Supply Chain Management: A Systematic Literature Review

Tri Pujadi[1], Witarsyah[1], Haris Setia Budi[1], Wahyu Sardjono[1], Bachtiar H. Simamora[2] and Ximing Ruan[3]

[1]*Information Systems Department, School of Information Systems, Bina Nusantara University, Jakarta, Indonesia*
[2]*Department of Management, Binus Business School, Bina Nusantara University, Jakarta, Indonesia*
[3]*MSc-International Management, Bristol Business School, University of the West of England, U.K.*

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Abstract: The study aims to conduct a comprehensive literature review on supply chain management frameworks by determining research sources; determine the keyword pattern for the search process; using inclusion and exclusion criteria; data extraction; and finally analyzing findings to answer research questions. The results are a variable component of SCM mapping, and lastly have important implications for theory and practice.

1 INTRODUCTION

The coronavirus pandemic has sparked online commerce and ordering, forcing retailers to adapt to digital adoption to ensure the safety of employees and customers. This includes the use of apps and online orders for contactless purchases. The more retailers that adapt this form of technology, and then will make the consumer more comfortable, which in turn will encourage e-commerce and delivery to the end user. In order to maintain an overview, all companies in the supply chain must use this data to plan and optimize their business operations effectively.

According Fernandez "*The last three months of social distance have also shown us how dependent we have become on e-commerce to acquire the goods we need and the remaining challenges, such as the visibility of the supply chain that is still present.*"(Akyuz, 2016). "*To fully excel in delivering accurate deliveries to buyers, retailers have strengthened their partnerships with business partners and focused on the quality of product information they make available to consumers.*" he added. With the need for more consumable and comprehensive data, brands and retailers have worked to transform inefficient, lengthy and often manual data management processes and automate traditional operations to better anticipate what consumers want (Almaktoom, 2010).

There is more work to be done, especially as social distance will continue to impact the growth of e-commerce. However, retailers may run the risk of running into expensive returns if consumers do not value the delivered product at all like the online display: using a standards-based data framework remains essential (Ascencio, 2014).

Consumer issues and problems caused by COVID-19 can encourage companies to reserve part of their activities (Ascencio, 2014).As with online trading, visibility is likely to increase alongside the technology behind these portals.

Supply-Chain-Management can be defined as a strategies that optimize the flow of materials or services in order to make the product or service available to the end user. The aim is to perform this task in an integrated and cost-effective way (Burgess, 2006).

Today's supply chain is part of every leading industry. The general categories that underpin industry-standard supply chain management include demand planning, procurement, manufacturing, inventory management, or warehousing and logistics (Chauhan, 2019).

The context of Supply Chain Management in its application for small and medium businesses (MSME) is the timely and efficient delivery of goods or services to consumers (Chen, 2017) and (Chen, 2011).

MSME operates SCM digitally to achieve this goal. Therefore, this research literature tries to define "*what are the components of a digital SCM and the attributes required for MSMEs in their ideal application*". The concept of SCM digitally refers to

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the use of the internet as a medium for implementing supply chain management (Chen, 2007), or called e-supply chain

2 METHOD

This research study includes a comprehensive literature review of the supply chain management framework that is implemented digitally to the electronic supply chain (e-supply chain). The implementation consists of several steps, namely the identification of the research source, determine the keyword pattern for the search process, use inclusion and exclusion criteria, data extraction, and finally analyze the results to answer research questions.

2.1 The Search Process

The first step in research is to define literature sources to find suitable journals and articles. The selected literary sources for the systematic study of this literature are as follows:

- ACM-Digital-Library (http://dl.acm.org)
- IEEE Digital-Library (ieeexplore.ieee.org)
- Science Direct (http://www.sciencedirect.com)
- Emerald Insight (emeraldinsight.com)
- Springer-Link (http://springer.com)
- Taylor-Francis(taylorandfrancis.com/)

The aims of this research, is to study the use of supply chain management patterns in business to achieve more effective and efficient service to customers. Keyword search is combined with some terminology for implementing SCM digitally, or e-SCM.

The keyword pattern used to answer research questions when searching for related research articles is organized using Boolean operators to select and filter data. This is set so that you can prioritize finding data based on the symbols used. Boolean symbols and operators that we use in this document, such as .AND.,. OR. The Keyword combinations are as follows:

- *Supply Chain*. OR. *Supply Chain Management*. OR. (*e-Supply Chain*). AND. *Optimizing*. AND. *Electronic Commerce*. OR. *E-Commerce*
- (*Electronic*. OR. *Digital*). AND. *Supply Chain*. AND. *Optimizing*. AND. Electronic Commerce
- (*E-Supply Chain*. OR. *Supply Chain Management*). AND. (*Optimization*. OR. (*Effective*. AND. *Efficient*)) AND. *Electronic Commerce*).

Inclusion criteria for search engines consist of three filter processes. The first is the "Study Found" process. All articles found in original publications on specific keywords are saved as found research. The next step is to filter the article by title and abstract. If the title and abstract are relevant and appropriate to help determine the research question, this article will be saved as a "Study Candidate". The final part of filtering this article is to carefully read all of the candidate articles to answer the research questions. If the article is suitable to answer research questions, it is defined as a "Selected Study".

