

Research on the Conceptualization and Research of Empowerment in the Field of Management in China— Based on the Perspective of Knowledge Graph

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Abstract: By studying the origin and concept of empowerment research, taking 365 empowerment research articles of CSSCI source literature from 2002 to 2022 as a research sample, using the scientific knowledge map method and document analysis method, the domestic empowerment research overview, research hotspots. The evolution context is comprehensively sorted out and visualized. The research found that: (1) Domestic research on empowerment theory has fluctuated since 2005, and has grown rapidly since 2019. (2) Domestic empowerment research has mainly formed four major research hotspots: theoretical basis, psychological empowerment, technical empowerment and data empowerment; (3) Starting from model construction, data collection, research methods and research content, it points out that domestic management The breakthrough direction of the empowerment theory in the academic field is to promote and guide the deepening of the empowerment theory.

1. Introduction

In recent years, with the world moving into the era of digital economy and the wide application of digital information technologies such as artificial intelligence, blockchain, Big data, empowerment research has received much attention from domestic and foreign academic circles, especially in the field of management^[1]. At present, domestic and foreign scholars can roughly divide their research on empowerment into two directions: firstly, they mainly focus on empowering individuals and organizations in organizational contexts; Secondly, it mainly focuses on the application of digital information and other technologies. As of now, although the academic achievements in the field of empowerment research in management have gradually increased, there are still the following problems in the academic community's understanding of the concept of empowerment and its theoretical application: (1) The research on empowerment in China has not yet formed a system, and few scholars have unified the connotation of the concept of empowerment based on the current research status at home and abroad. Due to the translation of the term 'empowerment', scholars have different understandings and translations of empowerment in different contexts. Firstly, it is believed that there are two translation outcomes for 'empowerment'^[2],

namely words related to 'power' and 'energy', and secondly, it is translated as 'empowerment'^[3]. (2) Few scholars have conducted research on the research hotspots of empowerment theory. With the continuous development of digital technology and society, the concept of empowerment will be expanded, and the application of empowerment theory will also change. Research hotspots and cutting-edge themes help to grasp the overall research progress and future trends of empowerment.

According to the existing problems in the research on the concept of empowerment and its theoretical application, this paper analyzes the following aspects on the basis of Document retrieval and sorting analysis: first, systematically sort out the Chinese representative literature of empowerment, analyze the nature of empowerment, list and summarize the representative definitions from the perspective of process, method and state research, and summarize the concept of empowerment under the discipline of management; Secondly, the Knowledge graph software is used to visually analyze the representative literature on empowerment in the domestic management field from 2002 to 2022. Through the clustering function of CiteSpace software, the research hotspots of empowerment in the domestic management field are analyzed; Thirdly, by highlighting keywords, the research direction of empowerment is pointed out, with the aim of achieving further development in this field.

The theoretical contributions of this article mainly lie in: firstly, carefully sorting out the representative definitions of empowerment characterized by process, method, and state, comparing and analyzing the representative viewpoints of domestic and foreign scholars, and summarizing the concept and connotation of empowerment; The second is to systematically review the research achievements related to empowerment in China, showcasing the latest research topics and cutting-edge hotspots in the field of management empowerment in China, providing reference for scholars to expand their research methods and content on empowerment; Thirdly, based on the shortcomings of empowerment research, feasible future research directions and methods have been proposed to enhance the application of empowerment theory, lay the foundation for domestic scholars to carry out empowerment research in new contexts, and promote the better development of empowerment research in the field of management.

2. Defining the Concept of Empowerment

The Chinese translation of empowerment originates from the translation of the English word 'empowerment'. The translation of the term 'empowerment' comes from the translation of its verb 'power', which can be divided into the prefix 'em' and the noun 'power'. The prefix 'em' is usually translated as 'cause; cause to enter 'or' cause to be in a state of... 'in Chinese, so' empower 'is to put... in a state of power'^[4]. According to the 9th edition of the Oxford Advanced English Chinese Dictionary, 'power' has multiple meanings, and two of them are worth paying attention to: firstly, the ability or opportunity to do something; The second is the power or authority of individuals or groups to do something. In addition, foreign scholars believe that power has the following three meanings: authority, capacity, and energy^[5]. From this, it can be seen that power has multiple meanings, but both involve the aspects of "ability" and "power". Please remember that all the papers must be in English and without orthographic errors.

