

## Research Article

# A Bibliometric Review of CSR in China Based on CNKI Database: 2006–2022

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In the economic society, CSR mainly emphasizes the contribution of enterprises to the environment, the public, and society. Enterprises should not only focus on financial performance but also on the achievement of social performance. Using the CSSCI journal literature on China Knowledge Network from 2006 to 2022 as a sample, the article uses bibliometrics to explore the research trends in this field in China in terms of CSR research literature issuance, co-occurrence of keywords, clustering, timeline, and mutation rate detection, and to look forward to future CSR research directions to provide empirical evidence for academia and enterprises.

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## 1. Introduction

In the late 19th and early 20th centuries, the concept of CSR was introduced by Sheldon in his book *The Philosophy of Management*. Later Howard R. Bowen explained CSR as the obligation of merchants to formulate policies and make decisions following the goals and values expected by society<sup>[1]</sup> in his book *The Social Responsibility of Businessmen*.

In the middle of the twentieth century, High level of international concern for the environment, the economic society gradually linked CSR with business trade. The implementation of CSR strategy by enterprises became one of the important initiatives to enhance their international competitiveness.

China follows the definition of corporate social responsibility in Western countries and in 2006, the Company Law clarified in legal form the social responsibility to be borne by enterprises engaged in production and business activities, emphasizing that enterprises and their proprietors must be bearing the corresponding legal responsibility within the scope of their responsibility, assume the

responsibility of regulating and managing internal labor relations and fulfilling the rights and interests of stakeholders<sup>[2]</sup> (Chang kai 2006).

With the development of the domestic economy, the depth of the information revolution, and the promotion of international business, more attention has been paid to the construction of corporate social responsibility (CSR) in China.<sup>[3]</sup> (Shen Minrong and Yao Jidong 2018). Academics agree that combining CSR with harmonious development, business responsibility, and reliable business citizenship is also profoundly influential<sup>[4]</sup> (Zeng Huixiang et al. 2020).

Under the regulation of a series of standard systems, domestic issues related to CSR have been improved gradually, but with the domestic digital transformation sweeping the market and the frequent occurrence of corporate reputation crises due to social responsibility deficiency behaviors, CSR governance issues have also become one of the focal points of political and academic concerns.

Although the international situation has changed rapidly since the outbreak of the epidemic in 2019, and the expectations and concerns of the political and academic communities on CSR have shifted, CSR still plays a vital role in the world economy under the influence of Musk's accusations on ESG ratings, Anti-green wash review by the SEC, the EU and other efforts to strengthen information disclosure, ISSB seeks to establish globally harmonized sustainability disclosure guidelines, CSR issues continue to receive widespread attention from all walks of life around the world.

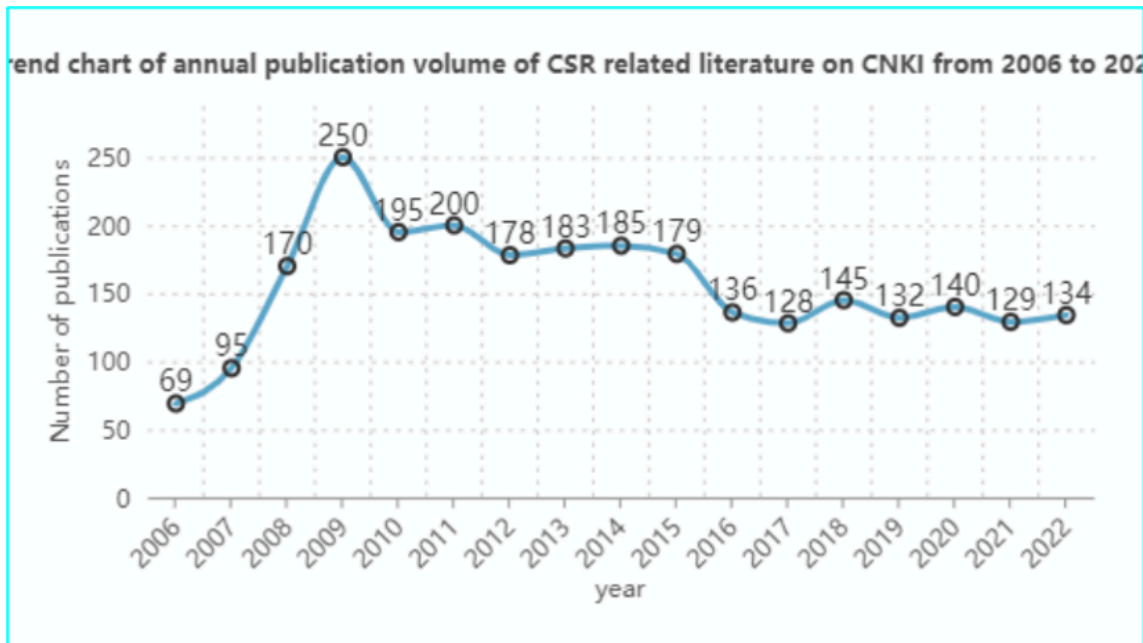
Therefore, with the growing wealth of CSR research, it is significant to know the current status and trends of CSR.

