THE IDENTIFICATION OF THE KEY ATTRIBUTES OF THE PERFORMANCE ENHANCEMENT OF THE LOGISTICS SECTORS: A BIBLIOMETRIC APPROACH

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Abstract

The primary goal is to determine the key attributes of the performance enhancement of the logistics sectors. Furthermore, a full content analysis of the 87 most influential publications is offered to identify important study qualities such as data characteristics, techniques, and major discoveries. An overview of current developments in the performance of logistics companies is presented in this paper. An approach known as bibliometric analysis is used to assess the current state and forecast future developments in the performance of logistics companies. We contributed to the development of a strong theoretical framework and a roadmap for future study.

Keywords: Bibliometric Analysis, Logistics Sector, Performance

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1. INTRODUCTION

Supply chain management (SCM) is a critical strategic aspect for boosting business effectiveness in a global economy and competitive and dynamic environment. Wineries all around the world are beginning to grasp the significance of the supply chain and the significance of how they perform for their businesses in general (Islami, 2021). It is possible to gauge the global significance of the wine industry by its business and operational volume. Recent years have seen numerous works on measuring supply chain performance using various methodologies, such as different scopes

(all logistical activities versus individual logistic processes), different techniques, and so on and so forth (grouping indicators within dimensions, data envelopment analysis, multi-criteria analysis, etc.) (Noor, 2022). The aims of each of these methodologies are distinct (e.g., measuring internal performance, benchmarking, extracting knowledge in the form of dependency relationships between indicators, etc.). A variety of sectors and business sizes have made use of the presented models and methodologies (e.g., manufacturing, hardware and software, textile and garment, etc.). An overview of contemporary literature is offered here to show how performance assessment can be used in a variety of industries,

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contexts, and for a variety of purposes. Small and medium-sized businesses were the topic of a supply chain balance scorecard established (Chienwattanasook et al., 2019). This type of dashboard provides a quantitative view of the dynamics of distributed logistics chains thanks to the availability of indicators. Internal logistics chain tools, such as information systems, cost management, optimization systems, and multicriteria decision support can now be implemented.

Information systems have had a growing impact on logistics in recent years. Information systems activities have been studied from a variety of angles, and the relationship between information technology (IT) deployment, supply chain integration, and supply chain performance has also been examined (Kim & Kim, 2019). An empirical study by Bayraktar et al. (2009) examined a framework for establishing causal relationships between SCM and information systems practices. It is also been explored by Kirono et al. (2019) on how to precisely evaluate SCM performance at the inventory level while minimizing overall cost, and performance measurement tools have been applied to specific scenarios like manufacturing companies. For example, Vuković et al. (2020) proposed a conceptual framework for helping to define performance indicators that promote the alignment of maintenance objectives with production and business goals. According to Neely et al. (1996), the adoption of structured processes for developing performance measurement systems, comprising more than 850 small and medium-sized enterprises (SMEs) in the United Kingdom, simplifies this effort and increases quality. Since the 1970s, bibliometric studies have been utilized in numerous fields to track the evolution of research, citation, and collaborative practices. Bibliometrics, according to Pritchard (1969), measures and analyses many elements of written documents in an effort to quantify communication. The goal is to get insight into how science's written communication develops in order to determine a discipline's growth. It is a brand-new field with only a few bibliometric studies in city logistics and related fields to back it up. Research into bibliometrics in this field is now possible because of this potential. Researchers have identified a void in the literature in this area, and they are filling it by doing bibliometric analysis on the performance of logistics organizations to discover the most common keywords used in publications and to detect author citation trends in the field (Algaraleh et al., 2022). The study aims to identify the key attributes of the performance enhancement of the logistics sectors.

This article is structured as follows. Section 1 is the introduction. Section 2 reviews the relevant literature. Section 3 presents the research methodology. Section 4 provides the research results and discusses the findings. Finally, Section 5 concludes the paper.

2. LITERATURE REVIEW

Each organization creates a performance definition, performance indicators, and a performance measurement system in accordance with its own goals and objectives. Value, money, promotion, human capital, growth potential, commercial loss recompense, and bureaucracy are the variables used in the research to measure the effectiveness of logistics organizations (Geçkil, 2022). The study employed performance indicators such as procurement time, stock maintenance costs, and shipment (Moons et al., 2019). Logistics performance measures, however, have been highlighted as security, dependability, on-time delivery, cost savings, and standard compliance (Jazairy et al., 2017; Thuneibat et al., 2022).

