

Visual Analysis of Logistics Cost Accounting Based on Citespace

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Abstract: Modern enterprise management pays special attention to cost management, in order to get the maximum profit and achieve the enterprise goal. Logistics cost is an important part of enterprise cost, accounting for about 30% to 40% of product cost. Therefore, accurate management of enterprise logistics cost can make great contribution to reducing the overall cost of enterprise. However, there are few review articles of related literatures. Therefore, this paper analyzes and discusses the research status of logistics cost accounting through CiteSpace and other literature analysis software, and draws a conclusion that this topic will still be the center of discussion in the future, and it will involve more and more fields with the progress of society, and will be combined with different fields to become a new research hotspot.

Keywords: CiteSpace; Logistics; Cost accounting; Visual analysis

1. Introduction

As the last stick of supply and demand docking, both the supply side and the demand side are inseparable from logistics, and the level of logistics directly affects both sides. In the business activities of enterprises, logistics is an activity that permeates all business processes. Logistics cost is to use the amount to evaluate the actual situation of logistics activities. Modern logistics cost refers to all the logistics costs from the supply of raw materials to the delivery of goods to consumers. In China, high logistics cost and low efficiency are a major problem. Therefore, reducing the logistics cost is an urgent task. To reduce the cost, we must first find a reasonable and feasible management mode, and the choice of cost accounting should be more cautious. Because different accounting methods will lead to different management results, it is a key step to explore the impact of cost accounting on logistics costs. However, most of the existing documents belong to case papers, only discussing the logistics cost accounting of an enterprise alone, but there are few comprehensive studies on the relevant documents. Therefore, this paper discusses the research status of relevant documents in order to explore the research hotspot and its development trend.

2. A research process

Based on the 20-year literature samples, this paper studies the logistics cost accounting. In this paper, firstly, literature on related topics is collected by a certain search formula on China HowNet platform, and at the same time, literature is screened, and the literature with less relevance is eliminated to get the final valid sample. Then, the samples are analyzed by CiteSpace and other literature analysis software, so as to get the published annual trend chart, periodical collection chart, keyword clustering chart and keyword clustering chart, and analyze and discuss the charts. Finally, the research status, development direction and future prospect of logistics cost accounting are summarized at the end of the paper.

3. Research methods

3.1 Data acquisition

The data source of this article is the literature in China CNKI database. Because there are a large number of literatures on this topic and there are literatures with little relevance or too early research time, this paper selects SCI, Peking University Core and CSSCI periodicals from 2002 to 2022 as sample literatures, and sequentially inputs the keywords "logistics" and "cost accounting" through subject search,

and a total of 366 literatures are retrieved, and the number of literatures after removing invalid literatures is 347. And the documents are exported in Refworks format, so as to use CiteSpace software for clustering research and analysis.

3.2 Analytical methods

In this paper, CiteSpace software is used for measurement and visual analysis, which was developed by American Chinese scholar Professor Chen Chaomei and introduced to China in 2007. Its main function is to show the development and trend of a discipline in a certain period, and to find out the relationship of information in the literature, which is expressed in a visual form. The software version adopted in this paper is CiteSpace.v.5.6.R5 (64.bit). After importing the documents about logistics cost accounting from 2002 to 2022 and running the software, a series of knowledge maps are obtained.

4. Research, statistical analysis

4.1 The number of documents issued

This paper uses the visual analysis function of HowNet to export the annual trend published in Figure 1. As can be seen from the figure, the published amount of literature was generally at a high level during the period of 2006-2014, but it decreased obviously in 2008, and then recovered to the previous level in 2009. After that, the published amount gradually decreased, reaching the lowest value in 2021, and 3 articles were published by September in 2022, and the number turned around. By consulting recent literature, this paper finds that the reason why the number has turned around in 2022 is that the daily demand of logistics business is still increasing, and various industries pay more and more attention to the logistics cost of their own enterprises, especially the logistics industry and medical industry. The industry has found an activity-based costing method suitable for logistics cost accounting, and on this basis, it has added time elements to make the cost allocation more accurate and more convenient for enterprises to carry out cost management, which is the practice of theoretical knowledge. Therefore, most of the research results in recent years are about the application of time-driven activity-based costing.

