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Intimacy, Passion, and Commitment in Supply Chain Relationships: Examining the Triangular Theory of Love

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Abstract

Purpose – This study empirically analyzes the impact of intimacy, passion, and commitment on information sharing and logistics performance within inter-company relationships in the supply chain.
Design/Methodology/Approach – We adopted the triangular theory of love and established a research model on the assumption that these elements of human relationships—intimacy, passion, and commitment—lead to information sharing and improved logistics performance. To examine their correlations, a survey was administered among professionals in supply chain-related departments in South Korea. Subsequently, we tested hypotheses through structural equation modeling using SPSS 18.0 and AMOS 18.0.
Findings – We found that all the components of the triangular theory of love—intimacy, passion, and commitment—significantly positively impacted information sharing. Moreover, we confirmed that information sharing significantly positively impacts logistics performance, which can represent supply chain performance.
Research Implications – Based on these results, the following conclusions can be drawn: To form new business relationships and measure performance, fundamental human relationships between supply chain participants are crucial, as is the development of tools to quantitatively measure these relationships. For quantitative performance, information sharing based on human relationships is necessary. Therefore, as qualitative relationships and quantitative performance are increasing proportionally, supply chain participants must recognize their importance.

Keywords: Human Relationships, Information Sharing, Inter-Company Relationships, Logistics Performance, Supply Chain, Triangular Theory Of Love
JEL Classifications: D20, F20, L20

I. Introduction

As supply chains become more diversified and investment increases, competition to streamline inter-company supply chains is intensifying. Although several factors exist in competition,

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selecting the right logistics partner and forming relationships is the first step to achieving optimal logistics performance. Modern logistics relates not only to the movement of goods or products but to overall supply chain performance. Considering this context, competition within the logistics ecosystem is based on various corporate alliances, making optimization essential.

Alliances and contracts are not only relationships between companies but can also be considered relationships between involved members. Relationships with contractors can be formed horizontally, vertically, or even adversarially (Jambulingam et al., 2011; Poppo and Zhou, 2013). While alliances and contracts have traditionally meant vertical relationships, as the international environment has changed and businesses have been tied into a single supply chain, long-term amicable relations have become challenging to maintain without horizontal relationships. Thus, the ideal relationship can be seen as two or more parties sharing strategic directions in supply chain management and conducting long-term transactions through horizontal and collaborative relationships (Lumineau and Henderson, 2012; Park and Hartley, 2002).

Conversely, as long-term transactions continue, implicit emotions develop between the buyer and supplier, and these emotions tend to foster a desire to engage in long-term business relationships. These emotions, although complex, can be differentiated into trust, commitment, cooperation, and some others. (Myhr, 2001). As these emotions are the starting point for long-term transactions, studying logistics and supply chain performance from this starting point is necessary. Therefore, this study adopts the "triangular theory of love," which theoretically elucidates these emotional factors to find links in the relationship between supply chain contractors and their performance.

The psychologist Robert Sternberg introduced the triangular theory of love in 1986. The core of the triangular theory of love is that male–female relationships comprise intimacy, passion, and commitment and that the more balanced and established these elements are, the more sustainable a relationship can become. Evidently, this theory has predominantly been addressed in psychology and behavioral science research. However, this study applies this theory to relationships between partners within a supply chain, acknowledging that such relationships are important for firms and are related to behavioral science.

Specifically, this study was conducted based on the assumption that the basic elements of the triangular theory of love—intimacy, passion, and commitment—influence the formation of trusting relationships within the supply chain and enable information sharing, among the most critical elements in supply chain management. Information sharing eliminates waste in supply chain operations and maximizes efficiency, thus creating positive tangible and intangible results. Therefore, this study's research model was designed under the assumption that intimacy, passion, and commitment influence information sharing and that information sharing affects logistics performance, which can be considered a representative outcome of supply chain performance.

This study clarifies the impact of qualitative factors on quantitative performance in supply chains and provides several insights for subsequent research and companies contemplating selecting new partners and enhancing their performance during a period when supply chains are simultaneously disintegrating and integrating.

