



# A Review of Research on Digital Platform Governance in China: Hotspots, Characteristics, and Frontiers

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**Abstract.** Digital platforms have brought new challenges to traditional governance systems. Since 2020, there has been a sharp increase in research achievements in the field of digital platform governance in China, and it is necessary to systematically review these studies. This article used CSSCI as the data source and utilizes the CiteSpace software, a bibliometric visualization tool, to quantitatively analyze 346 literature from 2011 to 2022, systematically sorting out the overall trends, research hotspots, and research frontiers in the field of digital platform governance. This article finds that research on digital platform governance in China can be divided into three stages: the embryonic stage, the exploratory stage, and the explosive stage, and presents the following characteristics: focusing on the two core elements of data and algorithms; Focusing on monopoly issues; Mainly focused on ultra large digital platforms; Staged development with practical development as the background; The key concepts are diverse and not yet unified. The research on digital platform governance in China has different frontiers in terms of governance subjects, governance objects, and governance systems.

**Keywords:** Digital platform governance; Digital platform; CiteSpace; Bibliometrics

## 1 Introduction

Digital platforms break traditional governance frameworks through digital technology innovation, bringing great uncertainty to established governance systems<sup>1</sup>, leading to governance issues such as algorithmic discrimination, monopolies, and improper competition<sup>2</sup>. The governance of digital platforms is receiving high attention from Chinese academia. It is necessary to systematically sort out the research status in the field of digital platform governance.

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This article analyzes 346 articles in the CSSCI database from 2011 to 2022 based on the bibliometric software CiteSpace 6.1.3. This article reports on the overall trend, research hotspots and characteristics, and research frontiers of digital platform governance research.

## 2 Research Methods and Data

This article used CiteSpace 6.1.3 software to analyze data. CiteSpace is a software developed for literature data mining and visualization, which can mine complex information contained in literature to explore the current research status and trends in a certain research field. This article used the CSSCI database as the data source, with a time span of 2011-2022. Specifically, the search format is set to "Internet platform/digital platform"+"regulation/governance", and the search time is November 10, 2022. After preliminary search, invalid literature such as solicitations, notices, and newspapers were excluded, and 346 articles were ultimately identified as the research samples for this article.

## 3 Overall Research Trends

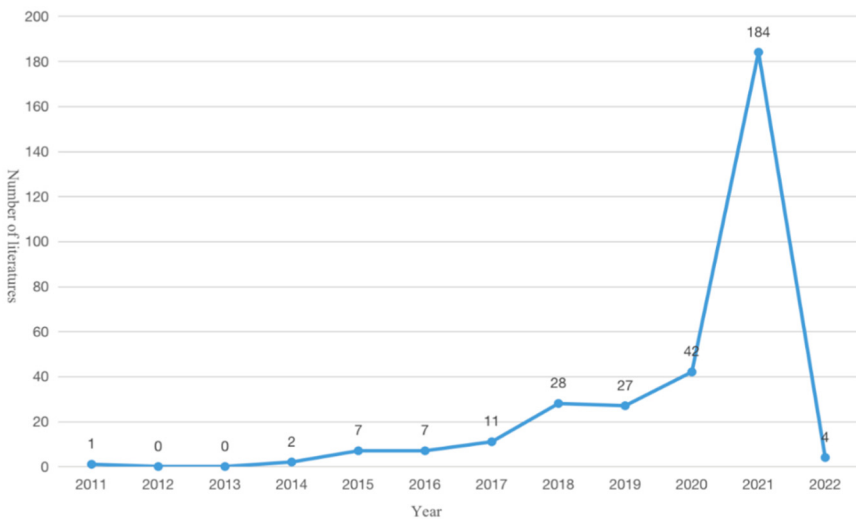


Fig. 1. Annual distribution of literature

After data analysis, this article found that the research on digital platform governance in China shows a trend of "long-term sustained growth, and short-term rapid rise". As shown in Fig.1,the embryonic stage of research is before 2017; From 2018 to 2020, the overall number of publications showed a gradual upward trend, with an annual increase of 26 articles and an accelerated growth rate of literature. This stage is a research and exploration period; From 2020 to 2022, the number of publications

increased sharply, reaching 147 in the field by 2021. Since 2021, it has been a period of explosive research in the field of digital platform governance in China, and the issue of digital platform governance is receiving widespread attention from the academic community.

