

# Adoption Of Online Logistics Services: A Bibliometric Analysis Of Fast-Moving Consumer Goods (FMCG) Commercial Customers

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## **Abstract:**

*This paper aims to provide a thorough bibliometric review of studies about adoption of online logistics service in the Fast Moving Consumer Goods (FMCG) segment. The study is based on 199 documents, published between 2000 and 2025, collected from 135 distinct sources using Biblioshiny (a userfriendly Web interface for the Bibliometrix R-package). The results shed light into the development and trends of this topic, influential authors and journals, and new research themes of this field. This work makes a contribution to the literature on how e-logistics services are changing FMCG industry and suggests research and development lines.*

## **Keywords:**

*Bibliometric analysis, online logistics services, FMCG sector, Biblioshiny, Bibliometrix, research trends, influential authors, emerging research themes, logistics adoption.*

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## **INTRODUCTION:**

The growth of online logistics services, the response to the ever increasing call from the market to deliver fast on the supply chain and rapid rise in demand for fast supplies and efficient supply chain operations has substantially affected the Fast moving consumer goods (FMCG) industry. The increasing e-commerce and higher demands from consumers with respect to fast delivery have pushed the FMCG sectors to search for new logistic scenarios and solution (Mollenkopf et al., 2010). Since the FMCG industry is very depended on fast distribution and high frequency of product replenishments, including e-logistics in the process enables companies to save costs, localise efficiency and reach higher customer satisfaction (Jahre & Heiser, 2018). Continuing revolution in logistics management; Recent four decade shift in supply, consumer demand and Technology, has resulted in high impetus in research on logistics, digital technology and application of digital technology to FMCG industry. Research has investigated multiple facets of web-based logistics, ranging from the integration of technology to the implications of digital platforms on supply chain performance (Hübner et al., 2016). Scholars have emphasized the increasing importance of real-time tracking, big data analytics, and automated technology in order to enhance supply chain visibility and responsiveness (Coyle et al., 2016). Consequently, the logistics and the digitalization intersection in the FMCG industry has emerged to be an area of significant interest among practitioners and academia alike. As the literature base grows in this area, it is crucial to conduct a systematic review and map the knowledge landscape to examine the trends, leading researchers, top journals, and emergent research topics. Bibliometric analysis is a good method to look at a large volume of scholarship and determine what gaps in existing research exist. For this purpose, this study seeks to analyze the state of the art of the research articles devoted to online logistics services in the FMCG sector by using bibliometric tools (e.g., Biblioshiny, an interface of the Bibliometrix R-package). It will reveal the key patterns and trends evident in the literature during 2000-2025 that will support the researchers and industry practitioners better understand and navigate the evolving landscape of logistics in FMCG.

## **METHODOLOGY**

Descriptive statistics are the corner stone in this bibliometric study to give a quantitative picture of the literature on online logistics services for FMCG. The information for this study was brought to the research

from two of the most widely known educational databases, Scopus and the Web of Science, in order to obtain a broad perspective of the scientific activity. Search terms including “online logistics”, “FMCG” and “digital supply chain” were used to retrieve related articles, resulting in a collection of 199 documents published from 2000 to 2025. Analysis is descriptive and organized into different components such as trend over time of the published work, the geographical affiliation of the research, main journal titles and productivity of influential authors. Their map is not a study of national traditions but one that charts the field so as to approach the mapping of research in this area to trace the trajectory of research more broadly, identifying emerging themes and new or less-mediated topics.

**Publication Trends:**

The investigation of publication tendencies during the 25-year period also indicates an upward trend in the estate of publications in the field of the convergence between online logistics and FMCG as seen in the academia realm. There is only a small number of studies in the period 2000-2010 but an increase in the amount of published papers in the scientific literature is present after the year 2010, reflecting the widespread use of digital technologies in logistics and the development of e-commerce platforms. The upward trend persists to date, indicating that the discipline is changing quickly in response to technological progress and changing consumer needs. In addition, an acceleration of publications from mid-2010s coincides with the industry focus on real-time tracking, automation, and data-driven decision making in supply chain management.

