for hospital administrators seeking to strengthen supplier partnerships and enhance supply chain resilience. By operationalizing commitment through consistent behaviors, building trust via sustained transparency, and improving communication beyond routine exchanges, hospitals can achieve higher supplier satisfaction, which in turn supports preferential resource allocation, proactive problem-solving, and reliable access to critical supplies. However, the study has limitations, including its single-site, cross-sectional design, which restricts generalizability and prevents strong causal inferences over time. The unexplained variance of 38% also suggests that additional factors such as dependency levels, conflict resolution, or external disruptions may play a role. Future research should adopt longitudinal designs to track relationship evolution and link relational quality to objective performance outcomes like supply fill rates or stockout frequency. Expanding the scope to multiple hospitals across different regions or countries would further enable cross-cultural comparisons and provide broader insights into relational dynamics in global healthcare supply chains.

FUNDING STATEMENT: This research did not receive any specific grant from funding agencies in the public, commercial, or not - for - profit sectors.

CONFLICTS OF INTEREST: The author declares no conflict of interest.

DECLARATION OF GENERATIVE AI STATEMENT: During the preparation of this work, the author used Turnitin, Grammarly, and ChatGPT to improve sentence structure and overall clarity. All content was then reviewed, edited, and refined by the author, who takes full responsibility for the accuracy, integrity, and originality of the final publication.

REFERENCES

[1] Aigbavboa, S., & Mbohwa, C. (2020). The headache of medicines' supply in Nigeria: an exploratory study on the most critical challenges of pharmaceutical outbound value chains. *Procedia Manufacturing*, *43*(5), 336-343.

[2] Anderson, E., & Weitz, B. (1992). The use of pledges to build and sustain commitment in distribution channels. *Journal of Marketing Research*, *29*(1), 18–34.

[3] Anderson, J. C., & Narus, J. A. (1990). A model of distributor firm and manufacturer firm working partnerships. *Journal of Marketing*, *54*(1), 42–58.

[4] Basha, S. A. K., Sridhar, G., Basha, P. R., & Khatua, S. (2022). The effect of process integration on organizational culture for strategic collaboration in automobile industry. *Management Insight*, *18*(2), 67-79.

[5] Benton, W. C., & Maloni, M. (2005). The influence of power driven buyer/seller relationships on supply chain satisfaction. *Journal of Operations Management*, *23*(1), 1–22.

[6] Byrne, B. M. (2016). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (3rd ed.). New York: Routledge.

[7] Corsten, D., Kumar, N., Edel, K., Geyskens, I., Hardie, B., Hofstetter, J., Steenkamp, J.-B., & Scheer, L. (2005). Do suppliers benefit from collaborative relationships with large retailers? An empirical investigation of efficient consumer response adoption. *Journal of Marketing*, *69*(4), 80–94.

[8] Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, *78*(1), 98–104.

[9] Davies, H., & Ellis, P. (2000). Porter's competitive advantage of nations: Time for the final judgement? *Journal of Management Studies*, *37*(8), 1189–1214.

[10] Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing*, *61*(2), 35–51.

[11] Dwyer, C. P., Hogan, M. J., & Stewart, I. (2014). An integrated critical thinking framework for the 21st century. *Thinking Skills and Creativity*, *12*(1), 43–52.

