

Integration of Business Alliance Strategy in Reducing Fraud Risk in Global Supply Chain: A Systematic Literature Review

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Abstract: *The systematic literature review explores the integration of business alliance strategies as a means to reduce fraud risk within global supply chains. Fraud remains a significant challenge in supply chain management, exacerbated by globalisation and complex interdependencies among stakeholders. The review synthesises existing research on business alliances, highlighting how collaborative frameworks can enhance transparency, trust, and risk-sharing among partners. Key findings indicate that effective business alliances can mitigate fraud risks through improved information sharing, joint risk management practices, and the establishment of robust governance structures. This article contributes to the understanding of how strategic alliances can serve as a proactive approach to fraud prevention in global supply chains, providing valuable insights for practitioners and policymakers.*

Keywords: *business alliance, fraud risk, global supply chain, collaboration, strategic approaches, risk management*

Abstrak: Tinjauan literatur sistematis ini mengeksplorasi integrasi strategi aliansi bisnis sebagai cara untuk mengurangi risiko kecurangan (fraud) dalam rantai pasokan global. Kecurangan (fraud) tetap menjadi tantangan signifikan dalam manajemen rantai pasokan, diperburuk oleh globalisasi dan ketergantungan kompleks di antara para pemangku kepentingan. Tinjauan ini menyintesis penelitian yang ada tentang aliansi bisnis, menyoroti bagaimana kerangka kolaboratif dapat meningkatkan transparansi, kepercayaan, dan pembagian risiko di antara mitra. Temuan kunci menunjukkan bahwa aliansi bisnis yang efektif dapat mengurangi risiko kecurangan melalui peningkatan berbagi informasi, praktik manajemen risiko bersama, dan pembentukan struktur tata kelola yang kuat. Artikel ini memberikan kontribusi pada pemahaman tentang bagaimana aliansi strategis dapat berfungsi sebagai pendekatan proaktif untuk pencegahan kecurangan dalam rantai pasokan global, memberikan wawasan berharga bagi praktisi dan pembuat kebijakan.

Kata kunci: aliansi bisnis, risiko kecurangan, rantai pasokan global, kolaborasi, pendekatan strategis, manajemen risiko

Introduction

Alliance has proven to be one of the effective strategies that organisations use to manage fraud in the global supply chain. These organisations could employ the strategy independently or collaboratively with governments and other private entities. Among various alliance strategies, the integration alliance strategy has emerged as a key approach in managing fraud risk in the global supply chain. This study aims to examine the integration of business alliance strategies by identifying the alliances formed, their purposes, operational mechanisms, and the benefits gained by organisations in mitigating fraud risk.

Fraud is a breach of the honesty principle, which constitutes a core enterprise risk that can offer serious financial harm, necessitated by boards and investors, in which the risk of loss is still underappreciated and downplayed by many organisations. Fraud was considered a major risk within any organisation, indicating that supply chain professionals must build effective anti-fraud measures into their management structure to prevent these types of losses. It alerted us to the reality of financial loss in an organisational supply chain by explaining how a dishonest employee working within an organisation's supply chain is the organisation's greatest strategic risk. Fraud and Behaviour was published for the first time by research journal organisations that show it



without a change in the ethical behaviour of key principles in business, without a climate of business integrity, and without integrating accounting, auditing, and other business education, fraud will lead to the abuse and lose of resources that will rise to a level that requires continuous management of the supply chain. In this context, the study addresses the following research questions:

- a. What specific business alliance strategies have been identified in the literature as effective in reducing fraud risk within global supply chains?
This question explores the range of strategies that organisations can adopt through alliances to combat fraud.
- b. How do these business alliance strategies influence the dynamics of trust and communication among supply chain partners?
This question examines the relational aspects of alliances and their contributions to fraud prevention.
- c. What challenges do organisations face when implementing business alliance strategies to mitigate fraud risk in their supply chains?
This question identifies potential barriers and limitations in applying alliance strategies effectively.
- d. What role does technology play in enhancing the effectiveness of business alliances in reducing fraud risk?
This question investigates how technological innovations, such as blockchain, contribute to the success of these strategies.