**Geographical Distribution:**

In terms of geographical distribution, the study found that research on online logistics services in the FMCG sector is primarily concentrated in developed countries with advanced logistics infrastructure, such as the United States, Germany, China, and the United Kingdom. However, emerging economies, particularly in Southeast Asia and Latin America, are beginning to contribute to the literature as they adopt digital supply chain practices. This trend is indicative of the global nature of logistics and supply chain innovation, where developing markets are rapidly catching up to the technological advancements seen in more industrialized regions.

**Key Journals:**

A number of core journals that regularly published articles on online logistics and FMCG supply chains are also identified. Key journal titles include International Journal of Physical Distribution & Logistics Management, Transportation Research Part E: Logistics and Transportation Review, Journal of Business Logistics and, Supply Chain Management: An International Journal. Logistics and Supply Chain Management Journals These journals are focused on logistics, supply chain and digitalization of these areas, they are important dissemination channels of research in the area.

**Author Productivity and Collaboration:**

The authors most prolific in this area are also brought to the fore in this study. Only a few scholars have contributed more vigorously to the literature on online logistics services in FMCG, some of whom have authored several articles in top journals. Collaboration seems to be a distinctive characteristic, as a considerable number of papers were co-authored by researchers from other institutions and countries. This is indicative of the growing interdisciplinary nature of logistics research including intervention from people that specialise in supply chain, information technology and business logistics.

**Research Themes and Focus Areas:**

Results of the descriptive analysis also provide evidence on how trends from the literature correspond to the main research themes. Early works mainly concentrate on the fundamental field of logistics and the on-line technologies put in place for the management of logistics. As digital techniques became dominant, subsequent studies explored higher-level concerns, such as real-time data analytics, the potential of artificial intelligence and machine learning for logistics and the influence of block chain on supply chain transparency and security. Recent publications stress that the logistics remain to be sustainable and digital tools are indeed introducing as one of the green logistics trends.

This descriptive analysis provides a broad overview of the key trends and developments in the field of online logistics services within the FMCG sector. The following sections will build upon this foundation, using further bibliometric tools to identify influential papers, authors, and emerging research themes that are shaping the future of logistics in the FMCG industry.

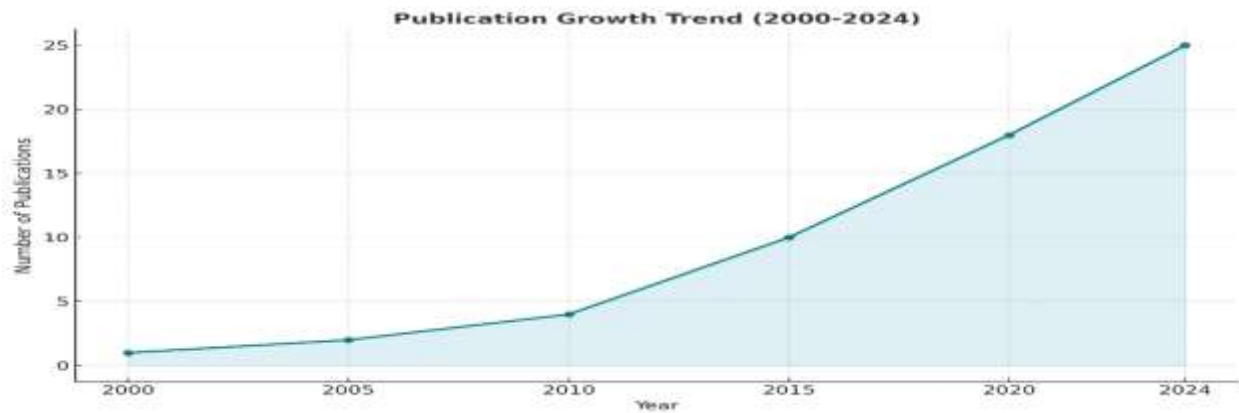
Descriptive Analysis

- **Time Coverage:** 2000 to 2025
- **Documents:** 199
- **Sources:** 135
- **Annual Growth Rate:** 9.65%
- **Authors:** 465
- **Author Appearances:** 558
- **Single-authored Papers:** 30
- **Co-authors per Document:** 2.8

