



A Neutrosophic Decision-Making Methods of the Key Aspects for Supply Chain Management in International Business Administrations

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Abstract

The importance of supply chain management in the field of international business administration is investigated in this study. Global businesses rely heavily on effective supply chain management, which coordinates the international transfer of materials, data, and money. The paper illuminates the critical nature of supply chain management on a worldwide scale. Distance, cultural differences, legal constraints, and logistics are only some of the problems and complexity of international supply chain management that are explored in this article. Topics covered include supplier selection and management, demand forecasting, inventory control, transportation, and distribution network design, as well as other techniques used by businesses to improve their worldwide supply chains. The study also discusses how international supply networks are affected by globalization, free trade agreements, and geopolitical considerations. Organizational strategies for overcoming hurdles such as tariffs, quotas, and political instability in international commerce are discussed. This paper used the neutrosophic sets (NSs) to deal with uncertainty in assessment factors of supply chains in international business. The NS is integrated with the DEMATEL method. The neutrosophic DEMATEL is used to show relationships between factors.

Keywords: Neutrosophic Set; Business Administrations; Supply Chain; International Business Administration.

1. Introduction

Supply chain management is an integral part of any multinational organization and one with many moving parts. As businesses go global, they face a tangled web of new logistical hurdles, legal frameworks, cultural nuances, and geopolitical unknowns. Strategic planning, thorough coordination, and the flexibility to adjust to changing market circumstances are essential for effective supply chain management in today's global corporate scene[1], [2].

The term "supply chain" is used in international trade to refer to the full cycle of bringing a product from its inception to its final destination. To do this, you need to network with suppliers, organize your production schedule, comply with local laws, and send your goods to clients in various locations. The smooth flow of products, optimized costs, satisfied customers, and a competitive edge in a global market all rely on how well these operations are managed[2], [3].

Sourcing and procurement provide a significant obstacle when it comes to managing the supply chain in a multinational company. Organizations have the responsibility of finding trustworthy suppliers, evaluating their skills, negotiating contracts, and managing relationships with vendors from various areas. Considerations including price, quality, dependability, and conformity to international standards all play a role in sourcing selections. Securing the essential inputs, reducing risks, and assuring a steady supply of products all depend on efficient supplier management and close communication.

International supply chain management relies heavily on logistics and transportation. Planning, coordination, and optimization of air, sea, rail, and road transport are essential for the efficient flow of products across borders. Navigating international trade restrictions, keeping tabs on shipments, and getting them to clients in various time zones are all part of the logistics management process. Better logistics management increases productivity, shortens delivery times, and boosts happy customers[4], [5].

Supply chain management in international companies relies heavily on ensuring compliance with international trade rules. To maintain seamless cross-border operations, businesses must keep up with import/export regulations, customs procedures, and trade agreements. Organizations may keep their competitive advantage and gain the confidence of overseas partners by ensuring they comply with rules and paperwork requirements[6], [7].

International supply chain management relies heavily on careful inventory management. Organizations need to optimize their inventory levels to meet the demands of their various markets, reduce their carrying costs, and prevent stockouts and surpluses. To guarantee product availability while minimizing inefficiencies and financial risks associated with inventory management, accurate demand forecasting, effective order management, and powerful inventory control systems are required[8], [9].

Supply chain management in international companies is being revolutionized by technological and digital breakthroughs. Enterprise resource planning (ERP), supply chain management (SCM) software, and data analytics are just a few examples of the kinds of technology that may help businesses improve transparency, cooperation, and decision-making. Digital platform integration with suppliers and partners provides real-time data exchange, cuts down on mistakes, and boosts supply chain effectiveness[10], [11].

When doing business on a global scale, it is essential to take risk management into account when managing the supply chain. The risks associated with geopolitical circumstances, natural catastrophes, currency changes, supply interruptions, and other unforeseen occurrences must be identified and mitigated proactively by businesses. Maintaining supply chain resilience and business continuity in the face of uncertainty requires the development of effective risk management strategies, the performance of risk assessments, and the implementation of contingency plans[12], [13].

