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Platform-Based Supply Chain Coordination: A Bibliometric Analysis and Future Research Directions

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Abstract

Supply chains that utilize platforms are causing a shift in global commerce by enabling interoperability in real time among manufacturers, service providers, and consumers. However, the published research is scarce in the literature regarding contract mediation of digitally mediated supply chains and fragmentary among the sub disciplines of operations, information systems, and strategy. This article is a first attempt to address those gaps by employing bibliometric and network analysis to systematically review the digitally mediated supply chains through contracts literature from the period of 2010 to 2025, including the 99 peer-reviewed published articles relevant to this review. Our analysis shows that the literature consists of three fragmented but predominant clusters in the themes of analytical models of contracts, governance using blockchain, and contracts related to sustainability, including reverse logistics. Institutional publications by country based on density indicates that China was the predominant research publishing country (70.71%) despite the smaller volumes of the U.K. and Hong Kong, which have been highly cited. Concerning the literature, there remains considerable gaps regarding interoperability on digitally connected platforms, governance in an uncertain environment, enforceability of smart contracts, and competition and governance associated with platforms. In summary, this paper contributes by organizing the literature and providing a reasonable research agenda to Build Theory and Practice in the digitally mediated context, while respecting the digitized environment.

Keywords
Platform, supply chain, Contract, coordination, Blockchain governance, Bibliometric analysis

1. Introduction
In the past decade, platform-based supply chains have brought about seismic changes in business organization and competition. Platforms such as Amazon, Flipkart, Uber, and Zomato function based on marketplace, or reselling, models enabling users to scale quickly, capture data in real time and make coordinated decisions in contexts that are not geographically bounded. Rather, platforms are algorithmically managed networks, tying together logistics and pricing, and governance.

Industrial supply chains were designed largely to buffer risk and uncertainty providing firm stability, whereas digital platforms require even more coordinative and responsive processes, where prices inductively shift in response to feedback loops that shape supply and demand. As these shifts occur, the growing use of revenue sharing contracts, blockchain enabled contracts and fluid policies all reinforce that supply chains are becoming both continuously responsive, reactive and coordinated processes.

The linear vulnerabilities in supply chains exposed in our recent global disruption most notably COVID-19 and increasingly appearing geopolitical tension have accelerated the transition into platform-based organizations and practices. Policymakers and corporations are now gravitating to digital platforms as a fundamental component of supply chain resilience and competitiveness. With this shift, contracts that govern these platforms coexist as an essential part, rather than an ancillary element to, modern supply chain governance. However, even with these events unfolding, research on the contracts is scattered across several management disciplines and studied without theoretical integration in one coherent, logical research flow. The domain needs to draw together literature to provide an opportunity to identify intellectual underpinnings, lead authors/contributors, and future research directions in this domain.

In response for this need, the current paper employs bibliometric and network analysis on 99 peer-reviewed research papers published in key management and logistics journals from 2010 to 2025. The specific research questions guiding this inquiry are:

RQ1: What are the intellectual contributions and main themes in the literature around contracts to coordinate platform-based supply chains?

RQ2: Who are the lead authors and countries and how are they connected to the general body of literature?

RQ3: What future research directions might lead the scholarly and managerial research agenda for examining platform-based supply chain coordination?

Through answering the research questions, the paper will contribute to clarifying this fragment literature, map out intellectual development, and propose a systematic research agenda for future research.

2. Research Methodology

This paper utilizes a systematic bibliometric approach to review and synthesize literature related to contracts for platform-based supply chain coordination. In following the direction of Merigó and Yang (2017), this methodology contains three sequential steps: database selection, data refinement, and bibliometrics analysis.

2.1 Database Selection and Search Strategy

Scopus was the chosen primary source due to its extensive multidisciplinary coverage and utility across academic disciplines. The period setting is from 2010 to 2025 to account for early conceptualizations and more recent developments on platform-based supply chain coordination. For comprehensive retrieval, keyword combinations with specific Boolean operators were created to enable disparate terminology across disciplinary communities (see Table 1).

Table 1: Keyword Combinations for Scopus Search

Serial No.	Keyword Combination	Rationale
1	"platform" AND "supply chain"	Basic combination targeting platform-based supply chains
2	("platform" OR "platform-based") AND "supply chain"	Inclusion of platform terminology variants
3	"platform" AND "supply chain" AND "coordination"	Focus on coordination mechanisms in platform settings
4	"platform" AND "supply chain" AND "contract"	Focus on contracts in platform-based supply chains
5	("platform" AND "supply chain") AND ("coordination" OR "contract")	Capture studies on coordination or contracts
6	("platform" OR "platform-based") AND ("supply chain" OR "supply chains") AND ("coordination" OR "contract")	Comprehensive inclusion of plural forms and synonyms

7	("platform" AND "supply chain") AND ("coordination" AND "contract")	Studies addressing both coordination and contract aspects

2.2 Data Refinement and Inclusion Criteria

The original search generated 111 documents. Screening took place against a rigorous set of inclusion criteria:
• Peer-reviewed journal article (not conference papers do not review)
• English language articles
• Direct focus on platform-based supply chains, contracts, coordination, or governance mechanisms
• Published between 2010 - 2025
The exclusions that were also applied:
• Conference papers.
• Duplicates
• Non-supply chain management studies
• Non-English publication
This left a dataset of 99 unique peer-reviewed journal articles, from 253 authors published in 56 journals and sources.