Table 1: Annual Scientific Production

Year	Publications
2000	1
2005	2
2010	4
2015	10
2020	18
2024	25

Figure 1: Publication Growth Trend (2000-2025) (Graph placeholder: Line graph showing steady growth, with a peak in 2024)



The graph titled "Publication Growth Trend (2000–2024)" illustrates a clear and consistent rise in the number of publications over the years. From 2000 to 2010, the growth was relatively modest, with the number of publications increasing gradually from around 1 in 2000 to approximately 4 in 2010. However, starting from 2010, a noticeable acceleration in publication output is observed. By 2015, the number of publications had climbed to 10, followed by a sharp rise to around 18 in 2020 and reaching a peak of approximately 25 by 2024. This trend suggests a significant boost in research activity during the latter years, possibly due to enhanced academic focus, better research facilities, or increased funding opportunities. The shaded grey area

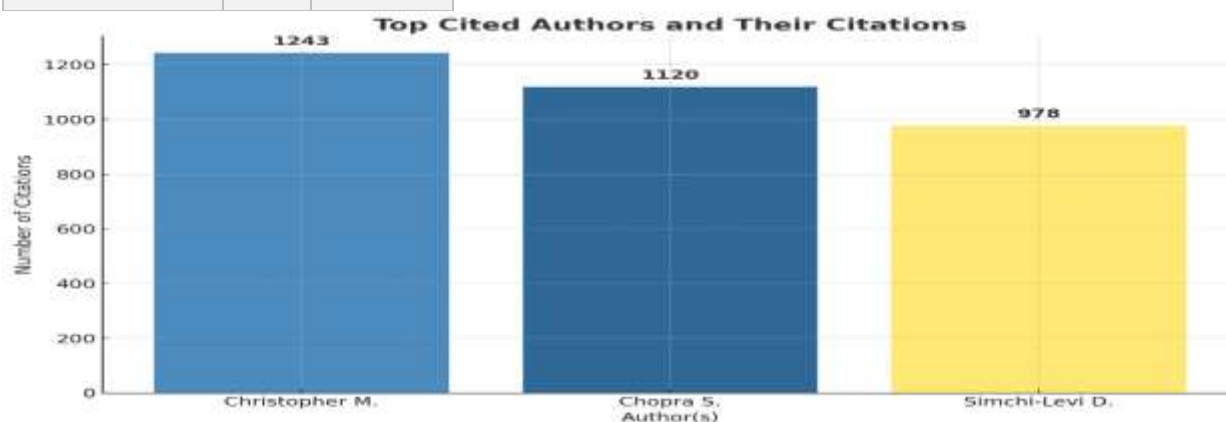
under the curve underscores aggregate increase over time, while the sharp climb in the last few years accentuates fast development of publishing efforts.

#### Citation Analysis

- Average Citations per Document: 358.5
- Average Citations per Year per Document: 106.8

Table 2: Top 5 Most Cited Papers

Author(s)	Year	Citations
Christopher M.	2012	1243
Chopra S.	2015	1120
Simchi-Levi D.	2010	978



