

# Ghanaian Institutions and Supply Chain Management Practices: A Systematic Review of Evidence

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## Abstract

This systematic review aims to enhance the current understanding of supply chain management (SCM) practices in Ghana by examining emerging trends in the literature. The analysis considered 43 peer-reviewed articles published in the last 20 years to identify the features, SCM components, research types, methodologies, and contributions to SCM theory. The results indicate that previous research on SCM practices in Ghana has mainly focused on particular attributes, such as supply chain (SC) risk planning and management, communication and information sharing, quality, strategic supplier partnership, inventory, and logistics management. However, benchmarking, customer relationship, and demand forecast, were list examined. Additionally, research on SCM practices has been concentrated in industries, such as manufacturing, banking and finance, agriculture value chain, health and allied areas, and retail and SMEs. The study also reveals that while quantitative research methods have gained increasing interest, qualitative research methods are still prevalent in the field. The results further highlighted a variety of SCM theories, namely resource-based view, transaction cost theory, agency, SC operations reference (SCOR), network theory, diffusion of innovation theory, contingency theory, and service demand logic, are focal areas of understanding SCM practices, performance, and their critical success factors in Ghanaian industries. This study provides practical insights for industry practitioners to better understand SCM deployment, design, and implementation steps, as well as suggestions for future research directions for SCM theory and practice in Ghana. These include exploring other areas and industries to gain a more comprehensive understanding of SCM practices in the country.

**Key words:** Supply Chain Management, Supply Chain Elements, Customer Relationship, Conceptual Review, Ghana

## Introduction

In today's business environment, effective competition can be challenging for businesses and industries if their suppliers, customers, and other entities within their supply chain (SC) are not aligned with their operations (Hugos, 2018). Supply Chain Management (SCM) emerged from logistics, gaining importance in economics and business. Since the 1980s, collaboration along the value chain has been recognized as beneficial, as proposed by Porter's value chain (Núñez-Merino, Maqueira-Marín, Moyano-Fuentes & Castaño-Moraga, 2022). It emphasizes aligning internal processes with suppliers, distribution channels, and customers for efficiency and competitive edge.

Ghana, an emerging economy in sub-Saharan Africa, has shown slow but consistent and promising economic growth in recent years, despite the obstacles presented by the COVID-19 pandemic (Dickson & Yao, 2020; Aduhene & Osei-Assibey, 2021). Nevertheless, the rise of an increasingly sophisticated technological environment has led to heightened demands from customers, compelling businesses in Ghana to meet expectations by delivering high-quality products and services (Amankwah-Amoah, Osabutey & Egbetokun, 2018). As a result, businesses must focus on delivering products that meet customer needs while striving for optimal returns. This new dimension has prompted businesses to reevaluate their operations in order to achieve greater efficiencies and minimize costs.

Ghana presents a unique context for studying SCM practices. This is due to the limited research available in the field and the narrowed focus on specific sectors (Adomako, Frimpong, Danso, Amankwah-Amoah, Uddin & Kesse, 2020).

Additionally, there is the need for understanding the prevalent research channels, SCM practice elements, industry sectors, research focus, types, and methodologies employed in Ghanaian literature. Conducting a review of the body of knowledge on SCM using data from Ghana can provide valuable insights into the current state of SCM practices in Ghana, contribute to the existing literature on SCM, and potentially inform future research and practice in the Ghanaian context and beyond.

This study aims to fill gaps in SCM research in Ghana by examining research channels, SCM elements, industries covered, research focus, and methodologies used. It employs a systematic approach to categorize literature based on relevant scopes. The study includes sections on literature review, methodology, results, and discussions. It concludes by summarizing findings, offering recommendations, and emphasizing contributions to SCM knowledge in Ghana, along with implications for experts and scholars.

## Literature Review

### Concept of Supply Chain Management

The concept of SCM is widely recognized as an essential tool for businesses since the 1990s, as it brings numerous benefits to the various members of the SC in terms of timely production and cost-effective delivery of products or services (Salamai, 2022). SCM encompasses a sequence of interconnected activities carried out by different firms with the aim of meeting consumer needs. These activities include procurement, manufacturing, distribution, and waste disposal, along with associated transportation, storage, and information technology support, involving all members within the SC such as manufacturers,

suppliers, transporters, warehouses, retailers, and customers, as well as internal operations of individual businesses that contribute to fulfilling customer demands (Kazmi & Ahmed, 2021).

SCM involves a network of businesses adding value and ensuring timely delivery (Isho, 2022). It covers various functions, product life cycles, and aims for efficiency at minimal cost (Diaz et al., 2021). Core processes include planning, sourcing, production, inventory, and distribution (Kuupiel, Tlou, Bawontuo, Drain & Mashamba-Thompson, 2019) which emphasizes efficiency and customer focus.