## 2. Data and Methodology

We obtained the research data for this paper from China Knowledge Network. Under the advanced search mode of China Knowledge Network, CSR was used as the keyword, the year of publication spanned from 2006 to 2022, the type of literature was academic journals, and the type of journal was SSCI journals, and a total of 2694 Chinese literature were retrieved. The literature with low relevance to CSR was removed and de-duplicated by the Remove Duplicates function in CiteSpace software, resulting in 2628 articles. Finally, we used CiteSpace to conduct a bibliometric analysis of the 2628 data to explore the current situation and trends of Chinese CSR research., We hope to provide empirical evidence for the subsequent research and to serve as a guide for corporate practice.

### 3. Trend analysis of the number of articles issued

The author has compiled a graph of the annual publication trends of CSR research literature between 2006 and 2022 (Figure 1). to grasp the overall changes in the number of relevant research literature and the chronological pattern.



**Figure 1.** Annual volume of domestic CSR literature from 2006–2022

As shown in Figure 1, in terms of the total volume of literature, the average annual number of publications has been around 154 since 2006. Based on the changes in the number of publications, The changes in the number of publications and the chronological pattern are as follows.

From 2006 to 2009, the number of articles published increased year by year, reaching a peak in 2009. In late 2005, the Chinese government formulated the first Chinese Corporate Social Responsibility Standard. In 2006, the Company Law of China was enacted and came into force, which not only guided the management of domestic enterprises but also provided a reference for academic research and helped to increase the popularity of CSR research.

The number of articles published in 2010 was significantly lower than that in 2009. From 2010 to 2015, the number of articles published remained at a high level, and the number of articles published tended to stabilize, showing a continuous and stable trend of domestic research enthusiasm.

Since 2016, the number of articles published has remained above 110, and the number of articles published has decreased but remained stable. Domestic research remains hot. The reason for this is that for the economy and society, the number of enterprises in China is huge, but the overall level of CSR construction is still in its infancy, and a large number of new issues are constantly emerging in the course of construction practice and research.

Through analyzing the volume of CSR research articles, we found that domestic CSR research is consistent with the national development strategy, and research hot spots will adapt to social development. and show the characteristics of diversified and specialized forms of practice. In addition, future research related to CSR will continue to be of great interest, and continued research on CSR is of practical value and guidance.

## **4. Research trend analysis**

### *4.1. Keyword frequency analysis*

We ran CiteSpace software to obtain CSR research keyword frequency and centrality values, merging synonymous keywords and removing low-frequency and invalid keywords, we gained Table 1.

The network modularity Q value is known to be in the range [0,1], and the network silhouette S value is known to be in the range [0,1]. If the Q value is greater than 0.3, the clustering is significant; if the S value is greater than 0.7, the results are reliable. The visualization results showed that  $Q=0.6854$ , greater than 0.3;  $S=0.9035$ , greater than 0.7, indicating that the keywords co-occurred, the clustering structure was significant in the 2628 CSR studies, and the visualization results were convincing.