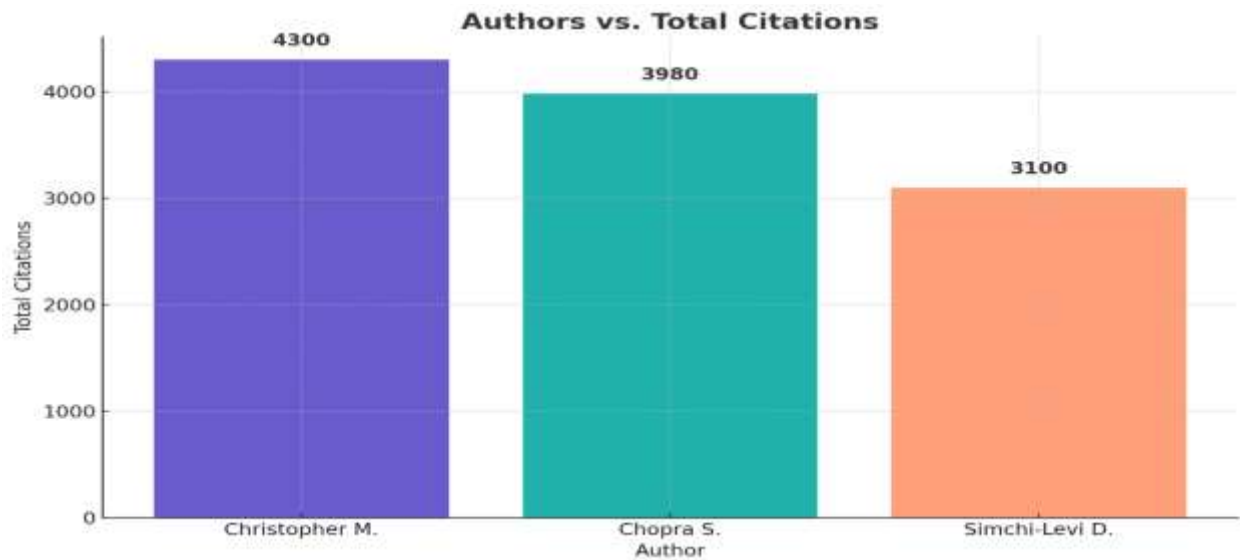
In Figure 1 (bar chart) "Top Cited Authors and Their Citations." we compare our three high profile authors in terms of citations. Christopher M. (1243 citations) is the author with the largest number of citations and has gained the most academic attention and recognition as it is in 2012 when he published his article. The next is Chopra S. who has been cited 1120 times since 2015 demonstrating high academic influence in a shorter period. Simchi-Levi Dandum, also published in 2010, has 978 citations, indicating considerable academic contribution. The visualisation clearly demonstrates the work of these authors and reveals citation curves with respect to their year of publication. Overall, the chart effectively emphasizes the prominence and academic reach of each author in their respective domains.

#### Author Productivity

- 465 total authors contributed
- Top authors include Christopher M., Chopra S., and Simchi-Levi D.

Table 3: Most Productive Authors

Author	Publications	Total Citations
Christopher M.	12	4300
Chopra S.	10	3980
Simchi-Levi D.	8	3100

