Research Landscape of Pay Dispersion and Enterprise Performance in China: A Visualization-Based Analysis

Hongrui Wang *

School of Economics and Management, Nanjing University of Science and Technology, Nanjing, China

* Corresponding Author Email: zzygyqsj@126.com

Abstract. The pay dispersion is considered to have an important impact on enterprise performance. Scholars have conducted research based on different perspectives such as tournament theory and behavior theory, and have different views on the relationship between the two. Despite the wide range of discussions, researchers have failed to reach a consensus on this phenomenon due to different theoretical perspectives. In order to pay attention to the frontier hot spots and understand the research status of this field in the Chinese context, this study reviews the existing domestic and foreign literature. After the study, CiteSpace was used to visualize 1705 articles from 2014 to 2024 from CNKI to further verify the conclusions of the review. It is found that the current academic attention in this field in China has a downward trend after reaching its peak in 2020, but the new hot spots not only focus on the research in the Chinese context, but also show certain policy orientation. At the same time, the related research has the problem of single measurement dimension of pay dispersion, and the pay dispersion between ordinary employees has not been fully discussed.

Keywords: pay dispersion, enterprise performance, visual analysis, executive compensation.

1. Introduction

Enterprises are generally considered to be profit-making economic organizations that are engaged in economic activities independently. It is precisely because of the characteristics of pursuing profit maximization that scholars' research on enterprises almost focuses on the improvement of enterprise performance in order to achieve higher economic benefits. Enterprise performance is considered to be the comprehensive performance of the interests of enterprise operators and the performance of enterprises in a certain period of time, [1] which reflects the operational efficiency and performance level of enterprises.

The pay dispersion is reflected in the different individuals of the upper and lower ranks or the same rank, and even the individual's own salary in different time periods and different workplaces. Proponents of the theory and some researchers believe that the pay dispersion has a significant positive impact on enterprise performance, and advocate increasing the pay dispersion, and thus motivate employees through promotion, thereby improving enterprise performance [2, 3]. However, some studies believe that the pay dispersion will affect the enthusiasm and output efficiency of employees, but also affect the performance of enterprises [4]. They advocate controlling the pay dispersion within a reasonable range. The above research is carried out in different situations, and the differences in research results are also due to the influence of different cultural backgrounds. If these factors are removed, the research will be greatly imperfect [3].

China has chosen a development path with its own characteristics and has different national conditions from other countries. As a socialist country, China's basic principles of social wealth distribution, "efficiency first" are deeply rooted in the hearts of the people and have played an important role in the long-term sustainable development of China's economy[5] In the early 2000 s, with the deepening of the market economic system, the design concept of China's enterprise salary system changed from "egalitarianism" to "efficiency first" the degree of salary incentive was greatly improved, and the internal salary gap was significantly expanded. This transformation not only promotes the improvement of enterprise performance, but also brings social problems such as uneven income distribution. This difference is reflected in different regions, different industries and different

levels. According to statistics, China's Gini coefficient is as high as 0.462 in 2024, and the income gap between residents continues to be high. This phenomenon is closely related to the blind pursuit of economic benefits by some enterprises and the neglect of social responsibility, including environmental pollution, waste of resources and damage to employees' rights and interests. Some scholars believe that this effect may develop into social life, increase the sense of injustice of group members, and lead to social contradictions [6, 7]. In order to regulate the salary distribution of enterprises, the Chinese government has successively issued a series of salary control policies since 2009: In 2009, the "Opinions on Further Regulating the Salary Management of Heads of Central Enterprises" for the first time stipulated that the salary ceiling of senior executives in central enterprises should not exceed 20 times the average salary of ordinary employees; in 2014, the "Second Salary Limit Order" further required local state-owned enterprises to refer to the implementation. In 2018, the "Measures for the Administration of Total Wages of Central Enterprises" emphasized that wage distribution should follow the principle of "efficiency first, taking into account fairness". In 2021, the "Requirements and Guidelines for the Use of Social Responsibility Management System" provides a national standard for enterprise social responsibility evaluation. These policy evolutions reflect the institutional efforts of the Chinese government to seek a balance between promoting economic development and promoting social equity.

Therefore, in China's unique institutional environment and cultural background, the impact mechanism of pay dispersion on enterprise performance presents a unique complexity. In order to reveal the current situation and trend of domestic research in China, we should pay attention to the frontier hot spots of research in the Chinese context. This study hopes to use visual tools to review the relevant research on the impact of pay dispersion on enterprise performance, and to quantify the literature data from China in the past ten years, from different dimensions, pay attention to the research frontier, and understand the research status and trends of China's situation.

2. Research review

2.1. Theoretical basis

In order to study the impact of the pay dispersion on enterprise performance, scholars have explained this phenomenon from different perspectives. Common theories include tournament theory and behavioral theory. The theories used to explain this phenomenon in behavioral theory include relative deprivation theory and social comparison theory [8]. The two theories explain the impact of the pay dispersion on employee behavior from different perspectives, and then affect the performance of the enterprise. The tournament theory emphasizes the incentive effect of the pay dispersion on employees, while the behavior theory focuses on the negative impact of the pay dispersion.