### The Supply Chain Management Process

Previous studies have generally referred to SCM as a process that involves planning and managing all activities related to obtaining materials, converting them into final products, and distributing them to the final consumer (Nguegan & Mafini, 2017; Fenton, 2019). However, other studies have focused on management processes. For instance, Dijikman et al. (2016) stated that management processes are a structured and measured set of actions intended to create specific outputs for a customer or market. Marker (2017) highlighted that SCM is the practice of managing relationships, information, and inputs flow across institutional borders to improve customer service and economic value through synchronized management of the flow of physical goods and associated information from sourcing to consumption. Li (2014) outlines SCM as the operational functions defining how a SC moves goods and services to the market. It involves a clear sequence of actions, identifying inputs and outputs (Halseth, 2018; A. Lemariska et al., 2015). Maddah and Roghanian (2021) emphasize that successful SCM requires businesses to break functional silos and

adopt a process-driven approach, organizing functions around meeting customer needs (Daniel, 2020; Li, 2014; Fish, 2011). Key processes include customer relationship management, customer service, demand, order fulfillment, manufacturing flow, procurement, and product development (Maddah and Roghanian, 2021).

Modern businesses leverage SCM practices to heighten agility and cost-effectiveness by collaborating with suppliers and integrating supply and demand effectively (Kersten, 2017). SCM aims to deliver superior customer value in speed, cost, quality, and flexibility. Various elements of SCM practices have been identified: Sánchez-Flores et al. (2020) highlight seven elements for sustainable SCM: common vision, information sharing, risk management, collaboration, process integration, sustainable relationships, and shared SC leadership. Gamini and Rajapaksa (2020) note supplier partnerships, outsourcing, cycle time, continuous flow, and information sharing as key for SC reliability. Pakurár et al. (2019) discuss the impact of purchasing, quality, and customer relations on SC integration's effect on financial performance. Rasib et al. (2021) connect six SCM elements such as SC integration, information sharing, customer service, geography, and JIT capability to SC innovation. Kumar et al. (2020) emphasize ICT, sourcing, supplier relationships, manufacturing, inventory, transportation, and customer relationships in impacting business performance through SCM.

This review thus suggests that the elements of SCM practices are multi-faceted with the common goal of ultimately improving business performance. While many models of SCM practice elements have been adduced in the literature, there appears to be no clear convergence on a single unifying construct to incorporate all facets

of SCM. However, some common set of SCM practice elements or constructs can be highlighted in this review; strategic supplier partnership, ICT and information sharing, customer relationship management, inventory and demand management and SCI.

### Supply Chain Management Practices in Ghana

SCM is a complex responsibility that involves multiple customers and suppliers, creating challenges for businesses in all industries and countries, including Ghana (Nsiah Asare, 2016). Small businesses in particular face difficulties in implementing SCM practices due to competition with larger businesses that have more leverage and resources (Aduhene, D. T., & Osei-Assibey, E. (2021)). These challenges are prevalent among small businesses in Ghana, regardless of their industry, market, or geographical location (Tetteh, Kwarteng, Gyamera, Lamptey, Sunu & Muda, 2023). Constraints such as limited finances, infrastructure, and human capital are notable barriers for Ghanaian small businesses in adopting modern SCM practices into their strategic operations (Aggrey et al., 2021).

Large corporate businesses in Ghana have adopted centralized SCM practices due to high setup costs (Fuertes et al., 2020). However, they face challenges due to a scarcity of personnel with expertise in managing sophisticated SC strategies (Amoako, Huai Sheng, Dogbe & Pomegbe, 2022). Many prioritize hiring personnel with narrower skills in distribution channels rather than broader SCM expertise (Asante, Agyemang, Faibil & Osei-Assibey, 2022). Ghanaian businesses often focus solely on distribution channels as they expand, overlooking their entire SC (Ayam & Kusi, 2021)). In contrast, global conglomerates engage in diverse market services and

source supplies from niche businesses, driving global SC growth (Donkor, Papadopoulos & Spiegler, 2021). This leaves Ghanaian businesses at a disadvantage in global competition.

### Risk Associated with Supply Chain Management Practices

SCM has gained global popularity due to its significant impact on improving business performance. However, many businesses face various risks that hinder the effective operation of SCM. These risks, known as Supply Chain Risks (SCR), are associated with uncertainties and the subjective nature of intended outcomes (Baryannis, Validi, Dani & Antoniou, 2019). According to Gurtu and Johny (2021), SCR can be classified into different types based on the stages in the SC network, including external or environmental risks, internal or industry risks, and organizational risks. Additionally, SC process risks can be classified into external, internal, supply and demand side, and SC infrastructure risks (Benedito, Martínez-Costa & Rubio, 2020).

As highlighted by Shishodia, Sharma, Rajesh and Munim (2021), effective risk estimation is crucial for developing strategies to mitigate or manage SCR, which in turn improves SC resilience. Strategies such as prevention, rescheduling, conjecture, numerical and economic methods, vertical integration, risk-sharing, and technology and security can be employed to manage or control SCR (Gurtu & Johny, 2021).

Ghanaian businesses can enhance SC resilience by adopting contingency plans, monitoring failures through internal controls and audits, akin to practices seen in global companies like Toyota, mitigating product recalls (Qureshi, Sohu & Keerio, 2020). This necessitates streamlined SCM practices, proactive approaches, and flexible management behaviours.