Traditional performance assessment techniques highlight five major performance criteria that are considered crucial for an organization to succeed in logistics activities. Specific metrics from each primary performance criterion are used in the evaluation of logistical functions. The criteria and measurements used in the evaluation by de Lorena Diniz Chaves et al. (2020) are listed below:

1. Asset management: Return on investment and capacity utilization.

2. *Price:* Per-unit prices and shipping fees.

3. Customer service: Variability in transfer times and average transfer times.

4. The quantity of deliveries made by each vehicle serves as a proxy for productivity.

5. *Quality:* Shipping-related damages and documentation accuracy.

The sustainability of the success of logistics operations should also be considered while assessing their performance (Cedillo-Campos et al., 2022).

The idea of sustainable growth is having a significant impact on research across many different fields of study and is quickly becoming crucial. The logistics industry has recently been impacted by these innovations, and the concept of sustainability has emerged as one of the core tenets of logistics management (Kagermann, 2014). The Association of International Transportation and Logistics Services, one of the most well-known Turkey's logistics industry, organizations in has started a program to aid all logistics and transportation businesses in achieving long-term success. Bureau Veritas, an impartial certification and inspection organization, and the Association of International Forwarding and Logistics Service Providers are partners in the initiative's management (Ersoy & Tanyeri, 2021). A certification scheme implemented that will is being support the environmental, social, and financial long-term viability of logistics firms. Prior to applying for sustainable logistics accreditation, businesses interested in learning more about the general sustainability standards must attend a seminar (Alderman & Ilina, 2014). The evaluation covers management's dedication to sustainability, the the business's stewardship of its assets, the environment, energy, occupational health and safety, and employee rights. A sustainable logistics accreditation is given to businesses that are deemed suitable following the inspection process (Khan & Liu. 2023: Al Tarawneh et al., 2023).

The Logistics Performance Index (LPI) is a comprehensive indicator created to help nations recognize the challenges and opportunities they can face. The World Bank develops the LPI, which is then made into a report and released. Jayathilaka et al. (2022) describe it as a comprehensive evaluation of logistics performance. The evaluation's worst score is 1, and its highest grade is 5. The Index compares



the logistics performance of 155 countries by combining judgments made by more than 5,000 employees of around 1,000 international logistics organizations (Nitsche, 2021). In this study, the effectiveness of nations in terms of logistics was assessed across seven aspects (Yang & Thoo, 2023). According to Barakat et al. (2023), the 7 dimensions include the efficiency of customs procedures, logistic infrastructure possibilities, ease of shipment and transportation, quality of logistic services, shipment follow-up and traceability, on-time delivery, and domestic logistics costs. In the second study, which was released in 2010, domestic logistic costs were excluded from the calculation, and the number of criteria was reduced to 6 (Arvis et al., 2016).

3. RESEARCH METHODOLOGY

A bibliometric analytic strategy is applied in this research. Pritchard (1969) was the first to utilize it, and it has since grown in prominence as a tool for quantitative analysis of literature. Software developed by Alqaraleh et al. (2020) and Aria and Cuccurullo (2017) is used to highlight the trends of prior studies on the performance of logistics companies. "Performance of logistics companies", "performance of logistics", and "logistics" are the keywords we use because there is no clear conceptual definition of the "performance of logistics companies" in the market. Restricting the ability to find relevant studies is one of the ways we keep the general information and make searches easier. In the first place, all of the potential papers should be included in the Web of Science core collection. One of the following indices should contain papers: A subset of SCIE is called Science Citation Index Expanded (SCIE), and a subset of SCIE is called Science Citation Index (SCI), containing journals that rank competitively among the most highly-cited core journals in their category or categories. Social Science Citation Index (SSCI) allows you, first, to identify articles relating to topics you are interested in, and then, using those articles as a kind of base, it allows you to "spread out" and identify related works. You "spread out" by going both up and down. The Arts and Humanities Citation Index (A&HCI) is a citation index that offers bibliographical access to a curated collection of over 1,800 journals across 28 arts and humanities disciplines and individually selected, relevant items from over 6,800 major science and social science journals — from 1988 to present. The Emerging Sources Citation Index (ESCI) aims to extend the scope of publications in the Web of Science to include high-quality, peer-reviewed publications. It ensures important research is visible in the Web of Science Core Collection even if it is not yet internationally recognized. From 2012 to 2021, the most relevant samples are available. Our next step is to look over each title and abstract by hand in order to weed out any items that are not relevant. Our sample consists of a total of 87 pieces of writing. Figure 1 plots the number of papers published each year. During the time period under study, a definite rising trend in publications was seen. The slow and steady expansion has been replaced by a rise in scholarly interest in the performance of logistics companies.