II. Theoretical Background

1. Intimacy

Intimacy is the psychological distance between people, referring to their frequency of contact

and the degree to which they can easily contact each other. Intimacy can be considered the starting point of a relationship and the stage where mutual affection begins to form. However, intimacy without passion or commitment may lead to emotions between parties stagnating or diminishing over time. Therefore, passion and commitment are necessary for a deeper relationship. A relationship cannot start without intimacy, but progressing a relationship is difficult without passion and commitment (Kim, 2015).

In contractual relationships within the supply chain, intimacy is the first factor involved in selecting a partner from numerous potential partners and developing a contractual relationship. If multiple potential partners have similar conditions, forming rapport provides a stage to discuss the initiation of a contract. If intimacy is formed through basic rapport, the relationship accelerates, playing a vital role in building trust and reducing risks and costs (Heide and Wathne, 2006; Weitz and Jap, 1995).

The role of sales representatives and the relationships between practitioners in inter-company contractual relationships are represented by relationship quality, more than mere intimacy. This is because the ability to contact each other and ask for help without reluctance, even for trivial matters, plays a crucial role in forming the basic trust required in a contractual relationship. Consequently, intimacy alleviates reluctance and enhances loyalty between parties (Aaker et al., 1992).

2. Passion

Passion dramatically elevates a relationship. This is contrary to intimacy, which starts out cautiously, nurtures the relationship over a long period, and can instantly stagnate or diminish (Rousseau et al., 2002). Considering its nature, responding to a relationship crisis or external difficulties with passion alone would be difficult. In other words, without intimacy and commitment, passion is likely to lead to the formation of a negative relationship rather than a sustainable one.

When likened to contractual relationships within the supply chain, this can be considered a strategic alliance driven by necessity. This relates to relationships formed with radical ties centered on mutual interests. However, in times of crisis or conflict of interests, contractual relationships can easily end or lead to decreased intimacy, potentially leading to another crisis (Lee and Ha, 2023).

Currently, global supply chains are experiencing rapid disintegration and integration owing to external factors. Considering this state, passionate contractual relationships can be formed to overcome immediate crises. However, passion devoid of intimacy and commitment will likely form an incomplete relationship. Hence, intimacy and commitment toward each other must be added to maintain optimal relationships beyond radical or empathetic ties.

3. Commitment

Commitment is the last element of love mentioned in the triangular theory of love, and it originates from a sense of duty to sustain a relationship that started with intimacy and passion. It is a stage where sacrifice and deep understanding for the other party are possible and an element that sustains the relationship for a long time. Therefore, a complete relationship requires harmony among intimacy, passion, and commitment, and if applied to the supply chain, it can lead to information sharing, the first step for optimal performance.

Dwyer et al. (1987) described commitment as the implicit and explicit promises between

partners concerning the willingness to sustain a relationship. Anderson and Weitz (1989) argued that it involves the willingness to endure short-term losses and confidence in the relationship's stability.

Such phenomena can easily be found in export–import contractual relationships and logistics contractual relationships due to COVID-19. For example, issues of whether to maintain existing contractual relationships when logistics costs skyrocket, search for alternative logistics routes with commitment when logistics progress is impossible in the contract section, or trust and accept a partner's decision have repeatedly been topics over the past few years. In this environment, both parties have paid financial and time sacrifices, and contracts have also been terminated (Ha and Woo, 2020). Consequently, relationships between contract partners who have made sacrificial commitments toward each other will grow stronger and can look forward to the future, whereas relationships between partners who easily terminated contracts become irretrievable (Bakhshi et al., 2011; DeConinck & Bachmann, 2011).

4. Information Sharing

Information sharing arises from intimacy and commitment, the fundamental elements of long-term business relationships, and is an essential factor leading to long-term contractual relationships (Doney and Cannon, 1997). Contract partners transparently share information on production planning, forecasts, resources, performance, and cash flow, and this is perceived as a guarantee for each other's relationship (Pieter van Donk, 2008).

Such information sharing brings three major strategic and operational benefits. First, information sharing reduces uncertainty between parties. Effective planning and forecasting can be facilitated through appropriate information sharing, bringing the highest efficiency (Cachon and Fisher, 2000; Mukhopadhyay and Kekre, 2002). Second, information sharing reduces the bullwhip effect, thus lowering transaction costs. Information becomes distorted or loses timeliness as it moves up the supply chain. However, real-time transparent information sharing enables efficient inventory management, leading to cost savings or reduction in waste (Fiala, 2005; Lin et al., 2002). Finally, information sharing broadens both parties perspectives, thereby aiding in optimal decision-making. In other words, previously unconsidered facts become strategic assets, providing room to improve productivity and service (Yang and Maxwell, 2011).