## Synthesis and Gaps in the Literature Review

SCM benefits businesses by ensuring timely production and cost-effective delivery (Katsaliaki, Galetsi & Kumar, 2021; Haddouch, Beidouri & El Oumami, 2019). It involves core processes like planning, sourcing, making, and delivering, covering various business functions (Marculetiu, Ataseven & Mackelprang, 2023; Mageto & Luke, 2020). SCM aims to optimize business returns by efficiently meeting customer needs (Wu, Yue, Jin & Yen, 2016). Past studies identify SCM elements but reveal gaps in Ghanaian literature: Few empirical studies on SCM implementation exist; focus is mainly on theory. Cultural and institutional factors impacting SCM adoption are overlooked. Understanding these factors, including trust affected by power distance, collectivism, and uncertainty avoidance, is crucial. Challenges in infrastructure and government policies hinder SCM. Future research should explore these factors to devise effective SCM strategies in Ghanaian businesses.

## Methodology

The study adopts a systematic review approach to examine SCM practices in Ghana, following methodologies advocated by Tang and Qin (2018), Shishodia et al. (2021), Alexander (2020), Regmi and Jones (2020), Vieira et al. (2022), and Verma et al. (2021). Mendeley software is used for reference management due to its user-friendly interface and extensive features. The study method is structured into five steps: defining research questions, keyword classification, data selection and evaluation, data extraction, and analysis.

## The Research Questions

Five study research questions as indicated below are formulated to achieve the objectives of the study;

RQ1: What is the common research channels used to publish SCM studies in Ghana?

RQ2: Which SCM practice elements are predominantly examined in the Ghanaian literature?

RQ3: Which industry sectors are mostly explored in the Ghanaian literature in relation to SCM?

RQ4: What is the prevalent research focus, types, and methodologies employed in the Ghanaian literature on SCM?

RQ5: What theoretical contributions have been made in the Ghanaian literature on SCM?

## Classifying Keywords and Search Scheme

The research examined peer-reviewed journal publications on SCM practices published in Ghana over the last ten years, from 2010 to 2021. The study conducted a pilot search by using a simple string in all the potential electronic databases to identify relevant journals and conferences publishing research on SCM. These databases included Google Scholar, EmeraldInsight, Scopus, ScienceDirect, academia, SageJournals, scirp.org, onlinejournal.org.uk, AfroAsianArchive.com and EBSCO Host. The relevant articles were then selected using the study articles quality selection criteria manually screening for only articles published in a peer-reviewed journals and in English. See table 1 for the study articles search criteria.

**Table 1. Search Criteria**

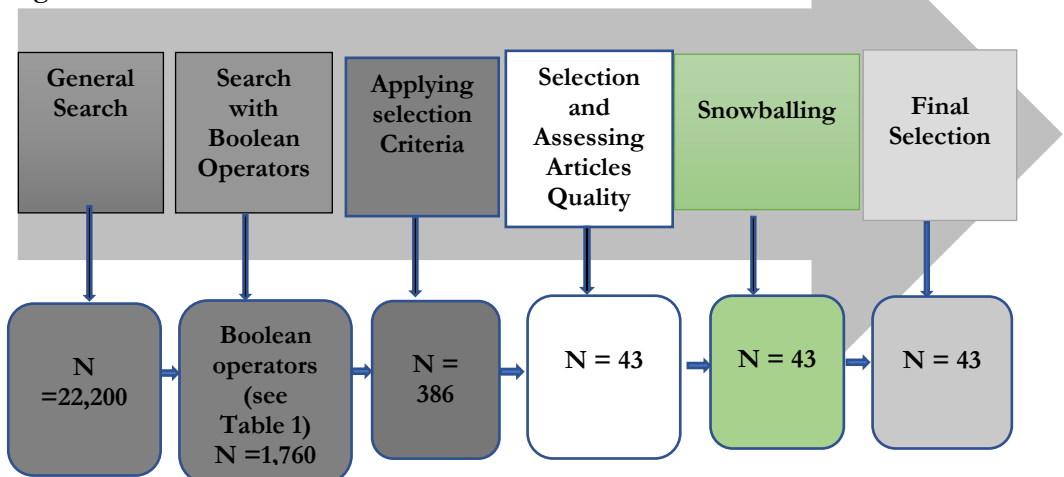
Concept	Keyword and String	Boolean Operator
Supply Chain	[Supply Chain] AND [practices mechanisms] OR [Chain]	AND, OR, "Snowballing" and Limits Publication date, Language).
Supply Chain Management	[Supply Chain Management] AND [practices mechanisms] OR [Chain]	AND, OR, "Snowballing" and Limits Publication date, Language).
Supply Chain Management Ghana	[Supply Chain Management] AND [practices mechanisms] OR [Chain] AND [Ghana]	AND, OR, "Snowballing" and Limits Publication date, Language).