The significance of this study lies in its potential to provide practical, theoretical, policy-relevant, and educational insights. Practically, it offers guidance for practitioners to develop and implement strategies that foster trust, improve communication, and enhance transparency, ultimately reducing fraud risk. Theoretically, it contributes to the literature by synthesising and analysing existing research on business alliances and fraud risk, identifying gaps, and proposing directions for future studies. Policymakers and industry leaders may benefit from the findings by understanding the importance of collaborative frameworks and regulatory support for strategic alliances. Furthermore, by raising awareness of the role of alliances in fraud prevention, the study encourages organisations to adopt collaborative approaches and supports educational initiatives on best practices in alliance management.

Overall, this research bridges the gap between theory and practice by providing actionable insights into how organisations can leverage effective collaboration to navigate the challenges of fraud in global supply chains.

Theoretical Foundations

1.1. Business Alliance Strategy

Business alliances are strategic agreements between two or more firms to pursue a set of agreed-upon objectives while remaining independent organisations. These alliances can take various forms, such as joint ventures, partnerships, and collaborations. Aside from its primary goal to create synergies leading to competitive advantages, such as cost reduction, improved innovation, and enhanced market access, this strategy is also pivotal for understanding how organisations can collaborate to mitigate risks, particularly in the context of fraud within global supply chains (Chen and Paulraj, 2004; Doz and Hamel, 1998; Hegedoom, 1993). This strategy emphasises the formation of partnerships that leverage shared resources, knowledge, and capabilities to enhance operational efficiency and security (Chen and Paulraj, 2004; Das and Teng, 2000; Nyaga and

Lynch, 2010; Sodhi, et al, 2012). Several key components that should be established to make a successful business alliance are including trust and cooperation – as it can open communication and resource sharing (Shazi, et al., 2015; Goerzen and Beamish, 2018); shared goals – as these are common outcomes worked towards, which is essential for maintaining commitment and focus (Wang and Rajagopalan, 2015; Teece, 2018); and resource sharing – as it can lead to improved capabilities and reduced operational costs (Luo and Heng, 2018; Inkpen and Tsang, 2016).

1.2. Fraud Risk in Global Supply Chains

Fraud risk in global supply chains is an increasingly critical area of study as organisations face complex challenges arising from globalisation, technological advancements, and intricate supplier networks. This theoretical foundation explores the nature of fraud risks, their implications, and strategies for mitigation.

The global supply chain landscape presents numerous vulnerabilities that can be exploited for fraudulent activities. Key factors contributing to fraud risk include:

- Complexity and global reach – modern supply chains, with their widespread global reach and intricate supplier networks, present a high risk of fraud at multiple stages, including procurement and distribution. The complexity makes it challenging for organisations to monitor all processes effectively, creating opportunities for fraudulent activities to occur without detection.
- Fraud triangle framework – the “fraud triangle” – comprising opportunity, motivation, and rationalisation – offers a key framework for analysing fraud risks. In supply chains, opportunities often emerge due to weak internal controls, whilst motivations may be driven by financial stress or an organisation’s culture. Rationalisation involves justifying unethical actions, often influenced by perceived inequities or intense competitive pressures.
- Technological vulnerabilities – the use of advanced IT systems in supply chains creates new risks, including exposure to cybersecurity threats that enable activities like data breaches and financial fraud. A notable proportion of fraud cases leverage technological weaknesses, underscoring the critical need for strong IT security measures to safeguard against these vulnerabilities (Drunen, et al., 2017).

There are various types of fraud can occur within global supply chains, such as:

- Counterfeiting – the infiltration of counterfeit goods into supply chains presents severe challenges to brand reputation and consumer safety. These fake products often enter through poorly regulated suppliers, particularly in regions with less stringent oversight, such as developing countries (Ghadge, et al., 2021).
- Asset misappropriation – schemes such as fraudulent billing and disbursement involve employees exploiting their roles to steal company assets. According to the Association of Certified Fraud Examiners (ACFE), asset misappropriation is one of the most common types of workplace fraud (Drunen, 2017).
- Collusion and bribery – fraudulent schemes often involve collusion between employees and external parties, resulting in unethical practices like kickbacks or bid rigging. These corrupt activities comprise fair competition and undermine organisational integrity (Drunen, 2017).

Such activities mentioned beforehand can ripple through the supply chain, exacerbating vulnerabilities and amplifying the risks faced by businesses. Hence, the consequences of fraud in global supply chains can be severe, including financial losses impacting profitability and shareholder value, eroding consumer trust and damaging brand reputation which lead to long-term

repercussions for businesses, and resulting an increased regulatory oversight which necessitates costly compliance measures and potentially leading to legal penalties (Drunen, 2017).