4.2 Co-occurrence analysis of authors

From Table 1, we can see that among the core authors who study logistics cost accounting, Song Hua has published the most, with a total of 4 related documents. In order to further explore the core authors, this paper introduces Price's law in science and technology information science, and calculates the number of core authors' papers through the formula $M_p=0.749^*$ (where M_p is the minimum number of core authors' papers and N_{pmax} is the number of authors' papers with the most papers). By analyzing the literature data, we can know that $M_p=1.498$ is calculated by $N_{pmax}=4$, and according to the calculation results, it is determined that the number of articles published by the author is greater than or equal to 2, which is the core author in this field (rounding principle). According to statistics, there are 24 authors with two or more articles, and the number of articles published by these authors is 57, accounting for 16.43% of the total literature, indicating that the contribution of core authors to the subject is at a normal level, that is, the overall distribution of articles on this topic is relatively average.

Table 1: Information of the Core Authors' Posting

column	author	quantity
1	SONG HUA	4
2	XIANG LELE	3
3	ZHANG MEILIN	3
4	REN YINGJIE	3
5	CUI DONG	3
6	NIE YONGGANG	3
7	WANG YONGLAN	3
8	SHAO RUIQING	3
9	HU WEI	2
10	WANG XINLI	2

5. Study the analysis of co-occurrence words

5.1 Co-occurrence and analysis of keyword maps

5.1.1 Keywords co-occurrence analysis

Keywords can highly summarize the content of the article and show the theme of the article. In this paper, the network node of Citepace is selected as "Keyword", and the time slice is set to 1. After running, Figure 3, the keyword co-occurrence map of logistics cost accounting, is obtained, which includes 291 network nodes and 396 network connections, and the network density is 0.0094. The node font size in the figure indicates the frequency of keywords. Among them, most branches focus on cost accounting, logistics cost, logistics and cost control, with activity motivation, cost management, enterprise logistics and logistics enterprises as secondary branches. The keywords are generally regional, and multiple keywords are the core of the region, and they are staggered at the end of the branch.

The keyword list is derived in the background, and the word frequency is further ranked to get Table 2, which is the high-frequency keywords of logistics cost accounting (the top 10). As shown in Table 2, the key words are mainly logistics cost (132), activity-based costing (86), logistics cost accounting (59), cost accounting (47), cost control (36), logistics enterprises (32), etc., which are preliminarily judged as research hotspots in this field.

As a separate sub-branch, "supply chain" is in line with the development of the current industry. In the gradual development of logistics industry, a new form, namely supply chain, has emerged, and then how to implement its cost control has entered the eyes of various scholars. After all, it is related to whether the development of logistics industry can enter a brand-new stage. The existence of this sub-branch point reflects how the research topic explores and expands its own territory step by step, which is related to other topics, even interdisciplinary.

Table 2: High frequency keywords

column	keyword	frequency
1	Logistics cost	132
2	Activity-based costing	86
3	Logistics cost accounting	59
4	cost accounting	47
5	cost control	36
6	Logistics enterprises	32
7	Logistics cost management	26
8	cost control	24
9	Logistics activities	18
10	logistics	17

5.1.2 Keywords cluster map

Keyword clustering analysis is a multivariate statistical analysis method dealing with matrix structure, which can reveal the evolution trend of each keyword. Based on the keyword co-occurrence map, a cluster map is drawn to generate logistics cost accounting (as shown in Figure 4), in which there are 291 Node and 396 Edges, and different color boxes represent different clusters, with Density index of 0.0094 and Modularity index of 0.8413. After screening keyword clustering, the atlas finally shows only the first seven types of clustering. They are cost accounting, logistics cost, activity motivation, logistics enterprises, cost drivers, cost control and inventory expenses.

5.2 Research hotspots and prospects

As can be seen from the above chart, although the keywords in this paper are "logistics" and "cost accounting", which means that industries and enterprises are not restricted to collect all the cost accounting documents about "logistics", in recent years, many documents are applied articles, that is, case papers, and most of these papers study and analyze research enterprises as a part of the supply chain, so the future research direction of this topic will be closely integrated with the supply chain. This is also the necessary result of the development of logistics and supply chain, that is, integrating resources to manage enterprises from a holistic perspective, reducing all unnecessary costs, eliminating repetitive processes as much as possible, and simplifying the whole supply chain process.

Cluster 1 "Cost Accounting"

Cost accounting is very important for enterprises, so the choice of accounting method for enterprise management often leads to discussion, and the most common one is how to choose standard cost method and activity-based cost method. And with the renewal and iteration of management methods, cost accounting is often combined with management methods to study.