2.3 Data Characteristics

Main Dataset Characteristics are presented in Table 2.

Table 2: Main Dataset Characteristics

Characteristic	Value
Temporal Span	2010–2025 (15 years)
Number of Sources (Journals)	56
Total Documents	99
Annual Growth Rate (%)	11.25
Average Document Age (years)	3.59
Average Citations per Document	23.01
Total References	4,507
Keywords-Plus (Indexed)	549
Author-Supplied Keywords	308
Total Authors	253
Single-Authored Documents	3
Co-Authors per Document	3.34
International Co-Authorship Rate (%)	31.31
Research Articles	98
Review Papers	1

2.4 Analytical Methods

Bibliometric and network analysis procedures were carried out with the Bibliometrix R package (version 5.0.1) through the Biblioshiny interface. The specific methodology was a fit to the research questions:

• **For RQ1**: The keyword co-occurrence analysis, the thematic mapping, and cluster analysis were used to generate the conceptual structure and major topics in the field.

• **For RQ2**: Trends in authorship, co-authorship networks, and collaboration at the country level were analyzed to reveal the intellectual and social structure of the research community.

• **For RQ3**: Changes in keywords over time and identification of emerging thematic clusters were analyzed to understand development in the field and also to identify potentially future research directions.

This mixed-method approach provides both descriptive coverage and interpretive understanding of the intellectual and structural evolution of this developing field in collaboration by platform-based supply chain.

3. Results and Discussion

3.1 Publication Trends

Figure 1 depicts the research trajectory of supply chain coordination by platforms. Between 2010 and 2017, research publications on platform-based supply chain coordination were limited and sporadic. The few studies during this period indicated the immaturity of this research field. After 2018, however, the rate of publication grew rapidly, and it peaked in 2023. This rapid growth represents growing academic and organizational interest in digital governance structures, algorithmic coordination, and blockchain-enabled contracts.

The trend toward research on platform-based supply chain coordination after 2020 shows a clear shift in the focus of enquiry from traditional buyer–supplier contracts to governance mechanisms at the level of platforms, or networks, within ecosystem contexts. This trend resonates with a broader literature on data-driven governance and platforms as mechanisms for coordination, particularly given the necessity for more resilient and adaptive characteristics to supply chains, post-COVID-19.

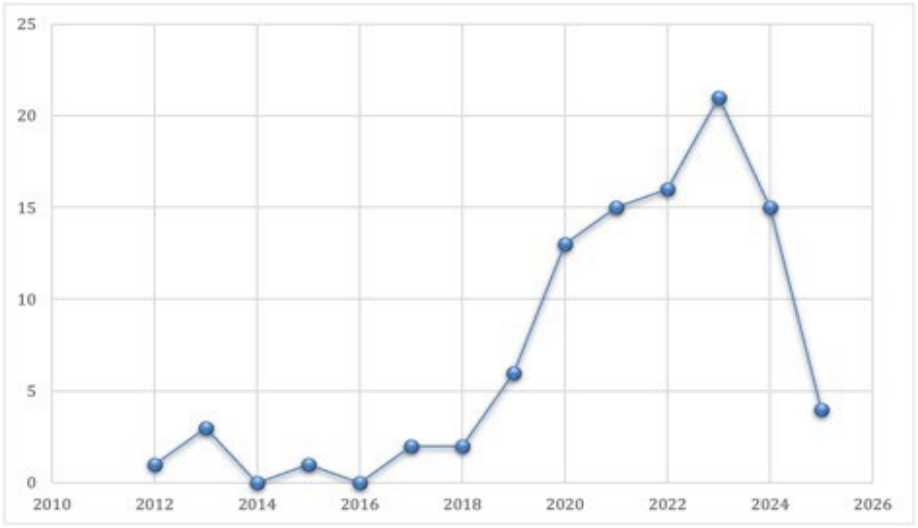

Figure 1: Number of Articles Published per Year (2010–2025)

3.2 Leading Journals and Publication Venues

Research on supply chain coordination in a platform context has appeared in 56 academic journals. The research has mainly been published in higher ranked journals in operations management, supply chain management, and information systems. Table 3 lists the top 10 journals by number of published articles and citation impact.