Figure 1. Number of relevant publications from 2012 to 2021



Source: Zhang et al. (2021).

4. RESULTS

4.1. Journal distribution

According to the number of publications in our sample, Table 1 provides a list of the journals with the most articles published. Despite the fact that finance is a critical component of the performance of logistics companies, the primary journals publishing related articles are those focusing on SCM. There was not a single journal dedicated to business management on the list. In fact, we were able to find some relevant papers in finance journals, such as one from the Journal of Applied Economics, one from International Business Management, one from the International Journal of Productivity and Performance Management, and one from the International Journal of Quality and Reliability Management, by examining the list of papers published in finance journals. To be fair, even though system planning, SCM, and safety are represented in the first study, the evidence presented here verifies what Diaz-Rainey et al. (2017) found: the mainstream management publications are typically mute on issues related to global warming and climate change. International Journal of



Productivity and Performance Management, International Business Management Journal, and Industrial Engineering & Management Systems all are featured on this list since they are all journals in the fields of management and resource economics. In spite of its generally accepted relevance and urgent need for full-fledged policy and regulatory instruments, the performance of logistics companies has yet to become an interest of mainstream economics or finance journals. There is still a long way to go in mainstream economic and financial research to bring this fast-developing area into the spotlight and fill the large gap that exists in the present literature. There are two reasons to back up what we are saying. Both investment in and research outputs by academic researchers in the field of performance of logistics companies projects have grown significantly over the past few decades and have maintained a high growth momentum. Many events linked to mainstream finance journals in the recent few years are definitely linked to relevant outputs, even though it is too early to see additional publications today. Because of the scarcity of relevant studies, groundbreaking work in this area could have a significant influence. As a whole, we feel confident in claiming that there is an opportunity.

Table 1. Journal distributions

Sources	Articles
Proceedings of the 2014 International Conference of Logistics Engineering and Management	2
Applied Economics	1
Civil Engineering and Architecture	1
Industrial Engineering and Management Systems	1
International Business Management	1
International Journal of Economic Research	1
International Journal of Productivity and Performance Management	1
International Journal of Quality and Reliability Management	1
Journal of Distribution Science	1
Lecture Notes in Mechanical Engineering	1
4th IEEE International Symposium on Logistics and Industrial Informatics Proceedings	1
Promet — Traffic & Transportation	1
Sustainability	1

Figure 2. Journal distribution





Source: Tseng and Liao (2015).

4.2. Authors' country of origin

The main source of interest in the performance of logistics companies research is Malaysia, therefore, it is worth looking into it. We examine this topic in relation to the countries of origin of the authors. The country of origin of the writers is summarized in Figure 3. It shows that Malaysia, Korea, China, the United States, Indonesia, and Thailand are the primary contributors to the recent rapid advancement of this sector. Since the World Bank, United Nations, and a slew of other major international organizations have headquarters in the United States, it is no surprise to see a concentration of researchers from the United States working in this area. With regard to international collaboration in logistics, Europe has long been the driving force. The European Union Emissions Trading System, the world's largest carbon pricing market, has long piqued the interest of academics studying logistics performance.

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Figure 3. Authors' country of origin



Source: Bosona and Gebresenbet (2013).

4.3. Keywords analysis

The top 13 keywords are shown in Table 2. There are three key issues in the literature: "logistics", "performance", and "companies". An important policy challenge is how to deal with organizations, which is why enhancing the performance of logistics companies is important. According to Figure 4, these articles contained a number of keywords. When the graphs and the top 13 countries in the globe are combined, several intriguing patterns emerge. It turns out that, in addition to the main topics, other key terms received considerable attention. For example, the 8th position highlights worry about how the performance of logistics companies is managed by a state or a market. Figure 4 also shows a crucial keyword ("business") related to management, which indicates that appropriate important concern governance is an for the performance of logistics companies. Researchers are also interested in the impact of logistics companies, or how their performance affects development (growth). Due to its position as a major player in the performance of the logistics companies market, Malaysia is a natural choice for this study. Figure 4 clearly shows the need to examine the performance of logistics companies topics from

a financial perspective, even though they did not make it to the top 13 list. In order to better understand the performance of logistics companies, it is vital to analyze keywords. Logistics companies' performance is clearly linked to their organizational structure and should therefore be policy-driven. It is all about financing or investing in the adaptability of logistics companies. In addition, financial economists are needed to help improve the performance of logistics companies.