Li Zhoupeng believes that cost accounting and management will directly affect the business decisions of enterprises. Accurate and timely cost accounting data is the theoretical basis for analyzing the profitability of products and markets ^[1]. Xin Chunhua and Zhou Yang believe that cost accounting is the most basic link in cost management, and other cost management work operates on this basis ^[2]. On this basis, Wang Xingyan believes that cost accounting is not only an important part of business activities, but also a key element for enterprises to maximize their interests. There are many methods of cost accounting, among which standard cost method and activity-based costing method have the highest utilization rate, and their functions are different ^[3]. Therefore, Yang Jirong suggested that the accounting process of biological assets and the determination of capitalization stop time should be flexibly used according to the characteristics of their different growth stages ^[4]. Wang Gui thinks that we should strengthen cost management and control, strengthen the integration with ERP system, and establish a special cost accounting center to make cost accounting more professional and digital ^[5].

Cost accounting plays an important role in enterprises. Therefore, more and more managers begin to seriously consider how to carry out cost accounting to help enterprises maximize profits, how to make the cost accounting method cooperate with the enterprise management method properly, how to realize "digitalization" and the integration with Internet information. These issues have yet to be explored, and will also become the focus of academic discussion in the future.

Cluster 2 "Logistics Cost"

In recent years, the popularization of online shopping has made the logistics cost of enterprises account for an increasing proportion of the total cost. While managers pay more attention to logistics cost control, more professional third-party logistics enterprises have formed in the market, and the requirements of such enterprises for logistics cost accounting will be higher than those of other enterprises.

Gao Jianbing pointed out the importance of enterprise logistics cost management control in enterprise management by further exploring the framework of enterprise logistics cost control in the literature in 2002 ^[6]. Obviously, the logistics cost is different from other costs of enterprises, and there is an "iceberg phenomenon" in logistics cost, that is, the cost is implicit and the indirect cost accounts for a large proportion ^[7]. With the improvement of management methods, scholars have further studied the logistics cost. Zhang Hanjiang put forward and analyzed the new ideas of logistics control and cost management, which involved comprehensive cost control, supply chain optimization technology and cost accounting system ^[8]. Li Chaohui and others put forward a systematic way and local control in the way enterprises control logistics costs ^[9]. Zhang Hairui optimized enterprise logistics cost management from the perspective of supply chain, and put forward some strategies, such as promoting digitalization, perfecting accounting system, controlling logistics cost and building and optimizing accounting mechanism ^[10]. Today, with the rise of e-commerce, logistics cost has become the focus of e-commerce. Zhang Lifeng pointed out that China's e-commerce enterprises lack cost control means, improper logistics cost control methods, inadequate logistics cost control of sales returns, and weak inventory cost control ability ^[11]. Through the research on the logistics cost characteristics of e-commerce companies, Koufei thinks that enterprises should set up cost task centers and establish management systems ^[12]. At the same time, the number of documents related to third-party logistics has gradually increased. Xu Shujun clearly explained the reasons, highlights and development direction of third-party logistics, and thought that the emergence of third-party logistics companies meant the professionalism of logistics service level. He also analyzed how modern enterprises choose third-party logistics service providers and how to cooperate with them, and put forward reasonable and effective plans ^[13]. Stefan Zetzmann and Karl Fein studied the logistics data of 100 to 100 carriers and found that horizontal cooperation with enterprises in the same industry can quickly and effectively reduce logistics costs ^[14].

The specialization of logistics industry makes logistics cost a hot keyword, and more and more scholars begin to study how to reduce logistics cost and how to apply theoretical knowledge to enterprises. However, up to now, these problems have not been well solved, and more scholars and experts need to discuss and study them.

Cluster 3 "Logistics Enterprises"

"Logistics business" started as an accessory to other businesses, and has been transformed into a third-party logistics enterprise, becoming more specialized. Although it is a new enterprise, its management method and cost accounting method are still traditional methods, and there is no matching method, so this has become one of the problems faced by logistics enterprises.