In order to clarify the validity of the literature, criteria for the exclusion of queries are defined in various procedures, including:

- Select articles based on publishing-dates before 2000.
- The complete paper structure, which means all identities (journals/conferences, author-identities, etc.) are men-tioned in the paper.
- Duplicate-papers from the same study are excluded in the SLR

2.2 The Data Extraction

The study literature examined 392 articles from all sources and criteria. Of the 392 articles examined, 70 papers are candidate studies based on the appropriate title a n d abstract of the research question. After further study, only 31 items can be used for these studies.

Table 1: Data extraction in inclussion criteria.

Source	Found	Candidate	Selected
Google Scholars	106	20	12
ACM-Digital Library	15	4	2
IEEEXplorer	47	7	3
Science direct	81	14	5
Wiley Online	76	12	4
Emerald	23	5	2
Springer	44	8	3
Total	392	70	31

3 RESULT AND DISCUSSION

This literature study aims to examine the components of supply chain management for a company's

business. The use of digital supply chain management in companies has created new opportunities and challenges to improve the performance of functions in their companies. On this basis, the general components of electronic supply chain management (e-supply chain) are identified in this study. In this section, article presents the demographics and trends of the *Selected Studies* literature, such as Publication sources, year of publication, classification of (variable components and mapping of components supply chain management and electronic supply chain) of study literature. Table 2 shows the journal ID, title, year, type, and name of the journal or conference

Table 2: Publication (source, year, type).

No	Title	Year	Type
1	A Review	2019	J
2	Requirements	2009	J
3	The impact	2020	J
4	Assessing	2020	J
5	Supply	2018	J
6	Method	2020	J
7	Using	2017	C
8	Supply	2016	C
9	Warehouse	2017	C
10	Mathematical	2013	J
11	Research	2018	C
12	User	2017	C
13	A Strategy	2013	J
14	E-procurement	2014	C
15	A hierarchical	2007	J
16	Using ICT	2015	C
17	Information	2019	J
18	The research	2011	C
19	Big Data	2019	C
20	e-Commerce	2002	J
21	Supply	2006	J
22	E-Commerce	2016	C
23	An analysis]	2007	J
24	The Impact.	2018	J
25	The Effect	2014	C
26	Supply chain	2020	J
27	Strategic	2013	J
28	Influence	2020	J
29	A collaborative	2014	J
30	SMEs	2009	J
31	Process	2020	J

Note: J-Journal, C-Conference

From the articles processed, most of the writer's discipline expertise comes from computer science (47%), as can be seen in Table 3. It can be concluded that the topic of supply-chain-management or e-SCM is a multidisciplinary concept between computer-science, business-management, information-systems, and engineering. The developing technology, especially in electronic-commerce, encourages this research to find a component framework for e-SCM that supports convergence between institutions. According to the study literature, there are 31 components of the e-SCM framework.

Table 3: Author discipline of expertise.

No	Discipline	#	%
Management		20	29%
1	Economics and Business Administration	7	1%
2	Management	2	2%
3	Marketing	10	1%
4	Media Science	1	1%
		32	4%
Computer Science			
5	Computer and Mathematical Sciences	8	8%
6	Computer Science	13	14%
7	Information Technology	3	3%
8	Sciences and Technologies	4	4%
9	Software Engineering	7	10%
Information Systems			
10	Information Center	1	1%
11	Information Management	4	1%
12	Information Systems	2	2%
		9	13%
Engineering			
13	Engineering	6	4%
14	Geography	1	1%
15	Architecture	2	2%
	Total	68	

4 IMPLICATION AND CONCLUSION

This study has two important implications for theory and practice. First, these results can be used to determine which key components in supply chain management and E-SCM support the most effective operations in the company. Increasing e-commerce technology, it is necessary to identify the components of the technology that can increase the effectiveness of a supply chain management as a result of the application of the technology (e-SCM) The right identification of technology components can maximize the integration of e-commerce applications in the supply chain management.

Table 4: The classification of variables.

Variables	Component	Indicatot
Functionality	• Customer Offering • Order Processing • Inventory level Management • Warehousing • Transportation	• strategic level • tactical level • operational
Stakeholder	• Producer • Supplier • Distributor • Consumer	• Decision made • Controllership • Task Force
Impact	• Implication of Technology • Trust • Governance • Ownership • Relatively new • Several Discipline • Predominantly • Conceptual Framing	• Cost • Quality • Service Speed • Reliability • Effectiveness • Efficiency • Customer Loyalty • Market Development

5 LIMITATION AND FUTURE RESEARCH

This study has two important implications for theory and practice. First, these results can be used to determine which key components in supply chain management and E-SCM support the most effective operations in the company.

Based on the identified model component, there are many areas that need to be considered for future research. The output components are only conceptual components for business and enterprise, and there are many aspects of the e-SCM component framework that need refining. Organizing the part was a challenge, although there are many theories to support it.

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