Table 3: Top 10 Journals Publishing Platform-Based Supply Chain Research

Journal Name	Number of Articles	Total Citations	Average Citations per Article
Sustainability	8	96	12
Transportation Research Part E	6	192	32
Complexity	5	61	12
European Journal of Operational Research	4	261	65
International Journal of Production Economics	4	129	32
Mathematics	4	52	13

Computers and Industrial Engineering	3	116	39
International Journal of Production Research	3	279	93
Sage Open	3	41	14
Asia-Pacific Journal of Operational Research	2	26	13

Although Sustainability has the highest overall output because of its coverage of a wider range of supply chain sustainability themes, journals with a strong operational research basis—especially in the International Journal of Production Research and the European Journal of Operational Research—have the highest intellectual impact. The International Journal of Production Research with 279 citations (93 citations per article) and the European Journal of Operational Research with 261 (65 citations per article) are valuable locations for developing theoretical and empirical work in platform-based supply chain coordination. Transportation Research Part E (6 articles, 192 citations) also represents another impactful location for empirical and model-based studies on digital governance of the supply chain.

3.3 Key Authors and Influential Contributors

The research community involved in platform-based supply chain coordination includes 253 scholars with differing influence and citation impact. The data in Table 4 lists the top 10 contributors ranked by their overall scholarly impact measures (h-index, g-index, and m-index).

Table 4: Top 10 Authors by Local Citation Impact

Author	H-Index	G-Index	M-Index	Total Citations	Number of Publications	Start Year
Wang Y	9	13	1.13	553	13	2018
Shen L	6	7	0.86	458	7	2019
Yu Z	5	5	0.71	166	5	2019
Cheng TCE	4	5	1.00	152	5	2022
Guo Y	4	4	0.29	31	4	2012
Xu X	4	4	0.67	286	4	2020
Zhang J	4	6	0.36	280	6	2015
Choi TM	3	3	0.60	264	3	2021
Fan R	3	3	0.50	301	3	2020
Li M	3	3	0.75	21	3	2022

Analysis: Wang Y appears to be the most significant academic in this field, with a highest h-index (9), g-index (13), and high m-index (1.13) showing consistent output levels, and notably, sustained citation impact over longer careers in this body of work. Shen L holds the second highest h-index of 6 and g-index of 7 and represents a substantial contribution to applied studies on coordination in e-commerce platforms.

Emerging scholars such as Yu Z and Cheng TCE are also demonstrating good momentum with m-indices of 0.71 and 1.00, respectively, suggesting they have made significant contributions to the field and have recently emerged as productive scholarship, although they have recently entered the field (2019 and 2022, respectively). Their swift accumulation of citations indicates they are generating new avenues for future digital governance and smart contracts.

Key Pattern: Author structure has a bifurcated pattern - a concentration of authority among some established scholars (Wang Y, Shen L, Xu X) and a diverse pool of newer scholars (Yu Z, Cheng TCE), which are contributing to the field in new topical areas that stem from blockchain integration, smart contract design, and emergent sustainable coordination mechanisms associated with the integration of blockchains in social infrastructure. The dual author impact of consolidation and diversification indicates a growing research community with established intellectual pathology, whilst maintaining good productive capacity for emerging knowledge area, closely aligning to RQ2 with associated impact attested to leading authorship and intellectual contribution.

3.4 Keyword Analysis and Conceptual Structure

According to Figure 2, examining 2,365 unique keywords provides a clear understanding of the intellectual core and development of the field. The most frequently noted terms: supply (369) and chain (344) indicate that supply chain management serves as a high-level academic discipline. Additionally, associated keywords such as platform (218), contract (195), and coordination (148) reinforce the significance of contractual mechanisms and structures of coordination for platform-based supply chains. The methodological focus of the literature is further revealed by the prevalence of key terms such as model (140), optimization language (optimal, 99), and topical domains (e-commerce, 130) that are ubiquitous terms that signal a literature rooted in analytical modeling, and operations research.

New ideas like sharing (54), blockchain (49), and low carbon (39) show a slow but noticeable change in research interest away from contractual models to digitally enabled, sustainability concepts in the supply chain. We can see that while the field is building on previous academic traditions in operations research, and contract theory, it is more easily pursuing in new areas of digital governance, environmental principles, and emerging technologies.

The keyword patterns are clearly providing data for RQ1 (academic contributions and themes) and RQ3 (emerging research topics), and key concepts have gained conceptual consolidation in the discipline and are evolving into new frontiers of supply chain management.