Combining the definition and effects of information sharing suggested by previous studies indicates that it can eliminate wasteful elements and enhance productivity and service, providing opportunities to improve cost, operational, and strategic factors. Therefore, information sharing can be considered a key factor in the preceding stage for improving logistics performance within the supply chain.

5. Logistics Performance

Logistics performance can be measured in various ways, but from a general perspective, it can be explained by dividing it into a cost perspective and an efficiency perspective. From the cost perspective, it can be considered a direct logistics cost, becoming a direct management target by contributing directly to the company's expenses through contract logistics costs, optimal logistics route discovery, and so on. In any situation, this has become an important management target as a primary concern for logistics operation and performance measurement. However, the uncertainty in logistics delays and lead times after COVID-19 has led to increased air costs and new contracts, becoming among the most important management elements for a company(Kim, 2021; Wang and

Lee, 2021).

On the contrary, the outcomes from an efficiency perspective include the prevention of opportunity loss through adherence to lead times, order completion rate, management cost savings through inventory turnover control, and so on. (Harrison and New, 2002; Wang and Yeo, 2018). Owing to its indirect cost nature, this was not as much a management target as a direct logistics cost. However, as the importance of logistics is highlighted, research is gradually becoming increasingly active, and companies are making efforts to quantify its cost. Although it may take time for indirect costs to be quantified and managed, if their importance is highlighted through qualitative research like this study, they will become as important a target for performance management as direct costs(Ha, 2022).

III. Hypothesis Formulation and Research Model

1. Intimacy and Information Sharing

Intimacy is the most basic element for forming human relationships and is essential for forming initial bonds. Numerous studies analyze intimacy as the beginning of interpersonal relationships, setting trust as a preceding or succeeding factor, and explain the two factors as mutually complementary relationships. Depending on the studies' purpose, in some cases, trust is a preceding factor to intimacy, and vice versa, whereby intimacy is a preceding factor to trust. Notably, these two factors were revealed as the variables that initiate a relationship through various studies (Humphreys et al., 2004; Stewart and Malaga, 2009).

From a business perspective, this forms the initial trust between buyers and suppliers, and as intimacy improves, the initial trust level gradually increases, forming a virtuous cycle (Grayson, 2007; Heide and Wathne, 2006). Specifically, intimacy can be considered the starting point leading to trust, long-term business relationships, and information sharing. Thus, basic bonding forms the trust that internal information can be shared, leading to information sharing. Accordingly, this study established the following hypothesis.

H1: Intimacy significantly positively influences information sharing.

2. Passion and Information Sharing

Passion is an element that rapidly brings human relationships closer and significantly contributes in advancing initial relationships. Interpreting passion from a business perspective, it can be understood as a strong will to succeed in business or an entrepreneurial spirit.

The initial stage of passion commences with the will to make a single transaction. After the transaction is completed, an effect transfers to the entire organization, becoming a factor that makes the supply chain aware of the will to succeed and important information (Cardon, 2008; Cardon et al., 2013).

Furthermore, once a certain degree of relationship and business has advanced, passion leads to the transfer of business versions and goals within the supply chain, and it results in information search and sharing regarding the techniques and knowledge needed to achieve the goals (Tang et al., 2012).

Thus, passion enhances the likelihood of a transaction and becomes a strong growth driver for business growth after the transaction is formed. Therefore, this study assumed that information sharing based on passion is necessary as a condition for supply chain success. Accordingly, the

following hypothesis was established.

H2: Passion significantly positively influences information sharing.

3. Commitment and Information Sharing

Commitment can be expressed as a sacrifice for long-term relationship orientation. This could be a financial sacrifice or a sacrifice of time and effort. Additionally, a single act of commitment increases the other party's liking and loyalty in human relationships.

