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RESEARCH STATUS OF RURAL HUMAN RESOURCE MANAGEMENT IN CHINA : BASED ON CITESPACE'S QUANTITATIVE ANALYSIS

Cui Lijuan*

Henan Institute of Science and Technology, Henan, China,

Sumy National Agrarian University, Sumy, Ukraine,

ORCID ID: 0000-0002-8751-9184

*Corresponding author email: 993705019@qq.com

Abstract. In order to understand the current research status of human resource management in China, this article takes CNKI as the data source and uses CiteSpace software to sort out relevant literatures on Human resources in Rural China since 2010, and analyzes them from four dimensions: the number of articles published, author contribution, institutional cooperation and keywords. Research indicates that China's research on rural human resources has generally shown a downward trend since 2010. However, with the implementation of China's rural revitalization strategy, targeted poverty alleviation and other national policies, research on rural human resources has begun to rebound in recent years. In addition, the core team of authors in this research field has not yet formed, and there is a lack of cooperation between them. In terms of research institutions, colleges and universities undertake the main task of theoretical research, while government agencies pay more attention to cooperation between different departments. At the same time, through analysis, it is also found that the research hotspots in this field are epochal, and key words with high degree of emergence have appeared in different periods. The value of this article lies in the three-dimensional presentation of the current situation of China's rural human resources research, which provides a better direction for scholars to carry out research in the future.

Keywords: rural, human resources, CNKI, CiteSpace

JEL Classification : J23, M12

INTRODUCTION

Rural human resources refer to the sum of the physical and mental power of the population in rural areas. Compared with the international academic circles, China's research on rural human resources started relatively late, but China is a big agricultural country after all. It is China's unshirkable obligation and responsibility to train high-quality rural human resources. At present, there are many achievements in the field of rural human resources research in China, but there are few systematic sorting and analysis of current research. Therefore, this article takes CNKI as the data source and uses CiteSpace to sort out literatures in the field of human resource research in rural China, so as to identify hot areas of human resource management research. This is not only the basis to promote the in-depth development of rural human resources research, but also provides a better direction for scholars to carry out research in the future.

LITERATURE REVIEW

At present, there are many researches on rural human resources in China, but there are still relatively few scholars who specialize in documenting these studies. Through combing the existing literature, it is found that the research methods used in these literatures are different, and there are three main types.

First, qualitative research methods. Qualitative research methods are currently the literature analysis methods commonly used by Chinese scholars. Cai Ningwei and Zhang Lihua (2014) took master's degree theses as sample, adopted the literature research method of content analysis, and analyzed the changes in human resource management research from 1990 to 2005 from the perspective of semantics. The research found that the research of human resource management in China has a trend of internationalization, scientization, standardization and meticulousness. Yang Nina (2015) summarized the general situation of China's human resource service industry theoretical research around the meaning, classification and development status of human resource service industry, and proposed the characteristics of the theoretical results of China's human resource service industry and the direction of future research. Second, quantitative research methods. Ding Mengru and Zhang Xiang (2013) took sci-tech human resources as the key word and CAJD database as the data source, analyzed sci-tech human resources from the perspectives of age distribution, journal sources, core authors, funding and subject content by using bibliometric and co-word analysis methods, and put forward some suggestions for the future development of sci-tech human resources. Zhang Haoyu, Fang Hongjun (2015) used Citespace software and information visualization technology to conduct a quantitative and visual analysis of the research literature published in the magazine "China Human Resources Development" in the past 15 years. It probes the important authors, authoritative institutions, classic documents, topic hotspots and their evolution of China's human resources research in the early 21st century, and predicts the development trend of China's human resources research. Third, a combination of qualitative and quantitative methods. Wang Yufeng and Li Dan (2019) used bibliometric methods and content analysis methods to analyze foreign research literature related to rural human resource development from 2006 to 2016. The results of the study found that the academic community's attention to the development of rural human resources is increasing year by year; the research methods are mainly theoretical studies and case studies, with relatively few empirical studies; the research topics are concentrated on development strategies, influencing factors, development Mode and so on. On this basis, the paper analyzes the shortcomings of the current foreign rural human resource development research, and predicts the future research direction.