## 4 Research Hotspots

Keyword clustering analysis is the use of a certain clustering method to simplify the process of keyword co-occurrence network relationships. This article selects K (keyword) clustering and uses the LSI algorithm (latent semantic index algorithm) to obtain the keyword co-occurrence network clustering table. The cluster number in Table 1 is the code for clustering, and the smaller the number, the larger the cluster size; The cluster size represents the number of literature in the category, and the larger the cluster size, the more members of the category; The average year represents the average year in which the literature in that category appears.

**Table 1.** Keyword Clusters

Cluster Number	Cluster Scale	mean year	Clustering Terminology
0	26	2021	Platform governance; Digital platform; Trust transfer; Tacit knowledge spillover; Platform Market
1	25	2021	Digital economy; Platform economy; Industrial integration; Public governance; Platform supervision
2	20	2018	Platform economy; Internet platform supervision; Technical characteristics; Development dividends; Anti monopoly regulation
3	19	2021	Internet platform; Principal responsibility; Classification and grading; Public goods; Platform Society
4	10	2018	Internet finance; Internal control; Knowledge graph; Financial innovation; financial risk
5	6	2018	Sharing economy; Library; Service mode; Shared platform

Based on Table 2 and combined with literature content, it can be concluded that the research field of digital platform governance in China presents the following characteristics:

### 4.1 Focus on data and algorithms.

Under the background of rapid development of digital technologies such as Big data, artificial intelligence and blockchain, digital platforms rely on data and algorithms to

amplify their advantages and have a huge impact on the economy and society. The research field of digital platform governance in China focuses on data and algorithms, which are key elements of platform operation. Attempt to interpret the characteristics and laws of these elements as a logical starting point for understanding digital platform governance issues. Therefore, a large number of keywords such as artificial intelligence, data monopoly, blockchain, data, and technological characteristics appear in Table 1.

#### **4.2 Focus on a series of governance issues centered around monopoly issues.**

Monopoly is the core problem encountered in the development of Platform economy, and it is also the earliest and most focused part of China's digital platform governance research. The research on the governance of China's digital platforms is expanded and extended around monopoly issues, and a series of issues such as labor exploitation, tax issues, algorithmic collusion, and Data breach are discussed. The corresponding keywords include antitrust, platform competition, data monopoly, data governance, artificial intelligence, etc.

#### **4.3 Pay more attention to ultra large digital platforms.**

Ultra large digital platforms leverage scale effects, network effects, and lock-in effects to achieve rapid expansion and doubling of platform scale<sup>3</sup>. Ultra large digital platforms have received long-term attention in the field of digital platform governance research in China, with corresponding keywords such as platform society, public goods, super platforms, and ultra large digital platform enterprises. With the gradual advancement of research, the heterogeneity presented by digital platforms of different scales in governance tools, governance entities, and governance strategies has gradually attracted attention, leading to discussions on classified governance of digital platforms.

#### **4.4 Driven by practical needs, presenting phased development.**

Before 2017, China's digital platforms rapidly rose during this stage, and the risk events on financial internet platforms became a real driving force for academic research. During the period from 2018 to 2020, many policies focused on the impact of the complex characteristics of digital platforms on the existing governance system, and proposed normative opinions from various aspects such as market access. The highly relevant policy background is stimulating the research on digital platform governance, and the number of academic achievements has significantly increased. During the period from 2021 to 2022, a large number of policy documents focused on digital platform "antitrust" emerged, and frequent digital platform governance practices also stimulated research progress, resulting in an explosive growth in the number of research achievements during this stage.

#### 4.5 Diversified key concepts have not yet formed a stable discussion category.

The research on governance of digital platforms in China is rooted in the rapid development of the digital economy and presents a characteristic of diversified key concepts. From the keywords such as digital platforms, shared platforms, platform enterprises, and subject responsibilities in Table 1, it can be seen that research in the field has jointly focused on governance issues such as monopolies, but the conceptual categories and disciplinary perspectives are relatively diverse, leading to a diversified interpretation of the same research object. The concept of "digital platform governance" has not yet formed a stable discussion category.

