The Current Status, Hotspots and Prospects of Cross-cultural Human Resource Management-Visual Analysis Based on CiteSpace

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Abstract: Cross-cultural human resource management can not only eliminate cross-cultural conflicts caused by multinational companies but also improve the efficiency and benefit of human resource allocation and application management activities. To further understand the research status and hotspots of cross-cultural human resource management at home and abroad, to grasp the contributions made by domestic and foreign scholars in this field, and the differences of research in this field. Taking the literature included by CNKI and Web of Science from 2008 to 2021 as the data source, CiteSpace visualization software was used to analyze the current situation of cross-cultural human resource management research, research subject cooperation, and research hotspots and research frontiers. It is found that domestic research requires further deepening research; domestic cross-cultural human resource management research forces are mainly distributed in universities and research institutes, but there is no cooperation between the publishing institutions, foreign publishing agencies are mainly universities and publishing agencies have formed close cooperation; a stable core author group is formed domestic and abroad; domestic research hotspots are local culture and human resources, and those of foreign research hotspots are meta-analysis and performance; domestic research frontier is localization, foreign research frontier is human resources practice, local culture, and meta-analysis, etc.

Keywords: Cross-cultural human resource management, Citespace, Visual analysis, Current status and hotspots of research.

1. Introduction

With the continuous development of economic globalization, the transnational operation has become a trend. In international enterprises, managers and employees come from different countries and nationalities, representing different cultures. That is, when managers and employees communicate, there will be essential conflicts, which is not conducive to the improvement of organizational performance. The essence of cross-cultural human resource management is to eliminate the conflicts caused by cross-culture, so cross-cultural human resource management plays an important role in international enterprises. Cross-cultural human resource management is to shape the culture suitable for the development of the enterprise according to the culture of the whole country, so as to improve the adaptability and productivity of employees to the organizational culture. Shengming Feng[1] is believed that the cross-cultural HRM strategy includes four models: (1) the field cultural model, That is, the parent company is completely based on its own actual situation. Develop personnel management policies suitable for the local conditions. The parent company does not impose its own human resources management policies on such companies; (2) Cultural transplantation mode of the parent company. That is, the parent company culture is directly copied to its subsidiaries or affiliates while ignoring the corporate culture of the subsidiaries or affiliated companies or the local culture of the subsidiaries; (3) Cultural grafting mode of the parent company. That is, dominated by the culture of the parent company, Integrate the culture suitable for the subsidiary culture according to the development of the subsidiary; (4) Cultural integration and innovation mode. At the highest level of cross-cultural management, It does not dominated on parent or subsidiary culture, It is a direct integration of the two cultures. According to the existing literature, domestic enterprises are mainly from the macro and medium perspective, analyzing the cultural differences between different countries and nationalities and organizations, focusing on case studies, and foreign studies are mainly from the micro perspective, focusing on statistical empirical research. Domestic and foreign scholars rarely use the perspective of combining knowledge mapping and qualitative analysis to further study the research status, hot spots, and future development trends of cross-cultural human resource management. From the method perspective, the research perspective is too single, which is not conducive to the development of cross-cultural human resource management research. Based on this, this paper uses Cite Space visual analysis software to study the current status of cross-cultural human resource management research, research subject cooperation, research hotspots, and future development trend from the number of publications, publishing organizations, author, highly cited literature, countries, keywords, etc. To provide some reference and aid for future scholars in the field of cross-cultural human resource management.

2. Research Methods and Data Sources

2.1 Research Methods

CiteSpace software is a bibliometric software for studying the visual analysis of scientific knowledge mapping jointly developed by Dr. Chaomei Chen of Drethel University and his team[2]. This study uses visual analysis of data collected from CNKI and WOS, To study the current situation and hot spots of cross-cultural human resource management research at home and abroad; The basic operations are as follows: the data included from the CNKI and WOS databases are exported in Ref Works form in CNKI and WOS form in plain text files, respectively. And named as download into the Input folder, Reimport into the Cite Space software for analysis, Set the period to 2008 to 2021 in the time zone selection, The time
slice is 1. The remaining parameters are set accordingly for the node type and cropping mode according to the specific needs. Finally, click on GO! After the operation of the program, Cite Space software can map the research structure collaboration network map, research subject collaboration network map, country analysis map, keyword co-occurrence, keyword clustering, keyword burst map of cross-cultural human resource management, etc. By observing these network knowledge maps and based on the understanding and combing of the existing cross-cultural human resource management research, the research status, hot spots, and future development trends of cross-cultural human resource management at home and abroad can be inferred.

