

Bibliometric Analysis of Supplier Management

Subjects: Economics

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This entry presents the results of a bibliometric analysis of supplier management. We conducted a bibliometric analysis based on 4687 papers on supplier management from 1997 to 2017. Through a comparative analysis of the four stages using Bibexcel and Ucinet6 software, this paper explores the evolution of supplier management from the theme and cluster perspectives. The results show that supplier management research has made breakthroughs in both breadth and depth. Representative research themes, such as “sustainable supply chain”, “corporate social responsibility”, “knowledge management”, etc., have gradually penetrated into the field of supplier management. Research related to “supplier selection” and “supplier relations” have always been of the highest strategic importance, and themes in “supplier relations” cluster such as “trust” and “commitment” have gradually attracted more and more researchers' attention. The “inventory” cluster has also been a research focus, and the structural stability and maturity of the cluster have gradually improved. The “innovation” cluster is a relatively “open” cluster, and its impact on the entire research field of supplier management has been gradually increasing. More importantly, the “sustainability” cluster is an evolving cluster, research themes related to “sustainability”, such as “green supply chain”, “sustainable supply chain” and “green supplier selection”, will play an increasingly important role in the field of supplier management.

Keywords: supplier management ; evolution ; co-word analysis ; cluster analysis ; bibliometrics ; strategic diagram

1. Research questions

The research questions are as follows:

Q1: what are the hot research themes in the field of supplier management?

Q2: what is the relationship between these hot research themes?

Q3: What are the evolution trends in the field of supplier management?

Q4: What are the main future research directions in the field of supplier management?

In order to answer these above questions, a bibliometric analysis based on 4687 papers on supplier management from 1997 to 2017 was conducted. Through a comparative analysis of the four stages using Bibexcel and Ucinet6 software, the paper explores the evolution of supplier management from the theme and cluster perspective.

2. Important findings

First, the research on supplier management has made breakthroughs in both breadth and depth during the research period. Representative research themes, such as, “sustainable supply chain”, “corporate social responsibility”, “knowledge management”, etc., have gradually penetrated into the field of supplier management. Corporate social responsibility in supplier management has received increasing attention in recent years.

Second, research themes such as “supplier selection” and “supplier relations” have always been of the highest strategic importance in the field of supplier management, both from theme and cluster perspectives. However, the “supplier selection” cluster and “supplier relations” cluster present very different characteristics. The “supplier selection” cluster is not stable because its theme members are always changing, and the theme of “supplier selection” is not very closely related to other themes. The reason for this phenomenon may be that although there are a large number of studies on “supplier selection”, most of these studies focus on the application of mathematical methods in supplier selection. In addition, research on sustainable, green and strategic-oriented supplier selection is in the early stage of the research cycle and may evolve into hot research themes in the future ^[1]. The “supplier relations” cluster have always had a significant impact on the field of supplier management. In addition, more and more researchers pay attention to the

“supplier relations” cluster members such as “trust” and “commitment”. Many studies highlight the importance of “trust” and “commitment” to client–supplier relationship [2][3][4][5]. In addition, there are also studies show that “trust” has a significant positive effect on “commitment”[5][6].

Third, researchers have always been very enthusiastic about the research related to “inventory”, the strength of the linkages between themes within the cluster has been increasing, and the structural stability and maturity of the cluster have gradually improved. The theme members of these clusters cover some important inventory models, such as “VMI”, “consignment inventory” and “JIT”. The self-frequency and co-occurrence frequency of these themes gradually increased during the research period, while the self-frequency and co-occurrence frequency of “EOQ” gradually decreased. In addition, important factors affecting inventory management, such as “lead time”, “pricing”, and “logistics”, have also attracted the attention of many researchers.

Fourth, the “innovation” cluster is a relatively “open” cluster, and its impact on the entire research filed of supplier management has been gradually increasing. The co-word analysis results show that theme members such as “product development”, “supplier involvement” and “innovation” have always been hot research themes. In addition, the results also show that “supply chain collaboration”, which has been proved to improve the collaborative advantage and have a significant impact on enterprise performance [7], is an important research background for research related to “innovation” in the field of supplier management. There are also studies indicating that “supply chain collaboration” has a positive effect on improving sustainability [8]. Innovation in the supply chain is expected to achieve sustainable results. Therefore, sustainable supply chain innovation has also become an important research direction. Tebaldi et al. (2017) found that the number of papers on innovation and sustainable development increased by seven times in ten years, so they predicted that the rapid growth stage of sustainable supply chain innovation research was coming [9].

Fifth, the “sustainability” cluster is an evolving cluster, research themes related to “sustainability”, such as “green supply chain”, “sustainable supply chain” and “green supplier selection”, will play an increasingly important role in the field of supplier management. Both co-word analysis and cluster analysis results show that themes related to “sustainability” have become the new favorite of researchers. In fact, the integration of sustainability into business practice is one of the most dynamic research themes in the field of supplier management, and publications on this research theme presents a sharp growth in recent years [10]. The discussion above shows that some hot research themes, such as “corporate social responsibility”, “knowledge management”, “supplier selection”, “innovation”, and “supply chain collaboration”, are increasingly related to “sustainability”. In addition, it can be also found from the “Introduction” Section that literature reviews on sustainability and supply chain, such as sustainable supply chain, green supply chain and low-carbon supply chain, have attracted the most attention in recent years. However, it should be noted that despite the large number of studies on sustainability in the supply chain, most of these studies focus on environmental considerations, while less attention has been paid to social considerations [11]. In addition, the present findings show that the density of the “sustainability” cluster is relatively low, indicating that the stability and maturity of the structure need to be further improved. It is mainly because that research themes such as “green supply chain”, “sustainability” and “sustainable supply chain” are evolving concepts [12], which leads to the “sustainability” cluster being an evolving cluster. What’s more, it also illustrates that “sustainability” will interact deeply with more traditional and emerging themes in the context of the supply chain.

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