Domestic scholars have not reached a consensus on the translation of empowerment. Currently, there are mainly the following views: firstly, the translation of "empowerment" is empowerment, and it is believed that there are two main research directions for empowerment theory: firstly, empowerment applied in the fields of organizational behavior and human resources, and secondly, technological empowerment relying on digital technology^[6]. Secondly, there are two translation directions for Empowerment based on different situations: one is about the translation of "power", such as authorization, empowerment^[7], and the other is about the translation of "power", such as

empowerment^[8], but there are differences between the two. Thirdly, influenced by the theory of empowerment in management, empowerment is translated as empowerment^[2]. In summary, the translation of empowerment in the domestic academic community mainly focuses on “ability” and “power”. However, empowerment is the way of empowerment, and empowerment is the purpose of empowerment^[9]. Xiao Peng^[3] (2021) also believes that “energy” has more inherent sustainability than “power”, which is more in line with its inherent characteristics. Therefore, this article translates empowerment as empowerment. For a best viewing experience the used font must be Times New Roman, on a Macintosh use the font named times, except on special occasions, such as program code.

The earliest research on empowerment can be traced back to the study of empowerment theory by Western scholar Fred in the 1920s. According to Li Qingfang's (2005) research, empowerment is considered to give more power to enterprise employees. Western scholar Solomon (1987) early explored the issue of empowerment in his work “*Black Empowerment: Social Work for Oppressed Communities*”. Reading relevant literature on empowerment, it was found that domestic scholars have explored the concept of empowerment from different perspectives, including: firstly, the process perspective, which is the process of enhancing members' self-efficacy. This process involves identifying the conditions that lead to powerlessness, and then adopting formal protective measures and informal effective technologies to eliminate these conditions^[11]; Kabeer (1999) also understood it as the process by which people who are deprived of the ability to choose acquire their abilities. Secondly, from a methodological or methodological perspective, empowerment is essentially a method that helps professionals address the power barriers experienced by individuals or families who are negatively evaluated^[10]. Empowerment can also refer to the management approach in which managers share their influence in the decision-making process with other organizational members^[11]. Thirdly, from a state perspective, authorization is specific to the work field, and attention should be paid to employees' cognition, especially their psychological experience; After analyzing the characteristics of authorized individuals, Appelbaum et al. (1999) believe that authorization is a mindset of employees towards their roles in the organization. Fourthly, from a behavioral perspective, Dimitrides (2005), after synthesizing relevant literature, identified empowerment as an act of delegating power to authorized individuals. Lee&Koh (2001) also viewed 'empowerment' as the act of empowering a supervisor to subordinates. Finally, scholars have conducted research on the concept of empowerment from a comprehensive perspective. For example, according to Wang Dan and Liu Zuyun (2020), empowerment is considered to be the process of maximizing the potential and abilities of individuals or organizations, improving their ability to take action and work efficiency, and achieving previously unattainable goals at both the individual and organizational levels through changes in organizational structure, resource allocation, power relationships, and personal psychology^[12].

In other words, empowerment can be understood as a process, state, method, and behavior. The concept of empowerment roughly includes the increase of external power and internal capabilities, and overall, it is mainly to stimulate the internal and external power of the “incompetent” or “powerless”. In essence, empowerment is not only a process, but also includes the feelings it brings to individuals, that is, their psychological state. From different perspectives, methods, management methods, and forms of employee participation can all be understood as a practical process. Therefore, empowerment refers to the process of empowering the “disabled” and empowering the “powerless”, as well as the psychological state of the “disabled” or “powerless” to help them change the status quo and achieve their goals. In summary, the empowerment of this article is an extension of the empowerment theory based on digital technology, which refers to the process of changing the current situation and achieving goals by empowering organizations or society with abilities that were not previously possessed by a certain medium.