To combat fraud risks effectively, organisations should adopt comprehensive strategies such as:

- Thorough supplier checks (due diligence) – conducting detailed evaluations of suppliers can uncover risks early. This includes reviewing their integrity and adherence to ethical standards before forming agreements.
- Strong controls and audits – implementing solid internal systems and frequent audits can catch issues quickly. Training employees on ethical behaviour and encouraging the reporting of suspicious actions are also key steps.
- Advanced technology use – tools like blockchain enhance supply chain transparency by securely verifying product authenticity and transaction details, reducing the likelihood of fraud (Drunen, et al, 2017; Ghadge, et al, 2021; Petratos and Faccia, 2023).

1.3. Fraud Risk Management

In global supply chains, adopting business alliance strategies is essential for mitigating the risk of fraud. By forming partnerships with other organisations, companies can enhance their monitoring systems and exchange information on potential threats. These alliances provide a collaborative framework to address fraud risks effectively, leveraging shared efforts to improve detection, prevention, and management. The mechanisms outlined below highlight how such strategies can be utilised to reduce fraud risks while enhancing transparency and operational security within the supply chain:

- a. Information sharing – alliances facilitate the exchange of intelligence on fraud patterns and risks among partnering firms. This shared knowledge improves the ability to identify fraudulent activities promptly, reducing vulnerabilities in the supply chain (Luo, Gu and Heng, 2018).
- b. Joint risk management – partnering organisations can co-create risk management frameworks, establishing standardised processes for identifying and addressing fraud risks. This joint approach ensures consistency and effectiveness in mitigating threats across the supply chain (Das and Teng, 2000).
- c. Enhanced transparency – technologies such as a blockchain, often adopted in business alliances, offer improved transparency in transactional data. This visibility discourages fraudulent behaviour by making it harder for dishonest actions to remain undetected (Inkpen and Tsang, 2016).
- d. Shared resources and expertise – leveraging combined strengths to enhance security measures (Crichton, et al, 2024; Middle East Institute, 2023).

Research Methodology

The systematic literature review (SLR) is used in this study which thoroughly and comprehensively outlines the comprehensive theoretical concepts, principles, and strategies that are closely associated with the scientific fields of business alliances, reducing fraud risk, and illuminated their intrinsic and intricate relationship with the global supply chain and its utmost importance, significance, and relevance in today's evolving landscape of business operations. Additionally, it also provides a clear and detailed insight into the nuanced and interdependent theoretical connections, correlations, and interplay between the vital terminologies of the alliance and the effective reduction of fraud risk in various organisational contexts and business environments.

The research journal review tool used to ensure that the SLR is transparent, replicable, and scientifically adequate is the *Preferred Reporting Items for Systematic Reviews and Meta-analyses* (PRISMA) 2020 (Page et al, 2021). Particularly, the journal articles were searched using database tools such as Scispace, Web of Science, and ScienceDirect. In the search for journals, the keywords used were business alliance, fraud risk, global supply chain, collaboration, risk management. The criteria used to select journals for inclusion were: (a) journal articles in Indonesian and English published between 2018 – 2024, (b) researches on business alliance strategy and fraud risk management. Content analysis was used to analyse the content of journals and literature references. The flowchart of the PRISMA 2020 search method is shown in Figure 1 below.