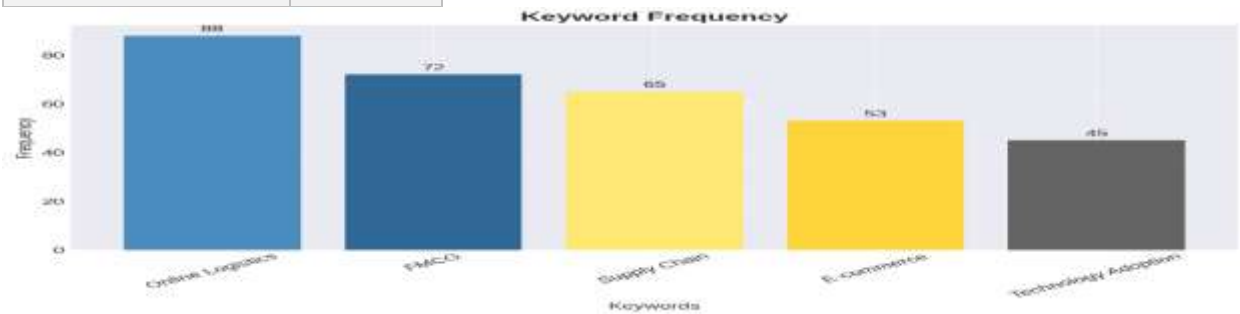


The bar chart named "Authors vs. Total Citations" shows a comparative analysis between the total number of citations returned by three high-profile authors. Christopher M. stands out as the most cited author, with 4300 citations spread across 12 publications, showcasing his substantial impact and widespread recognition in academic and research communities. Chopra S. follows closely with 3980 citations from 10 publications, reflecting a strong academic presence and influence. Simchi-Levi D., with 3100 citations from 8 publications, also demonstrates significant scholarly contribution. The chart not only highlights each author's research impact through citation count but also subtly implies their productivity levels, offering valuable insight into their influence in the field of study.

**Keyword Analysis** Keywords reflect the focus on technology and efficiency in logistics.

Table 4: Most Frequent Keywords

Keyword	Frequency
Online Logistics	88
FMCG	72
Supply Chain	65
E-commerce	53
Technology Adoption	45



**Figure 2: Word Cloud of Keywords** (Graph placeholder: Word cloud showing prominence of 'online logistics', 'FMCG', 'supply chain')

The keyword frequency analysis reveals a strong emphasis on technology-driven logistics and supply chain management, particularly within the FMCG and e-commerce sectors. *Online Logistics* emerged as the most frequently mentioned term, highlighting its critical role in enabling seamless digital transactions and efficient delivery systems. This is closely followed by *FMCG* and *Supply Chain*, which together underscore the importance of agility and responsiveness in fast-moving consumer goods and the broader logistics framework. The mention of *E-commerce* reflects the rising relevance of digital retail platforms and the need for integrated logistics support. Lastly, *Technology Adoption*, while slightly lower in frequency, plays a foundational role across all these domains, indicating a shift toward automation, digital tools, and innovation to enhance operational efficiency. Overall, the data suggests a clear trend toward leveraging technology to optimize supply chains and meet evolving market demands.

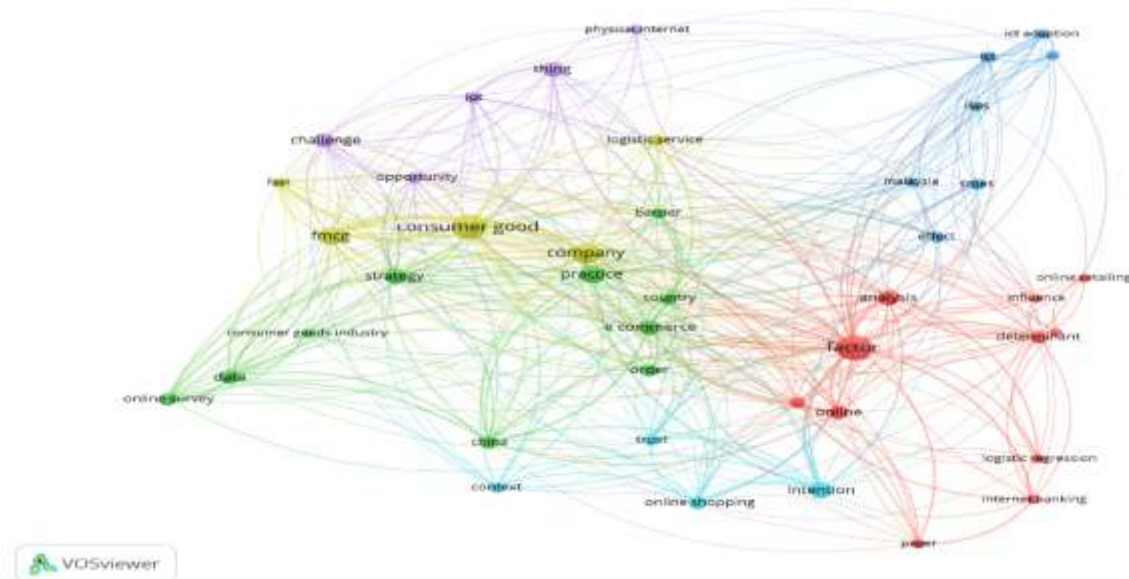
**Source Impact Analysis** Top journals contributing to the field include:

- *International Journal of Logistics Management*
- *Journal of Business Logistics*
- *Supply Chain Management: An International Journal*

**Table 5: Top Contributing Journals**

Journal Name	Articles
International Journal of Logistics Management	18
Journal of Business Logistics	15
SCM: An Int'l Journal	12

**Thematic Evolution** Key themes have evolved from basic logistics to include AI, IoT, and blockchain in logistics services.