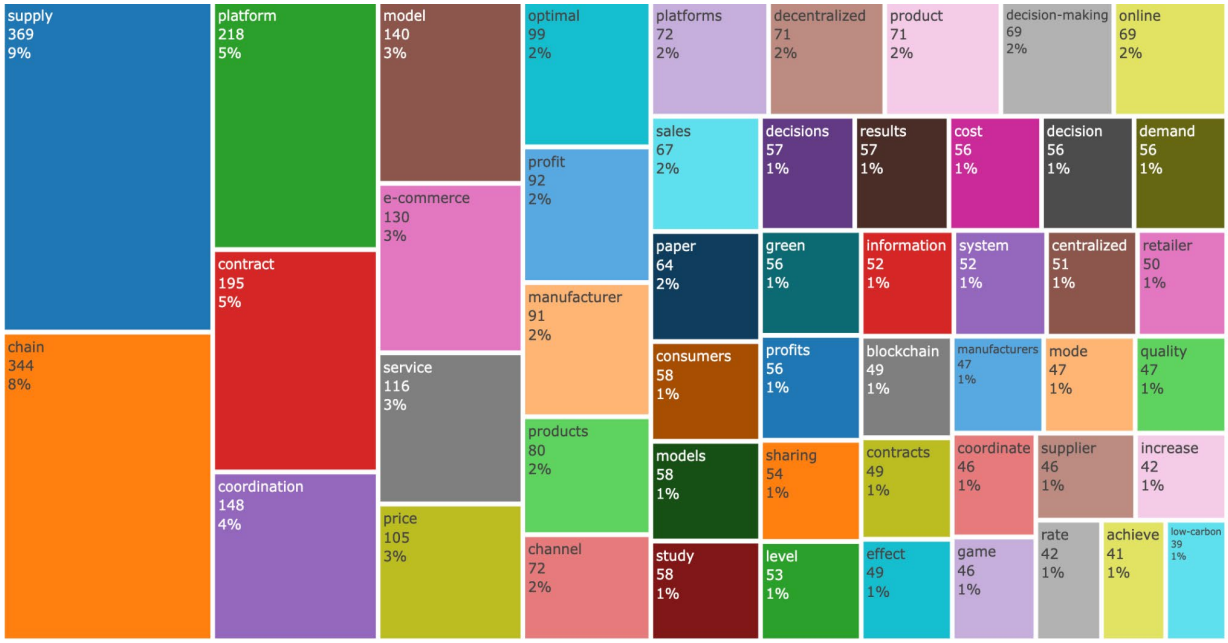

Figure 2: Treemap of High-Frequency Keywords

3.5 Geographic Contributions to the Field

The investigation of geographic distribution indicates pronounced asymmetries in the research output (Table 5) around the globe, looking at volume, international collaboration rates, and geographic patterns by country.

Table 5: Country-Based Analysis of Research Outputs and International Collaboration Rates

Country	Number of Articles	Percentage of Total	Single-Country Publications	Multi-Country Publications	International Collaboration Rate (%)
China	70	70.71	48	22	31.43
USA	6	6.06	3	3	50.00
India	5	5.05	5	0	0.00

United Kingdom	4	4.04	2	2	50.00
Australia	2	2.02	1	1	50.00
Hong Kong	1	1.01	0	1	100.00
Israel	1	1.01	1	0	0.00
Switzerland	1	1.01	0	1	100.00

Geographic Patterns show three patterns emerge from this geographic analysis:
1. China Dominates Volume: China leads considerably in volume with 70 publications (70.71% of the total) due in part to China's notable domestic research capacity and supportive domestic institutions. However, China's relatively low rate of international collaboration in published research (31.43%) suggests that research in China occurs largely through domestic research networks when there is a lack of cross-fertilization of ideas across cultures.

2. Quality-Augmented Collaboration in Developed Economies: The United States and United Kingdom produced fewer papers (6 and 4 respectively) yet had admirable rates of international collaboration (50% each). The extent to which these countries of origin achieved a specific quality of scholarship through collaboration was improved by systemic stability, allowing for more national integration and contribution to the scholars' larger networks and more ongoing agreements as collaborators.

3. Highly Engaged Smaller Contributors: Hong Kong and Switzerland each produced only one publication, but they achieved substantially high rates of collaboration (100% international collaboration rates), and arguably all the reputational capital and enhanced visibility can be accounted for by having collaborations across borders. They are not volume producers; instead, they represent a specialized, high-performing intellectual contributor group.

Concerns about India in global research networks are increasing. India produced five publications (5.05%) in the dataset analyzed. None of these publications had any evidence of cross-country collaborations. This is notable given the current rapid pace of growth that India is experiencing digitally, with India's e-commerce sector being a global success. This juxtaposition suggests that India's advancements in technology and innovation are not quite there when it comes to cross-country collaboration in research. However, it provides India a promising opportunity for strong academic affiliation and international partnership. The findings suggest that research influence is not only a function of publications produced, but of international collaboration and research affiliation in influencing reach, visibility and quality of scholarship. This finding connects to RQ2, which speaks to the underlying structures and processes of research ecosystems that depend on communities of researchers and geographical diversity.