Source: Author's own constructs

### Articles Selection and Quality Evaluation

The study initial general search without limiting the publication period retrieved a total of 22,200 articles from all the electronic databases considered. The study further applied the article quality selection criteria which further excluded no peer-reviewed articles in general, prefaces,

editorial notes, book reviews and interviews, conference papers. The article quality selection phase reduced the articles further to 1,760. The sampled reviewed articles were subsequently obtained from this result by further reading the titles of the displayed articles or abstracts where necessary which finally resulted the sampled selected articles of 43. See figure 1 for details

**Figure 1. Article Selection Process**

Source: Author's own constructs

## Data Classification and Model Framework

The study organized and grouped sampled articles into dimensions within a framework for holistic research analysis in SCM. It assessed literature trends, research focus on

SCM attributes and industries, and research type/methodology's contribution to SCM knowledge. The approach used a wide range of dimensions for a comprehensive examination of SCM practices, ensuring reliability. Reviewers classified articles and reached consensus. Details are in Table 2.

**Table 2. Data Classification Model Framework**

Group	Dimension	Purpose
1 Characteristics of Selected Articles	Authors, Year of publications, Journal Name, Database, Citation	Analyses characteristics of the selected articles
2 Research Focus	SCM attributes Industry Sector	Classifies the selected articles contribution into SCM attributes covered and the industry sector
3 Research Type and Method	Research Type Research Method	Classifies the selected articles into the research type and method
4 Research Theory	Theoretical Contribution	Classifies the sampled articles into the various theoretical processes

Source: Authors' own constructs

## Data Analysis and Discussions

### Data Analysis

#### *Articles Characteristics*

This section addresses Research Question 1 by presenting the characteristics of the included studies. Analyzed articles' primary characteristics encompass author names, study titles, journals, publication years, rankings, databases, and citations (Table 3). The publications were fairly distributed across years, with the highest (8) in 2022 and the lowest in 2016 and 2017, each with one article. A considerable number of the articles (15) were sourced from lesser-

known electronic databases, followed by 12 in Emerald, 7 in academia, 3 each in Taylor and Francis, and Elsevier, and 1 each in sagepub.com and core.ac.uk. A notable number of articles (15) originated from lesser-known electronic databases. The International Journal of Production Economics had the highest citations (190), followed by Management Decision (97), Benchmarking: An International Journal (84), Journal of Rural Studies (43), and Management Research Review (41), indicating their prominence in Ghanaian SCM (Table 3).

**Table 3: Research Articles Characteristics**

No.	Author(s)	Year	Title of Article	Journal	Journal Rankings (SJR)	Database	Citations
1	Abbey, W. M., Owusu - Bempah, G., & Owusu, I.	2013	Assessing the Relationship between Supply Chain Management and Organizational Performance in the Filtered Water Industry in Ghana	<i>International Journal of Business Management &amp; Research (IJBMR)</i>	2.404	academia.edu	6
2	Afum, E., Issau, K., Agyabeng-Mensah, Y., Baah, C., Dacosta, E., Essandoh, E., & Agyenim Boateng, E.	2023	The missing links of sustainable supply chain management and green radical product innovation between sustainable entrepreneurship orientation and sustainability performance	<i>Journal of Engineering, Design and Technology</i>	0.371	EmeraldInsight	14



No.	Author(s)	Year	Title of Article	Journal	Journal Rankings (SJR)	Database	Citations
3	Aduku, J. M., & Ayertey, S. N.	2015	Supply Chain Management Integration and its Effects on Performance in the Hospitality Industry in Ghana	<i>Universal Journal of Industrial and Business Management</i>	0.200	academia.edu	3
4	Adu-Poku, S., Asamoah, D., & Abor, P. A.	2011	Users' perspective of medical logistics supply chain system in Ghana: The case of Adansi South District Health Directorate	<i>Journal of Medical Marketing</i>	0.500	sageJournals	11
5	Adusei, C., & Agambire, R.	2019	Qualitative insights into supply chain management of herbal medicine in Ghana	<i>Asian Journal of Advanced Research and Reports</i>	0.600	academia.edu	2
6	Amedofu, M., Asamoah, D., & Agyei-Owusu, B.	2019	Effect of supply chain management practices on customer development and start-up performance	<i>Benchmarking: An International Journal</i>	0.894	EmeraldInsight	25

No.	Author(s)	Year	Title of Article	Journal	Journal Rankings (SJR)	Database	Citations
7	Aggrey, G. A. B., Kusi, L. Y., Afum, E., Osei-Ahenkan, V. Y., Norman, C., Boateng, K. B., & Ampomah Owusu, J.	2022	Firm performance implications of supply chain integration, agility and innovation in agribusinesses: evidence from an emergent economy	Journal of Agribusiness in Developing and Emerging Economies	1.980	EmeraldInsight	8
8	Dadzie, K., Dadzie, C., Johnston, W. J., Winston, E., & Wang, H.	2023	The integration of logistics and marketing practice into baseline supply chain practices in the emerging markets	Journal of Business & Industrial Marketing	0.782	EmeraldInsight	2
9	Aman kwah-Amoah, J., Debrah, Y. A., & Nuertey, D.	2018	Institutional legitimacy, cross-border trade and institutional voids: Insights from the cocoa industry in Ghana	Journal of Rural Studies	5.157	ScienceDirect	43