To sum up, the current research focuses on qualitative research in research methods, and there are few quantitative researches. Many researches are based on the analysis of a certain journal. The data source is relatively narrow. Therefore, this paper uses CiteSpace software and CNKI as the data source to analyze and sort out relevant literatures since 2010.

PAPER OBJECTIVE

The purpose of this study is to carry out multi-dimensional scanning of relevant researches on rural human resources in China through literature measurement and data visualization technology, so as to present the research status of rural human resources in China.

DATA SOURCES AND METHODOLOGY

The sample of this article comes from CNKI. CNKI database is the most authoritative and most frequently used literature database of Chinese social science journals in China. The selection of the literature in this database for research can ensure the authority of the research data. In order to

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accurately retrieve the research literature, select "Advanced Search" in the CNKI database, use "Rural" and "Human Resources" as the title, select "Academic Journal" as the data source, and select "2010-2020" for the time span. Finally, 910 literatures were obtained. On this basis, after manual screening, it was determined that the retrieved literatures were all valid literatures.

In terms of research methods, this study selected the Cite Space visualization software developed by Dr. Chen Chaomei, a well-known information visualization expert, to perform multiple analyses on the collected data. Cite Space is the abbreviation of Citation Space. It is a visual analysis software that focuses on the analysis of potential knowledge contained in scientific literature and is gradually developed in the context of scientometrics, data and information visualization. The principle of this analysis software is to quantitatively analyze the literature based on co-citation analysis theory and pathfinding network algorithm. Because the structure, rules, and distribution of scientific knowledge are presented through visualization methods, the visualization graphs obtained by this type of method analysis are also called "scientific knowledge graphs." "Scientific Knowledge Graphs" has the dual nature and characteristics of both "graph" and "spectrum", which can be displayed as a visual knowledge graph, and can also reflect a serialized knowledge pedigree. Therefore, the visual analysis of rural human resources is helpful for scholars to better grasp the frontiers and development trends of the field of rural human resources research, so as to provide references for better carrying out theoretical research and practical research in this field.

RESULT AND DISCUSSION

With the help of the Cite Space visual analysis tool, this study analyzes the literature from four dimensions, including chronological distribution, author contribution, institutional cooperation and keyword co-occurrence, in order to comprehensively display the diversity of human resources research in Rural China as much as possible.

Chronological Distribution of Literature

Through the data analysis of collected literatures, it is found that from 2010 to 2020, the amount of literatures in the field of rural human resources research in China generally shows a downward trend, as shown in Figure 1. Since 2017, it has been gradually rising, which is mainly related to the rural revitalization strategy implemented in China in recent years.

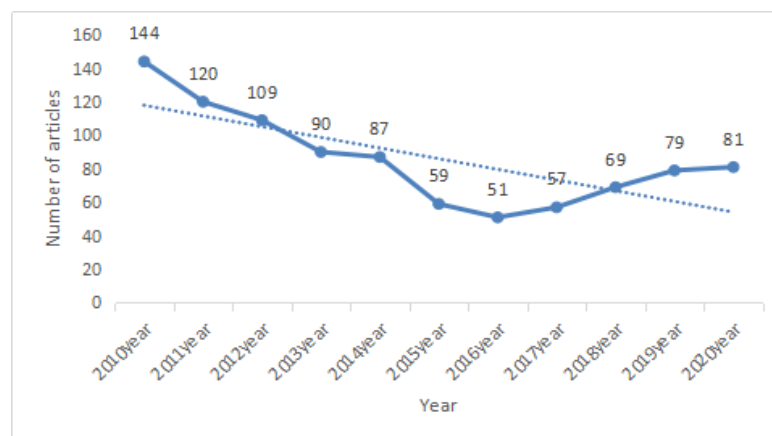


Figure 1. Annual publication of literatures related to rural human resources
Source: CNKI database

Author Contribution

Through the quantitative analysis of the authors, not only find the core authors of a certain research topic, but also serve as an important basis for the research on the formation of the

community. In this study, author cooperation atlas was drawn with CiteSpace tool, and authors whose publication frequency was greater than 4 were exported through background data, as shown in Figure 2 and Table 1.