This paper used the neutrosophic sets to deal with uncertain data in the evaluation process[14]. The neutrosophic is integrated with the DEMATEL method. The Neutrosophic DEMATEL method is used to find relationships between factors[15], [16].

2. Challenges of Supply Chain in International Business

There are a few universal difficulties that businesses face when trying to manage their supply chains on a global scale. Problems like this crop up because expanding into new countries, markets, and legal frameworks is difficult. Key difficulties include, among others:

Transportation and Logistics on a Global Scale It may be difficult to manage logistics and transportation across various regions and nations. It entails determining the most economical and timely means of shipping, complying with all paperwork needs, and negotiating the complexities of customs clearance[17], [18].

Trade Laws and Compliance Requirements Vary by Country and Region Trade laws and compliance requirements differ from country to country and region to area. Businesses need to be current on import/export rules, trade agreements, tariffs, and customs processes. Following these rules and securing the required authorizations may be difficult and time-consuming[19], [20].

Understanding the linguistic and cultural barriers that exist while doing business on a global scale is essential. Supply chain coordination, connections with suppliers, and operational efficiency may all be negatively impacted by language issues, different work styles, and cultural customs.

Finding and keeping tabs on trustworthy international suppliers may be difficult when running a business. Distance, cultural differences, and language limitations may all make it more difficult to evaluate supplier skills, ensure quality standards are fulfilled, negotiate contracts, and maintain efficient communication[19], [21].

Financial hazards may arise for worldwide supply chains when they must deal with numerous currencies and variable exchange rates. To limit their loss exposure, businesses must master the complexities of international financial operations and currency hedging.

Coordination and decision-making may be hampered by a lack of real-time visibility and information exchange throughout the supply chain. It becomes difficult to keep tabs on deliveries, check stock levels, and adjust to sudden shifts in demand or supply.

Global supply networks are vulnerable to political and geopolitical risks such as instability, war, and policy shifts. Potential disruptions to sourcing strategy, transportation routes, and commercial connections may result from geopolitical risks such as trade disputes, sanctions, or new regulations[22], [23].

Resilience in Infrastructure and the Supply Chain Differences in national infrastructure may reduce the effectiveness and dependability of supply chain operations. Inadequate transit systems, storage space, and communication channels may cause setbacks and interruptions.

Challenges to timely decision-making, communication, and coordination might arise while working across many time zones. Issues and current information may be delayed due to time zone variations[23], [24].

International supply chains increase the difficulty of adhering to sustainability requirements, responsible sourcing practices, and ethical issues. It takes rigorous planning and monitoring to ensure compliance with environmental legislation, promote fair labor practices, and manage social and environmental hazards across international borders[22], [25].

3. Neutrosophic Decision-Making Framework

Human language is full of subjectivities, ambiguity, and imprecision in the method of information outline, distribution, and assessment. In mathematics, neutrosophic sets logic are potent instruments for modeling ambiguous systems. A crisp set's capabilities are expanded upon by a neutrosophic set. In this part, we've looked at the basics of neutrosophic sets, including their notations, definitions, and underlying theories. Important neutrosophic set theory concepts are provided here.

3.1 Preliminaries

In this part, we introduce some mathematical equations to show the operations of the neutrosophic sets such as:

We define the variables of neutrosophic sets as:

$$0 \leq T_A(x), I_A(x), F_A(x) \leq 3$$

Where the $T_A(x), I_A(x), F_A(x)$ refers to the truth, indeterminacy, and falsity of membership degrees.