However, the commitment within a supply chain can be considered at a higher level than personal commitment. The inter-company supply chain is often likened to an organism moving with considerable funding and labor. Hence, a single act of commitment within the supply chain involves a cost, time, and labor investment across the entire supply chain. Therefore, commitment in business relationships can be considered a high-level strategic decision accompanied by mutual trust and the will for long-term business relationships (Dion et al., 1992; Trent et al., 1998).

Such commitment enhances organizational power across the entire organization, based on trust and loyalty between partners. That is, the greater the commitment, the more the members consider the time and resources invested thus far, making it difficult to act against supply chain performance and pursue the long-term goals of the entire supply chain (Chen and Paulraj, 2004). Therefore, this study assumed that commitment is necessary as a precursor to information sharing—an essential element for building a successful supply chain. Accordingly, the following hypothesis was established.

H3: Commitment significantly positively influences information sharing.

4. Information Sharing and Logistics Performance

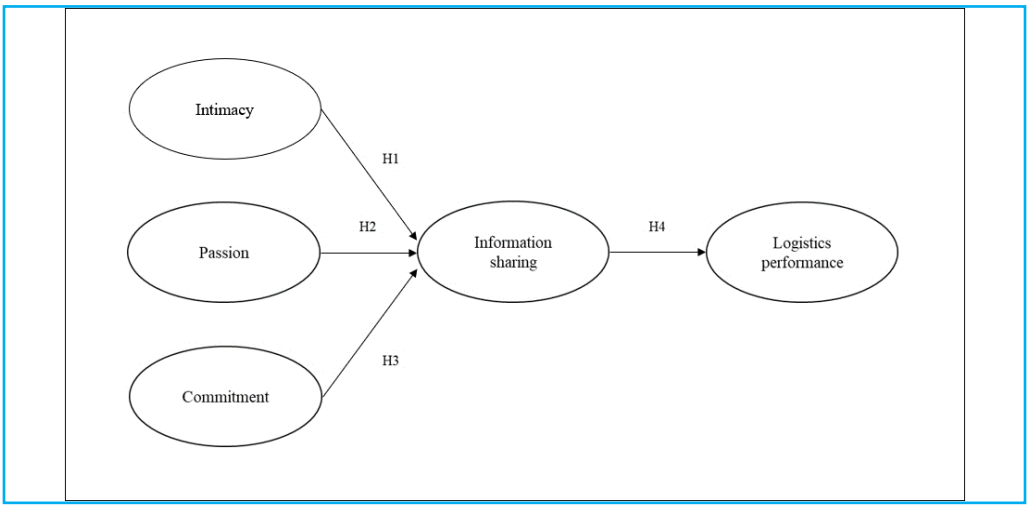
Information sharing is essential to increase profit-making opportunities and reduce wasteful factors. It is influenced by trust and commitment, the emotional elements of long-term business relationships (Lee and Ha, 2023). Therefore, information sharing is directly associated with performance from strategic and operational perspectives. The reduction of uncertainty through information sharing directly affects procurement, inventory management, and sales planning. Specifically, wasteful factors can be easily eliminated by establishing production and operation plans based on accurate and timely shared information.

Moreover, information sharing lays the groundwork for future performance. Being a proprietary asset of a company, information is sometimes treated as confidential, and such strategic information sharing can present different future performance than operational information sharing. For example, sharing long-accumulated know-how, wasteful elements occurring between clients, contracts, best practices, etc., provides opportunities for improvement in all areas of production, procurement, and sales. This can also enhance the future performance of the supply chain (Dyer, 1996; Spekman et al., 1998). Therefore, based on previous research, this study assumed that information sharing is an essential asset leading to logistics performance and established the following hypothesis.

H4: Information sharing significantly positively influences logistics performance.

Based on the above hypotheses, this study established a research model as presented in Fig. 1.

Fig. 1. Research Model



IV. Research Method and Empirical Analysis

1. Data Collection and Analysis Method

The sample for the empirical analysis of this study included employees working in Korean companies' supply chain-related departments. Prior to distributing the questionnaire, we sought advice from employees engaged in supply chain-related tasks to verify the validity of the research content, specifically regarding the measurement items. The final survey questions were selected based on this input, and all survey items were measured using a 7-point Likert scale. The survey was administered online through Entrust Survey over a month in June 2023, with 4,952 questionnaires distributed. Overall, 350 questionnaires were collected and utilized in statistical analysis, and 4,570 were excluded due to respondents failing the pre-survey screening questions, dropouts, and faulty responses.