3.6 Citation Impact by Country

Impact Analysis: The above Table 6: shows there are important differences between volume and impact. China has a significant lead in absolute citation counts (1,584 total citations), although the citation impact per article (22.6 citation impact average) remains low. The United Kingdom has a relatively higher impact per article, but fewer overall papers, and averages 43 citations per article (nearly double Company A). Hong Kong and Switzerland provide outlier instances where the country published only one paper but had a vastly different total citation impact (141 and 74 citations). Citation impact per paper tells us that if scholarship is focused on even modestly original or conceptually discernible new work, it can achieve a relatively high mark for visibility (we will argument on the subpoint). The United States and India are symmetrical to each other with organized 'overall'/total citation count and moderate averaged (and even lesser) averaged citation counts per article 18.0 and 19.6 respectively.

Table 6: Citation Impact Analysis by Country

Country	Total Citations	Average Citations per Article
China	1,584	22.6
United Kingdom	172	43.0
Hong Kong	141	141.0
USA	108	18.0
India	98	19.6
Switzerland	74	74.0
Israel	8	8.0
Australia	7	3.5

Strategic Implication: Results here show scholarly impact of works does not solely resolve around volume; fewer countries and fewer research groups can establish themselves as intellectual beacons of significance with a great degree of scholarly upon production of singular papers with generally high quality or novelty of ideas or concepts. This aspect of the argument extends RQ3 that there is future research avenues opened not solely by producing research but by producing ideas and frameworks that would bring higher rates of intellectual readership and community adoption.

3.7 Co-occurrence Analysis and Thematic Clustering

Analyzing keywords and concepts' co-occurrence identifies the discipline's intellectual core in the context of supply chain coordination in a platform-based ecosystem. The co-occurrence network is displayed in Figure 3.

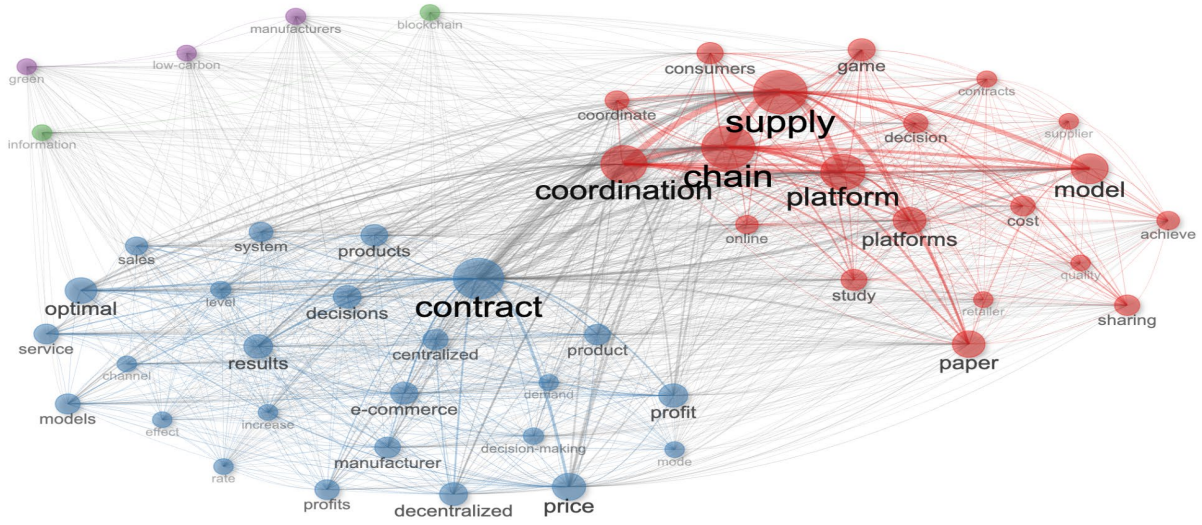

Figure 3: Keyword Co-Occurrence Network Analysis

The co-occurrence analysis identifies three main research clusters that shape the field of platform-based supply chain coordination (Figure 6).

Cluster 1 - Analytical Contract Models and Incentive Alignment addresses a number of game theory, contract design and revenue-sharing models. The research predominantly employs optimization and game-theoretic models to describe how contracts align/ induce incentives between partners, where the main problem relates to coordination under information limitations and human behaviors.

Cluster 2 - Blockchain-enabled Digital Governance and Trust Infrastructure incorporates blockchain technology, smart contracts, and distributed ledgers that create transparency and trust. The studies adopt technology and architecture studies to establish real-life viability but have barriers centering on interoperability and legal enforcement.

Cluster 3 - Sustainability-Focused Supply Chain Practices encompasses reverse logistics, circular economy, and low-carbon supply chain operations, in which studies apply case studies or lifecycle analysis as the discussion and justify integrating environmental sustainability goals into the coordination studies.