We let the two neutrosophic numbers as $u_1 = (T_{u_1}(x), I_{u_1}(x), F_{u_1}(x))$ and $u_2 = (T_{u_2}(x), I_{u_2}(x), F_{u_2}(x))$

$$u_1^c = (F_{u_1}(x), 1 - I_{u_1}(x), T_{u_1}(x))$$

$$u_1 \sqsubseteq u_2 \text{ if } T_{u_1}(x) \leq T_{u_2}(x), I_{u_1}(x) \geq I_{u_2}(x) \text{ and } F_{u_1}(x) \geq F_{u_2}(x)$$

$$u_1 = u_2 \text{ if and only if } u_1 \sqsubseteq u_2 \text{ and } u_2 \sqsubseteq u_1$$

$$u_1 \cup u_2 = \left\{ \begin{array}{l} \max(T_{u_1}(x), T_{u_2}(x)) \\ \min(I_{u_1}(x), I_{u_2}(x)) \\ \min(F_{u_1}(x), F_{u_2}(x)) \end{array} \right\}$$

$$\begin{aligned}
u_1 \cap u_2 &= \left\{ \begin{array}{l} \min(T_{u_1}(x), T_{u_2}(x)) \\ \max(I_{u_1}(x), I_{u_2}(x)) \\ \max(F_{u_1}(x), F_{u_1}(x)) \end{array} \right\} \\
u_1 \oplus u_2 &= \left\{ \begin{array}{l} T_{u_1}(x) + T_{u_2}(x) \\ I_{u_1}(x) + I_{u_2}(x) \\ F_{u_1}(x) + F_{u_2}(x) \end{array} \right\} \\
u_1 \otimes u_2 &= \left\{ \begin{array}{l} T_{u_1}(x)T_{u_2}(x) \\ I_{u_1}(x) + I_{u_2}(x) - I_{u_1}(x)I_{u_2}(x) \\ F_{u_1}(x) + F_{u_2}(x) - F_{u_1}(x)F_{u_2}(x) \end{array} \right\} \\
\wedge u_1 &= (1 - (1 - T_{u_1}(x))^\wedge, I_{u_1}(x)^\wedge, F_{u_1}(x)^\wedge) \\
u_1^\wedge &= \left\{ \begin{array}{l} T_{u_1}(x)^\wedge, \\ 1 - (1 - I_{u_1}(x))^\wedge \\ 1 - (1 - F_{u_1}(x))^\wedge \end{array} \right\} \\
u_1 - u_2 &= \left\{ \begin{array}{l} \frac{T_{u_1}(x) - T_{u_2}(x)}{1 - T_{u_2}(x)} \\ \frac{I_{u_1}(x)}{I_{u_2}(x)} \\ \frac{F_{u_1}(x)}{F_{u_1}(x)} \end{array} \right\}
\end{aligned}$$

3.2 Neutrosophic DEMATEL

This section introduces the steps of the neutrosophic DEMATEL to compute the weights of the criteria. DEMATEL is capable of processing a huge number of variables and illuminating their interconnectedness[26], [27]. It determines what causes led to what others, and vice versa. DEMATEL also produces weight-based rankings independently of any other methodologies. To cope with a neutrosophic environment while dividing up complicated components, neutrosophic DEMATEL provides an augmented approach[28]. When compared to the DEMATEL approach, the results from a neutrosophic DEMATEL analysis are more reliable. The framework of this study is shown in Figure 1.