We validated the hypotheses through structural equation modeling. Structural equation modeling is a statistical analysis method that allows researchers to examine the structural relationships between various latent variables simultaneously according to the formulated hypotheses. Recently, structural equation modeling has been utilized not only in business studies but also in various social science fields; various statistical programs are available for this purpose. This study utilized SPSS 18.0 and AMOS 18.0.

2. Measurement of Variables and Sample Characteristics

This study, referring to previous studies, used 22 measurement variables to ensure the content validity of the latent variables. Intimacy was operationalized into the following five variables: inquiries regarding well-being (A1), casual conversation (A2), family affairs (A3), social issues (A4), and daily life (A5). Passion was operationalized into the following five variables: idealistic (B1), romantic (B2), attractive (B3), passionate (B4), and superior (B5). Commitment was measured through problem-solving (C1), persistence (C2), promise fulfillment (C3), and long-

term cooperation (C4); information sharing was measured through the following four variables: sales-related information sharing (H1), strategy and policy-related information sharing (H2), organizational know-how sharing (H3), and consumer preference-related information sharing (H4). Finally, logistics performance was operationalized through the following four variables: total logistics cost (K1), lead time (K2), order completion rate (K3), and inventory turnover rate (K4).

Table 1 presents the definitions and references for the above measurement variables.

Table 1. Definition and Measurement of Variables

Latent Variables	Measurement Variables	Operational Definition	References
Intimacy	Inquiries about well-being	The extent to which one inquires regarding the well-being of the other person	Acker and Davis (1992), Madey and Rodgers (2009)
	Casual Conversation	The extent to which one exchanges casual conversation with the other person	
	Family Affairs	The extent to which one discusses family matters with the other person	
	Social Issues	The extent to which one discusses social issues with the other person	
	Daily Life	The extent to which one discusses daily life with the other person	
Passion	Idealistic	The extent to which one thinks the relationship with the other person is ideal	Acker and Davis, (1992), Madey and Rodgers (2009)
	Romantic	The extent to which the relationship with the other party is considered romantic	
	Attractive	The extent to which the relationship with the other party is considered attractive	
	Passionate	The extent to which the relationship with the other party is considered passionate	
	Superior	The extent to which the relationship with the other party is considered better than relationships with other suppliers	
Commitment	Problem-solving	The extent to which proactive efforts are made for mutual problem-solving when a problem arises	Acker and Davis, (1992), Madey and Rodgers (2009)
	Persistence	The extent of effort and willpower invested to maintain the current relationship	
	Promise Fulfillment	The extent to which effort is made to fulfill mutual promises	
	Long-term Cooperation	The extent to which cooperation is made to achieve long-term common goals	

Information Sharing	Sales-related information sharing	The extent to which sales-related information is shared with the other party	Li and Lin (2006), Lotfi et al. (2013)
	Strategy and policy-related information sharing	The extent to which strategy and policy-related information is shared with the other party	
	Organizational know-how sharing	The extent to which the organization's know-how is exchanged and shared with the other party	
	Consumer preference-related information sharing	The extent to which information related to the end consumer's preferences is shared	
Logistics Performance	Total Logistics Cost	Logistics-related costs such as transportation, storage, and inventory management	Harrison and New (2002), Wang and Yeo (2018)
	Lead Time	The time related to the production and delivery of ordered goods	
	Order Completion Rate	The ability to deliver ordered goods to a designated place according to the conditions within a given time	
	Inventory Turnover Rate	The annual turnover rate of inventory	

Meanwhile, the characteristics of the sample used in this study are as follows: First, the most common number of years of work experience in supply chain management departments was 1–5 years for 213 respondents (60.86%), followed by 6–10 years for 87 (24.86%). Regarding the number of respondents in major industries, the general machinery industry was the highest with 85 respondents (24.29%), followed by the semiconductor industry with 46 respondents (13.14%) and petrochemical products industry with 42 respondents (12%). Meanwhile, as of 2023, total assets were less than $400 million for the companies of 193 respondents (55.14%), and the average number of employees was less than 5000 for the companies of 315 respondents (90%). Finally, we found that most respondents dealt with more than 20 suppliers and customer companies.