## 5 Research Frontiers

**Table 2.** Keyword Evolution of Digital Platform Governance Research

2011-2017	2018-2020	2021-present
Internet; Supervision; Financial regulation; Internet+	Platform economy; Blockchain; Artificial intelligence; Sharing economy; Two-sided market Digital economy; Digital platform; Platform governance; Platform enterprises; Governance; Anti Monopoly Law; Data governance; Double round monopoly	Anti monopoly; Platform monopoly; Platform supervision; Monopoly; EU; Principal responsibility; data Collaborative governance; Platform competition; Digital governance; Interconnection and interworking; Platform society; Data monopoly; Competition policy; platform

It can be seen from Table 2 that before 2017, China's digital platform governance research mainly focused on the promotion and restructuring of digital platforms to the traditional financial industry in the context of Internet plus, and noted the risk governance of financial Internet platforms in the context of the Internet. At this stage, research on digital platform governance not only focuses on the positive role of digital platforms in regulation and discusses their regulatory tool attributes, but also pays attention to the governance issues exposed by the rise of digital platforms.

From 2018 to 2020, this stage of research fully focused on the contradictions in the development process of digital platforms, focusing on the incremental and technological spillover effects of algorithms and data in digital platform competition. Furthermore, it focused on the contradictions such as labor relations, false information, and improper competition in the development process of digital platforms. Discussions on digital platform governance models, government regulation, and platform autonomy gradually increased. Corresponding keywords include artificial intelligence, data governance, double monopoly, Sharing economy, etc.

From 2021 to 2022, there was a thorough discussion on the mechanism of monopoly formation and underlying logic, and a more in-depth discussion on the construction of digital platform governance models and the boundaries between government regulation and platform autonomy. Platform responsibility, as a focus area in the field

of digital platform governance research, has received a lot of discussion at this stage. The difference in responsibility between digital platform enterprises and traditional enterprises has received attention, and discussions have emerged on platform responsibility models and fulfillment paths.

Based on the above analysis, the development direction of digital platform governance research in China can be identified. Firstly, in terms of governance objects, on the one hand, academic research is gradually focusing on antitrust issues, focusing on improper competitive behavior in the operation of large and ultra large platforms, and gradually subdividing it into governance of key elements such as data and algorithms. On the other hand, based on the energy level differences of digital platforms of different scales, attention has been paid to the classification and governance of digital platforms. Secondly, in terms of governance entities, gradually shift from government leadership to diversified coordination. While emphasizing government administrative supervision and legal regulation, more emphasis is placed on the responsibility of platform enterprises in self-regulation and social governance, and platform users, platform operators, and social organizations in the field are collectively included in the scope of governance entities<sup>4</sup>. Thirdly, in terms of governance system, gradually pay attention to global digital platform governance practices and cross-border digital platform governance, pay attention to the impact of platformization trends on public value in social change, and focus on ecological governance, complexity governance, and global governance of digital platforms.

## 6 Conclusion

This article used CSSCI as the data source and utilizes the Citespace software, a bibliometric visualization tool, to quantitatively analyze 346 literature from 2011 to 2022, systematically sorting out the overall trends, research hotspots, and research frontiers in the field of digital platform governance. This article finds that research on digital platform governance in China can be divided into three stages: the embryonic stage, the exploratory stage, and the explosive stage, and presents the following characteristics: focusing on the two core elements of data and algorithms; Focusing on monopoly issues; Mainly focused on ultra large digital platforms; Staged development with practical development as the background; The key concepts are diverse and not yet unified. The research on digital platform governance in China has different frontiers in terms of governance subjects, governance objects, and governance systems.

## 7 Discussion

Chinese academia has made preliminary achievements in the field of digital platform governance research, but there are also some research deficiencies. For example, existing research lacks systematicity and exhibits fragmented characteristics; Insufficient research on collaborative governance, agile governance, and adaptive govern-

ance; The research perspective is single, and the depth and breadth of the research are insufficient.

Based on the above analysis, the following suggestions are proposed for future research. Firstly, construct a systematic, interrelated, and complex digital platform governance theory and paradigm. Future research should adhere to a systematic perspective, extract relevant concepts of digital platforms and their governance, clarify research boundaries, and focus on digital resource governance, digital responsibility governance, digital society governance, and multi subject value co creation. Secondly, from a dynamic perspective, conduct evolutionary simulation research in the field of digital platform governance, exploring the interaction and evolution mechanisms between various elements in the governance system. Future research can use empirical strategies such as evolutionary simulation to analyze the dynamic impact of government policies, public opinion, technological innovation, and other factors on the governance performance of digital platforms, optimize collaborative governance mechanisms, and promote interaction and collaboration among multiple entities<sup>5</sup>. Thirdly, future research needs to recognize that digital platform governance is a comprehensive and complex social issue, and understand digital platform governance issues from an interdisciplinary and multidimensional perspective<sup>6</sup>.

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