3. Data Sources and Research Methods

3.1. Data Sources

This paper selects the CSSCI database recognized by the academic circles at home and abroad as the data source for Document retrieval, and the time of Document retrieval is May 8, 2023. In order to ensure the integrity and relevance of enabling Document retrieval, CSSCI advanced retrieval function is selected to set advanced retrieval conditions as “title= 'enabling' or 'authorization', subject type= 'management', document type= 'thesis' or 'review'” , manually remove documents related to patent authorization, and finally obtain 365 domestic sample documents that meet the requirements for research enabling.

3.2. Research Methods

The scientific Knowledge graph can dynamically reveal the deep development law of literature in the knowledge field in time and space, transform abstract measurement into image graphics, and then visualize the origin, evolution and expansion of the field^[13]. Existing scholars mainly use this method for literature review, so this paper uses the Knowledge graph software CiteSpace5.8. R3 (64 bit) to carry out bibliometric and visual analysis. In addition, CiteSpace software can visually display all information in a certain field, further showcasing important literature, research hotspots, and research trends in that field^[14]. Compared with other software, this software has the advantages of convenient data processing, better visualization effect, and easier interpretation, which can meet the requirements of literature co citation analysis and keyword cooccurrence analysis for large sample literature^[15].

Save 365 Chinese literature in CiteSpace reading format; Secondly, perform data conversion processing on Chinese literature, and then import it into CitaSpace 5.8.R3 (64 bit) software. Taking 2002 to 2022 as the time range and one year as a time period, the association strength of network nodes adopts the default Cosine, selects “keywords” as the node type, draws a Knowledge graph of the distribution of research hotspots, explores the hot topics of empowerment research through keyword co-occurrence and clustering maps, and analyzes the emerging frontier in this field by detecting keyword emergence.

4. Research Hotspots and Cutting-edge Developments in the Field of Management Empowerment

Using CiteSpace5.8. R3 to select the Pathfinder algorithm to cluster high-frequency keywords, we can get the Knowledge graph of domestic empowerment research hotspots in the field of management. From the graph, it can be seen that the clustering structure of the literature is significant, the clustering results are convincing, and the consistency is high. Based on the results of keyword clustering analysis, the research hotspots on empowerment are further summarized into four aspects: #1 theoretical basis (authorization, authorization empowerment), #2 leadership authorization (psychological authorization, trust), #3 technology empowerment (technology empowerment, blockchain, digital technology), and #4 data empowerment (data empowerment). The following will introduce the four hotspots of empowerment research in the field of management in China:

4.1. Research Hotspots

4.1.1. Theoretical basis

The research on empowerment by domestic scholars is closely related to the empowerment theory and empowerment theory. Lei Qiaoling et al. (2006) conducted an early literature review on foreign empowerment theories and pointed out future research directions. Subsequently, Wang Guomeng and Zheng Quanquan (2008) elaborated on the background, concepts, and research paradigms of authorization theory, and also predicted the future development trends. Jing Tao et al. (2009) proposed the concept of systematic authorization based on authorization theory and developed a systematic authorization scale. Kong Haidong et al. (2019) defined the concept of empowerment when constructing a value co creation analysis framework, and believed that empowerment theory includes empowerment and technology empowerment, and empowerment is precisely the theory mentioned by scholar Lei Qiaoling. Some scholars also believe that with the development of digital technology, technology empowerment has been widely applied, but scholars have a deep understanding of the concepts of empowerment and technology empowerment.