No.	Keywords	Frequency	Centrality	No.	Keywords	Frequency	Centrality
1	CSR	2138	1.75	31	Influence Factor	9	0
2	Stakeholder	176	0.02	32	Media Attention	8	0
3	Information Disclosure	78	0	33	Marketization process	8	0
4	Business Performance	55	0.02	34	Platform Economy	8	0
5	Corporate Governance	48	0	35	R&D	8	0
6	Enterprise Value	45	0	36	Closed-loop supply chain	8	0
7	Harmonious Society	32	0	37	Informal Institution	8	0
8	Supply Chain	31	0	38	Business Management	8	0.01
9	Corporate Citizen	28	0	39	Values	7	0
10	Sustainable Development	25	0	40	Brand Assets	7	0
11	Corporate Reputation	21	0	41	Enterprise Strategy	7	0
12	Consumers	21	0	42	Government Subsidies	7	0
13	Technological Innovation	20	0	43	SA 8000	6	0
14	CE	19	0	44	CI	6	0
15	Business Ethics	19	0.01	45	Low Carbon Economy	6	0
16	Property Nature	18	0	46	Government Regulation	6	0
17	Political Connections	18	0	47	The Belt and Road Initiative	5	0
18	Corporate Culture	17	0	48	Product Competition	5	0
19	Charitable Donations	16	0	49	People Oriented	5	0
20	Earnings Management	16	0	50	CSR governance	5	0

No.	Keywords	Frequency	Centrality	No.	Keywords	Frequency	Centrality
21	Financing Constraints	16	0	51	Labor Rights	5	0
22	Mesomeric Effect	15	0	52	Investment Efficiency	5	0
23	Government	15	0.01	53	Investment efficiency	5	0
24	Value Creation	13	0	54	Entrepreneurship	4	0
25	Social Performance	12	0	55	CSR Report	4	0
26	Institutional Environment	12	0	56	Global Compact	4	0
27	Human Resources Management	11	0	57	Innovation Performance	4	0
28	Enterprise Competitiveness	11	0	58	Social Governance	4	0
29	Internal Controls	11	0	59	SRI	4	0
30	Moral Responsibility	10	0	60	Equity Nature	4	0

**Table 1.** Word frequency centrality distribution of keywords in CSR research literature

*Notes: R&D=Research and Development; SRI=Socially Responsible Investment; CE=Competitive Edge*

According to Table 1, we found that:

The frequency and centrality of the keyword "corporate social responsibility" is the highest, indicating that the research data on "corporate social responsibility" is reasonably selected. There has been a high level of attention to domestic research on corporate social responsibility.

The keywords "harmonious society", "corporate innovation", "low carbon economy", and "sustainable development" show that scientific Studies are aligned with national development strategies, and that domestic research on CSR is inseparable from our keen insight into specific social events and political policies at a particular time.

In addition, the keywords are multiple and diverse, there are many factors related to CSR and the intrinsic mechanisms affecting CSR are complex. The existing research shows that scholars have paid attention to both environmental factors and other antecedent factors that influence CSR performance, and there is a trend for CSR research to be multi-faceted and wide-ranging.

#### 4.2. Keywords clustering Analysis

We applied the CiteSpace clustering function for keyword clustering and obtained a keyword clustering map (Figure 2).

As shown in Figure 2, the clustering of domestic research on CSR mainly includes eight, namely "#0 CSR", "#1 stakeholders", "#2 information disclosure", "#3 corporate performance", "#4 supply chain", "#5 harmonious society", "#6 consumers", "#7 management systems", and "#8 industry competition"