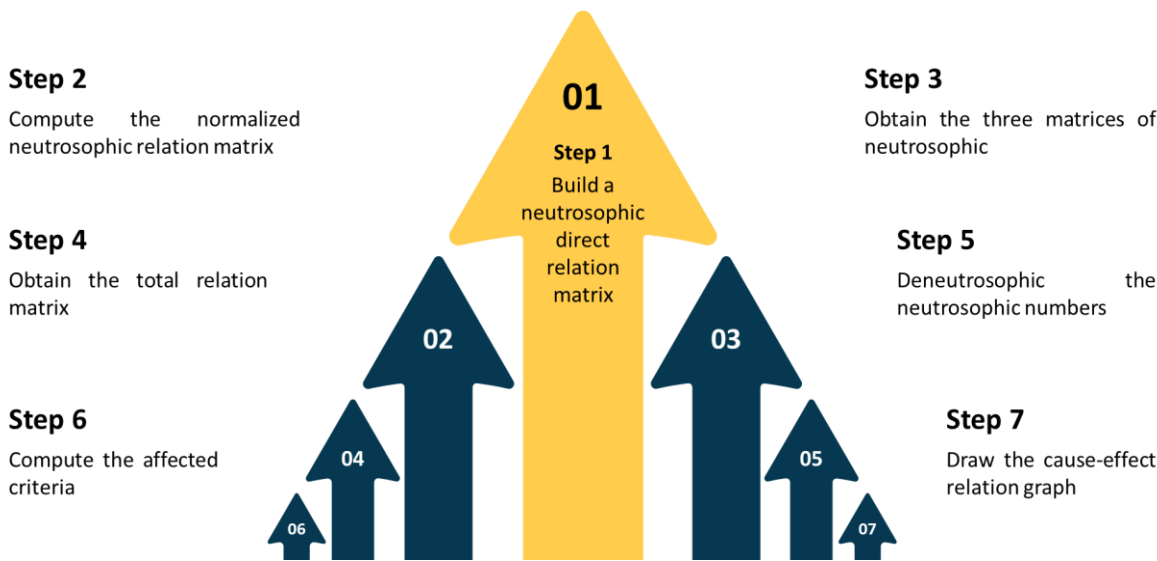


Figure 1: The steps of the neutrosophic DEMATEL method.

3.1 Neutrosophic DEMATEL Method

We used the neutrosophic sets scale to evaluate the criteria by the experts and decision makers[29], [30].

Stage 1. Build a neutrosophic direct relation matrix.

In the first stage, a neutrosophic direct-relation matrix X is built using pairwise comparisons of the criteria performed by experts. The i -dependent criteria j is broken down into its constituent parts in $x_{ij} = (l_{ij}, m_{ij}, u_{ij})$. Where l_{ij}, m_{ij}, u_{ij} refer to the truth, indeterminacy, and falsity of membership degrees. Then compute the weights of experts by

$$w_e = \frac{x_e}{\sum_{e=1}^M x_e} \tag{1}$$

Then combined the direct relation matrix by experts as:

$$x_{ij} = \sum_{e=1}^{1 \leq e \leq M} w_e (x_{ij}^l, x_{ij}^m, x_{ij}^u) \tag{2}$$

Stage 2. Compute the normalized neutrosophic relation matrix

$$A = f \times X \tag{3}$$

$$f = \frac{1}{\max_{1 \leq i \leq n} \sum_{j=1}^n u_{ij}} \tag{4}$$

Stage 3. Obtain the three matrices of neutrosophic

$$X_l = \begin{bmatrix} 0 & \dots & l_{1n} \\ \vdots & \ddots & \vdots \\ l_{n1} & \dots & 0 \end{bmatrix} \tag{5}$$

$$X_m = \begin{bmatrix} 0 & \dots & m_{1n} \\ \vdots & \ddots & \vdots \\ m_{n1} & \dots & 0 \end{bmatrix} \tag{6}$$

$$X_u = \begin{bmatrix} 0 & \dots & u_{1n} \\ \vdots & \ddots & \vdots \\ u_{n1} & \dots & 0 \end{bmatrix} \tag{7}$$

Stage 4. Obtain the total relation matrix

$$T = X(1 - X)^{-1} \quad (8)$$

Stage 5. Deneutrosophic the neutrosophic numbers

$$d = \frac{2+l_{ij}-m_{ij}-u_{ij}}{3} \quad (9)$$

Stage 6. Compute the affected criteria

This stage is used to compute the sum of rows and the sum of columns.

Stage 7. Draw the cause-effect relation graph.