4.1.2. Psychological Empowerment

The research hotspots of psychological empowerment mainly include the keywords “psychological empowerment, trust”. The research on psychological empowerment in China is relatively late, and the current research on psychological empowerment in China still focuses on the following two aspects: the concept and measurement of psychological empowerment, and the theoretical model of psychological empowerment. Regarding the definition of psychological empowerment, domestic and foreign scholars believe that psychological empowerment is a type of work motivation or employee's psychological perception or state. For example, Gong Zhenxing and Zhang Jian (2015) believe that psychological empowerment refers to a psychological cognition generated by individuals influenced by their work environment. Zhao Jinjin and Liu Bo (2019) view psychological empowerment as a collection of employees' psychological states. Regarding the measurement of psychological empowerment, Li Chaoping (2006) revised and validated the psychological empowerment scale developed by Spreitzer in the context of Chinese local culture, and the results showed that the scale had good reliability and validity. At present, most of the research on the theoretical models of psychological empowerment in China still focuses on the mediation and regulation of psychological empowerment on other variables. There is less research on the antecedent and outcome variables of psychological empowerment, and more attention is paid to leadership types and employees' innovative behavior, creativity, and happiness. For example, Sun Chunling et al. (2015) studied the relationship between transformational leadership and psychological empowerment from the perspective of dimensional differentiation. Zhou Chunyan et al. (2022) analyzed the relationship between psychological empowerment and occupational burnout among primary and secondary school teachers, revealing the roles of surface and deep behaviors.

4.1.3. Technological Empowerment

The research hotspots of technology empowerment mainly include the keywords “blockchain, technology empowerment, and digital technology”. The research on technology empowerment mainly focuses on the combination of digital technologies such as blockchain, Big data, cloud technology, artificial intelligence and empowerment theory, and is mainly used in urban governance, emergency management, government services and other fields. For example, Chen Peng (2019) found the internal mechanism of Big data technology for political dynamic monitoring and early warning empowerment by using the actual case of Pizhou Big data monitoring political dynamics.

Gong Yiwei et al. (2020) analyzed the case of Zhejiang government reform, and found that the enabling role of cloud technology can improve the development of Digital transformation. Wang Qifei et al. (2021) analyzed the case of the “Hubei Cold Chain” during the epidemic and concluded that blockchain technology has a mechanism for practical application through structural empowerment, resource empowerment, and psychological empowerment.

4.1.4. Data Empowerment

The research on data empowerment mainly focuses on social governance and business model innovation, with case analysis as the main research method. Regarding the current status and future development of data empowerment research, domestic scholars Sun Xinbo et al. (2020) have conducted a review, clarified the concept of data empowerment, and looked forward to the future development of data empowerment from three aspects: foundation, model, and application research. For data empowering social governance, Shen Feiwei and Zhu Jingwen (2021) conducted a study on the operational mechanism of data empowering digital government governance. Yan Haina et al. (2021) preliminarily explored the operational mechanism of data empowerment for collaborative governance of water environment departments through a multi case analysis of water environment governance. For the innovation of business models, Sun Xinbo et al. (2018) constructed an agile manufacturing process model from a data-driven perspective and elaborated in detail on how manufacturing enterprises can achieve agile manufacturing through data empowerment. Zhang Mingchao et al. (2021) used the exploratory Case study method to build an integrated theoretical model to reveal the internal mechanism of how data empowerment drives Lean manufacturing innovation.

4.2. Keyword Emergence Analysis

Table 1: Emergence of Key Words in Domestic Empowerment Research from 2002 to 2022

Keyword	Strength	Start Year	Terminal Year	Emergence Situation
psychological empowerment	11.98	2007	2018	
technological empowerment	7.29	2020	2022	
empowerment	6.05	2007	2012	
digital empowerment	5.99	2021	2022	
blockchain	4.97	2020	2022	
value co-creation	3.91	2017	2019	
digital government	3.7	2021	2022	
digital technique	3.32	2021	2022	
organizational commitment	3.19	2006	2011	