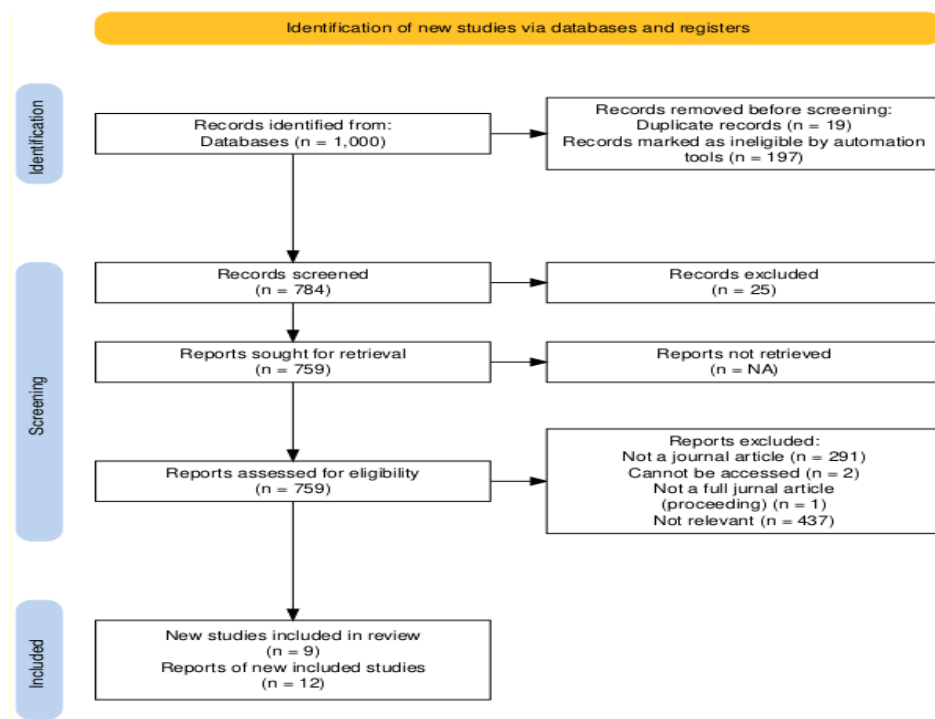


Figure 1 - Flowchart with the PRISMA 2020 search method

2. Findings

The following findings provide critical insights into the effectiveness of various business alliance strategies in reducing fraud risk, the challenges organisations face in their implementation, and the role of technological advancements in enhancing alliance success. The most significant patterns and outcomes identified in the existing literature are explored below:

a. Business alliance Strategy

1. Business alliance strategy and its role in supply chain resilience.

Many studies emphasize the importance of collaboration within business alliances to improve supply chain resilience, particularly in the face of disruptions (Kouvelis, et al., 2023; Nguyen, et al., 2022). Strategic alliances enhance information sharing, trust, and coordination among supply chain partners, which is crucial for preventing fraud. These alliances enable firms to address risks proactively, share resources, and engage in joint problem-solving, thus creating a more resilient and transparent supply chain (Chen & Paulraj, 2004; Goerzen & Beamish, 2018). For instance, a bibliometric analysis by

Münch and Benz (2022) identified that strategic alliances, especially those focused on information exchange, help mitigate relational risks, including fraudulent activities, by fostering transparency and accountability.

2. Trust and communication as key elements in fraud prevention.

The studies consistently highlight that trust and communication within strategic alliances serve as informal governance tools that can reduce fraud risk. In particular, trust between supply chain partners is essential for ensuring transparency and discouraging opportunistic behaviour (Das & Teng, 2000; Shazi et al., 2015). As seen in the study by Farquee et al. (2021), that the integration of trust, combined with digital transformation tools, improves the resilience of global supply chains by enhancing visibility, agility, and recovery capabilities. Despite the advantages of digital technologies, trust remains critical in reducing fraud and maintaining collaborative integrity in global supply chains.

3. Fraud risk management through strategic alliances.

While not all studies explicitly focus on fraud risk management, many indirect references to fraud mitigation were found in the context of managing operational and relational risks. For example, the study on strategic supplier relationships (Nguyen et al., 2023) suggests that collaboration and trust reduce opportunities for fraud by enhancing monitoring capabilities and ensuring ethical behaviour through mutual accountability. Similarly, in the context of multi-tier supply chains, companies that form alliances with suppliers at different levels can better oversee their operations, reducing the likelihood of fraud by establishing stronger controls across the supply chain (Petratos & Faccia, 2023).

4. Leveraging technology to enhance fraud risk mitigation.

Several studies point to the growing role of technology, particularly blockchain, in enhancing transparency and security within supply chains (Drunen, 2017). For instance, the recent researches highlight how improved communication and resource sharing (Shazi, et al., 2015; Goerzen and Beamish, 2018), facilitated by digital platforms (Faruquee et al., 2021), play a significant role in reducing fraud risks by minimising information distortion. These technological advancements not only strengthen the strategic alliances themselves but also provide an additional layer of protection against fraud by ensuring the integrity and authenticity of data within the supply chain.