Table 2. Top 13 keywords

Keywords	Frequency
Logistics	69
Performance	52
Companies	43
Business	20
Logistic	14
Safety	14
Corporate	13
Efficiency	10
Improve	9
Organizational	9
Strategy	9
Capabilities	8
Leadership	8

Figure 4a. Performance logistic







Figure 4c. Word growth



4.4. Citation analysis

Literature related to logistics company performance has a high rate of citation. The sample of 87 papers has an average citation count of 8.5. As seen in Table 3, the 13 most often cited papers in our sample are listed. There is a wide variety of perspectives represented here, highlighting the topic's interdisciplinary aspect once again. Eighty-seven (87) papers' references are also examined for their origins. Science, climate change, and environmental journals are clearly the most prominent in the field. These studies appear to be affected by a few economic journals (such as the *American Economic Review and Ecological Economics*), while finance journals are clearly absent. It is possible to see how the relevant literature network has grown by performing an in-depth citation analysis on referenced journals. Though it is called "performance of logistics companies", current research in this area is not based on mainstream financial publications. It also shows that methodologies and models for studying the performance of logistics companies should be introduced into mainstream financial research.



Author	Journal	Total citations	TC per year	Normalized TC
Chienwattanasook et al. (2019)	Industrial Engineering & Management Systems	34	8.5	2.55
Yu et al. (2016)	Sustainability	18	2.5714	1
Wong et al. (2015)	International Journal of Productivity and Performance Management	18	2.25	1
Chandraprakaikul and Suebpongsakorn (2012)	In 2012 4th IEEE International Symposium on Logistics and Industrial Informatics	12	1.0909	1.846
Le et al. (2020)	Applied Economics	6	2	2.25
Kirono et al. (2019)	International Journal of Quality & Reliability Management	5	1.25	0.375
Vuković et al. (2020)	Promet — Traffic & Transportation	1	0.3333	0.375
Hoang (2020)	Civil Engineering and Architecture	1	0.3333	0.375
Kim and Kim (2019)	Journal of Distribution Science	1	0.25	0.075
Samad and Abdullah (2012)	International Business Management	1	0.0909	0.154

Table 3. Top cited papers

5. CONCLUSION

A simple bibliometric technique was used in this work to assess the current state and future direction in which academic research on this topic is moving forward. It is possible to get a clearer understanding of this subject matter by ranking and visualizing a sample of 87 relevant publications on a number of critical aspects. The performance of logistics companies should be deemed an interdisciplinary research subject, based on keyword analysis of the literature, because it deals with policies, involvement, and management of equity investments in global adaptation. Performance of logistics companies research is currently dominated by academics from developed economies, as the authors' analysis of country of origin demonstrates. Policy journals and journals specializing in environmental/ climate change publish the majority of papers in this field, while conventional economics and finance publications rarely publish anything in this area. The importance and expanding relevance of logistics companies have been demonstrated time and time again. Because mainstream economics and finance journals do not pay enough attention to new work, a void has opened up that allows academics to explore at least three other avenues for future research. In the first place, because the performance of logistics companies is primarily a financial topic, it is vital that cash flow perspectives and methodologies from finance be used to analyze

the performance of logistics companies' difficulties. Mainstream financial journals should be interested in topics like equities, sustainable risk management, and sustainable management. Second, regulators and policymakers might benefit from further studies on the performance of logistics companies from the perspective of developing countries in order to align different policy aims and generate well-defined policy goals. More international cooperation between developing and developed countries is envisaged as a result of clear information benefits for scholars from the developing world. Third, it is worth noting that the performance of logistics companies' topic is fundamentally policy-driven, unlike typical financial themes. The quickly changing international economic and political contexts are likely to lead to new difficulties in this subject. A full evaluation of relevant literature is currently lacking, to our knowledge. Exploration and comparison with the findings of our bibliometric analysis are highly recommended

Future research should widen the scope of keywords and population to guarantee that all relevant literature on performance enhancement of the logistics. Unexplored elements such as clarity, beauty, efficiency, competitive advantage, and mediating/moderating functions of factors should be investigated. It is also critical to keep up with the newest technology and performance of the logistics through regular updates and repeat searches.

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