Liu Xiaofang believes that China's logistics enterprises pay little attention to cost control. From the national level, although the management of the logistics industry has been strengthened, a standardized management system has not been formed. From the enterprise itself, internal control has not formed a standardized management model. This phenomenon arises because on the one hand, the development history of logistics enterprises in China is short. Even if there are "third-party logistics" enterprises, these enterprises are the result of the transformation of express delivery companies, and there is no corresponding new management mode, but only the traditional ideas are used to control Chengmu, so the thinking of logistics service industry lags behind the pace of rapid economic development. On the other hand, our country has not strictly regulated the logistics industry from the legal system, and the current axiom system of enterprise financial accounting has not specially set up the usage method and accounting caliber of logistics industry cost calculation. These two reasons have affected the improvement of the cost control ability of China's logistics enterprises. Combined with this, Liu Xiaofang believes that in terms of logistics cost control, both the industry and the enterprises themselves should make timely adjustments and changes, so as to control the costs of enterprises and find a more reasonable and suitable cost control method ^[15].

There are many problems faced by new enterprises, and everything needs to be tried and explored, which means that the research upsurge of third-party logistics enterprises will be set off next. The existing research fields need to be further explored and deepened.

Cluster 4 "Cost Control"

Scholars have made in-depth research on the subject of cost control, which can be roughly divided into three stages: first, Jiang Juan first put forward her view that enterprises must adopt scientific cost management methods to control costs if they want to reduce costs and improve profits ^[16]. Therefore, the managers of small and medium-sized manufacturing industries should pay attention to the choice of cost management methods, combine cost management with market demand and the development of enterprises themselves, and carry out other management work on this basis. Subsequently, Guo Keliang formally proposed that the traditional cost accounting method should be transformed into a strategic cost management method. The traditional activity-based costing management method should be reformed to adapt to the long-term strategy of enterprises and provide a more scientific and reasonable basis for the strategic decision-making of enterprises. Finally ^[17], Alina Zhang and Li Likun also made in-depth research in this direction. They pointed out that enterprises should choose and formulate cost control methods based on their own actual conditions, and they should not blindly reduce costs and increase efficiency by saving production costs. Cost control is an important factor for manufacturing enterprises to enhance production capacity and improve profitability. Choosing reasonable and effective cost control methods will promote the long-term development of enterprises ^{[18][19]}. These scholars' research theories on cost-sharing system are relatively unified, mainly using cost management methods to adapt to the actual needs of the market and the development strategy of the industry itself, in order to seek the long-term development of the industry.

Cost control is not a new hot topic, but managers require it to be updated and iterated with the development of society, so the discussion on cost control will not stop. Every new management mode, new industry and new accounting mode will become a new challenge for cost control. Therefore, the development direction of cost control is very wide and can be applied to every industry, which shows that the theme is highly exploitable and there will be many innovations waiting for us to discover.

Cluster 5 "Inventory Expense"

Inventory cost is an important factor to measure the quality of inventory system, which mainly includes ordering cost, inventory cost and out-of-stock cost. Inventory cost control is a management method which can make the inventory cost reach the lowest level while ensuring the maximum supply level and not allowing shortage.

Inventory cost accounting refers to the measurement of enterprise inventory value, which is used for enterprise inventory warehousing accounting, opening and closing processing and related data maintenance. The methods of inventory cost accounting mainly include absolute cost method, relative cost control, standard cost method and economic batch method. In the discussion of quantity discount under the economic batch method, Liu Ruishan discussed how enterprises should choose when there is

quantity discount ^[20]. Chen Weiguang and Yu Shuxiu applied the economic batch method in the daily inventory management of an enterprise and put the theory into practice. Inventory cost measurement methods include moving weighted average method, first-in first-out method, last-in first-out method and individual pricing method ^[21]. In the study of inventory valuation method selection, Li Hongmei thinks that no matter which method is chosen, managers should have strict requirements on cost measurement. For example, when inventory enters and exits the warehouse, it is necessary to confirm its cost, so that the warehousing cost information can be compared and the cost management information can be improved ^[22]. Hu Shixiong thinks that compared with individual valuation method, other cost measurement methods do not convey accurate relevant accounting information in practical application, so using individual valuation method can improve the quality of accounting information. For example, the drug circulation in hospitals is applicable to the individual pricing method, which can ensure that the whole process of drug circulation is strictly controlled ^[23]. In the statistical report on the use of inventory valuation methods in China industries, Liu Hongbo and Li Wan also believe that due to the wide application of bar code technology and radio frequency technology, the heavy workload of physical operation of individual valuation methods no longer exists, so in order to obtain more accurate cost data, enterprises should try to choose individual valuation methods for inventory cost management ^[24].