4. Results

This section shows the results of the application of neutrosophic DEMATEL method. This paper used the seven factors of supply chain in international business. It is important to keep in mind several factors while managing the supply chain in an international company administration. Among them are the following:

Locations of suppliers, factories, distribution hubs, and storage facilities must be carefully considered when developing a worldwide network architecture. Market demand, transportation options, trade rules, and economies of scale are all relevant factors. The lag time for delivering items is decreased when the network is well-designed. Managing your connections with your suppliers is essential to establishing a steady supply chain. Supplier selection, performance assessment, cooperation, and risk management are all essential components of effective supplier relationship management. Mutually beneficial collaborations may be fostered via open lines of communication, supplier development programs, and transparent legal agreements. Managing inventories, manufacturing schedules, and customer satisfaction all depend on the accuracy of demand planning and forecasting. Optimizing inventory and production while minimizing stockouts and surplus inventory requires taking into account aspects including market trends, seasonality, consumer preferences, and geographical variances.

Trade compliance and customs rules are essential to the success of any international business. Compliance, reduced delays, and the avoidance of fines may all be achieved with a thorough understanding of import/export regulations, paperwork requirements, tariffs, and trade agreements. Keeping up with regulatory changes and using trade specialists or customs brokers might make it easier to comply. Geopolitical unpredictability, natural catastrophes, currency fluctuations, and supplier interruptions are just some of the hazards that international supply chains face. Risks must be reduced via the use of various risk management measures, including risk assessments and the creation of backup plans. Having many sources of supplies, a buffer stock, and flexible shipping choices all contribute to a more robust supply chain. Automation and Technology Leveraging automation and technology solutions may increase efficiency and transparency in global supply chains. Enterprise resource planning (ERP), supply chain management (SCM), and transportation management (TMS) implementations improve access to information, automation of routine tasks, and speed of decision-making in real time. Electronic data exchange (EDI) integration with suppliers and partners improves cooperation and reduces human mistakes.

International supply chain management is placing a greater emphasis on adopting sustainability and corporate social responsibility (CSR) practices. Environmental implications, working conditions, ethical sourcing, and corporate social responsibility are all issues that businesses should evaluate and work to improve. Green logistics, ethical procurement, and waste reduction are just a few examples of sustainable practices that may boost a company's image and ensure it lives up to the expectations of its stakeholders. Supply chain performance must be measured and evaluated regularly, and continuous improvement strategies must be put in place. Delivery on time, inventory turnover, and order correctness are all examples of KPIs that may be used to evaluate business success. Improving processes requires first identifying them, which may be done via frequent audits, benchmarking against industry standards, and input from customers and partners.

Supply chain management, operational optimization, cost reduction, risk mitigation, and improved customer satisfaction are all facilitated by taking these factors into account. A sustainable and competitive global supply chain may be maintained via the integration of people, processes, technology, and sustainability. We applied the neutrosophic DEMATEL in seven factors to show the best one in the supply chain in international business. The experts used to evaluate these seven factors. Then we used the neutrosophic numbers to evaluate these factors. Then

we used Eq. (3) to obtain the normalized relation matrix as shown in Table 1. Then we obtain the total relation matrix as shown in Table 2. Then we compute the cause effect of the total relation matrix as shown in Figure 2.

Table 1: Normalized direct relation matrix

	SCIB ₁	SCIB ₂	SCIB ₃	SCIB ₄	SCIB ₅	SCIB ₆	SCIB ₇
SCIB ₁	0.15	0.0354	0.1281	0.14475	0.0789	0.08835	0.14475
SCIB ₂	0.635593	0.15	0.0885	0.1035	0.06765	0.08535	0.0822
SCIB ₃	0.175644	0.254237	0.15	0.079035	0.14475	0.0225	0.10425
SCIB ₄	0.14475	0.217391	0.284684	0.15	0.0948	0.071835	0.08835
SCIB ₅	0.285171	0.332594	0.15544	0.237342	0.15	0.1047	0.0936
SCIB ₆	0.254669	0.26362	1	0.313218	0.2149	0.15	0.0825
SCIB ₇	0.15544	0.273723	0.215827	0.254669	0.240385	0.272727	0.15

Table 2: Neutrosophic total relation matrix.