No.	Author(s)	Year	Title of Article	Journal	Journal Rankings (SJR)	Database	Citations
10	Amegashie-Viglo, S., & Nikoi, J. A. K.	2014	Supply chain management of the pharmaceutical industry for quality health care delivery: consumer perception of Ernest chemists limited as a pharmaceutical service provider in Ghana	Supply Chain Management	2.036	core.ac.uk	9
11	Damoah, I. S.	2022	Exploring critical success factors (CSFs) of humanitarian supply chain management (HSCM) in flood disaster management (FDM)	Journal of Humanitarian Logistics and Supply Chain Management	0.729	EmeraldInsight	12
12	Som, J. O., & Anyigbaba, H.	2022	Examining the effects of information systems usage and managerial commitment on supply chain performance: the mediating role of supply chain integration	SAGE Open	2.032	journals.sagepub.com	1

No.	Author(s)	Year	Title of Article	Journal	Journal Rankings (SJR)	Database	Citations
13	Antwi, M. O., & Lulin, Z.	2018	Enhancing Supply Chain Management in Healthcare Facilities in Ghana: An Overview	European Journal of Contemporary Research	-	onlinejournal.org.uk	0
14	Anyanful, T. K., & Nartey, E. D.	2015	Critical Success Factors in Supply Chain Management in the Banking Sector in Ghana	International Journal of Business Management	-	academia.edu	7
15	Asamoah, D., Nuertey, D., Agyei-Owusu, B., & Akyeh, J.	2021	The effect of supply chain responsiveness on customer development	The International Journal of Logistics Management	5.630	EmeraldInsight	20
16	Asamoah, D., Abor, P., & Opare, M.	2011	An examination of pharmaceutical supply chain for artemisinin-based combination therapies in Ghana	Management research review	0.671	EmeraldInsight	12

No.	Author(s)	Year	Title of Article	Journal	Journal Rankings (SJR)	Database	Citations
17	Sarpong, P. B., Jianguo, D., Musah, A. A. I., & Boamah, K. B.	2018	Evaluation of the Use of E-Procurement System on Procurement Practices and Performance of Public Hospitals in Ghana	British Journal of Interdisciplinary Research	-	onlinejournal.org.uk	1
18	Atangar, R. A.	2018	The Effect of Supply Chain Management Systems (SCMS) on Customer Satisfaction in the Hotel Industry in Ghana: The Case of Selected Hotels in the Sekondi-Takoradi Metropolis	RA Journal of Applied Research	-	-	0
19	Adegoke, I., Mingba, C., Abredu, P., Ndafira, G. C., Amoateng, P. A., & Owusu-Gyan, L.	2021	The Impact of Sustainable Supply Chain Management Practices On Organizational Performance In Ghana	Management Science and Business Decisions	0.923	publish.thescienceinsight.com	4

No.	Author(s)	Year	Title of Article	Journal	Journal Rankings (SJR)	Database	Citations
20	Ayam, J. R. A., & Kusi, S.	2021	Supply chain management integration and value creation among Ghanaian 3-star hotels in the Bono Region	African Journal of Management Research	0.307	ajol.info	0
21	Owulaku, S. K., & Tetteh, A.	2022	The determinant of a five-stage downstream oil supply chain: An empirical study of Ghana	Journal of Transport and Supply Chain Management	1.060	jtscm.co.za	1
22	Dadzie, K. Q., Winston, E., & Hinson, R.	2015	Competing with Marketing Channels and Logistics in Africa's Booming Markets: An Investigation of Emerging Supply Chain Management Practices in Ghana	Journal of Marketing Channels	0.323	Taylor & Francis	21
23	Ageyi, E. K., Sarpong, K. O., & Anin, E. K.	2013	The challenges of supply chain in the gold mining sector of Obuasi municipality of Ghana	International Journal of Business and Social Research	0.760	academia.edu	15

No.	Author(s)	Year	Title of Article	Journal	Journal Rankings (SJR)	Database	Citations
24	Famiyeh, S., Kwarteng, A., Asante - Darko, D., & Dadzie, S. A.	2018	Green supply chain management initiatives and operational competitive performance	Benchmarking: An International Journal	0.894	EmeraldInsight	84
25	Nyama, E. Y., Jiang, Y., Feng, Y., & Enchill, E.	2017	Agri-food supply chain performance: an empirical impact of risk	Management Decision.	5.589	EmeraldInsight	97
26	Ganiyu, S. A., Yu, D., Xu, C., & Providence, A. M.	2020	The impact of supply chain risks and supply chain risk management strategies on enterprise performance in Ghana	Open Journal of Business and Management	0.300	scirp.org	11
27	Kafui, M. G., King, B. D., Linda, A., Esther, A., Ernest, O. N., & Kwarkoh, A. C.	2019	Assessing Supply Chain Vulnerabilities in Event Management in the Media Industry in Ghana-A Case of a Multimedia Station	International Journal of Management and Commerce Innovations	-	academia.edu	0

