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Research Overview of Management Accounting Based on CiteSpace

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Abstract: This paper focuses on management accounting, uses the visualization analysis software Citespace, reviews Chinese management accounting related literature, reveals the hot spot and frontier trend of management accounting research in our country. The analysis results show that the research focuses on the application of management accounting, discrimination of the relationship between management accounting and financial accounting, strategic management accounting, activity-based costing, and innovation of management accounting in the digital age. Under the background of big data, it is the frontier trend of domestic management accounting research to study the application of management accounting in different institutions such as public hospitals and feed enterprises based on the perspective of industry and finance integration.

Keywords: Management accounting, CiteSpace, Research review.

1. Introduction

Management accounting originated in the early 20th century, along with the progress of science and technology and the development of enterprise management methods, the theoretical trend of its research and the practical application of enterprises continue to change, and gradually tend to perfect. The management also attaches more and more importance to management accounting, and the various fields of enterprise operation and management begin to widely use management accounting, and according to their own actual situation, in order to achieve the goal of strategic, business and financial integration for enterprises. Under the background of globalization and information technology, many new methods and tools have emerged in modern management accounting, which makes the research methods increase day by day, and promotes the continuous breakthrough and innovation of management accounting theory research.

CiteSpace is a visualization software developed by Professor Chen Chaomei and his team, which has the functions of keyword analysis, cluster analysis and spatio-temporal analysis. It can systematically analyze and visually display the research hotspots and frontier trends in a certain academic field. Based on CiteSpace software and bibliometrics as the theoretical basis, this paper uses big data quantitative analysis to sort out the correlation between relevant literatures of management accounting in China, and discusses the knowledge structure and development trend in the field of management accounting from multiple perspectives, in order to provide references for related scholars in the future research direction.

2. Sources of Research Data

This paper uses CNKI database as the source of literature data, and searches academic journals with management accounting as the main topic. As of April 30, 2024, the source categories are limited to Peking University Core and CSSCI. According to the above establishment conditions, 1090 relevant literatures were retrieved, and then the first literature screening was carried out to remove literatures unrelated to the research, such as reviews, conferences, newspapers, news, reviews, etc., and 994 literatures were obtained. The data were imported into CiteSpace for the second screening, and a total of 972 literatures that could identify the publication date were used as research samples.

3. Research Hotspot Analysis

Keywords cannot only summarize the content of literature, but also reflect the common concern of scholars. Therefore, research hotspots in the academic field can be determined by analyzing keywords in relevant literature. This paper uses the keyword clustering map to show. Keyword clustering map is to cluster keywords in literature according to their similarities, paying more attention to the similarity between keywords and the division of research fields.

With CiteSpace, the keyword clustering graph (Figure 1) and the list of cluster label words (Table 1) are obtained. Generally speaking, if the value of network module Q > 0.3 in the graph, the network structure is considered significant. The average contour value S > 0.5 and the closer it is to 1, the more reliable the network is considered to be.