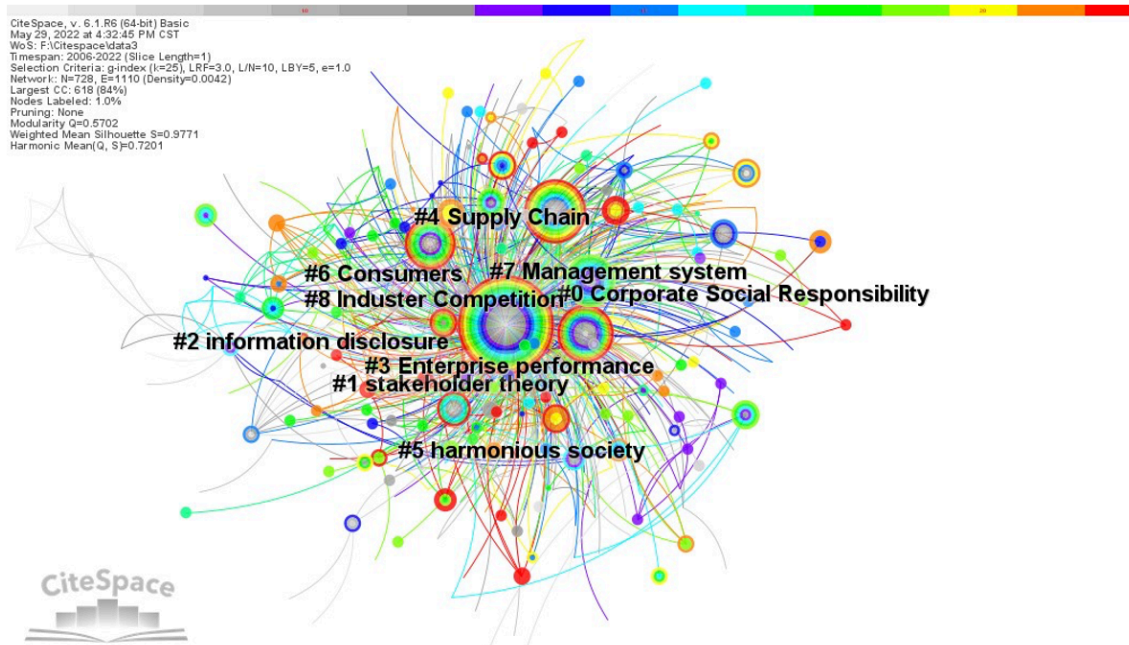
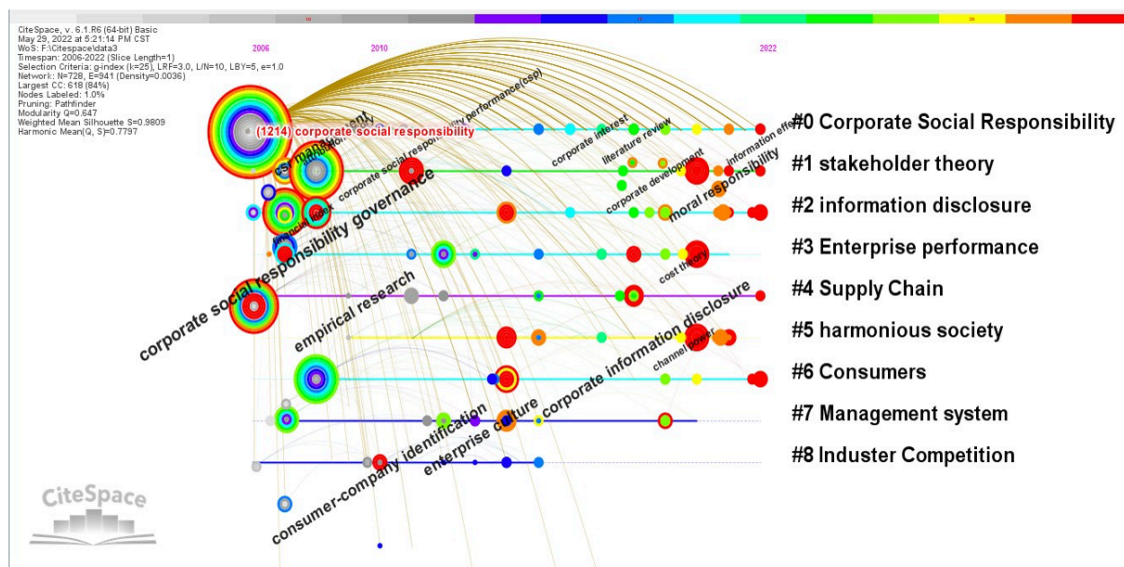


Figure 2. Keyword clustering chart

Domestic research on CSR revolves around corporate social responsibility, focusing on the antecedent motivations, internal mechanisms, and environmental systems that influence CSR.