No.	Author(s)	Year	Title of Article	Journal	Journal Rankings (SJR)	Database	Citations
28	Kusi-Sarpong, S., Sarkis, J., & Wang, X.	2016	Assessing green supply chain practices in the Ghanaian mining industry: A framework and evaluation	International Journal of Production Economics	11.251	ScienceDirect	190
29	Kuupiel, D., Tlou, B., Bawontuo, V., Drain, P. K., & Mashamba-Thompson, T. P.	2019	Poor supply chain management and stock-outs of point-of-care diagnostic tests in Upper East Region's primary healthcare clinics, Ghana	PLoS One	3.752	journals.plos.org	28
30	Lawer, A. P., Amani, F. O., Asare, C., & Acquah, I. S.	2014	The Effect of Supply Chain Management Practices on Performance of SMEs in Sekondi Takoradi Metropolis of Ghana	ADRRI Journal of Arts and Social Sciences	0.840	ojs.adrri.org	1
31	Mensah, C., Dyuoh, D., & Oppong, D.	2014	Assessment of supply chain management practices and its effects on the performance of kasapreko company limited in Ghana	European Journal of Logistics, Purchasing and Supply Chain Management	-	academia.edu	38



No.	Author(s)	Year	Title of Article	Journal	Journal Rankings (SJR)	Database	Citations
32	Dadzie, K. Q., Winston, E., & Hinson, R.	2015	Competing with Marketing Channels and Logistics in Africa's Booming Markets: An Investigation of Emerging Supply Chain Management Practices in Ghana	Journal of Marketing Channels	0.323	Taylor and Francis	21
33	Opoku, R. K., Fiati, H. M., Kaku, G., Ankomah, J., & Agyemang, F. O.	2020	Inventory management practices and operational performance of manufacturing firms in Ghana	Advances in Research	2.840	journal.pustakalibrary.com	16
34	Nartey, E., Aboagye-Otchere, F. K., & Yaw Simpson, S. N.	2020	The contingency effects of supply chain integration on management control system design and operational performance of hospitals in Ghana	Journal of Accounting in Emerging Economies	3.310	EmeraldInsight	16

No.	Author(s)	Year	Title of Article	Journal	Journal Rankings (SJR)	Database	Citations
35	Anin, E. K., Ofori, I., & Okyere, S.	2015	Factors affecting job satisfaction of employees in the construction supply chain in the Ashanti region of Ghana	European Journal of Business and Management	0.665	EBSCOhost	34
36	Appiah, K., Osei, C., Selassie, H., & Osabutey	2019	The role of government and the international competitiveness of SMEs: Evidence from Ghanaian non-traditional exports	Critical perspectives on international business	1.910	EmeraldInsight	25
37	Asante, R., Agyemang, M., Faibil, D., & Osei-Asibey, D.	2022	Roles and actions of managers in circular supply chain implementation: A resource orchestration perspective	Sustainable Production and Consumption	8.921	ScienceDirect	10
38	Nsowah, J., Agyemang-Boateng, G., & Anane, A.	2022	The Assessment of the Impact of Sustainable Supply Chain Management on the Performance of Manufacturing Firms in Ghana	Journal of Economics, Management and Trade	2.245	eparchives.uk	0

No.	Author(s)	Year	Title of Article	Journal	Journal Rankings (SJR)	Database	Citations
39	Kwamega, M., Li, D., & Abrokwa, E.	2018	Supply chain management practices and agribusiness firms' performance: Mediating role of supply chain integration	South African Journal of Business Management	0.836	journals.co.za	16
40	Amoako, T., Huai Sheng, Z., Dogbe, C. S. K., & Pomegbe, W. W. K.	2022	Effect of internal integration on SMEs' performance: the role of external integration and ICT	International Journal of Productivity and Performance Management	0.578	EmeraldInsight	21
41	Donkor, F., Papadopoulos, T., & Spiegler, V.	2021	The supply chain integration–Supply chain sustainability relationship in the UK and Ghana pharmaceutical industry: A stakeholder and contingency perspective	Transportation Research Part E: Logistics and Transportation Review	10.750	EBSCOhost	14

No.	Author(s)	Year	Title of Article	Journal	Journal Rankings (SJR)	Database	Citations
42	Asante Boakye, E., Zhao, H., Coffie, C. P. K., & Asare-Kyire, L.	2023	Seizing technological advancement; determinants of blockchain supply chain finance adoption in Ghanaian SMEs	Technology Analysis & Strategic Management	3.745	Taylor & Francis	0
43	Ofori, D., & Fuseini, O. I.	2020	Electronic government procurement adoption in Ghana: critical success factors	Advances in Research	2.840	afroasianarchive.com	8

Source: Authors' analysis with data from the sampled selected articles

### Supply Chain Management Attributes

Table 4 findings address the second research question on SCM elements studied in Ghana. Out of 43 articles, SC risk planning (21 articles - 49%) was the most examined attribute. Communication, quality, strategic supplier partnership, and inventory management followed (18 articles - 42% each). ICT, SC integration (9 articles - 21%), demand forecast, and

customer relationship (8 articles - 19%) were also studied. Benchmarking, customer relationship, and demand forecast received less attention (4 articles - 9% each). Ghanaian research has mainly focused on SC risk planning, with less exploration of benchmarking, customer relations, and demand forecasting.