5. Global supply chain considerations.

The findings underline the importance of forming alliances across the entire supply chain, including lower-tier suppliers, to mitigate fraud risks effectively. Research into the management of multi-tier supply chains stresses the need for oversight beyond first-tier suppliers (Luo & Heng, 2018). Companies must extend their vigilance to suppliers in various regions, where differing regulatory standards can increase vulnerability to fraud. Studies show that global supply chains require a comprehensive, collaborative approach, and the integration of sustainability standards across all levels of the supply chain is essential for building a more fraud-resistant network (Ghadge et al., 2021).

6. Motivation and risk in alliance formation.

A particular insightful finding from the research on online retailing supply chains is the influence of alliance motivations on fraud risk management. The study (2023) found that the financial incentives driving alliances, such as cost-sharing and efficiency gains, could either contribute to a win-win scenario or result in riskier partnerships if not

carefully managed. It indicates that not all alliances are beneficial, as some configurations can lead to adverse outcomes, potentially increasing fraud risks if partners have conflicting interests or if the terms of collaboration are not clear and transparent.

7. Social exchange theory and fraud risk.

The conceptual framework based on exchange theory, as presented in Münch and Benz (2022), sheds light on the power dynamics, reciprocity, and trust that influence the success of strategic alliances. By applying this theory, it becomes evident that fraud risk is mitigated when partners adhere to equitable terms and demonstrate commitment to the relationship. This reinforces the idea that alliances should be structured to ensure that all parties benefit fairly, with clear expectations of resource-sharing and risk management (Shazi et al., 2015; Goerzen & Beamish, 2018).

b. Fraud Risk Management

1. Business Alliance strategies in fraud risk reduction.

Several studies highlight the critical role of business alliance strategies in reducing fraud risk within global supply chains. The formation of strategic alliances allows companies to share resources, knowledge, and capabilities to strengthen their anti-fraud mechanisms (Chen & Paulraj, 2004; Das & Teng, 2000). Information sharing and joint risk management frameworks, as outlined by Luo et al. (2018) and Das & Teng (2000), enable companies to detect and respond to fraudulent activities more effectively. For example, in the dairy supply chain, strengthening collaboration between industry stakeholders, regulators, and researchers was identified as crucial for maintaining product safety and integrity (Ghadge et al., 2021). Similarly, in the honey supply chain, the importance of trust and collaboration among supply chain partners was underscored as a vital strategy for managing food fraud (Middle East Institute, 2023). These findings align with the theoretical framework of business alliance strategies, which suggest that fostering trust and cooperation can lead to better resource sharing and enhanced security measures (Shazi et al., 2015; Goerzen & Beamish, 2018).

2. The role of trust and communication in fraud risk management.

Effective fraud risk management in global supply chains is deeply intertwined with trust and communication. Research indicates that transparent communication and the building of trust among supply chain partners are pivotal in reducing fraud risks. In the context of global supply chains, trust not only facilitates smoother collaboration but also ensures better response mechanisms to fraud risks (Shazi et al., 2015). For instance, the study on fraud within the Asia-Pacific honey supply chains pointed out the need for cost-sharing contracts to foster trust and better alignment among firms (Middle East Institute, 2023). Furthermore, effective communication channels were identified as crucial for anticipating and managing security threats in supply chains, as seen in the application of strategic communication in criminological approaches to mitigate illicit trade and cyber threats (Petratos & Faccia, 2023).

3. Challenges in implementing business alliance strategies.

Despite the apparent benefits of business alliances, challenges remain in the implementation of these strategies. These challenges primarily stem from organisational barriers, such as differing corporate cultures, lack of alignment in objectives, and the complexity of managing multiple stakeholders across different geographical regions. The study on operational risk management in financial

institutions (Bazel II/III) highlighted the difficulty of integrating risk management strategies in organisations, particularly when dealing with limited or hard-to-collect data, which can affect the accuracy of fraud risk assessments (Drunen et al., 2017). In the global supply chain context, such challenges are exacerbated by the complexity of managing diverse suppliers and partners, which increases the risk of fraud going undetected.

Additionally, the lack of cost-sharing agreements in certain supply chains, such as the honey supply chain (Middle East Institute, 2023), was identified as a key barrier that hinders effective fraud prevention strategies. This highlights the necessity of aligning financial and operational interests among all supply chain members to ensure a collective and sustained effort in fraud mitigation.