2.2 Data Source
The data in this study comes from CNKI and WOS, the domestic data from CNKI journals and master’s thesis, in the advanced search of CNKI “cross-cultural human resource management” as the theme, and set the time range to 2008-2021, after the accurate search a total of 240 literature. To ensure the validity and accuracy of the data, by reading the literature content and abstract of the topic and conference minutes papers, 129 valid Chinese papers were finally obtained, including 102 core journals and 27 master’s papers. Foreign data from WOS, in WOS with “Cross-Cultural Human Resources Management” as the theme, defined time as 2008-2021 after the accurate search of 181 documents, manually checked in the literature type “paper”, review papers, language selection “English”, also to ensure the reliability and accuracy of the literature, remove revised online publication, editorial materials, conference papers, retracted papers refined 178 documents. To further ensure the relevance of the literature and the research topic, Literature unrelated to the study topic was removed by reading the abstract of the literature, and 153 foreign documents were obtained.

3. Basic Characteristics of the Literature
3.1 Analysis of the Number of Published Papers
The number of papers published can reflect the development status of a particular field in a specific period, and it can also see the changes in the research heat in this field more intuitively, which is of great significance to analyze the development trend of a certain field and predict its future development trend[3]. In this study, the origin counted the number of literature collected from the CNKI and WOS databases (Figure 1). Through the visual analysis of sample data, during the research period of domestic and foreign research, the overall publication of cross-cultural human resource management research at home and abroad shows a decreasing trend year by year and the number of foreign research documents was higher than domestic; before 2008, domestic attention to cross-cultural human resource management is relatively low and the research is in its infancy, after 2008, domestic research on the field of cross-cultural human resource management has ushered in the spring of development, for example, taking Carrefour as an example, proposed the important role of intercultural human resource management for multinational companies (Jia Xue et al.; 2008)[4]; The number of foreign cross-cultural human resource management research papers reached 17 in 2012, (Jaime Bonache; 2012)[5] It explore whether companies should adapt their human resource management (HRM) to countries and corporate cultures.

Figure 1: The number of published papers on cross-cultural human resource management of domestic and foreign employees (2008-2021)

3.2 Authors’ Collaborative Network Analysis
The analysis of the core authors in a certain field can judge the research hotspots of this field by analyzing the research direction of the core authors. The authors’ collaborative network map can also reveal the connection relationship of different authors in this field[6]. In this study, the Cite Space bibliometric software selected “author” for the node type of the data collected from CNKI and WOS, and the following network knowledge map was obtained after running the Cite Space software.

Figure 2: Domestic author collaborative network map
The authors’ cooperative network analysis formed a total of 142 nodes and 35 connections. The size of the nodes in the map represents the number of papers published by the authors, the more Zhao Shuming published the most papers and reached 4; The thickness of the connections between the nodes represents the close cooperation between different authors. From Figure 2, Jiang Jianwu, Zhao Shuming, Chengzhong, and Dai Wanjun formed a close research cooperation group, but in general, there are scattered researchers and no obvious cooperation network.
3.3 Research Institutional Analysis

Through the analysis of research institutions in a certain field, we can understand the cooperation of research institutions in the field and the distribution of the main research power in the area. The domestic and foreign data collected from CNKI and WOS databases were imported into Cite Space bibliometry software respectively, and the time was set to 2008-2022, the Time slicing is 1, and “institution” was selected in “Node Types” and figure 4 and 5 are obtained after running the program.

According to the collaborative network map analysis of domestic and foreign authors: (1) The cooperation between domestic research authors are relatively small, while foreign research authors is relatively intensive, but there is less cooperation and communication between domestic and foreign research authors; (2) The number of foreign core authors is more than that of domestic countries.