3. Reliability and Validity

This study verified reliability through Cronbach's alpha. In the social sciences, a value of at least 0.7 is generally considered to have acceptable reliability (Nunnally, 1978). In this study, all the measured variables had good reliability: intimacy=0.834, passion=0.821, commitment=0.818, information sharing=0.833, and logistics performance=0.782.

Subsequently, a confirmatory factor analysis was conducted to verify the validity of the causal relationships among intimacy, passion, commitment, information sharing, and logistics performance. First, the fit of the measurement model was x2(df)=708.265(200), GFI=0.926, RMR=0.014, RMSEA=0.046, CFI=0.928, and IFI=0.930, confirming that the research model is acceptable (Hair et al., 2010). Meanwhile, as all variables' average variance extracted (AVE) was above 0.5, and construct reliability was above 0.7, it was judged that convergent validity was

secured. Further, the path coefficients were significant at p<0.001, and hence, all factors were adopted. Table 2 presents the reliability and convergent validity analysis results for the variables used in this study.

Table 2. Reliability and Convergent Validity Analysis Results

Path	Standardized Coefficients	Unstandardized Coefficients	S.E.	C.R.	AVE	Construct Reliability	Cronbach's alpha
A1	0.472	1					
A2	0.765	2.037	0.241	8.448***			
A3	0.813	2.625	0.304	8.634***	0.610	0.826	0.834
A4	0.761	2.153	0.255	8.430***			
A5	0.709	1.879	0.229	8.192***			
B1	0.669	1					
B2	0.731	1.524	0.131	11.635***			
B3	0.788	1.549	0.126	12.328***	0.614	0.803	0.821
B4	0.716	1.245	0.109	11.434***			
B5	0.512	0.725	0.085	8.522***			
C1	0.721	1					
C2	0.722	1.045	0.089	11.785***	0.599	0.829	0.818
C3	0.757	1.190	0.097	12.214***			
C4	0.705	1.096	0.095	11.544***			
H1	0.704	1					
H2	0.764	1.189	0.095	12.575***	0.665	0.887	0.833
H3	0.798	1.327	0.102	13.008***			
H4	0.682	1.040	0.091	11.387***			
K1	0.621	1					
K2	0.692	1.158	0.123	9.388***	0.652	0.836	0.782
K3	0.676	1.208	0.130	9.262***			
K4	0.555	1.043	0.129	8.087***			

Note: *p<0.05, **p<0.01, ***p<0.001.

Discriminant validity represents the differences between independent latent variables. Specifically, if the correlation between latent variables is low, they can be considered independent constructs, thus securing discriminant validity. The criteria for verifying discriminant validity are met when each AVE exceeds the square of the correlation coefficient between the two constructs. In this research model, the square of the largest correlation coefficient is 0.418, and the minimum AVE is 0.599, and hence, it was determined that discriminant validity has been secured. Table 3 shows the results of the discriminant validity analysis.

Table 3. Discriminant Validity Analysis Results

	Intimacy	Passion	Commitment	Information Sharing	Logistics Performance
Intimacy	0.610				
Passion	0.416	0.614			
Commitment	0.070	0.148	0.599		
Information Sharing	0.310	0.319	0.114	0.665	
Logistics Performance	0.151	0.266	0.418	0.331	0.652

Note: Squared correlation coefficient excluding diagonal line.

4. Hypothesis Verification

This study used the maximum likelihood method as a statistical technique to verify the causal and correlation relationships among intimacy, passion, commitment, information sharing, and logistics performance. The fit of the research model was x2(df)=970.169(205), GFI=0.935, RMR=0.026, RMSEA=0.056, CFI=0.926, and IFI=0.927, confirming that it largely fulfills the standards recommended by Hair et al. (2010). Accordingly, the structural equation model was analyzed, and all hypotheses were supported. Table 4 shows the results of the path analysis through the structural equation model.

Table 4. Results of Hypothesis Verification

	Standardized Coefficients	Unstandardized Coefficients	S.E.	C.R.	p	Supported/ rejected
Hypothesis 1	0.449	0.634	0.107	5.900***	0.000	Supported
Hypothesis 2	0.399	0.409	0.066	6.186***	0.000	Supported
Hypothesis 3	0.258	0.282	0.065	4.358***	0.000	Supported
Hypothesis 4	0.609	0.498	0.069	7.236***	0.000	Supported

Note: *p<0.05, **p<0.01, ***p<0.001.