Compared with other keyword areas, "inventory cost" is not a keyword of the same level, but a subordinate vocabulary of "logistics cost". Logistics cost contains many elements, and only "inventory cost" forms an independent area because there will be a lot of costs in the process of warehousing management, which accounts for a large proportion of the total logistics cost. In order to improve the supply chain management step by step and reduce the cost of the whole supply chain, the unnecessary costs caused by the surplus accumulated in excess inventory need to be reduced. Driven by this demand, scholars have found a better management model, namely joint inventory management, which is an inventory management model with the balance of rights and responsibilities and risk sharing between upstream enterprises and downstream enterprises developed on the basis of VMI. However, this model still needs further research to further improve it, so as to make it fit the management status of existing enterprises and really apply theory to practice.

Cluster 6 "Activity Drivers" and "Cost Drivers"

Combined with the keyword co-occurrence map. This theme focuses on "logistics" and "cost accounting", in which "activity center" is the secondary branch point derived from "cost accounting". In response to the above, different industries are exploring the most suitable logistics cost accounting method for their own industries, and activity-based costing law is just the accounting method that has been found to be the most suitable for medical and logistics industries in recent years. These two industries attach great importance to logistics cost, which leads to an increase in the number of related research documents, and then the keyword "activity center" becomes a more important secondary branch.

The keyword "activity center" has increased in recent years. It first appeared in 1971, but it has been paid attention to by scholars again after many years, because the current enterprise management needs, social environment and scientific and technological development level are more adaptable and able to use this accounting method. Nowadays, the development of science and technology makes each process standardized, and the time required for each process can be accurate to the minute. Therefore, time-driven activity-based costing is derived from activity-based costing, which is more in line with the industry situation of logistics and medical industry, so the future activity-based costing will be more suitable for some industries and will also show certain exclusivity. Regarding the logistics cost accounting methods of other industries, scholars need to explore and find a more suitable method for this industry.

The basis of cost attribution in Activity-Based Costing (ABC) and Cost-Based Costing (Cost-Based Costing) has high requirements on whether the process flow is clear and the relevant data are accurate. Only the process flow is clear and the data is accurate can reflect the advantages of ABC. Otherwise, the wrong basis of cost division and large data error will lead to invalid information transmission, which will not give managers correct information, let alone make correct decisions. Therefore, in the following research, the cost accounting method must be combined with information technology, enterprise management mode and internet, because only by relying on these factors to obtain data that correctly reflect the current situation of enterprises can we further control the cost and get the results that management hopes.

In terms of theoretical research, Wang Pingxin, Wang Fangjun and Qin Shiliang divided the cost behavior based on activity ^[25]. Then, Huang Ying and Lin Chunhong corrected the defects of cost, volume and profit based on activity motivation, so as to narrow the gap between predicted cost and theoretical cost and provide enterprises with more secure business decision-making suggestions ^[26]. At the same

time, Zhao Huijuan, Sun Meng Su and Xue Rongna introduced the activity-based cost-volume-profit model, which improved the traditional cost-volume-profit analysis into the activity-based cost-volume-profit analysis and applied it in combination with the actual situation of enterprises. Give better suggestions for enterprises in cost control. And it is necessary to popularize the cost-volume-profit analysis of basic operation drivers ^[27]. Fu Guangfu pointed out that activity-based costing can adopt different indirect cost allocation rates according to actual needs, so that the information obtained is more objective and accurate, thus making up for the shortcomings of traditional costing ^[28]. Peng Jiang pointed out that compared with traditional cost decision-making, cost-volume-profit decision-making based on activity motivation is more scientific and practical, which can provide efficient services for enterprises and improve their economic benefits ^[29].

In applied research, Christian Stoy Spiro Poll Alishans-Rudolf Schacher, a foreign scholar, selected nearly 80 German residential properties in 24 years as research samples, and determined the cost driver equation by multiple linear regression method, taking the number and compactness of elevators as the driving factors of construction cost, and tested the correlation between each cost driver and cost.

The application research of cost drivers in China mainly focuses on the application of cost driver theory to improve the level of cost management. Li Zhixue and other scholars selected a gas production plant in an oil field to scientifically analyze the drivers of natural gas operating costs based on the theory of cost drivers, and determined the main cost drivers that affect the operating costs of natural gas, making the management of natural gas costs more scientific and standardized ^[30]. Huang Guoliang and Wu Hanying selected the coal industry, and analyzed the hierarchical structure with the index layer composed of cost drivers. The results show that coal enterprises should strengthen the control of cost drivers when implementing strategic cost management ^[31].