In the cooperation map generated by Citespace, the connections between nodes reflect the strength of the cooperation relationship. The more connections, the more cooperation between each other. It can be seen from Figure 2 and Table 1 that since 2010, the research groups of rural human resources have been dispersed, and the only researchers with obvious cooperative relationships are Gao Shiyou, Wang Xiaoyan, Gao Qing, Wang Yu, Jiang Leilei, etc. All of these authors have published more than 4 articles. According to the Price formula $N=0.749 \times \sqrt{n_{\max}}$, the core authors are measured, (N represents the amount of articles published by the core authors, and n_{\max} represents the amount of articles published by the most productive authors). It is concluded that the core authors of this study are those who have published 2 or more articles. Through further analysis of CiteSpace background data, it was found that only 63 authors had published more than 2 articles, accounting for 6.9% of the total number of authors, which indicates that the core research team has not yet formed.

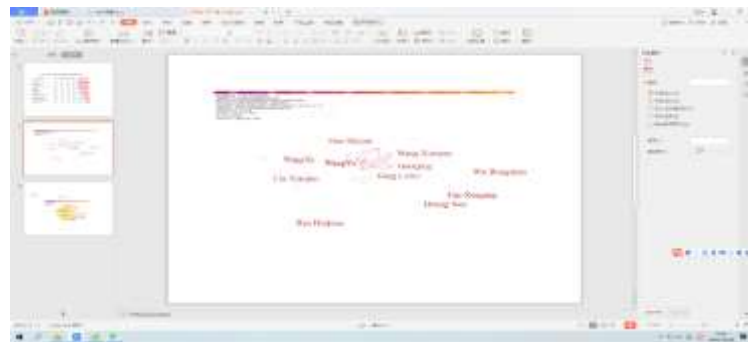


Figure 2. Author's cooperation map

Source: CNKI database

Table 1

Authors with publication frequency ≥ 4

Serial number	Author	Number of articles published
1	Wei Rongshan	7
2	Hao Huijuan	6
3	Liu Xiaojun	5
4	Zhu Yhanghao	5
5	Gao Shiyou	5
6	Jiang Leilei	5
7	Gao Qing	4
8	Fan Xuegang	4
9	Huang Wen	4
10	Wang Xiaoyan	4
11	Wang Yu	4

Source: CNKI database

Institutional Cooperation

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Through the analysis of institutional cooperation, it is possible to detect the distribution of the main research forces of a certain research topic. With the help of CiteSpace to draw a cooperation map of research institutions, it was found that the Ministry of Commerce, Ministry of Agriculture and Rural Affairs, National Development and Reform Commission, Ministry of Human Resources and Social Security and other institutions have obvious cooperative relations, and these institutions are all state agencies or government departments. This shows that the Chinese government pays very high attention to rural human resources and emphasizes multi-sectoral cooperation to jointly promote the development of rural human resources. From the perspective of the number of articles published, institutions with more than 4 articles published are mainly concentrated in universities (Table 2), which indicates that universities have become the core institutions of rural human resources research.

Table 2

Institutions with publication frequency ≥ 4

Serial number	Institution	Number of articles published
1	School of Business Administration, Jiangxi University of Finance and Economics	5
2	School of Economics and Management, Northwest University of Political Science and Law	5
3	Xi'an Peihua College	4
4	School of Economics and management, Beihua University	4
5	School of Economics and Management, Jiangxi Agricultural University	4
6	School of Health Management and Education, Capital Medical University	4
7	Dongying City Human Resources and Social Security Bureau	4
8	School of Economics and Management, Northeast Agricultural University	4
9	Henan Agricultural Vocational College	4
10	Xinxiang College	4
11	School of Economics and Management, Xichang College	4
12	School of Economics and Management, Northeast Forestry University	4
13	Beihua University	4
14	Northeast Electric Power University	4
15	Yunnan Agricultural University	4

Source: CNKI database

Through the emergence function of CiteSpace to further analyze the research institutions (Figure 3), it is found that there are mainly 4 emerging institutions in rural human resource research

since 2010, and all of them are colleges or secondary institutions of colleges and universities. It is worth mentioning that Xi'an Peihua College has the latest emergence time, starting in 2018, but the emergence intensity is the highest, with an emergence index of 2.11, it has become the main front of rural human resources research in recent years.