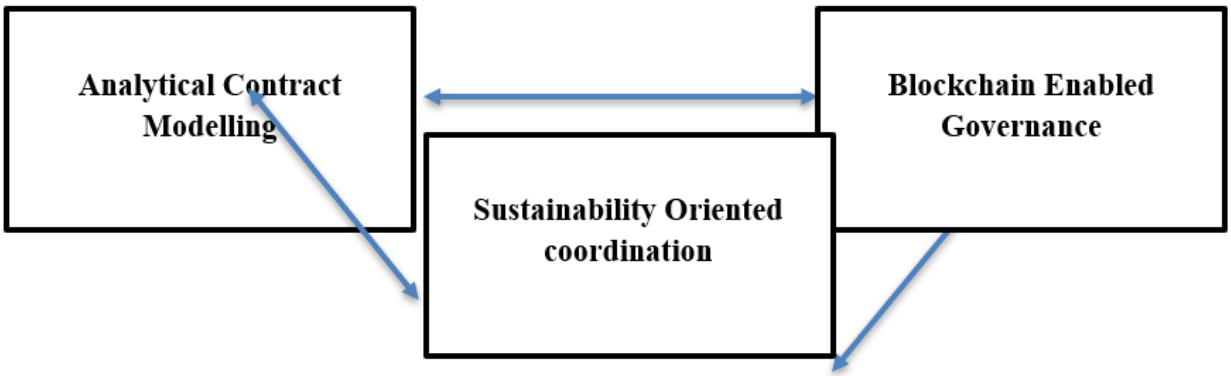

Figure 4: Conceptual Framework

The key focal point herein is how to balance economic and operational efficiency with the aims of sustainability. Overall, the analysed research clusters show an evolutionary path of empirical research that moves from analytical models aimed at optimizing the incentive alignment for partners, through technology-based trust systems, up to participatory frameworks highlighting the incorporation of sustainability into coordination processes, thereby underlining the multi-dimensional transformation of modern supply chain empirical research.

Bridging Concepts: Ideas of "platform," "coordination," and "information" act as bridges across each of the three clusters showing that effective governance on a platform necessitates the integration of analytical rigor, technological infrastructure, and a commitment to sustainability.

Identified Research Gaps: Despite the progress in the three identified clusters, gaps exist.

• **Cross-cluster coordination:** Not much work is done on how analytical models can include blockchain-enabled mechanisms or sustainability constraints.

• **Resilience and adaptation:** Limited literature on governance mechanisms to respond to uncertainty and disruption in supply chains

• **Multi-stakeholder governance:** There is limited work on how to coordinate various actors (platforms, suppliers, regulators, consumers) simultaneously

These clusters and gaps illustrate how work in this space can continue to develop in a direction of greater theoretical depth, technological integration, and real-world applicability, relative to RQ1 and RQ3.

3.8 International Collaboration Patterns

Utilizing network analysis at the country level unveiled the configuration of the world-wide research network. Table 7 portrays the patterns of collaboration with network analysis metrics (betweenness centrality, closeness centrality and PageRank).

Table 7: Country Collaboration Network Analysis

Country	Collaboration Cluster	Betweenness Centrality	PageRank Score
China	2	68.707	0.321
USA	2	12.125	0.167
Canada	1	12.000	0.040
Switzerland	1	0.000	0.026
Hong Kong	2	0.043	0.084
United Kingdom	2	0.125	0.053
Israel	2	0.000	0.017
Pakistan	2	0.000	0.018
South Korea	2	0.000	0.027
Philippines	2	0.000	0.018
Singapore	2	0.000	0.026
Sweden	2	0.000	0.018
Ecuador	3	0.000	0.031
Peru	3	0.000	0.031
Iran	4	0.000	0.062
Australia	4	0.000	0.062

Patterns of Collaboration:

1. China as a Dominating Centrality (Cluster 2): China has the highest betweenness (68.707) and PageRank (0.321), and is therefore, the center node of the research network. This is reflective of their number of published material and visibility in the field but does have only moderate closeness centrality suggesting that there can be more integration into the international networks.

2. Bridge Roles of North America and Europe (Clusters 1 & 2): The USA and Canada have positive betweenness centrality (12.125 and 12.000), suggesting they are also bridges of the Asian and European research communities. Their strategic position in the network generated credibility because there is comparatively publication volume to positional credibility.

3. Smaller Collaborators Show Strong Integration: Hong Kong, Switzerland, and smaller European nations show closer integration but with lower publication volumes, suggesting that quality and thematic connection enable integration regardless of volume.

4. Insufficient Global Engagement by Emerging Economies: The gap that India's participation illustrates is critical-it has provided only 5 publications and no international collaborations. This separation reduces the importance of India within global scholarship, while simultaneously depriving the field of a potential engagement with the emerging digital economy and supply chain expertise of India.

Strategic Implication: Analysis of the collaboration network indicates that for the global research frontier to expand, there needs to be an expansion of multilateral partnerships and an increase in the mobility programs, especially in the underrepresented regions like Latin America, where Ecuador and Peru showed low connectedness, and especially Africa, which did not show any connectedness within the collaboration network. Expanding global collaboration beyond updating the structure is an imperative for developing new research perspectives, aside from regional issues in supply chains.