By comparing the collaboration network map of domestic and foreign cross-cultural human resource management research institutions, we can see that: (1) The representative institution of domestic cross-cultural human resource management is the School of Management of Wuhan Donghu University, And the number of papers is up to 2. Foreign research institutions are mainly “Chinese Univ Hong Kong”, Followed by “Middlesex Univ” and “Univ Reading” and so on; (2) From the point of view of the number of papers, Foreign research institutions issued higher publications than domestic publications, But on the whole, the number of domestic and foreign institutions issued is relatively small; (3) Analysis of the number of research institutions, There are more foreign research institutions than the domestic ones. It shows that

Figure 3: The collaborative network map of foreign authors

The authors’ cooperative network analysis formed a total of 304 nodes and 409 connections, among which “KARIN SANDERS” published the most papers and reached 3; From the graph, “D T HALL”, “J UNITE”, “J P BRISCOE”, etc., form relatively close research cooperation groups. Overall, an obvious cooperation network is formed between researchers, but the communication between different groups is less.

Figure 4: Map of the collaboration network of domestic research institutions

Figure 5: The collaborative Network of foreign research institutions

In the cooperative network map of foreign research institutions, “Chinese Univ Hong Kong” and “Simon Fraser Univ” posted the most articles and reached 4, Secondly, the most published posts are “Middlesex Univ” and “Univ Reading”; The thickness of the connections between the nodes represents the closeness of the cooperation of each research institution, From the cooperative network map of research institutions, a research group is formed between “Simon Fraser Univ”, “Bogazici Univ” and “Cardiff Univ”, And in this group, the cooperation between the various institutions is relatively close, However, there are fewer exchanges and cooperation between the cooperation groups; Foreign research on cross-cultural human resource management is mainly distributed in universities, The main research force is in universities, The type of research institution is relatively single.
foreign research institutions pay more attention to the research of cross-cultural human resource management; (4) In terms of the type of research institutions, the types of foreign research institutions are mainly universities, and domestic research institutions include universities and research institutes, it can be seen that there are no rich types of domestic research institutions abroad; (5) In terms of the network density, foreign research institutions are working closely together, there is no cooperation between domestic research institutions. Based on this future, the cooperation between domestic research institutions should be strengthened to produce high-quality literature and further improve the research level.

3.4 Country Collaboration Analysis

Through the map analysis of the country collaboration network map, it is helpful to understand the closeness of the cooperation between different countries, and which countries have the highest number of publications. The search found a total of 57 countries studying Cross-cultural human resource management, as shown in Figure 6.

![Figure 6: Country collaboration Network map](image)

As is seen in Figure 6, The knowledge map comprises 57 nodes and 209 connections. According to the Country collaboration Network map, “USA” issued the largest number of articles and issued 41 articles, then “PEOPLES R CHINA” issued 26 articles and 22 articles “ENGLAND” articles; The connection between “AUSTRALIA” and “NETHERLANDS” and the thicker connection indicate that there are more cooperative studies between these countries; The purple appearance of the outermost circles such as “USA”, “PEOPLES R CHINA”, and “ENGLAND” nodes indicates that the country has a high intermediary centrality and plays a bridge role in the research field; In terms of the number of papers published, The “USA” has posted up to 40 articles; From the perspective of the mediation centrality degree, The “USA” betweenness-centrality(BC) index is 0.23, “PEOPLES R CHINA” (BC=0.16), “ENGLAD” (BC=0.18), The betweenness-centrality was greater than 0.1. Based on the analysis of the number of documents issued by foreign countries and the degree of betweenness-centrality, it is clear that “USA” plays a bridge role in the field of cross-cultural human resource management research.

3.5 Document Co-citation Analysis

The highly cited document represents the classic achievements accumulated from some research fields, and the clustering analysis of the cited literature can explore the knowledge basis of the area of Cross-cultural human resource management. After clustering, as shown in Figure 7, the results show that the information modularity of the cluster map (Q value): Q=0.9352 (Q>0.3), and the weighted mean silhouette S of the cluster map: S=0.985 (S>0.7). Therefore, the cluster map is fully readable.