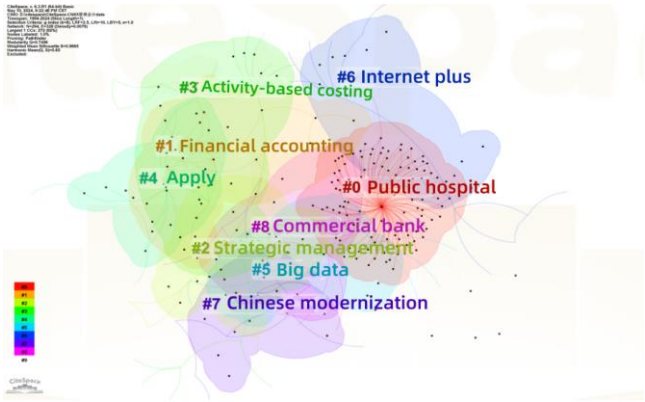

Figure 1. Keyword clustering diagram

Table 1. List of cluster label words

Cluster No.	Cluster Label	Cluster Size	Label Words
0	Public Hospitals	111	Public hospitals, Strategic management, Activity-based costing, Corporate governance, Financial management
1	Financial Accounting	25	Financial accounting, Corporate governance, Financial management, Accounting information systems, Development trends
2	Strategic Management	19	Strategic management, Strategic management accounting, Environmental uncertainty, Ethics, Behavioral motivation
3	Activity-Based Costing	16	Public hospitals, Activity-based costing, Budget management, Informatization, Performance evaluation
4	Applications	15	Applications, Enterprise management, Enterprises, Characteristics, Management methods
5	Big Data	13	Big data, Cost management, Implementation models, Cost structure evolution, Activity-based costing
6	Internet+	12	Internet+, Business-finance integration, Talent cultivation, Target costing, Information technology
7	Chinese-Style Modernization	9	Chinese-style modernization, High-quality development, Innovation models, Modern economic system, Digital transformation
8	Commercial Banks	9	Commercial banks, Countermeasures, Performance, Application issues, Review

Due to the large amount of data, 36 clusters and 9 cluster labels were obtained (see Figure 1). The results of cluster analysis showed that Q=0.7456, S=0.85, indicating that the cluster structure was significant and had high confidence. By analyzing the tag words in each cluster, it is found that the research contents of these clusters cross each other, and the irrelevant cluster #7 (Chinese-style modernization) can be excluded, and the similar clusters can be divided into five parts for analysis, detailed as follows:

#0, #4, #8 Clustering: Management accounting applications. This section focuses on the application and practice of management accounting in different types of institutions such as public hospitals, enterprises, and commercial banks. Domestic academic research on the application of management accounting in different types of institutions mostly focuses on the application direction of management accounting, application tools, existing problems, improvement suggestions and so on. Management accounting not only plays a positive role in promoting the optimization of financial management in public hospitals and commercial banks, but also is widely used in feed enterprises [1], iron and steel enterprises [2], oil field enterprises [3], etc., which improves the management level of enterprises and achieves sustainable development. In terms of management accounting application tools, Dou Jianfeng [4] believes that based on activity-based budgeting and through "embedded integration", the existing management accounting tools such as comprehensive budget management, balanced scorecard and standard cost method are integrated to form a suitable management accounting tool framework. Gao Ting [5] further took the First Affiliated Hospital of Henan University of Chinese Medicine as the research object and established a data exchange platform based on big data technology. On this basis, she flexibly applied management accounting tools such as comprehensive budget management and balanced scorecard to solve problems such as information island phenomenon and inconsistent standards related to medical data in hospitals. In addition, the application of management accounting mainly has problems such as insufficient attention from decision-making level, imperfect management accounting system, weak basic information and low quality of personnel [6]. In this regard, the key to the construction of management accounting system is to optimize the internal environment of management accounting application, establish an open and transparent data platform, improve the evaluation, supervision and accountability mechanism, and improve the talent selection system. At the same time, the management accounting system can be improved with the help of external consulting [7].

#1 Clustering: Analysis of the relationship between management accounting and financial accounting. Scholars mainly discuss whether management accounting and financial accounting are "combined" or "separate". Since the separation of financial accounting and management accounting, the nature and boundary of financial accounting and management accounting have been controversial. Wei Dehong et al. [8] believe that the association plan is divided into financial accounting and management accounting, the scientific nature of which is questionable, and such division has led to problems such as confusion of discipline system, confusion of work cognition, and weakening of financial management functions. Such division should be abolished, accounting should be returned to its origin, and financial management should be restored to its rightful position. On the other hand, He Yueying et al. [9] believe that the transformation from financial accounting to management accounting is not only necessary, but also urgent. Management accounting can not only provide more accurate and comprehensive financial information, but also help enterprises to achieve fine management and improve market competitiveness. The deep combination of management accounting and financial accounting will help enterprises form decision-making suggestions through sorting, processing and analysis based on the real financial information obtained by financial accounting, and provide references for enterprise managers [10]. This paper holds that the integration of management accounting and financial accounting is an inevitable trend in the development of modern enterprises. With the popularization and professional application of Internet big data technology, the integration trend of financial accounting and management accounting has been further accelerated and clarified [11]. This trend not only brings new technical support to enterprises, but also calls on us to pay attention to the exploration of the integration method of management accounting and financial accounting, in order to improve the efficiency and role of accounting in enterprise management. For example, Lin Gang [12] proposed the variable responsibility cost method, which not only meets the needs of management accounting cost forecasting, cost control and cost evaluation, but also meets the needs of

financial accounting and tax law cost accounting. It establishes a large accounting information system integrating management accounting and financial accounting, and organically integrates various information of management accounting and financial accounting. Make accounting play a greater role in enterprise management.