As can be seen from the above literature, because the above advanced theories originated from western countries, the domestic related theoretical research lags behind the foreign theoretical research. First of all, many domestic scholars' academic theories are based on the translation of excellent foreign theories, so the systematicness of the theories is relatively weak. Secondly, in the aspect of combining theory with practice, the application field of domestic theories is relatively fixed, the fundamental reason is that the relevant theories were introduced late, and most scholars only stay in the theoretical research of cost-volume-profit analysis or activity-based costing. As a result, enterprises are not flexible in their application and lack of practical cases for reference. Due to the demand, at present, the number of documents about the practical application of this theory is gradually increasing, and the fields involved are gradually expanding, which means that activity-based costing, a cost accounting method, will be combined with more fields in the future, and will be adjusted accordingly according to the characteristics of each field, so as to facilitate enterprises to use this method flexibly and help companies obtain more accurate cost information in the process of operation and management.

6. Conclusion

In this paper, CiteSpace and other literature analysis software are used to collect and analyze the related literature with the theme of "logistics" and "cost accounting" from 2002 to 2022, and at the same time, charts are made for their published volume, periodical collection, main scientific research institutions, high-frequency keywords, keyword co-occurrence and keyword clustering for research and discussion. Through a series of analysis, this paper finds that although the topic appeared earlier, it is the object of long-term discussion. Because the special keyword "cost" has always been the core concern of all enterprises, its discussion heat has never disappeared at a certain level.

The article draws relevant conclusions: the journal of Shanxi University of Finance and Economics is the core journal of this topic, and the core authors are Song Hua, Xiang Lele, Zhang Meilin, etc. The high-frequency keywords are logistics cost, activity-based costing, logistics cost accounting, etc., and their related clusters are: cost accounting, logistics cost, activity motivation, logistics enterprises, cost drivers, cost control and inventory expenses. The article thinks that this topic will be combined with other disciplines in the future, and it will be transformed from the previous research point of enterprises to the research object of the whole supply chain, and the further discussion of this topic will certainly be integrated into the Internet information-related technologies.

From a macro point of view, because the logistics cost is not included in the enterprise's financial accounting system, most manufacturing enterprises are used to counting the logistics cost into the product cost, while commercial enterprises mix the logistics cost with the commodity circulation cost. Therefore, whether it is a manufacturing enterprise or a commercial enterprise, it is not only difficult to calculate

the logistics cost completely according to the connotation of logistics cost, but also the logistics cost that has been separated from the production field or the circulation field can not be calculated and reflected separately. Whether it is enterprise logistics or logistics enterprises, how to optimize the allocation of their own logistics resources, how to implement management and decision-making, and how to bring maximum benefits at the lowest cost is one of the most important problems they face.

From the enterprise's point of view, an important goal of enterprise management is to exchange the minimum investment for the maximum income. The best way to achieve this goal is cost management. The control of logistics cost is to budget the cost limit, compare the actual cost with the target cost limit, correct the existing differences and improve the economic benefits of logistics activities. The reduction of the cost of a single logistics activity will inevitably lead to the increase of other costs, improper handling, and may even lead to the increase of the total cost. The total cost analysis of logistics is the key to integrated logistics management, and the application of total cost analysis can effectively manage and reduce costs in a real sense. Through the statistical analysis of the total logistics cost, enterprises can understand their own logistics operation status from a global perspective, clarify the key bottleneck problems and breakthroughs at present, and propose solutions to improve the overall operation performance of enterprises.

From the perspective of supply chain efficiency, there is still a lot of room for optimization and improvement in China. It is very important for the development of logistics industry to use modern digital means to apply big data technology and cloud computing technology to logistics systems and strengthen information construction. Therefore, with the development of society, the progress of science and technology, and the change of enterprise demand, managers have been exploring cost accounting methods. In recent years, the surge in public demand for logistics has made reducing logistics costs a more important link for most enterprises, so scholars have been exploring cost accounting methods that are more suitable for enterprises for many years, because a suitable accounting method can effectively reduce costs. To sum up, finding the correct cost accounting method will solve this problem from the root, which will also become the basis and motivation for the development of this theme in the future.