### 4.3. Keyword Trend Analysis

We further ran CiteSpace software to obtain keyword timeline mapping (Figure 3) and keyword emergent year trend mapping (Figure 4), combining Figure 3 and Figure 4 to analyze the keyword change trend of CSR research in China.



**Figure 3.** Keyword timeline mapping



## Top 22 Keywords with the Strongest Citation Bursts

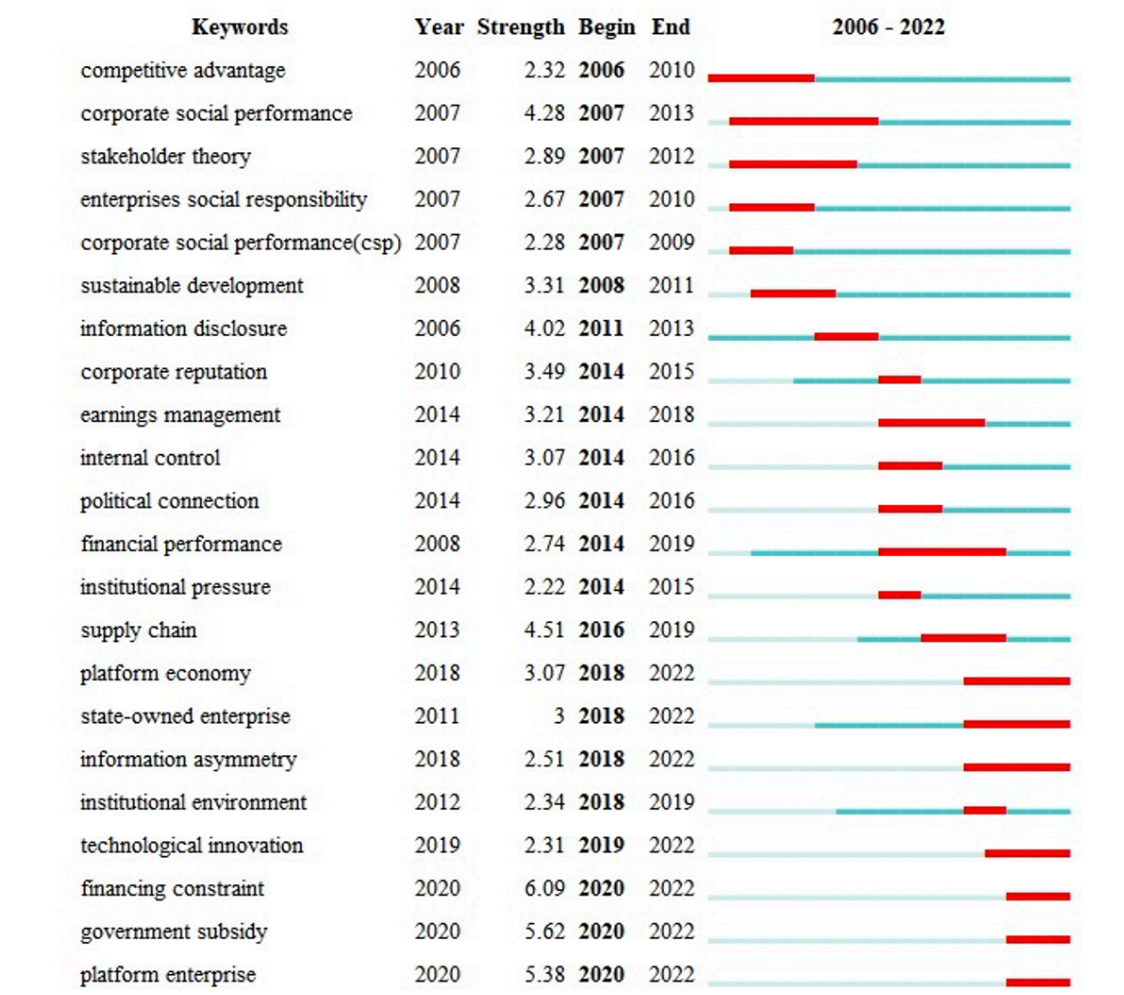


Figure 4. Schematic spectrum of the top 22 keywords sudden years

The different colors in the known keywords' emergence graph reflect whether there is relevant research literature in different periods and the different degrees of research hotness of relevant keywords in that period.