	SCIB ₁	SCIB ₂	SCIB ₃	SCIB ₄	SCIB ₅	SCIB ₆	SCIB ₇
SCI B ₁	- 1.15028729 945181	- 0.893095067 882773	- 0.953284704 641841	- 0.620683056 401392	- 0.519751313 530755	- 0.371064567 137866	- 0.386641564 003460
SCI B ₂	- 1.06095278 234117	- 1.149583788 85483	- 1.372360468 30032	- 0.901243473 370985	- 0.742253659 473423	- 0.518255708 799000	- 0.589168448 097666
SCI B ₃	- 1.14206315 205265	- 0.780726245 507436	- 1.111093451 51223	- 0.763217088 568278	- 0.525504670 697632	- 0.479215677 134839	- 0.467321872 089897
SCI B ₄	- 1.36826955 464664	- 0.933138054 507222	- 1.101809382 59162	- 0.811240637 729744	- 0.655177106 385574	- 0.509631917 995788	- 0.560372841 160630
SCI B ₅	- 1.68435714 471426	- 1.198510251 49479	- 1.637848464 90126	- 1.004955872 87324	- 0.842688142 249274	- 0.646077933 589908	- 0.753457450 400314
SCI B ₆	- 2.88764022 345743	- 2.042755087 92866	- 1.859489010 30457	- 1.680317304 30712	- 1.306623349 77081	- 1.079998532 08533	- 1.243656444 90420
SCI B ₇	- 2.47193351 133470	- 1.683681556 29732	- 2.034406640 12271	- 1.364313198 07697	- 1.038552919 61579	- 0.717502330 465325	- 0.982632304 136068