References

- [1] Li Zhoupeng. *The improvement path of enterprise cost control in RS company [D]*. Yunnan normal university, 2022. doi: 10.27459/d.cnki.gynfc.2022.2002408080805
- [2] Xin Chunhua, Zhou Yang. *Thoughts on product cost accounting and management of agricultural enterprises-based on the questionnaire survey of agricultural enterprises in Shandong Province [J]*. *Friends of Accounting*, 2016(13):42-45.
- [3] Wang Xingyan. *On the cost accounting problems and solutions [J]*. *China's township enterprise accounting*, 2020(09):117-118.
- [4] Yang Jirong. *Problems and countermeasures in the development of farmers' professional cooperatives-taking Sichuan farmers' professional cooperatives as an example [J]*. *Journal of Sichuan Administration College*, 2016(04):34-36.
- [5] Wang Gui. *Application of enterprise environmental cost accounting system based on material flow cost accounting-taking the ethereal liquor industry as an example [J]*. *Accounting Newsletter*, 2019 (16): 83-87. DOI: 10.16144/j.cnki.ISSN 1002-8072.2019.16.020
- [6] Gao Jianbing, Huang Yan, Cai Yuyang. *Research on the Control of Enterprise Logistics Cost [J]*. *Logistics Technology and Application*, 2000(02):23-26.
- [7] Ming Ran. *Research on the application of time-driven activity-based costing in T logistics enterprises [D]*. *Jilin University of Finance and Economics*, 2021. DOI: 10.26979/d.cnki.gcc.sc.2021.200000808006
- [8] Zhang Hanjiang, Zhang Yuan, Li Junping, Luo Duanhong. *Study on the short-term equilibrium of supply chain of integrated downstream enterprises' self-made parts and outsourcing decisions [J]*. *China Management Science*, 2011,19 (01): 42-47. DOI: 10.16381/J.CNKI.ISSN 1003-207X.
- [9] Li Chaohui. *Management innovation and practice of China Railway Express cargo packaging [J]*. *railway purchase and logistics*, 2012,7(06):60-61.
- [10] Zhang Hairui. *Pharmaceutical Logistics Cost Management in Supply Chain Environment [J]*. *Logistics Engineering and Management*, 2020,42(12):92-94.
- [11] Zhang Lifeng, Sun Ping. *Application and improvement of activity-based costing in logistics enterprises [J]*. *Friends of Accounting*, 2012(35):34-35.
- [12] Kou Fei. *Discussion on the cost control of China's logistics enterprises in the e-commerce environment [J]*. *Business Economic Research*, 2017(14):101-103.
- [13] Xu Shujun, Ma Shihua. *Research on strategic partnership among supply chain enterprises [J]*.