#2 Clustering: Strategic management accounting. In the 1980s, strategic management accounting emerged and developed based on strategic management. Strategic management accounting analyzes and provides the characteristics of strategy-related data for enterprises, which enables enterprises to obtain lasting competitive advantages, and raises modern management accounting to a new level in breadth, depth and height. In order to meet the needs of enterprise process reengineering and refined management, strategic management accounting is widely used in many fields in practical research: for example, strategic management accounting theory and technical methods are applied in commercial banks [13]; This paper discusses the implementation of strategic management accounting in commercial banks from the perspectives of activity management, balanced scorecard and value management [14, 15]. Other specific applications include: the construction of the strategic environmental management accounting system of oilfield enterprises [16], the decision analysis of enterprise loss products and goodwill promotion from the perspective of strategic management accounting [17, 18], etc.

#3 Clustering: Activity-based costing. Activity-based costing is one of the cost accounting methods commonly used in management accounting. Due to the great changes in the production and manufacturing environment of Chinese enterprises, the cost information provided by activity-based costing is more comprehensive and accurate than the traditional costing method [19], so more and more enterprises are adopting activity-based costing. In the implementation of activity-based costing, cost driver is the real cause of resource consumption, so the correct selection of cost driver is the key to the application of activity-based costing [20]. ABC is not universal, and it has certain application conditions, namely determining factors, which are product differentiation, importance of indirect cost and market competition [21]. Cost structure is an important factor for Chinese enterprises to adopt ABC. Compared with foreign enterprises, Chinese enterprises' choice of ABC seems to be unaffected by the proportion of manufacturing expenses [22].

#5, #6 Clustering: Management accounting innovation in the digital age. In recent years, China's management accounting has entered a stage characterized by "big data" and "comprehensive promotion", from the early cost management and budget control to the integration of management control and information support, extending the boundary of management accounting and providing a new direction for the construction of management accounting theory system with Chinese characteristics. Under the opportunity of big data, management accounting has good technical and environmental conditions, which has a great role in promoting the development of management accounting. The wide application of big data has put forward higher requirements for the professional capacity building, information confidentiality ability and corresponding technical conditions of management accounting personnel. This requires the establishment of a competence framework for management accounting talents with three core skills: technology, interpersonal skills and decision-making [23], the establishment of a high-standard risk management mechanism, in order to realize information security monitoring and early warning [24], and the construction of an accounting information system based on cloud computing. For example, through the combination of big data and management accounting, commercial banks transition their main function from reflection to control, and carry out fine management to encourage commercial banks to rebuild business processes [25]. Combined with big data intelligent technology and based on knowledge transformation SECI theory, a framework model for training management accounting talents is constructed [26].

4. Analysis of Frontier Trends

By analyzing the occurrence frequency, correlation and evolution law of keywords in literature, CiteSpace can reveal the hot trends and emerging directions in the research field. Keyword emergence map indicates the new trends and hot spots in the field by showing the sudden emergence or rapid growth of keyword groups in the research field.

Based on the keyword clustering map, the keyword emergence map was obtained (Figure 2).

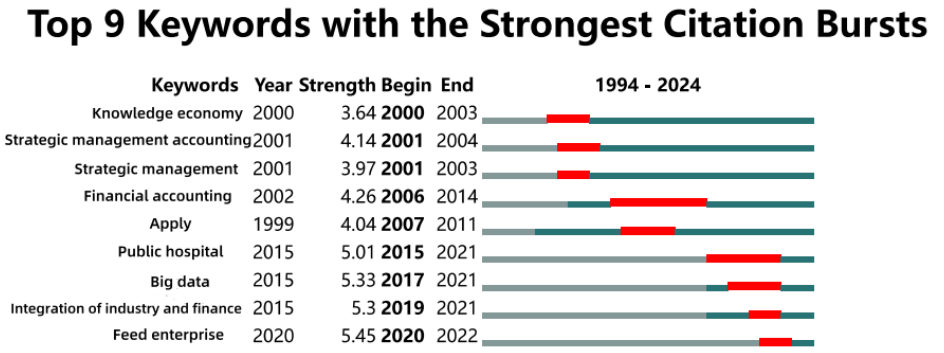

Figure 2. Keyword emergence map

It can be seen from Figure 2 that the emergence time of public hospitals, big data, industry and finance integration, and feed enterprises is the latest. Under the background of big data, it is the frontier trend of domestic management accounting research to study the application of management accounting in different institutions such as public hospitals and feed enterprises based on the perspective of industry and finance integration. The state provides many policy supports for the implementation of the information strategy and the promotion of the development of management accounting, such as the "Accounting Information Development Plan" and the "Outline of the 14th Five-Year Plan for Accounting Reform and Development". Under the guidance of the policy, the discussion and promotion of the combination of