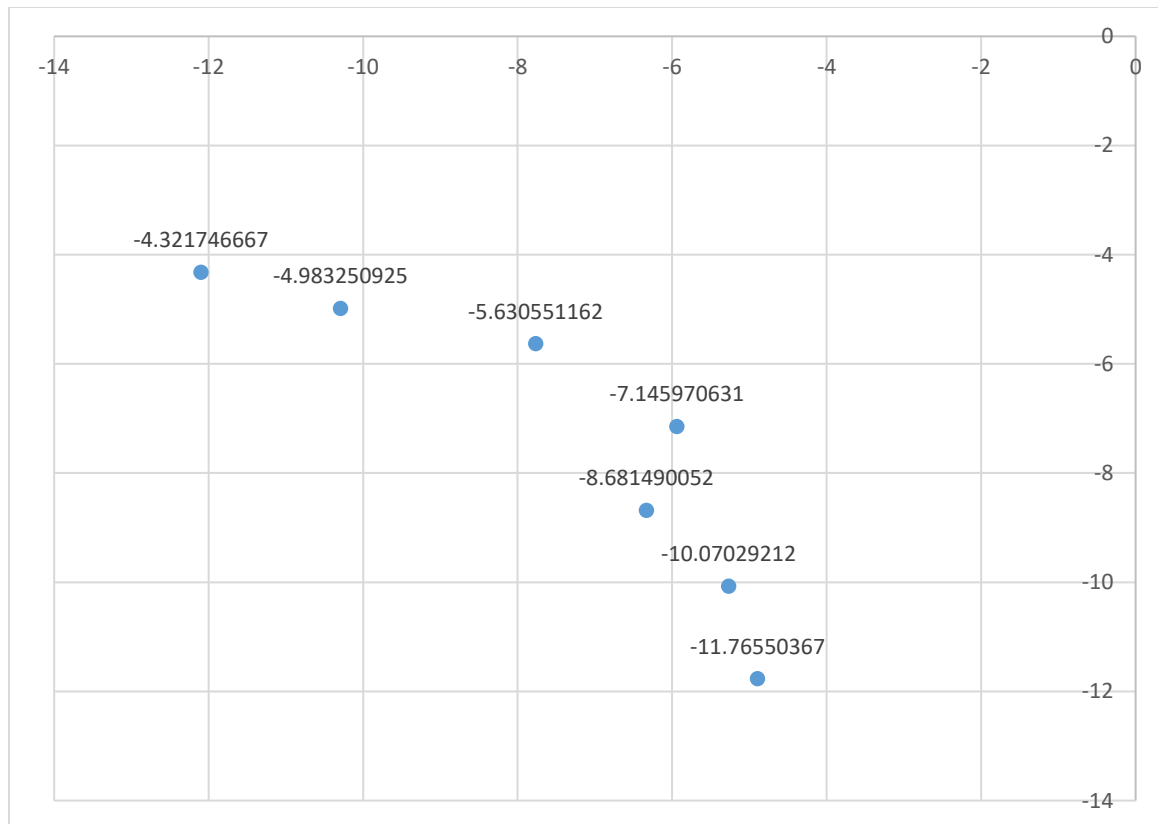


Figure 2: Cause effect diagram.

5. Risks of Supply Chain in International Business

Managers of international supply networks must be alert to and prepared to respond to a wide range of hazards that threaten the supply chain's efficiency and effectiveness. Managers should think about the following frequent dangers:

International supply networks are vulnerable to geopolitical risks such as war, terrorism, economic recession, and regulatory uncertainty. Managers should keep tabs on global events and evaluate how they could affect procurement, shipping, customs, and delivery. International supply networks are vulnerable to economic risks such as fluctuations in currency values, inflation, interest rates, and economic crises in many nations. To lessen the impact of economic risks, managers should examine currency risks, evaluate the financial health of suppliers and consumers, and use hedging methods. Natural catastrophes, pandemics, labor strikes, transportation interruptions, and supplier failures may all cause disruptions in the supply chain. To improve resilience and lessen the effect of supply interruptions, managers should have backup plans, alternate sourcing choices, and supply chain diversification methods in place.

Compliance with varying quality and safety regulations in various countries is a risk inherent in international supply chains. Managers have a responsibility to verify that their suppliers follow all applicable rules and regulations concerning quality, product safety, working conditions, the environment, and ethics. Failure to comply with regulations may result in fines, negative publicity, and interruptions to your supply chain. Intellectual Property (IP) Risks: Securing IP rights in global supply networks may be difficult. Managers should take precautions to protect confidential data, such as trade secrets and patents. This entails being selective about who you work with, setting clear expectations, and actively protecting your intellectual property.

International supply chains have an increased focus on managing ethical and social responsibility hazards. Managers have a responsibility to guarantee that their suppliers uphold human rights, environmental sustainability, and fair labor practices. Damage to a company's reputation, legal trouble, and lost business might result from operating unethically. Threats to Data Integrity and Privacy Electronic data and computer systems are integral parts of global supply networks. Cyber threats, data breaches, and unauthorized access to sensitive information are all issues that need to be addressed by managers. It is critical to safeguard supply chain data by implementing strong cybersecurity protections,

data encryption, and access restrictions. International supply chain operations may be jeopardized by language barriers and other forms of cultural dissimilarity. Managers who are sensitive to cultural norms, language hurdles, and communication styles may help employees from different backgrounds work together more productively. These dangers may be lessened with the use of cross-cultural training and open lines of communication.

Delays, customs complications, port congestion, and theft are just a few of the transportation and logistics hazards that might arise when shipping internationally. Managers need to organize routes, choose dependable carriers, and keep up with the latest security and safety standards in the transportation industry. Transportation and logistics hazards may be reduced via the use of track-and-trace systems and supply chain visibility technologies.

Payment delays, currency fluctuations, credit risks, and working capital management are all examples of financial hazards that may arise in international supply chains. When it comes to managing money, managers should put in place measures like credit risk assessment, financial forecasts, and liquidity management procedures.