3.9 Limitations of Current Research

The field of platform-based supply chain coordination is currently constrained by a number of limitations in research:

1. Language Limitations: Our primary analysis was confined to studies written in English. Despite our desires to be inclusive, we may have omitted significant contributions to our field(s), from non-English speaking communities, for example, located primarily in China, India, or any other number of non-Western economies, where research may be published in regional journals, or local indigenous languages.

2. Database Limitations: While we have used Scopus as a resource, the coverage of its database is variably comprehensive, and it potentially omits quality publications from select journals that address the domains of specific supply chain management studies, practitioner-centric publications, or emerging digital platforms and preprint databases.

3. Search String Limitations: Although we attempted to be expansive and representative with our usage of keywords, our Boolean search strings and use of specific combinations may have privileged certain studies under the headings of platform governance, contract designs, or supply chain coordination, and we may not have included studies under alternative headings to address those same issues.

4. Geographic Bias: database indexing is inherently biased toward articles produced by well-established academic institutions within developed economies, and this bias may limit the representation of research produced by developing nations, such as Southeast Asia, Latin America, and Africa, as they develop their digital economies (e.g. digital platforms may not yet be as large in scope).

5. Time Frame: The 2010–2025-time frame, while suitable to capture the emergence of the digital platform, possibly underrepresents earlier, formative studies on supply chain contracts and coordination prior to 2010.

6. Lack of Gray Literature: this study examined only articles published in peer-reviewed journals, excluding white papers, technical reports, or industry analyses, which likely contain valuable applied information about platform governance. Consideration for these limitations is warranted in interpreting the conclusions of this study and in advancing research into the future.

4. Key Findings and Future Research Directions

4.1 Summary of Key Findings

The examination of published research on platform-based supply chain governance (PBSCG) has identified the following conclusions on the work's characteristics and overall patterns in publications of peer-reviewed articles from 2010–2025:

1. Emerging Research Domain Exhibiting Parts-Based Growth: The rate of publication lagged until 2017, yet it hastened significantly after 2018. This accelerating rate of activity is a clear sign of increased interest both academically and organizationally in the topic of platform-based supply chain governance.

2. Three Intellectual Clusters that Shape the Field: Contributions have come in the form of analytical modelling of contracts, game-theory and optimization; governance structures that describe block-chain-enabled governance; and sustainability-oriented practice. Noticeably, there is very little integration across these clusters of intellectual experience.

3. Concentration of Research Productivity: China leads the field in published article volume, at 70.71%, but the United Kingdom and Hong Kong countries led the field by achieving a disproportionately higher citation impact for their published articles through a relatively larger number of papers focusing on national collaborative and specialized papers.

4. Development of Research Leadership: While all three researchers, Wang Y, Shen L, and Xu X, were established intellectual leaders in the research domain, comparatively the emerging scholars Yu Z and Cheng TCE will rapidly have some of the most influential works with regard to blockchain contracts/smart contracts.

5. Continued Fragmentation: Overall, despite three years of rapid organizational academic growth, the discipline of research continues to reflect fragmented boundaries in research organizations without a more cohesive structure of theoretical integration or research trajectories as a community of scholars.

4.2 Future Research Directions

In order to move the field toward more apparent theoretical coherence, practical relevance, and the closing of research gaps, the following avenues of research are suggested:

Direction 1: Interoperability between Heterogeneous Platforms

Rationale: Analysis of the co-occurrence shows several siloed research clusters and very little study spanning platforms. As supply chains are increasingly relying on multiple platforms—such as selling, logistics, procurement, among others—the scholarship must consider how coordination mechanism(s) and contracts function across platforms.

Specific Research Questions:

- What might be the potential roles of smart contracts together with API-based (Application Programming Interface) integrations for coordination across multiple platforms with independent governance?
- What are the contract structures and governance standards that would facilitate interoperability between platforms while still retaining governance independence for the platform?
- What are the implications of switching costs and lock-in effects for contracts working across multi-platform ecosystems?

Methodological Options: Conceptual modelling, case studies in multiple platforms, architectural design research

Theoretical Contributions: Extends the supply chain coordination-theory to multi-platform contexts; connects literature on platforms and contracts.

Direction 2: Governance in Uncertainty and Disruptions
Rationale: The rising number of publications on platform-based chains of supply in the post-COVID-19 era testifies to the temporary fragility of existing governance structures and the need for adaptive contracts that foster re-resilience in the face of disruptions that have no precedent.

Specific Research Questions:

- Are there any contract implementations that can allow for flexibility in the case of supply, demand, or regulatory disruptions?
- Considering contingency clauses, force majeure clauses, and renegotiation protocols, in what kind of context should one think of their meaning in a platform setting?
- If algorithms can use real-time data and real-time adjustments in a generally uncertain environment, then how do they support coordination?

Possible Methodologies: dynamic modelling, scenario analysis, entity-based simulation, real-time case studies.