Top 4 Institutions with the Strongest Citation Bursts

Institutions	Year	Strength	Begin	End	2020-2020
1.School of Economics and Management, Northeast Forestry University	2010	1.75	2013	2020	
2.school of Economics and management, Beihua University	2010	1.77	2017	2020	
3.Beihua University	2010	1.77	2017	2020	
4.Xi'an Peihua College	2010	2.11	2018	2020	

Figure 3. Map of institutions with the strongest citation bursts

Source: CNKI database

Keyword Analysis

The existence of keywords in an article is a high degree of condensation and generalization of research topics, and is the main indicator selected in bibliometric research and analysis. Keyword analysis can better detect the evolution trend of the discipline development and the impact of sudden events on the development of the discipline. Through the Burst emergence detection of CiteSpace analysis software, the top 20 emergent keywords were collected, such as figure 4. It is worth noting that among these high emergence keywords, the emergence intensity of rural revitalization, targeted poverty alleviation and new countryside construction is particularly high, especially the emergence intensity of rural revitalization is as high as 11.26. On the one hand, it is in line with the rural revitalization strategy and the targeted poverty alleviation project being implemented by the Chinese government, confirming that theories are derived from practice, and on the other hand, it also explains the reason why the research on human resources in rural China has rebounded in recent years.

Top 20 Keywords with the Strongest Citation Bursts





Keywords	Year	Strength	Begin	End	2010-2020
1. Rural health human resources	2010	3.06	2010	2020	
2. New farmers	2010	2.09	2010	2020	
3. New countryside construction	2010	7.86	2010	2020	
4. Government	2010	2.09	2010	2020	
5. Vocational education	2010	1.86	2011	2020	
6. Influencing factors	2010	1.8	2011	2020	
7. Building a new socialist countryside	2010	2.26	2011	2020	
8. Measures	2010	1.98	2012	2020	
9. Rural health	2010	2.52	2012	2020	
10. Suggestions	2010	2.57	2014	2020	
11. New urbanization	2010	3.66	2014	2020	
12. Ethnic regions	2010	2.35	2014	2020	
13. Surplus labor	2010	2.12	2014	2020	
14. Human resource management	2010	3.66	2015	2020	
15. Development	2010	2.13	2015	2020	
16. New professional farmers	2010	2.47	2016	2020	
17. Transfer employment	2010	2.3	2017	2020	
18. Targeted poverty alleviation	2010	4.65	2018	2020	
19. Rural revitalization strategy	2010	6.53	2018	2020	
20. Rural revitalization	2010	11.26	2018	2020	

Figure 4. Map of keywords with the strongest citation bursts

Source: CNKI database

Export the top 10 keywords with co-occurrence frequency through CiteSpace software and calculate their centrality. The higher the centrality, the richer the research around the keyword, and

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the stronger the control and influence the keyword has in the research network. As shown in Table 3, since 2010, keywords with high frequency of rural human resource research have basically been positively correlated with their centrality, and keywords with high centrality are basically the same as keywords with high emergence rate, which shows that since 2010, China's rural human resources research has formed a more obvious hot spot.

Table 3

Top 10 keywords with co-occurrence frequency and their centrality

Serial number	Keywords	Frequency	Centrality
1	Human Resources	229	0.44
2	Rural	193	0.28
3	Rural human resources	192	0.44
4	Human Resource Development	168	0.31
5	Rural human resource development	139	0.35
6	Countermeasure	78	0.15
7	development	75	0.07
8	New Countryside Construction	66	0.19
9	Human resource Management	47	0.10
10	status quo	34	0.07

Source: CNKI database

CONCLUSION

In summary, the following conclusions can be drawn, China's research on rural human resources has generally shown a downward trend since 2010. However, with the implementation of China's rural revitalization strategy, targeted poverty alleviation and other national policies, research on rural human resources has begun to rebound in recent years. In addition, the core team of authors in this research field has not yet formed, and there is a lack of cooperation between them. In terms of research institutions, colleges and universities undertake the main task of theoretical research, while government agencies pay more attention to cooperation between different departments. At the same time, through analysis, it is also found that the research hotspots in this field are epochal, and key words with high degree of emergence have appeared in different periods. According to the analysis results of Citespace, future research needs to pay special attention to strengthening the cooperation between authors, condense the academic team, promote the generation of core authors, and enhance the authority of research.