**Table 4. SCM Attribute**

Category	Article S/N (Ref. Table 3)	No. of Articles	<i>Freq.</i>
Strategic Supplier Partnership	1,7,8,12,23,24,25,33,34,36,37	11	16
Level of Communication and Information Sharing and Quality	1,2,3,7,8,10,11,13,23,24,29,34	12	18
SC Risk Planning and Management	4,16,17,19,26,27,31,32,34,36,39,40,41,42	14	21
Inventory and Logistics Management	2,4,5,6,11,22,29,30,32,33,38	11	16
Demand Forecast	3,9,24,27,30	5	8
Benchmarking	2,3,28	3	4
ICT System and SC Integration	4,5,7,11,18,23,	6	9
Customer Relationship	3,9,20,25,35	5	8
<b>Total</b>		<b>67<sup>a</sup></b>	<b>100</b>

Source: Authors' analysis with data from the sampled selected articles

<sup>a</sup>Note: Whereas 43 articles were reviewed; some articles discussed more than one SC element

### *Industry Sectors*

Prior SCM studies in Ghana show concentration in specific industries. Table 5 analysis highlights: 13 articles (30%) on manufacturing, 8 (19%) on banking and finance, and 5 (each) on agriculture, health,

retail, and SMEs. Three articles on tourism, two on media, and one each on water, mining, and natural resources. These findings sufficiently address the study's third research question.

**Table 5. Industry Sectors**

Category	Article S/N (Ref. Table 3)	No. of Articles	<i>Freq.</i>
Agriculture Value Chain	1,5,21,31,32,	5	12
Water & Natural Resources	23,	1	2
Banking and Finance	9,13,14,22,26,34,38,41	8	19
Tourism, Art & Culture	18,27,37	3	6
Health & Allied Areas	4,12,16,17,29	5	12
Manufacturing	2,3,6,7,8,11,24,33,36,39,40,42,43	13	30
Retail & SMEs	15,19,20,25,30	5	12
Mining	28	1	2
Media	10,35	2	5
<b>Total</b>		<b>43</b>	<b>100</b>

Source: Authors' analysis with data from the sampled selected article

## Research Type and Method

Table 6 reveals increased interest in evaluation research and quantitative methods among Ghanaian SCM scholars. All 43 sampled articles were evaluative, with

20 (46.5%) using quantitative approaches, 17 (39.5%) employing qualitative methods, and 6 (14%) adopting a mixed approach. These findings address the final research question effectively.

**Table 6. Research Focus**

Research Method	Article S/N (Ref. Table 3)	No. of Articles	Freq.
Quantitative	1,3,7,8,12,14,15,16,17,18,19,20,26,36,37,38,39,40,41	20	47
Qualitative	2,4,5,10,13,21,22,23,24,25,27,30,31,32,34,35,42	17	39
Mixed	6,9,11,28,29,33	6	14
<b>Total</b>		<b>43</b>	<b>100</b>

Source: Authors' analysis with data from the sampled selected articles

## Theoretical Contributions

Table 7 presents the theoretical contributions in Ghanaian SCM studies, covering various theories: resource-based view, transaction cost, agency, SC operations reference (SCOR), network, diffusion of innovation, contingency, and service demand logic. The analysis reveals predominant focus on resource-based view (10 articles), service demand logic (9

articles), and transaction cost economics (6 articles). Additionally, contingency theory (5 articles), network theory (4), and fewer articles on agency theory, SCOR, and diffusion of innovation were observed (3 each). These studies enrich SCM theory, performance, and critical success factors in Ghanaian industries, contributing to the country's SCM field.

**Table 7. Theoretical Contribution**

Theoretical Model	Theoretical Contribution	Article S/N (Ref. Table 3)	No. of Articles	Freq.
Resource-Based View	The studies assessed the relationship between SCM and organizational performance in Ghana, focusing on industries such as filtered water, cocoa, oil and gas, and beverages, including specific companies like Kasapreko Company Limited and Coca Cola Bottling Company Ghana Limited. They also examined the impact of SCI, customer integration, and sustainable SCM practices on performance in the food processing, pharmaceutical, and agribusiness industries in Ghana.	1, 9,12,21,31, 32,33,41,4 2,43	10	23