Theoretical Contributions: Contributes to behavioural contract theory; links resilience in supply chains to governance design.

Direction 3: Enforceability and Compliance of Smart Contracts

Rationale: While adoption of block chain has been explored at length, little has been done in way of examination of legal and practical enforceability, or compliance that might be applicable for high stakes supply chain transactions.

Specific Research Questions:

- Under what legal jurisdictions could smart contracts be enforceable, and how does that vary across commercial law impacting platform governance?
- How might smart contracts manage exceptions, disputes and off-chain judgement needed in instances of judgement calls?
- What institutional and governance frameworks are conducive to using smart contracts in supply chain contexts?

Possible Methodologies: legal analysis and comparative law, interdisciplinary case studies with law and computer science, stakeholder interviews.

Theoretical Contributions: Brings together law, technology, and operations management, contributes to understanding institutional factors within tech adoption.

Direction 4: Competitive Tension and Ecosystem Dynamics

Rationale: Collaboration network analysis shows research interest in dominant platforms but not competitive tension, exclusionary behavior, or using multiple platforms.

Specific Research Questions:

- What influence do contract design and governance structures have on competitive advantages for platforms?
- What are the roles of exclusivity, preferential pricing, and restrictions to key data related to platform competition?
- How do suppliers manage their relationships with competing platforms, and how do platforms manage these relationships and shared suppliers?

Methodologies: Competitive strategy analysis, network analysis of platform ecosystems, longitudinal case studies

Theoretical Contributions: Extending supply chain management theory to platform competition; joining strategy, governance, and operations

Direction 5: Exploring Methodological Plurality and Mixed Methods Research

Rationale: A significant amount of the existing literature relies on mathematical optimization models and game theoretic perspectives. As part of a mixed-methods exploration, new methods that complement existing approaches are necessary to understand the contextual, behavioral, and social contextual elements of platform governance.

Specific Research Questions:

- What behavioral aspects influence contract compliance outcomes and coordination in platform ecosystems?
- What impacts do categorical aspects (i.e., organizational culture, social relationships among key actors, and trust methods) have on technology adoption and joint contract effectiveness?
- What form(s) of cultural and institutional variation exist across regions and industries for applying platform governance?

Methodology: Qualitative case studies, ethnographic studies, behavioral experimental studies, mixed methods extended studies.

Theoretical Contributions: Behavioral and institutional dual perspectives; facilitates understanding of technology adoption and joint governance mechanism effectiveness.

Direction 6: Cross-disciplinary integration of Operations Management, Information Systems, Law and Ethics
Rationale: The current research context is fragmented. To advance future research innovation, it needs to be intentionally integrated - think cross-disciplinary, with even stronger perspectives from Operations Management, Information Systems, Law, and Business and Public Policy Ethics. Specific Areas of Integration:

- **Operations / Computer Science:** Design of smart contracts in the supply chain context.
- **Operations / Law:** Legal framework for algorithms to govern risk and enforce contracts.
- **Information Systems / Ethics:**
  Data governance, privacy and algorithmic fairness in the coordination of platforms across stakeholders.

- **Public Policy / Supply Chain Management:** Regulatory frameworks that enable governance and competition of platforms.

Methodological Approaches: Research on interdisciplinary teams, symposia to bridge disciplines, shared case studies across disciplinary boundaries.

5. Conclusion

In this bibliometric assessment of 99 peer-reviewed articles (2010-2025), we aim to unify isolated research on supply chain management in platform contexts through an in-depth examination of publication patterns, leading researchers and institutions, organized research domains, and an investigation of global research trends. In total, three primary research trajectories were distinguished: analytical contract modeling, blockchain-based governance strategies, and sustainability-oriented supply chain management practices. A geographic review demonstrated the largest contributor to our sample is China based on total publication count, whereas the UK, Hong Kong, and more dedicated contributors exhibit an advantage due to the quality-to-visibility ratio of collaboration across borders.

Despite a significant amount of scholarship produced on platform-oriented contexts, there are gaps in understanding issues around platform interoperability, governance in conditions of uncertainty, the enforcement of smart contracts, dynamics of platform competition, and other institutional and behavioural conditions that influence technology adoption in supply chains more broadly. There is limited evidence of consolidation around key ideas in the field but also greater diversification around emerging technologies and sustainability frameworks in supply chains. I have synthesized this widely dispersed literature and have outlined a productive research agenda that will serve as an impetus for the next phase of academic research development for digitally mediated coordination in supply chains. Global supply chains will continue to evolve into platform-based systems, and understanding how to create appropriate and effective contractual and governance arrangements will be important to both the academic research and business strategy. Future research should provide a theoretical and conceptual synthesis with an eye on disciplinary boundaries, methodological diversity, and an engagement with the real-world challenges of supply chain practitioners and policy makers that are dealing with the increasingly complex development of digital platforms.

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