Emergent keywords are keywords that appear frequently in a short period of time, and analyzing them can predict research trends and frontiers in a certain field. Therefore, this article uses CiteSpace software to analyze the mutation of keywords to obtain the research frontiers empowered in the field of management. The specific steps are as follows: select keywords for node types, and select them in the Control Panel. Select the “Bursts” function and set parameters $\gamma = 0.6$, MinimumDuration=1, CSSCI source literature obtained 17 prominent words. The burst intensity is usually required to be greater than 3, and if the burst intensity is too low, it cannot predict its cutting-edge theme^[16]. Therefore, this article only retains keywords with a burst intensity greater than 3. According to the order of keyword outburst intensity, generate a graph of outburst words for empowering research in the field of management in China from 2002 to 2022, as shown in Table 1. The starting and ending time of prominent words is the duration of the prominent state of the paper's keywords. Short lines are used in the table to indicate the year, and bold lines are used to indicate the year of the prominent keyword.

Table 1 lists 9 keywords with high emergence intensity in the domestic management field empowerment research in different periods. Through the analysis of the emergence of the above keywords, it is found that at the beginning of the 21st century, the keywords with high emergence intensity include psychological authorization, authorization and Organizational commitment; Since 2010, technology empowerment, digital empowerment, blockchain, digital government, and value co creation have become highly prominent keywords. The above keywords reflect the hot topics and evolution trends of empowerment research in the field of management in China. The emergence intensity of psychological empowerment and technological empowerment is slightly higher than other keywords, with the emergence time of the “psychological empowerment” keyword lasting from 2007 to 2018, indicating that psychological empowerment research has a significant impact in the current academic community. In addition, the start and end time of authorization emergence was from 2007 to 2012, with the longest emergence time, indicating that authorization research received considerable attention from scholars at that time. Both technology empowerment and blockchain have emerged since 2020, while digital empowerment, digital government, and digital technology have emerged since 2021 with a high degree of emergence intensity. This indicates that technology empowerment and blockchain may continue to be studied by scholars, but digital empowerment, digital technology, and digital government will receive more attention. The above five keywords represent the hot and cutting-edge themes of empowerment research in the field of management in China, May be an important research direction in the future.

5. Conclusion

Overall, although the empowerment theory in the field of management has been developed to this day and has attracted the attention of many scholars. The research content and achievements are constantly enriched, and the research hotspots are also constantly updated. However, there are still many shortcomings in the research on empowerment in China. Overall, the research on empowerment themes within the discipline of management still needs to be further expanded and extended. Firstly, existing research on empowerment theories is relatively fragmented, with most of them relying on theories that combine management and psychology as support. A relatively complete theoretical system has not yet been formed, and there is no unified division of empowerment dimensions; Secondly, existing research has not yet analyzed the internal mechanisms of empowerment from multiple perspectives, especially at the individual and organizational levels, with most studies focusing on the relationships between variables; Thirdly, the research methods are relatively single, with a lack of qualitative research on topics such as psychological empowerment, and quantitative research on topics such as technology empowerment and data empowerment.

Based on this, this article proposes the following prospects for empowerment research in the field of management: (1) In the construction of research theoretical models, in the future, it is necessary to unify the dimensions of empowerment at different research levels, and combine corresponding theories, such as personal cognitive theory, organizational theory, and digital technology innovation theory, to comprehensively interpret empowerment theory. (2) In terms of data collection, collecting data from research subjects through questionnaire surveys has a certain degree of subjectivity. In the future, more objective methods combining biology and cognition can be used, and more reliable measurement methods can be developed based on specific situations to collect data. (3) In terms of research methods, for individual and organizational level research, in the future, specific industries or enterprises should be combined to deeply explore the internal mechanisms of how organizations empower individuals; For the application of digital technology, precise quantitative indicators should be selected in the future to develop reasonable scales, verified through empirical methods, and a combination of qualitative and quantitative research methods should be used. (4) In terms of research content, domestic research on psychological empowerment should pay more attention to the impact of environmental factors on individual psychological empowerment, and deeply analyze which other factors have an impact on employee psychological empowerment or which variables.

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