As shown in Figure 4, different keywords emerged in different years, showing a certain temporal pattern. 2006 to 2022, the most researched keywords in each year are not the same, and the duration of each keyword research recognition is also different. The analysis combined with the clustering labels is as follows:

The clustering tag #0 "CSR" reveals that the research on CSR in China between 2006 and 2022 is characterized by diversity and complexity as well as variability. As shown in Figure 4, from 2006 to

2012, 22 different keywords in the keyword emergent graph have emergent intensity higher than 2.0.

from 2006 to 2012, the emergent intensity of the keyword "stakeholder theory" was 2.89. Combining cluster tag #1 "Stakeholders" and cluster tag #6 "Consumers" shows that CSR research in China is based on the development background of a harmonious society, focusing on corporate citizenship throughout the development of CSR research, combining theory and focusing on practice. This is reflected in the keyword "competitive advantage". This is reflected in the keywords "competitive advantage", "multinational corporations", "stakeholder theory" and so on. In the context of fierce competition in the industry, it is important to explore how to achieve sustainable development to create a competitive advantage for enterprises, and it is important to guide research and practice.

Cluster #2 "information disclosure" corresponds to the emergent keyword "information disclosure" with an emergent intensity of 4.02 from 2011 to 2013, which may be related to the implementation of the "Rules for Determining Administrative Liability for Information Disclosure Violations" in China in April 2011. It is related to the implementation of the Rules on Administrative Liability for Information Disclosure Violations in April 2011. Under media attention and institutional constraints, enterprises require to disclose relevant CSR reports, such as the Baidu Wei Zexi platform bidding, the Haidian public trial of CEO Wang Xin and Wu Ming for spreading obscene materials for profit, and the release of CSR reports by several enterprises, including state-owned SOEs in Shenzhen. In addition, stakeholder decision-making is gradually influenced by CSR disclosure, suggesting that research on CSR has focused on CSR deficits, governance issues, and the mechanism of influence between CSR and stakeholders.

Cluster #3 "Corporate performance" with two keywords (corporate social performance and financial performance) emergence intensity of 4.28 and 2.74, which indicates that companies should focus not only on financial performance but also on the achievement of social performance in the process of sustainable development, as the achievement of social performance can, to a certain extent, reduce the risks faced by companies.<sup>[5]</sup> (2022 Yangzhen et al.) Moreover, in the particular economic environment of slowing domestic consumption growth and insufficient effective demand, CSR research is more oriented toward practical, corporate performance, and risk control studies.

Cluster #4 "supply chain" with a keyword emergence intensity of 4.51 from 2016 to 2019, is due to the significant increase in domestic technological strength since the 18th Party Congress and the dramatic increase in the number of enterprises, including multinational enterprises, supply chain enterprises, and platform enterprises. The scope of CSR also extends beyond the environment to include fair trade,

ethical employment, corruption prevention, and more<sup>[6]</sup> (2022 Gao Peiyong et al.). In addition, the rapid development of China's cross-border e-commerce in 2015, such as Premier Li Keqiang's inclusion of Shenzhen Yidatong's comprehensive foreign trade service platform in the government work report; the release of the "Chain 3+5 Ecological Strategy" by Yiya Tong and the release of IoT finance by Ping An Bank in Shanghai, etc., which has led to CSR research tending to grasp the overall situation of CSR, focus on what priorities affect CSR actions and the intrinsic influence mechanism between supply chain and CSR.

Cluster #7 "management systems" includes "countermeasures", "surplus management", "internal control", "R&D investment", "nature of property rights", etc. In the new era, China has put forward new requirements for enterprises to fulfill their social responsibility, and the construction of CSR has reached a new stage<sup>[7]</sup> (Li Zhijun 2022). The research has gradually manifested itself in concrete corporate initiatives in CSR building, and scholars have focused more on the practical guidance implications of CSR.