Managers may improve the performance and stability of their cross-border supply chains by keeping an eye out for and dealing with these potential threats.

6. Managerial Implications

crucial ramifications for managers in international company supply chain management Strategic Supplier Partnerships: In global supply chains, it is essential to have strong, cooperative partnerships with suppliers. Managers should put forth the effort to cultivate long-term relationships characterized by mutual trust, clear lines of communication, and mutual gain. Supply chain visibility and responsiveness may be improved by measures such as frequent supplier assessments, collaborative planning, and information sharing.

Managers must make tough choices about how much of their supply chain activities should be localized vs. how much should be globalized. Optimizing costs, mitigating risks, and meeting consumer expectations across markets may be achieved via a balance of centralized global procurement and the advantages of local responsiveness.

Resilience and risk management are essential for international supply networks, which face threats from geopolitical unpredictability, natural catastrophes, and supply chain interruptions. Managers should diversify their supply chains, create backup plans in case the primary source of supplies is interrupted, and build other effective risk management techniques to mitigate interruptions.

There is a tangled network of laws, customs processes, and trade agreements that must be followed by every company with an international supply chain. Managers have a responsibility to be abreast of new legal developments, monitor supply chain compliance, and resolve any legal or regulatory hurdles as they arise. This encompasses issues like required paperwork for customs, product safety rules, labor legislation, and ecological statutes. Management of cultural variations and clear communication are essential in global supply chains, therefore cultural intelligence is a must. To work successfully with stakeholders from various nations and cultures, managers should encourage cultural intelligence among team members, learn about cultural subtleties, and adjust communication approaches.

Technology and Digitalization: Utilizing technological and digital resources may improve international corporate supply chain effectiveness, transparency, and decision-making. Managers who want to optimize operations, increase forecasting accuracy, and boost overall performance should keep up with technology developments and invest in suitable supply chain management systems, data analytics tools, and automation solutions.

Diverse and talented employees are necessary for the successful management of a worldwide supply chain. To create a skilled and culturally sensitive supply chain team, managers should provide resources for talent acquisition, training, and development programs. To improve the global supply chain, it is important to provide chances for overseas assignments, language training, and cross-functional training.

Managers should make ethical and sustainable practices a top priority in global supply networks. Fair labor practices, sustainable procurement of resources, low environmental impact, and ethical community engagement are all part of this. Brand reputation, sales, and the number of environmentally and socially aware consumers may all benefit from sustainability programs. Key performance indicators (KPIs) and supply chain metrics must be established and monitored regularly for performance assessment and continual improvement. Managers should examine supply chain data for opportunities to improve efficiency, save costs, and increase happy customers, and then put those improvements into action. Supply chain partners' ability to work together and share information is crucial to the

success of any worldwide firm. Managers should promote open communication, encourage sharing of knowledge, and support cooperation between departments. To promote innovation and boost supply chain performance, businesses should work together by exchanging ideas and sharing knowledge via joint training programmers and other cooperative endeavors.

Decision-makers will benefit from this set of management ramifications since it provides a framework for managing and optimizing their international supply chains in the face of problems, taking advantage of opportunities, and gaining a competitive edge in the global market.

7. Conclusions

In international trade, supply chain management is a deliberate and sophisticated process. Sourcing and procurement, logistics and transportation, trade compliance, inventory management, integrating technology, and mitigating risk are just some of the many obstacles that businesses must overcome. Supply chain processes may be optimized, customer happiness increased, and worldwide business success fueled by careful management of these factors. To help businesses, improve their supply chain management in the global market, this study will go more deeply into these elements. This paper used the neutrosophic set to deal with uncertain data. The neutrosophic set is integrated with decision-making tools to analyze the factors to manage the supply chain in international business. We used the neutrosophic DEMATEL method to analyze these factors. The DEMATEL method is used to show the relationship between factors.

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