<b>Table 7 continued</b>				
<b>Theoretical Model</b>	<b>Theoretical Contribution</b>	<b>Article S/N (Ref. Table 3)</b>	<b>No. of Articles</b>	<b>Freq.</b>
Transaction Cost Economics	This research studies SCM practices among small and medium-sized enterprises in Ghana, with a focus on the pharmaceutical supply chain, consumer perceptions of Ernest Chemists Limited, emerging practices in Ghana's markets, contingency effects of supply chain integration on hospitals, and factors influencing supply chain management in Ghanaian construction firms.	2,10,16,22,34,35	6	14
Agency Theory	These studies investigate the impact of SCMI on performance in Ghana's hospitality industry, identify critical success factors in the banking sector, and explore SCM practices in the mining industry in Ghana.	3,14,23	3	7
Supply Chain Operations Reference (SCOR) Model	These articles examine the users' perspective of the medical logistics supply chain system in Ghana's Adansi South District Health Directorate, explore supply chain management practices in the Ghanaian construction industry, and investigate green supply chain management practices in the Ghanaian manufacturing sector.	4,11,24	3	7
Network Theory	The articles offer qualitative insights into the SCM of herbal medicine in Ghana, examine the effect of SCM systems on customer satisfaction in the hotel industry, explore SC sustainability practices in Ghana's agri-food sector, and provide an understanding of SCM practices in Ghana's cocoa industry as a case study of developing economies.	5,18,25,36	4	9

**Table 7 continued**

<b>Theoretical Model</b>	<b>Theoretical Contribution</b>	<b>Article S/N (Ref. Table 3)</b>	<b>No. of Articles</b>	<b>Freq.</b>
Diffusion of Innovation Theory	Exploring supply chain management practices of the construction industry in Ghana. Investigates supply chain management integration and value creation among Ghanaian 3-star hotels in the Bono Region.	6,20,26	3	7
Contingency Theory	These articles examined SCI's impact on manufacturing firm performance in Ghana, examined SC practices in public hospitals, explored the relationship between SCR, risk management strategies, and enterprise performance, assessed supply chain vulnerabilities in media event management, reviewed critical success factors for public-private partnership (PPP) projects, and evaluated PPP project success factors in Ghana from stakeholders' perspectives.	7,17,27,37,38	5	12
Service-Dominant Logic	These studies cover a wide range of topics in Ghana's SCM, including improving SC performance in emerging markets, enhancing healthcare facilities' SCM, investigating SMEs' SC practices in Kumasi Metropolis, examining the impact of SCM on pharmaceutical firm performance, assessing green SC practices in mining, identifying issues of poor SCM in healthcare clinics, studying the effect of supply chain management on SMEs' performance in Sekondi-Takoradi Metropolis, and exploring SCM practices in manufacturing and agribusiness sectors in Ghana.	8,13,15,19,28,29,30,39,40	9	21
<b>Total</b>			<b>43</b>	<b>100</b>



## Discussions

The result of the review addresses the study objectives, covering characteristics of articles, SCM elements, industries, research types, and theoretical contributions in Ghana (Table 2). Few peer-reviewed articles on SCM practices exist post-2011, signifying limited recent research. However, various journals publish on Ghanaian SCM, indicating broad interest (Table 2). Academic studies often focus on specific SCM attributes like strategic partnerships, communication, and quality, inventory, and customer relations (Table 4). Elements such as risk planning demand forecasting, benchmarking, ICT, and SC integration have received minimal attention. The industry sectors primarily explored in Ghanaian SCM studies are health, tourism, culture, and SMEs (Table 6). Research methods tend toward evaluative and quantitative approaches, while experimental designs are infrequent (Wang, Fan & Wang, 2016). Lack of mixed-method approaches may hinder SCM research development (Opoku, Fiati, Kaku, Ankomah & Agyemang, 2020)). Articles contribute insights into SCM in various industries, including medical logistics, cocoa, mining, agri-food, and pharmaceuticals. They explore IT, sustainability, risk management, and success factors in SCM, illuminating Ghana's SCM challenges and opportunities. Theoretical contributions encompass diverse theories such as resource-based view, transaction cost, agency, SCOR, network, diffusion of innovation, contingency, and service demand logic (Table 7). Resource-based view theory dominates, followed by service demand logic and transaction cost economics. These contributions enhance understanding of SCM in Ghana's industries, supporting sustainable growth (Anin, Boso & Asamoah, 2021; Osei-Kyei

& Chan, 2015). Further research is crucial for Ghana's SCM development.

## Conclusion

This study reviewed research on SCM practices in Ghana from 2010 to May 2021, exploring publishing channels, article prominence, research types, SCM elements, industry sectors, and theoretical contributions. Certain SCM attributes like risk planning, communication, quality, and inventory management have received attention, while others such as benchmarking and demand forecast need further exploration. Previous research mainly focuses on the manufacturing sector, warranting exploration in other industries for a comprehensive understanding. SCM researchers in Ghana employ diverse theoretical frameworks, enhancing understanding of SCM practices. These contributions add value to Ghana's SCM field, requiring further research for sustainable industry growth and development.

## Recommendations

The study suggests recommendations for advancing SCM in Ghana: Scholars should deepen consumer SCM understanding; embrace disruptive technologies like IoT, big data, blockchain, and AI; focus on tailored solutions for Ghanaian businesses. SCM should integrate with operations, logistics, and purchasing management. Research agencies should prioritize underexplored SCM elements, encourage diverse sector-focused SCM studies, and invest in infrastructure for SCM knowledge advancement. Ghanaian businesses should design customer-driven SCM strategies aligning with their operations. Assessing ICT utilization in SCM and fostering information sharing partnerships with suppliers can strengthen SCM resilience for Ghanaian businesses.

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