Research on CSR related to the keywords "state-owned enterprises", "corporate innovation", "technological innovation", and "platform economy". The research on "information asymmetry" is expected to continue until the end of 2022 and is expected to continue to rise. The twentieth Party Congress report has once again set a double carbon target. Led by the green innovation strategy, the digital transformation of enterprises is imperative, and state-owned enterprises, as the leaders of the transformation, have become the preferred research target. How enterprises can influence the implementation of CSR fulfillment through innovating, and thus drive the realization of corporate value, has become the focus of research. Since 2019, the platform economy has developed rapidly, under the influence of the new crown epidemic, the platform economy and social value have become increasingly prominent, the research on CSR based on the platform economy has also attracted extensive attention from scholars, and the research heat on CSR will not cool off precipitously, and the research heat remains significant.

## 5. Research Conclusions and Outlook

### 5.1. Conclusions

Using the CSSCI journals on the China Knowledge Network from 2006 to 2022 as a sample, the article explores the current situation and trends of CSR research in China using bibliometric methods. On the

one hand, it summarizes and enriches the content of CSR-related research in China, on the other hand, it provides empirical evidence for the subsequent research and corporate governance.

Firstly, the scope of research on CSR is broad, featuring a wide range of research perspectives, diverse forms of practice, and specialization. Not only does it cover the fulfillment of social responsibility in the context of the Internet and CSR governance in the context of innovation-driven development, but it also includes the fulfillment of CSR in the context of industry competition and supply chain influence. However, scientific research cannot be done without observing the general economic and market environment. The essence of the studies lies in how the endogenous mechanism affects the internal control of enterprises, which ultimately manifests itself externally in the degree of CSR fulfillment.

Secondly, CSR research cannot be done without scientific research that provides keen insight into specific social events at a particular time. However, the guidance of Special events is not the most crucial factor for scholars to conduct research.<sup>[8]</sup> (Zhang Luxiu 2022) shows that research hot spots change with social development and that scholars' work must grasp changes in market policies and systems, keep pace with social development and understand social needs.

In conclusion, future research on CSR in China still focuses mainly on the exogenous driving force of the institutional environment, the endogenous driving force of technological innovation and industry competition, the nature of property rights and the corporate nature of the supply chain, information asymmetry and green innovation, etc. The research fervor continues to be significant.

## *5.2. Research Outlook*

Firstly, as supply chains become more global and highly integrated, we should ignore the impact of supply chains on the competitiveness of enterprises. The supply chain directly affects the participation of enterprises in the global value chain and their competitiveness in the market. Therefore, the social responsibility management of the supply chain of domestic enterprises. how to investigate the social responsibility of their suppliers while undertaking the social responsibilities of their suppliers, deserves attention.

Secondly, in a competitive and sensitive market environment of the industry, on the one hand, the increasing awareness of social responsibility among the public; on the other hand, the fulfillment of social responsibility by enterprises is influenced by the level of social responsibility investment of their competitors, and stakeholders, when evaluating the social responsibility performance of

enterprises, will also refer to other competing enterprises in the industry in which the enterprises are located in terms of social responsibility and conduct Comparative evaluation. It is worthwhile for companies to consider how to win the continued choice of stakeholders and achieve sustainable development in the future.

Thirdly, in the market economy environment, new CSR deficiencies and governance issues are emerging, especially under the influence of Musk's accusations on ESG ratings, The Anti-green wash review by the SEC, the EU, and other efforts to strengthen information disclosure and the ISSB's attempts to establish a globally harmonized sustainability disclosure code, etc. It is vitally important to understand the current changes and development trends of CSR in China, and research on CSR needs to be further explored and analyzed in depth.

Fourthly, future research with bibliometric analysis can consider using other visualization software, such as VOSviewer software, combined with Python to write programs to crawl references in articles and use EndNote software to format the data exported from the Knowledge Network (CNKI) to realize co-citation and author co-citation analysis of the Knowledge Network data references, which in turn can provide an in-depth understanding of the current status and trends of research on different topics and provide a more systematic and in-depth guide for future research.

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## Declarations

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