- Journal of Huazhong University of Science and Technology*, 2001 (S1): 73-76. DOI: 10.13245/J.HUST.2001.S1.024.
- [14] Stefan Zetzmann and Karl Fein. *The Missed Chance to Cut Logistics Costs* [J]. *International Journal of Applied Logistics (IJAL)*, 2017, 7(1): 1-15.
- [15] Liu Xiaofang. *Research on the cost control of logistics enterprise a based on activity-based costing* [D]. Xi'an university of technology, 2021. doi: 10.27398/d.cnki.gxilu.2021.200100100006
- [16] Jiang Juan. *Analysis of the influence of route preparation scheme on reducing the company's cost* [J]. *Electromechanical Information*, 2016 (12): 95-96. DOI: 10.19514/j.cnki.cn32-1628/tm.2016.12.053.
- [17] Guo keliang. *On the reform of manufacturing cost management in the era of "China's intellectual creation"* [J]. *Shopping mall modernization*, 2018 (21): 135-136. DOI: 10.14013/j.cnki.scxdh.2018.21.079.
- [18] Alina Zhang. *Enterprise supply chain quality management development status and trends* [J]. *Quality and Market*, 2020(16):146-148.
- [19] Li Likun. *Research on manufacturing cost control* [J]. *Cooperative Economy and Technology*, 2020 (16): 106-107. DOI: 10.13665/j.cnki.hzjykj.2020.16.041.
- [20] Liu Ruishan. *Discussion on quantity discount under economic batch method* [J]. *Communications Accounting*, 2011(10):53-55.
- [21] Chen Weiguang, Yu Shuxiu. *Discussion on the Improvement of the Optimal Economic Lot Sizing Method for Inventory in Material Management* [C]//*Proceedings of International Conference on Engineering and Business Management (EBM 2012)*. Scientific Research Publishing, 2012: 1169-1171.
- [22] Li Hongmei. *Research on the selection of inventory valuation methods* [J]. *Accounting newsletter*, 2014 (07): 62-64. doi: 10.16144/j.cnki.issn1002-8072.2014.07.030.
- [23] Hu Shixiong. *Analysis of the impact of individual valuation method on enterprise inventory cost accounting* [J]. *Value Engineering*, 2016, 35 (16): 59-61. DOI: 10.14018/j.cnki.cn13-1085/n.2016.16.021.
- [24] Liu Hongbo, Li Wan. *Statistical report on the use of inventory valuation methods of enterprises in China-data analysis from listed companies in Shenzhen Stock Exchange* [J]. *Accounting Monthly*, 2015 (13): 101-105. DOI: 10.19641/J.CNKI.42-1290/F.2015.
- [25] Wang Fangjun, Wang Pingxin, Qin Shiliang. *Resource Cost Model under Activity-Based Costing: Theory and Case Study* [J]. *Journal of Hubei University of Economics*, 2003(04):74-78.
- [26] Huang Ying, Lin Chunhong. *Research on risk control of asset management of power supply enterprises based on financial intensification theory* [J]. *East China Electric Power*, 2014, 42(12):2743-2746.
- [27] Zhao Huijuan, Sun Meng Su, Xue Rongna. *Study on the strategy of protecting the capital of rural express outlets — Construction and application of cost-volume-profit model based on activity-based costing* [J]. *Price theory and practice*, 2018 (10): 121-124. DOI: 10.19851/j.cnki.cn11-.
- [28] Fu Guangfu. *Analysis of the differences between variable cost method and absorption costing accounting* [J]. *Business Accounting*, 2015(23):103-104.
- [29] Peng Jiang. *On the cost-volume-profit decision analysis under activity-based costing* [J]. *Times Finance*, 2019(18):77-78.
- [30] Li Zhixue, Li Jun, Chen Jian. *Research on operating cost drivers of natural gas mining enterprises* [J]. *Friends of Accounting*, 2016(04):15-19.
- [31] Huang Guoliang, Wu Hanying, Xu Kuairu, Wei Linxin. *Research on identification and control of key strategic cost drivers of coal enterprises* [J]. *China Coal*, 2016,42 (08): 5-9+19. DOI: 10.19880/j.cnki.ccm.2016.08.00.
- [32] Ran Xin, Huan Wang. *Research hotspots and theme analysis of Party newspapers and journals* [J]. *Journal of Jiyuan Vocational and Technical College*, 2022,(01):6-12.
- [33] Li Qian. *Study on Injection Inventory Optimization in FY Hospital* [D]. Xi 'an University of Technology, 2018.
- [34] Zhang Yuan. *Analysis of enterprise logistics cost management in supply chain environment-taking manufacturing enterprises as an example* [J]. *China Storage and Transportation*, 2022 (06): 171-172. DOI: 10.16301/j.cnki.cn12-1204/f.2022.06.002.
- [35] Yang Daxiu. *Research on the logistics cost management problems and countermeasures of y company* [D]. East China normal university, 2022. doi: 10.27149/d.cnki.ghdsu.2022.2002100000006
- [36] Liu Qi. *Research on H Pharmaceutical Logistics Cost Accounting Based on Activity-Based Costing* [D]. Jimei University, 2022. DOI: 10.27720/d.cnki.gjmdx.2022.200210060606
- [37] Zhang Zhifei. *Research on cost management optimization of public hospitals* [D]. Yunnan University of Finance and Economics, 2022. DOI: 10.2455/D.CNKI.gycmc.2022.2002100000005
- [38] Wu Xiaofan. *A case study of cost accounting in C public hospitals* [D]. *China Academy of Fiscal*

Science, 2022. DOI: 10.26975/d.cnki.gccks.2022.200210008006

[39] Sun Yabing. *f company's cost control strategy based on ERP system [D]*. Dalian university of technology, 2021. doi: 10.26991/d.cnki.gdllu.20010.000000000003

[40] Rengui C, Changyong L, Shimin M. *Visual Analysis of Cognitive Structure based on the Human-Machine Interaction [J]*. 2015.

[41] Jiang Bo. *Research on the Application of Activity-based Cost-Volume-Profit Analysis in LD Company [D]*. Jiangxi University of Science and Technology, 2020. DOI: 10. 27176/ D. CNKI. gnfyc. 20007. 000000000606

[42] Feng Jiaqi. *Research on the cost control of the construction project of the fourth bid section of Y Expressway based on cost drivers [D]*. Lanzhou Jiaotong University, 2019. DOI: 10. 27205/ D. CNKI. GLTEC. 2009.200800000005