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СТАТУС ДОСЛІДЖЕННЯ СІЛЬСЬКОГО УПРАВЛІННЯ ЛЮДСЬКИМИ РЕСУРСАМИ В КИТАЇ: НА ОСНОВІ КІЛЬКІСНОГО АНАЛІЗУ CITESPACE

Cui Lijuan

*Henan Institute of Science and Technology, Henan, China,
Sumy National Agrarian University, Sumy, Ukraine,*

Щоб зрозуміти поточний стан досліджень управління людськими ресурсами в Китаї, ця стаття використовує China Knowledge Network (CNKI) як джерело даних і використовує програмне забезпечення CiteSpace для сортування відповідної літератури про людські ресурси в сільській місцевості Китаю з 2010 року. Результати дослідження показують, що дослідження в Китаї щодо людських ресурсів у сільській місцевості загалом знизилися з 2010 року. Однак із впровадженням китайської стратегії відродження сільської місцевості та цілеспрямованої боротьби з бідністю та інших національних політик, дослідження сільських людських ресурсів почали активізуватися в останні роки. Крім того, основний колектив авторів у цій дослідницькій галузі ще не сформований і між ними відсутня співпраця. Що стосується науково-дослідних установ, то основне завдання теоретичних досліджень виконують коледжі та університети, тоді як державні органи більше уваги приділяють співпраці між різними відомствами. У той же час шляхом аналізу також виявлено, що гарячі точки дослідження в цій галузі є епохальними, а ключові слова з високим ступенем появи з'являлися в різні періоди. Цінність цієї статті полягає в тривимірному представленні поточної ситуації з дослідженнями сільських людських ресурсів у Китаї, і вона надає вченим напрямок для кращого проведення досліджень у майбутньому.

Ключові слова: сільські, кадрові ресурси, CNKI, CiteSpace

СТАТУС ИССЛЕДОВАНИЙ В ОБЛАСТИ УПРАВЛЕНИЯ ЧЕЛОВЕЧЕСКИМИ РЕСУРСАМИ В СЕЛЬСКОЙ МЕСТНОСТИ КИТАЯ: КОЛИЧЕСТВЕННЫЙ АНАЛИЗ, ОСНОВАННЫЙ НА CITESPACE

Cui Lijuan

*Henan Institute of Science and Technology, Henan, China,
Sumy National Agrarian University, Sumy, Ukraine,*

Для того чтобы понять текущее положение исследований в области управления человеческими ресурсами Китая, эта статья использует китайскую сеть знаний (CNKI) в качестве источника данных, используя программу CiteSpace для обработки соответствующих документов, связанных с сельскими ресурсами Китая с 2010 года, а также для анализа из количества текстов, вкладов авторов, институционального сотрудничества и четырех измерений ключевых слов. Исследования показали, что с 2010 года в Китае в целом наблюдается тенденция к снижению исследований по сельским кадровым ресурсам, но в связи с реализацией государственной политики в таких странах, как омолаживание стратегических и точных мер по борьбе с бедностью в сельских районах Китая, в последние годы интенсивность исследований по кадровым ресурсам в сельских районах начала возрождаться. Кроме того, основные группы авторов в этой области исследований еще не сформированы, и им не хватает сотрудничества друг с другом. Что касается исследовательских институтов, то высшие учебные заведения выполняют основные задачи теоретических исследований, в то время как государственные учреждения уделяют большее внимание сотрудничеству между различными секторами. В то же время анализ выявил, что горячие точки исследований в этой области имеют временную актуальность, и в различные периоды ключевые слова, которые имеют более высокий уровень открытости. Ценность

этого исследования заключается в том, что оно представляет собой диораму, представляющую собой статус-кво в изучении человеческих ресурсов в сельской местности Китая, которая помогает ученым лучше проводить свои исследования в будущем.

Ключевые слова: сельские, человеческие ресурсы, CNKI, CiteSpace