![Figure 7: Document co-citation analysis network map](image)

Document co-citation is when one document is cited by multiple papers at the same time; the higher the literature is cited, it shows that the literature is the most basic and influential in a specific field[7]. As found in Figure 6, the most cited literature was[8] with a frequency of 3, followed by document[9] with a citation frequency of 2. The progress of 93 empirical studies published in management journals to evaluate organizational behavior with ethnic culture as the main explanatory variable was analyzed (Tsui, A.S., 2007)[8]; (J S Zhu; 2014) Based on a study of 21 Chinese multinational companies[9], It explores how the country of origin effect affects the management of host labor relations, which is an important area of human resource management (HRM). These two documents play a key role in the development process of the intercultural human resource management research field in China. Therefore, these two documents constitute the basic knowledge literature of foreign cross-cultural human resource management.

According to CNKI, the highest frequency of[10] literature being cited reached 4,984 times, followed by[11] literature with 30. Using the method of case study, in reviewing the relevant theory of culture and cross-cultural management, the study of Alibaba’s internationalization process and its cross-cultural human resource management system, put forward to promote the development of the organization, reduce the conflict caused by cross-cultural, in the internationalization of enterprise cross-cultural human resource management should proceed from the actual enterprise countermeasures (Jing Zhang; 2016)[10]; Using the hierarchical analysis method, we quantitatively analyze which cross-cultural human resource management mode enterprises should choose[11]. These two documents play a vital role in the development process of the intercultural human resource management research field in China.

4.1 Analysis of Research Hotspots

The analysis of high-frequency keywords can identify the research hotspots in a certain field[12]. The included 129 Chinese documents and 153 foreign documents were imported into the Citespace software. The node type was selected as “Keyword”, and the rest were selected by default. After the program was run, both Figure 8 and Figure 9 were obtained.

![Figure 8: Domestic keyword co-occurrence network map](image)

According to the domestic keyword occurrence map, a total of 122 nodes and 207 connections are formed; from the graph further analysis, the size of the nodes represents the frequency of the keywords, the larger the node indicates the higher the frequency of the keyword. From Figure 8, the highest cross-cultural frequency is 45 times, Second the frequency of cultural differences was 25, That is, cross-cultural and cultural differences are the hot spots in the field of cross-cultural human resource management; the cross-cultural human resource management betweenness-centrality is 0.44 and the outer circle of the keywords is purple, indicating that the cross-cultural acts as a bridge in the field. Secondly, the betweenness-centrality degree of cultural differences is 0.14, and the human resources is 0.11; the connection between the Keywords indicates that the two keywords or multiple keywords appear in the same article, (Haiyan Zhai; 2006)[13]By analyzing the problems existing in personnel allocation, training, assessment and salary management of sino-foreign joint ventures, we can explore the ideas and countermeasures of optimizing human resource management.

![Figure 9: Foreign keywords co-occurrence network map](image)

The foreign keywords occurrence map shows a total of 275 nodes, 1385 links, “Human resource management”, The highest frequency was 45, followed by “performance” 31, indicating that “Human resource management”, “performance” Is a hot topic of foreign research.

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<th>Domestic keywords</th>
<th>Foreign keywords</th>
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| Table 1: Analysis of high-frequency keywords at home and abroad |

Combined with domestic and foreign keyword co-occurrence map and high-frequency keywords table know: (1) foreign keywords’ co-occurrence frequency is higher than domestic, that is, foreign countries pay more attention to the research of cross-cultural human resource management; (2) domestic cross-cultural human resource management research hotspot “cross-cultural”, “cultural differences”, while foreign countries pay attention to “Human resource management”, “performance” Research; (3) the highest cross-cultural centrality in China is 0.44, while the highest center in foreign research is “Human resource management” At 0.62, followed by “model” For 0.22, etc.

4.2 Emerging trends analysis

Burst detection of high-frequency keywords can show the keywords that produce significant changes in a short period and can predict which key branch technologies will become hot spots and continue with explosive trends in the future. The author used this function to analyze and obtained 16 Chinese burst words (Figure 10) and 12 foreign burst words (Figure 11).
have different initial times, burst intensity, and mutation research. Through comparison, it is found that although "culture", and "meta-analysis" are the frontier of foreign research hotspots, domestic and foreign countries pay more attention to local culture and human resource management; the cooperation between foreign research institutions is closer than that between domestic research institutions.