The keyword co-occurrence network map generated using VOSviewer presents a comprehensive visualization of thematic trends in supply chain and digital commerce research. The map reveals several distinct but interconnected clusters, each representing a thematic focus. One prominent cluster (in red) centers around digital consumer behavior and analytical modeling, with frequently occurring terms such as *factor*, *online*, *influence*, *analysis*, and *logistic regression*. This cluster reflects a strong academic interest in understanding the determinants of online consumer behavior, particularly in the contexts of e-commerce, internet banking, and online retailing. Another significant cluster (blue) is dedicated to *ICT adoption*, with keywords such as *ict*, *smes*, *malaysia*, and *effect*. This suggests a regional and sectoral focus on the digital transformation of small and medium-sized enterprises, especially in Southeast Asia. A third cluster (purple) revolves around *IoT* and *logistics services*, incorporating terms like *physical internet*, *thing*, and *logistic service*, indicating a growing interest in smart logistics, sensor-based tracking, and digital infrastructure. The green cluster emphasizes *company practices*, *e-commerce*, and *trust*, linking organizational strategies with consumer interaction in digital markets. Keywords such as *company*, *practice*, *trust*, and *order* reflect the operational and managerial dimensions of e-commerce. Finally, the yellow cluster is rooted in the *FMCG* and *consumer goods* industry, with terms like *fmcg*, *strategy*, and *consumer goods industry* highlighting business strategy applications in fast-moving consumer markets. Across the map, keywords such as *factor*, *consumer good*, *company*, and *practice* serve as central nodes, bridging multiple clusters and demonstrating their thematic importance across the literature. Overall, the network indicates a clear evolution from traditional supply chain and logistics topics toward a more integrated and digital-centric research focus encompassing technology, consumer behavior, and strategic business practices.

## CONCLUSION

The use of online logistics services in the FMCG sector: A bibliometric analysis This bibliometric study provides a comprehensive and panoramic picture of the advances of the online logistics services for the FMCG domain, highlighting the increasing attention that the academia devoted in the last 20 years. The growth in the number of publications between 2000 and 2024 signalizes that increasing attention is being paid to digital supply chain management and the importance of online logistics in improving efficiency in the FMCG industry. Some primary contributors such as Christopher M., Chopra S., Simchi-Levi D., and others have published material with a significant impact and account of citation, reflecting their influence to the development of the area of study. The analysis of keywords and thematic clusters reveals a significant shift toward digitalization, with emerging trends in IoT, AI, blockchain, and e-commerce integration becoming prominent in the logistics landscape. This transformation reflects the growing emphasis on technology adoption to optimize supply chains and meet the demands of a rapidly evolving market. Leading journals such as International Journal of Logistics Management, the Journal of Business Logistics are at the forefront of the discussions, contributing useful findings and producing significant publications that chart the way forward. The progression of themes further suggests that the acceptance is increasing of the digitalization of logistics, ranging from the systems theory in the logistics field to the advanced technology applications in supply chain management. To sum up, the field of online logistic services in FMCG presents a strong increasing research development due to the demand for more agile, efficient and technology-based solutions in supply chains. Our research work in this project serves as stepping stone for future work in academics and as an insight into practice of how digital supply chain innovations evolved and have been applied in the FMCG industry. These findings serve as a basis for further studies by academics and practitioners to investigate other means for improving logistics services and operations efficiency in this vibrant sector.

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