management accounting and big data have heated up the hot spot. The continuous integration of digital intelligence technology and various industries and fields has become inevitable to promote the digital transformation of enterprises and create a new engine for the integration of smart industry and finance. The integration of industry and finance is the organic combination of management accounting and business activities. It is a value creation model with the main function of providing analysis data and decision information. It is also the key to the value creation of management accounting and the basis for realizing its functions, and an important content of management accounting [27]. Under the trend of the integration of industry and finance in the digital age, the function of management accounting has become increasingly prominent, and exploring a more scientific and effective management accounting framework has become an important issue [28]. Based on the integration of industry and finance, effective fine management is achieved, the management control effect of budget control is strengthened, the business data collection and processing capabilities are improved, and good information support is provided for the play of management accounting functions. For example, feed enterprises use big data technology to realize the integration of industry and finance, which helps financial personnel to efficiently process feed business data, give full play to the role of management accounting, predict the development of feed business, and reduce the operational risks of feed enterprises [29]. The ability framework of management accounting talents based on the integration of industry and finance plays a positive role in promoting the optimization of financial management of public hospitals, and can enhance the ability of management accounting talents and help the high-quality development of public hospitals [30].

In short, the combination of big data, the integration of industry and finance, and management accounting has become more popular in recent times. Scholars should keep up with this frontier trend and further reveal the complexity and diversity of management accounting through in-depth exploration and comprehensive analysis, to provide strong theoretical support and practical guidance for optimizing corporate governance and promoting the development of management accounting.

5. Conclusion

In this paper, the CiteSpace software is used to visualize and analyze 972 documents related to management accounting in CNKI, which directly shows the hot spots and cutting-edge trends in the field of management accounting in China. The results show that the research hotspots in the field of management accounting in China focus on the application of management accounting, the discrimination of the relationship between management accounting and financial accounting, strategic management accounting, activity-based costing, and the innovation of management accounting in the digital age. With the deepening of research, under the background of big data, it is the frontier trend of domestic management accounting research to study the application of management accounting in different institutions such as public hospitals and feed enterprises based on the perspective of industry and finance integration. In the face of this trend, management accounting research must actively devote itself to the practice of enterprises, summarize and refine the experience and practice of enterprise management accounting with Chinese characteristics, improve the theoretical system of management accounting and information support system, and promote the development of management accounting in China.

References

[1] H. Lü and M. L. Shi, "Research on the development path of management accounting in feed enterprises under the new economic normal," China Feed, no. 6, pp. 149-152, 2024.

[2] L. Yuan, Y. W. Guo, C. J. Lü, et al., "Research on smart treasury management accounting system: Evidence from Baowu's management accounting practice," Accounting Research, no. 4, pp. 173-192, 2023.

[3] J. S. Chen, Y. Liu, and J. Wu, "Research on maturity evaluation of management accounting reporting system in oilfield enterprises," Finance and Accounting Communications, no. 1, pp. 165-170, 2024.

[4] J. F. Dou, "Research on integrated management accounting tools in public hospitals based on activity-based budgeting," Health Economics Research, vol. 39, no. 2, pp. 81-84, 2022.

[5] T. Gao, "Research on the construction of information platform for public hospital operation: Based on the integration of big data technology and management accounting tools," Finance and Accounting Communications, no. 13, pp. 143-146, 2021.

[6] C. J. Zhu, "Discussion on the application of management accounting in commercial banks," Qinghai Finance, no. 2, pp. 62-63, 2012.

[7] C. Liu, L. Liu, R. Xu, et al., "Research on influencing factors of management accounting system construction in public hospitals," Chinese Hospital Management, vol. 41, no. 5, pp. 72-75, 2021.