[12] Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, *23*(4), 660–679.
[13] Essig, M., & Amann, M. (2009). Supplier satisfaction: Conceptual basics and explorative findings. *Journal of Purchasing and Supply Management*, *15*(2), 103–113.
[14] Ferro-Soto, C., Padin, C., Lubbe, I., Svensson, G., & Høgevold, N. (2025). Determinants and outcomes of satisfaction in B2B sales relationships. *Journal of Business & Industrial Marketing*, *40*(13), 61-76.
[15] Finstad, K. (2010). The usability metric for user experience. *Interacting with Computers*, *22*(5), 323–327.
[16] Fu, X., Tan, H., Tsenina, E., Liu, S., & Han, G. (2022). Information sharing based on two-way perceptions of trust and supply chain decisions: A simulation based approach. *Chaos, Solitons & Fractals*, *157*(1), 38-48.
[17] Ganesan, S. (1994). Determinants of long-term orientation in buyer-seller relationships. *Journal of Marketing*, *58*(2), 1–19.
[18] Garg, S., Kumar, P., Mishra, V., Guijt, R., Singh, P., Dumée, L. F., & Sharma, R. S. (2020). A review on the sources, occurrence and health risks of per-/poly-fluoroalkyl substances (PFAS) arising from the manufacture and disposal of electric and electronic products. *Journal of Water Process Engineering*, *38*(1), 83-93.
[19] Graham, G., Handfield, R., & Burns, L. (2020). Coronavirus, tariffs, trade wars and supply chain evolutionary design. *International Journal of Operations and Production Management*, *40*(1), 1-16,
[20] Gulati, R. (1995). Social structure and alliance formation patterns: A longitudinal analysis. *Administrative Science Quarterly*, *40*(4), 619–652.
[21] Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis* (7th ed.). London: Pearson.
[22] Jing, W., Mu, Y., & Cai, Y. (2021). Central sterile supply department (CSSD) management quality sensitive index constructed by management mode under the guidance of key point control theory and its effect on CSSD management quality: A retrospective study. *Annals of Palliative Medicine*, *11*(6), 2050–2060.
[23] Kenney, R. R., Haverhals, L., Stryczek, K. C., Fehling, K., & Ball, S. L. (2022). Site visit standards revisited: A framework for implementation. *American Journal of Evaluation*, *44*(2), 253–269.
[24] Kim, D.-Y., & Fortado, B. (2020). Outcomes of supply chain dependence asymmetry: A systematic review of the statistical evidence. *International Journal of Production Research*, *59*(19), 5844–5866.
[25] Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). New York: The Guilford Press.
[26] Kravtsova, M. (2020). Public procurement of the healthcare: The supplier's role in the hospital work. *Scientific Journal, 1*(1)*,* 109–131.
[27] Laeequddin, M., Sahay, B., Sahay, V., & Waheed, K. (2012). Trust building in supply chain partners relationship: An integrated conceptual model. *Journal of Management Development*, *31*(5), 550–564.
[28] Lavrakas, P. (2008). *Encyclopedia of survey research methods*. Thousand Oaks: Sage Publications.
[29] Liker, J., & Choi, T. (2004). Building deep supplier relationships. *Harvard Business Review*, *82*(12), 104–113.
[30] Marcinkowski, B. (2021). Functions and roles in operations management. In *Production–Operation Management. The Chosen Aspects* (pp. 45–67). Poznań: Wydawnictwo Uniwersytetu Ekonomicznego w Poznaniu.
[31] Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, *20*(3), 709–734.
[32] Mbugua, A., & Okech, T. (2023). Internal integration and operational performance of kenya's public hospitals. *Kabarak Journal of Research & Innovation*, *13*(3), 74-87.
[33] Mohr, J., & Spekman, R. (1994). Characteristics of partnership success: Partnership attributes, communication behavior, and conflict resolution techniques. *Strategic Management Journal*, *15*(2), 135–152.
[34] Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, *58*(3), 20–38.
[35] Nyaga, G. N., Whipple, J. M., & Lynch, D. F. (2010). Examining supply chain relationships: Do buyer and supplier perspectives on collaborative relationships differ? *Journal of Operations Management*, *28*(2), 101–114.
[36] Oduro, S., Nyarku, K. M., & Gbadeyan, R. A. (2020). Supplier relationship management and organizational performance of hospitals in an emerging economy context: A comparative study. *Journal of Modelling in Management*, *15*(4), 1451-1478.
[37] Olutuase, V. O., Iwu-Jaja, C. J., Akuoko, C. P., Adewuyi, E. O., & Khanal, V. (2022). Medicines and vaccines supply chains challenges in Nigeria: a scoping review. *BMC Public Health*, *22*(1), 11-19.
[38] Onukwulu, E. C., Agho, M. O., Eyo-Udo, N. L., Sule, A. K., & Azubuike, C. (2024). Advances in blockchain integration for transparent renewable energy supply chains. *International Journal of Research and Innovation in Applied Science*, *9*(12), 688-714.
[39] Pearce, J. A., & Robinson, R. B. (1997). *Strategic management: Formulation, implementation, and control* (6th ed.). Illinois: Irwin.

[40] Podsakoff, P., MacKenzie, S., Lee, J.-Y., & Podsakoff, N. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879–903.

[41] Pratono, A. H., & Maharani, A. (2024). Enhancing global supply chain resilience in the Indonesian medical device industry: a dynamic capability perspective. *Journal of Asia Business Studies*, *18*(5), 1156-1174.

[42] Rajala, A., Hautala-Kankaanpää, T., & Joensuu-Salo, S. (2025). Supplier experience as antecedent to supplier satisfaction—An explorative study of SMEs. *Industrial Marketing Management, 2*(1),12-24,

[43] Rivard-Royer, H., Landry, S., & Beaulieu, M. (2002). Hybrid stockless: A case study. Lessons for health-care supply chain integration. *International Journal of Operations & Production Management*, *22*(4), 412–424.

[44] Schneller, E. S., & Smeltzer, L. R. (2006). *Strategic management of the health care supply chain* (1st ed.). San Francisco: Jossey-Bass.

[45] Setiawati, M., Simatupang, T. M., & Okdinawati, L. (2024). People, process, technology, and partner in hospital supply chain management: a systematic literature review. *International Journal of Applied Business Research, 6*(2), 136-151.

[46] Suhara, A., Suprayitno, & Jayanto, I. (2025). The role of stakeholder collaboration in improving supply chain system performance and sustainability. *Jurnal Ilmiah Manajemen Kesatuan*, *13*(6), 4551–4562.

[47] Suprayitno, D. (2025). Enhancing supply chain agility through digital tools: A quantitative study in pharmaceutical distribution. *Jurnal Ilmiah Manajemen Kesatuan*, *13*(5), 3765–3776.

[48] Volland, J., Fügener, A., Schoenfelder, J., & Brunner, J. O. (2017). Material logistics in hospitals: A literature review. *Omega*, *69*(1), 82–101.

[49] Wibisono, D. (2012). A framework of performance measurement system for manufacturing company. *The South East Asian Journal of Management*, *5*(2), 1–15.

[50] Wieland, A., & Wallenburg, C. M. (2013). The influence of relational competencies on supply chain resilience: A relational view. *International Journal of Physical Distribution & Logistics Management*, *43*(4), 300–320.

[51] Wong, C., Wong, C. W. Y., & Boon-itt, S. (2020). Effects of green supply chain integration and green innovation on environmental and cost performance. *International Journal of Production Research*, *58*(15), 4589–4609.

[52] Zhang, X., & Liu, S. (2021). Understanding relationship commitment and continuous knowledge sharing in online health communities: A social exchange perspective. *Journal of Knowledge Management*, *26*(3), 592–614.