V. Conclusions

1. Conclusion

This study proposed the fundamental elements of the triangular theory of love as antecedent factors that influence information sharing and can enhance logistics performance. It empirically analyzed the relationships among these factors. The analysis results are summarized as follows:

First, intimacy positively impacted information sharing. Intimacy and information sharing seem to comprise trust and long-term orientation, and according to research, intimacy, trust, and long-term orientation can be distinguished as antecedent and posterior factors that are mutually complementary without any one being superior in the relationship. Thus, intimacy can be considered a key factor that improves trust and willingness for long-term transactions in business relationships, leading to the sharing of general and strategic information.

Second, passion positively impacted information sharing. Passion is essential for advancing initial relationships in interpersonal relationships. This is possible because passion can be interpreted as a strong will to succeed in business. Tang et al. (2012) argued that as the relationship with a partner deepens, the business's vision and goals are easily disseminated within the supply chain, and information sharing also occurs. As these relationships and findings were clearly revealed in this study, it can be suggested that information sharing based on passion is necessary to construct a successful supply chain.

Third, commitment positively impacted information sharing. Commitment—specifically, investing one's full strength and dedicating body and mind—can be financial or non-financial. Irrespective of the type of commitment, a single act of dedication can endear one to others. Thus, trust is formed if parties commit to each other within the supply chain, and the willingness for long-term business relationships is also enhanced. As information sharing is necessary for building an efficient supply chain, mutual sacrifice for long-term relationship orientation is required.

Finally, information sharing positively impacted logistics performance. This is consistent with previous studies examining the positive causal relationship between information sharing and logistics performance. In today's business environment, wherein the globalization of product production and distribution structures is accelerating, logistics is becoming the foundation for revenue generation. Within the global corporate environment, vitalizing information sharing can be considered an effective approach to improving logistics performance. Although information sharing is important in the supply chain, it is difficult to achieve easily due to the threat of a partner's potential opportunism. Thus, building a relationship based on intimacy, passion, and commitment is important to promote information sharing.

The theoretical and practical implications based on this conclusion are as follows: First, this study applied the triangular theory of love—primarily observed in psychology or behavioral studies—to business studies. Specifically, Sternberg (1986) explained that love comprises intimacy, passion, and commitment. This study judged these components to be useful in examining cooperation between partners within the supply chain. There are no examples of applying the triangular theory of love to supply chain-related research; hence, this study confirms that it can be applied to business studies, thereby enhancing its academic significance. Second, as this study confirmed that psychological research can be applied to business studies, extending and applying this research to other disciplines can produce meaningful findings. That is, the methodology of this research contributes to the exchange and expandability between disciplines, helping to actively conduct diverse research. Third, this study is also practically applicable. For example, suppose that multiple clients with identical quantitative and external conditions exist. In that case, the person responsible for selecting clients must rely on subjective judgment, which could be a potential risk factor. However, quantifying behavioral or psychological factors, as in the methodology of this study, would provide numerical data for practical judgment.

2. Limitations

The theoretical and practical implications discussed above should be considered alongside the

following limitations: First, this study reveals that each of the elements leads to information sharing and logistics performance. However, in the triangular theory of love, the harmony of intimacy, passion, and commitment is considered a preceding factor for long-term orientation or trust in human relationships. By contrast, this study focused on the relationship between each variable, analyzing the relationship with information sharing, a preceding factor of logistics performance. If these factors are combined to analyze the connection between long-term contractual relationship formation and trust, it would be possible to research long-term outcomes, extending the factors of logistics success.

Second, as this study focused on information sharing when examining collaboration in the supply chain, it did not measure other major activities in supply chain collaboration, such as joint decision-making and sharing risks and benefits. Future research that investigates collaboration activities in strategic aspects besides information sharing will be academically significant on a more macroscopic level.

Lastly, this study began with the assumption that the characteristics of general human behavior mentioned in psychological theory would equally apply within the supply chain. Although statistically significant results were obtained, I believe that follow-up research is needed to determine whether the same can be applied in more industries and relationships.

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