By comparing the keyword burst map at home and abroad, it can be found that a total of 16 burst words were obtained in the domestic keyword burst analysis. Analyzed from the dimension of time, Communication, corporate culture, and localization are the longest lasting keywords of the sudden cycle. For example, communication has a sudden trend from 2001 to 2007 for 7 years; From the dimensional analysis of the burst intensity, Human resources (Strength=2.16) and performance management (Strength=1.88) have a relatively high burst intensity. Represents an important aspect of the domestic Cross-cultural human resource management research field. Therefore, it has received a wide range of attention and become an influential frontier hot spot. A total of 12 mutations were obtained in foreign keyword mutation analysis. From the dimension of burst intensity, “national culture” (Strength=2.09) and “culture and attitude” (Strength=1.98) have relatively large burst intensity; from the time dimension, “HRM practice” and “knowledge” are relatively long bursts and the mutation duration is 4 years. Due to the continuity of the mutation, localization can still become the frontier of cross-cultural human resource management in China; “HRM practice”, “identity”, “national culture”, and “meta-analysis” are the frontier of foreign research. Through comparison, it is found that although localization, cross-cultural conflicts, and cultural conflicts have different initial times, burst intensity, and mutation duration, they are all important frontier hotspots in the field of cross-cultural human resource management.

5. Conclusion

This paper with the Cite Space bibliometric software in 2008-2021 CNKI database 129 Chinese literature and WOS database 153 foreign literature from the number of publications, the authors, publishing institutions, countries, keywords, etc., to discuss the current status of cross-cultural human resource management research at home and abroad, the collaboration of the subjects, research hotspot, research frontiers. The study results show that the:

First, the number of documents at home and abroad is constantly decreasing; foreign research on cross-cultural human resource management is earlier than domestic.

Second, from the perspective of research institutions, the number of documents issued by foreign institutions is much higher than that of domestic institutions, and the number of foreign research institutions is more than domestic, but the types of foreign institutions are not rich as domestic; domestic cross-cultural human resource management research power mainly include labor and Personnel School and Institute of Behavior, Renmin University of China.” Chinese Univ Hong Kong” and “Simon Fraser Univ” are the core forces in foreign cross-cultural human resource management; the cooperation between foreign research institutions is closer than that between domestic research institutions.

Third, relatively influential core author groups are formed at home and abroad; The number of articles published by core authors in China is less than that in foreign, authors at home and abroad have conducted close cooperation and exchange.

Fourth, “USA” is the country with the largest number of articles and the degree of betweenness-centrality, indicating that the country has a high influence on the field of cross-cultural human resource management; followed by “PEOPLES R CHINA”, “ENGLAND”, etc.

Fifth, in terms of research hotspots, domestic and foreign countries pay more attention to local culture and human resources; However, domestic countries pay more attention to corporate culture, dispatched personnel, communication, and other issues, while foreign countries are interested in cross-cultural adjustment and performance.

6. Future Outlook

Most of the existing studies use case study methods to explore the concepts and models of cross-cultural human resource management, but they also have the following shortcomings. For example, there is no cooperation and exchange between domestic research institutions. Future research can focus on three following aspects:

(1) Strengthen subject cooperation. When using Cite Space software to analyze domestic cross-cultural human resource management research institutions, there is no cooperation between domestic research institutions. Therefore, future research should strengthen the cooperation and exchanges among various institutions in China to improve the quality of
the literature and contribute to the field.

(2) In the implementation of localized management, we should respect, understand and reasonably use the host culture, and should not lose the excellent domestic culture. Based on maintaining the excellent local culture, we should absorb the best, eliminate the bad, and complement each other’s advantages[14].

(3) Modern management theory is mostly the research results of foreign scholars, which is based on foreign employees and foreign corporate culture[15]. Some theories are not suitable for the development of China’s national conditions, so management theories suitable for China’s national conditions should be developed in the future.

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References


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