4. The role of technology in fraud risk management.

Technology plays a pivotal role in enhancing the effectiveness of business alliances in reducing fraud risks. Blockchain, for example, has been identified as a game-changing technology that provides enhanced transparency in transactional data, making it more difficult for fraudulent activities to remain undetected (Inkpen & Tsang, 2016). Studies examining fraud risk management in the dairy sector, such as the use of blockchain to track product authenticity, underscore the growing importance of technology in improving supply chain security (Ghadge et al., 2021; Drunen et al., 2017). Furthermore, the integration of machine learning and artificial intelligence in financial fraud detection, as explored in the literature review by Drunen (2017), demonstrates the growing role of advanced technologies in detecting financial fraud in supply chains. The application of enterprise risk management frameworks, such as COSO ERM, also suggests that technology can help organisations systematically assess and address fraud risks in real-time, improving the agility and accuracy of fraud prevention measures (Petratos & Faccia, 2023).

5. Key fraud types and mitigation strategies.

Fraud within global supply chains manifests in various forms, including asset misappropriation, collusion, counterfeiting, and document fraud. Each of these fraud types presents unique challenges in terms of detection and mitigation. For instance, asset misappropriation, such as fraudulent billing and disbursement schemes, was identified as one of the most common types of workplace fraud (Drunen, 2017). Mitigating such risks requires robust internal controls, regular audits, and employee training on ethical behaviour.

The study on food fraud within the honey supply chain highlighted document fraud, such as falsified quality test results, as one of the most prevalent fraud types (Middle East Institute, 2023). Random validation of supplier-provided test results and targeted sampling were recommended as strategies to mitigate these risks.

c. Supply Chain Management

1. Business Alliance Strategies in Supply Chain Management.

Business alliances have emerged as a key strategy in managing fraud risks across supply chains. These strategic partnerships, whether independent or collaborative with governments and private entities, allow companies to benefit from shared knowledge and capabilities, leading to enhanced operational security and reduced fraud exposure. Key components that facilitate successful alliances include trust, cooperation, and resource sharing (Chen and Paulraj, 2004; Shazi et al., 2015). Trust is particularly vital,

as it fosters open communication and enhances transparency between partners, which is crucial for identifying and addressing potential fraudulent activities.

In the context of global supply chains, alliances facilitate the exchange of intelligence regarding fraud patterns, enabling partners to detect risks early and implement preventative measures (Luo, Gu, and Heng, 2018). The collaborative nature of these alliances ensures that risks are managed more effectively through joint risk management frameworks and shared expertise (Das and Teng, 2000). Technologies such as blockchain, which enhance transparency and traceability, play a significant role in fortifying these alliances, making it harder for fraudulent activities to go unnoticed (Inkpen and Tsang, 2016).

2. The Role of Technology in Reducing Fraud Risks

Technology plays a pivotal role in strengthening business alliances and improving fraud risk management. Innovations such as blockchain technology enable secure, transparent tracking of transactions and goods, reducing the opportunity for fraud within the supply chain (Drunen et al., 2017; Petratos and Faccia, 2023). Blockchain's ability to provide immutable records ensures that all parties within the supply chain can verify the authenticity of products and transactions, thus mitigating risks related to counterfeit goods and financial fraud (Ghadge et al., 2021).

Additionally, advanced data analytics and Internet of Things (IoT) technologies support proactive monitoring, which allows for real-time identification of fraud risks and quicker responses to potential threats (Petratos and Faccia, 2023). By integrating these technologies within supply chain alliances, companies can establish more robust mechanisms for fraud prevention.

3. Challenges in Implementing Business Alliance Strategies

Despite the clear advantages, the implementation of business alliance strategies in managing fraud risk is not without its challenges. One significant barrier is the complexity of managing relationships across diverse global supply chains, where cultural differences, regulatory variations, and varying levels of trust can complicate collaboration (Das and Teng, 2000). Moreover, the need for consistent communication and a shared understanding of fraud prevention measures requires a high degree of coordination, which can be resource-intensive.

Another challenge lies in the vulnerability of certain stakeholders in the supply chain, particularly when dealing with suppliers in regions with less stringent regulatory oversight. For instance, the risk of counterfeiting is heightened in areas where there is insufficient monitoring of supplier practices (Ghadge et al., 2021). In such cases, alliances must prioritise the development of strong due diligence processes and supplier selection criteria to mitigate risks effectively (Drunen, 2017).