[8] D. H. Wei, S. T. Chen, and H. Y. Yang, "Thoughts on dividing accounting into financial accounting and management accounting: Concurrently discussing the construction of financial management discipline," Finance and Accounting Monthly, no. 1, pp. 74-82, 2022.

[9] Y. Y. He and Z. Z. Cai, "Transformation from financial accounting to management accounting in leather enterprises," Leather Science and Engineering, vol. 34, no. 1, p. 126, 2024.

[10] L. Cui, "Research on the integration of financial accounting and management accounting in feed enterprises under electronic background," China Feed, no. 15, pp. 103-106, 2021.

[11] H. Yan, "Discussion on the integration path of financial accounting and management accounting in enterprises in the big data era," Journal of Commercial Economics, no. 15, pp. 132-134, 2021.

[12] G. Lin, "On the integration of management accounting and financial accounting," Finance & Accounting, no. 20, pp. 48-55, 2019.

[13] H. B. Song and Y. Luo, "Some thoughts on implementing strategic management accounting in China's commercial banks," Friends of Accounting, no. 8, pp. 46-48, 2006.

[14] J. W. Quan, "Brief discussion on the application of strategic management accounting in state-owned commercial banks," Southern Economy, no. 7, pp. 42-44, 2005.

[15] H. C. Peng, "Brief exploration of implementing strategic management accounting in commercial banks," Finance and Accounting Monthly, no. 18, pp. 24-25, 2007.

[16] X. F. Tian, "Proposal for constructing strategic environmental management accounting system in oilfield enterprises," Finance and Accounting Monthly, no. 23, pp. 86-88, 2008.

[17] R. K. Wang and Y. Wang, "Research on subsequent measurement methods of goodwill from the perspective of

economic consequences," Journal of Financial Education and Research, no. 4, pp. 63-68, 2020.

[18] X. Y. Yan, H. F. Chen, and Q. Chen, "Visual analysis of content and development context of goodwill research in China," Journal of Financial Education and Research, no. 3, pp. 54-63, 2020.

[19] L. Xu, "Adaptability analysis of activity-based costing and manufacturing environment," Finance and Accounting Monthly, no. 27, pp. 17-19, 2006.

[20] R. Zhang, B. Rao, and W. Wu, "Research on the application of activity-based costing in cost accounting of cigarette manufacturing industry," Accounting Research, no. 7, pp. 59-65+94, 2006.

[21] Y. P. Ning, "Survey research on applicable conditions of activity-based costing," Public Finance Research, no. 3, pp. 79-82, 2012.

[22] Y. R. Xiong and W. B. Su, "Current status and prospects of management accounting practice development: Survey on application status of advanced management accounting methods in China," Accounting Research, no. 11, pp. 84-90+97, 2008.

[23] R. S. Qin, "Analysis of dilemmas and innovative development of management accounting in China," Finance & Accounting, no. 16, pp. 10-12, 2018.

[24] D. L. Chen, "Discussion on challenges and countermeasures of management accounting in the big data era," Macroeconomic Management, suppl. 1, pp. 113-114, 2017.

[25] X. H. Shen, "Research on application prospects and paths of management accounting in commercial banks in the big data era," Financial Theory and Practice, no. 10, pp. 113-115, 2015.

[26] H. Y. Zha, H. J. Cai, and Y. N. Luo, "Research on competency-based training mode of accounting major in colleges under the background of 'big intelligence cloud'," Journal of Financial Education and Research, vol. 33, no. 4, pp. 75-80, 2020.

[27] G. Q. Liu, S. D. Gan, and H. Y. Duan, "Research on business-finance integration of management accounting based on blockchain technology," Finance and Accounting Communications, no. 1, pp. 160-165, 2022.

[28] W. Z. Ji and L. Zhou, "Research on management accounting framework under digital background: Based on the perspective of business-finance integration," Finance and Accounting Communications, no. 17, pp. 20-24, 2023.

[29] L. H. Zhao, Y. Zhang, and Y. N. Xu, "Advantages, challenges and paths of implementing business-finance integration in feed enterprises in the big data era," China Feed, no. 24, pp. 185-188, 2023.

[30] L. F. Deng, "Construction and implementation of competency framework for management accounting talents in public hospitals under the background of business-finance integration," Chinese Health Economics, vol. 43, no. 2, pp. 84-86+91, 2024.