4. Influence of Business Alliance Strategies on Trust and Communication

Business alliance strategies significantly influence the dynamics of trust and communication within supply chains. Collaborative partnerships facilitate the exchange of valuable information, which not only improves fraud detection but also enhances the overall security and resilience of the supply chain. The establishment of mutual goals and shared resources strengthens the bond between partners, making it easier to coordinate actions and ensure that anti-fraud measures are consistently enforced (Wang and Rajagopalan, 2015).

The emphasis on trust within alliances creates an environment where supply chain partners feel confident in sharing sensitive information regarding fraud risks. This mutual trust is essential for creating an atmosphere of transparency, which ultimately reduces the likelihood of fraudulent activities being concealed (Shazi et al., 2015).

5. Impact of Fraud Risk on Supply Chain Sustainability

Fraud risk in global supply chains can have far-reaching consequences, including financial losses, damaged reputations, and legal penalties. The studies reviewed indicate that fraud can exacerbate vulnerabilities within the supply chain, especially when organisations fail to implement effective fraud management strategies. For example, counterfeiting, asset misappropriation, and collusion between employees and external parties can severely disrupt operations and damage the trust between supply chain partners (Drunen, 2017).

Moreover, as organisations face increasing pressure from regulatory bodies and consumers to ensure ethical practices, the long-term sustainability of the supply chain becomes jeopardised in the absence of proactive fraud risk management. A failure to address these risks can lead to significant reputational damage, which in turn can reduce market share and profitability (Drunen et al., 2017).

6. Strategic Recommendations for Mitigating Fraud Risk

To address these challenges, organisations should adopt a comprehensive approach to fraud risk management that incorporates both internal controls and external collaborations. The study suggests that building strong alliances with key partners, enhancing transparency through technological innovations, and sharing intelligence on potential risks are essential steps in reducing fraud in global supply chains. Additionally, organisations should invest in training and capacity-building efforts to ensure that all parties involved are aware of the fraud risks and the steps necessary to mitigate them.

In conclusion, the integration of business alliances within supply chain management provides a robust framework for combating fraud risk. Through trust, cooperation, and the strategic use of technology, organisations can enhance the resilience of their supply chains, ensuring both operational efficiency and fraud prevention.

Discussion and Implications

2.1. Theoretical Contributions

This study provides significant theoretical contributions by exploring the integration of business alliance strategies within the context of global supply chains. It enhances the existing literature by showing how strategic alliances can not only create synergies and competitive advantages but also contribute to managing risks such as fraud, inefficiencies, and disruptions within complex supply chains. By examining different alliance strategies—ranging from joint ventures to collaborative partnerships—this research sheds light on how these strategies help organisations improve operational transparency, trust, and resource sharing. Moreover, the study integrates emerging technologies, particularly blockchain, into the framework of business alliances, offering a contemporary perspective on how technology can bolster alliance effectiveness. The findings also contribute to the understanding of the relational dynamics in alliances, particularly how shared goals, communication, and mutual cooperation shape the overall success of fraud risk mitigation in global supply chains. This research identifies gaps in the current

literature, particularly regarding the long-term impacts and scalability of business alliances in diverse industries, suggesting pathways for future research to explore these areas further.

2.2. Managerial Implications

For managers, this study offers valuable insights into how integrating business alliance strategies can strengthen global supply chains and mitigate operational risks, including fraud. Managers are encouraged to leverage alliances to enhance supply chain transparency, increase trust, and foster better communication with partners. The research highlights the importance of aligning shared goals and resources in order to create resilient, secure, and efficient supply chains. Furthermore, the study suggests that adopting technologies like blockchain can significantly improve the security and traceability of transactions, which are critical for reducing vulnerabilities. Managers should also focus on developing strategic collaborations that go beyond traditional supplier relationships, ensuring a comprehensive approach to risk management. By proactively addressing the challenges of collaboration, such as trust-building and cultural differences, companies can better align their efforts to manage risks effectively. Overall, the integration of business alliance strategies allows organisations to not only mitigate fraud risks but also improve operational efficiency, competitiveness, and long-term sustainability in the global market.

Conclusion

Summary of Key Findings

1. Business alliance strategy:

Strategic business alliance offer a powerful framework for managing fraud risk in global supply chains. By fostering trust, enhancing communication, leveraging technology, and ensuring fairness across partnerships, organisations can create more resilient and transparent supply chains. The integration of these strategies not only strengthens the alliance itself but also plays a crucial role in reducing fraud risks that threaten supply chain integrity. Future research could further explore the specific mechanisms through which trust and digital tools collaborate to combat fraud in supply chains, especially in multi-tier and global contexts.

2. Fraud risk management:

Business alliances represents a key strategy for mitigating fraud risk in global supply chains. Through enhanced collaboration, trust, and communication, organisations can more effectively manage fraud risks while benefiting from shared resources, expertise, and technological innovations. However, challenges remain, particularly in aligning objectives across diverse partners and overcoming organisational barriers. Technology, particularly blockchain and machine learning, plays a vital role in enhancing transparency, detecting fraud, and ensuring that fraudulent activities are quickly identified and addressed. As organisations continue to grapple with the complexities of global supply chains, strategic alliances and technological advancements will remain critical in their efforts to manage and mitigate fraud risks effectively.

3. Supply chain management:

In conclusion, this study emphasises the critical role of business alliance strategies in managing fraud risks within global supply chains. Effective collaboration, supported by technologies like blockchain, enhances transparency, reduces fraud opportunities, and strengthens overall supply chain security. By sharing resources and intelligence, companies can better detect, prevent, and manage fraud, fostering a more resilient supply chain environment.

However, implementing these strategies poses challenges, such as the complexity of global supply chains and the need for trust and communication among diverse partners. Additionally, regions with weaker regulatory oversight increase fraud risks, making it harder to establish strong anti-fraud mechanisms. Despite these challenges, organisations that invest in transparent and cooperative partnerships are better positioned to mitigate fraud risks effectively.

Technological advancements, including blockchain and data analytics, offer opportunities to enhance alliance effectiveness by providing secure, traceable records that reduce fraudulent activities. Proactive risk management through due diligence, audits, and collaboration is also crucial.

The findings suggest that a holistic approach to fraud risk management, combining internal controls with external collaborations, is essential. Strategic alliances not only mitigate fraud but also improve operational efficiency, market access, and long-term sustainability. In an era of increasingly sophisticated fraud risks, integrating business alliance strategies is vital for protecting supply chains and maintaining stakeholder trust.

This research bridges theory and practice, offering actionable insights for organisations to strengthen their fraud risk management strategies. By prioritising collaboration, transparency, and technology, businesses can navigate the complexities of global supply chains and safeguard against fraud's potentially devastating effects.

Limitations and Future Research Directions

This study presents several limitations that should be considered when interpreting its findings. First, the research relies heavily on secondary data and theoretical analysis, which may not fully capture the practical challenges and complexities of implementing business alliance strategies in real-world supply chains. Additionally, the sample size and industry focus may limit the generalisability of the findings, particularly to industries or regions with less technological sophistication or different operational models. The absence of empirical case studies further restricts the ability to assess the real-world applicability and success of the proposed strategies. Moreover, while the study discusses various types of fraud risks, it does not explore all potential fraud scenarios, particularly those specific to certain sectors or supply chains involving third-party intermediaries. The study also focuses on emerging technologies like blockchain, which may not yet be adopted universally, thus limiting its relevance to organisations still in the early stages of implementing such technologies.

Further, the research assumes that collaboration among supply chain partners is a universally effective strategy for mitigating fraud, without addressing potential challenges such as trust issues, cultural differences, or competitive conflicts. The study also narrows its scope to specific fraud risk management frameworks, such as the fraud triangle, without considering alternative or additional frameworks that might be more relevant in other contexts. Additionally, the rapidly evolving nature of technology means that some of the technological solutions discussed may soon become outdated, limiting the long-term relevance of the findings. Finally, the research does not assess the long-term sustainability or effectiveness of the strategies proposed, leaving open questions about their continued success in evolving supply chain environments.

Given the complexity and dynamic nature of global supply chains, future research could further explore the impact of various technological innovations on fraud prevention in specific industries. Additionally, studies focusing on the barriers to successful implementation of business alliance strategies—such as cultural differences, regulatory challenges, and organisational resistance—could offer deeper insights into the practical hurdles faced by firms. Expanding

research to include case studies and real-world examples could also provide more detailed evidence of the strategies' effectiveness in diverse supply chain contexts.

By continuing to investigate these areas, researchers can help refine and develop more tailored approaches to managing fraud risks in global supply chains, ultimately contributing to the development of more secure, transparent, and resilient business environments.

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