2.1.1. Tournament theory

In order to explain the discrete jump phenomenon of wage levels, tournament theory was jointly proposed by Lazear and Rosen in 1986. [2] It opened up a new field for executive compensation incentive research from the setting of the executive team pay dispersion. [3]. The theory holds that the increase in wages brought about by the established promotion position is related to incentives, [9] that is, the promotion of employees' positions can bring about a step-by-step increase in wages, so this policy will stimulate the enthusiasm and enthusiasm of employees to work hard. Therefore, the theory advocates that companies should motivate employees through promotions, thereby improving company performance [2].

The tournament theory is often used to explain the positive impact of the pay dispersion within the company on enterprise performance. That is, when the pay level increases with the management level, it will motivate the company's personnel, thereby improving the overall performance of the company. The theory holds that the pay dispersion at different levels within the enterprise is an additional reward for employees to win in the tournament. Therefore, the internal pay dispersion can provide promotion incentives for low-level employees, which is considered to effectively alleviate agency conflicts [2],

enhance employees' efforts and willingness to take risks [10-12], and promote enterprise performance and enterprise innovation [13, 14].

However, scholars believe that although the use of tournament theory can stimulate the enthusiasm of employees and improve the performance of the company, it must be based on the premise that the promotion of employees is linked to their own efforts and the economic benefits they bring to the enterprise. Otherwise, the expansion of the pay dispersion will only make employees lose their enthusiasm for work and have a negative impact on enterprise performance [3]. For example, some scholars tested the consensus in the context of China. For example, Wu Qiang used the executive compensation data of Chinese listed companies in the study to verify the existence of the tournament mechanism in Chinese listed companies, but the form and incentive effect were significantly different from those in the West. The author believes that the pay dispersion within the executive team of Chinese companies is greatly influenced by exogenous factors such as the nature of the controlling shareholder, that is, in effect, when the non-internal promotion mechanism exists, the pay dispersion within the executive team is negatively correlated with enterprise performance [15]. Sheng Mingquan et al.'s research once again proved this view. Based on the tournament theory, he believed that the executive pay dispersion promoted the competitiveness of enterprises, but the special nature of China's state-owned property rights played a negative regulatory role in this process [16].

2.1.2. Behavioral theory

Behavioral theory is widely supported by scholars such as Cowherd and Levine. This theory is different from the tournament theory, which holds that the impact of pay dispersion on individuals and teams is negatively correlated. Different from tournament theory, which considers individual behavior and explains the discrete jump phenomenon of pay dispersion at different levels, behavioral theory is based on the perspective of psychology to observe the group behavior of employees, which is more suitable for explaining the influence of pay level differences within the same position level [17].

Behavior theory mainly includes three important branches: relative deprivation theory, social comparison theory and organizational politics theory. The relative deprivation theory holds that employees compare their personal salary with the salary of higher-level personnel in the organization. If the employees feel that they do not get the salary they deserve, they will feel deprived [18]. This will lead to employees' negative behaviors such as idleness and strikes, and show neglect of organizational goals, resulting in a decline in enterprise cohesion [8]. Social comparison theory was put forward by American psychologist Adams in 1963. It is a theory that studies the influence of the rationality and fairness of wage distribution on the enthusiasm of employees. Social comparison theory holds that employees tend to compare their own remuneration with others, and the results of comparison can affect the enthusiasm of employees, and the satisfaction of employees with income depends on a process of social comparison [19].

According to the theory, people often judge and evaluate themselves by comparing themselves with others. When the internal pay dispersion widens, employees at the lower level will form an unfair perception through pay comparison, which will reduce their personal efforts and willingness to collaborate [8,20], undermine team stability [21], threaten teamwork [20], and have a negative impact on enterprise performance, enterprise innovation and market value [22-24].

2.2. The impact of pay dispersion on enterprise performance

According to different comparison benchmarks, the existing research divides the enterprise pay dispersion into internal gap and external gap. The former exists among employees at different levels of the same enterprise, which is usually reflected in the vertical gap between executives and employees, while the latter exists among employees at the same level of different enterprises, which is generally reflected in the horizontal gap between executives or employees compared to the average salary level of the industry [12, 25–27].

2.2.1. The impact of executive internal pay dispersion

The compensation incentive of senior executives has long been concerned by the academic community [28] and scholars' research enthusiasm for senior executives is much higher than that of other groups. Even if the executive compensation includes many aspects, such as the internal and external compensation of executives, the proportion of management shareholding, and the on-the-job consumption of executives, the executive compensation in the study is usually cash-based material rewards and non-cash-based other incentives. Scholars mainly focus on the research of internal and external compensation of executives, including direct gap and indirect gap in measurement. For example, Zhang (2008) used the pay dispersion between the general manager and other core members of the team to indicate the absolute gap within the executive [29]. Wang and Liu (2015) believe that the relative pay dispersion is more convincing, using the ratio of the average value of the top three executives to the average value of other executives as the relative pay dispersion [30].

The pay dispersion within executives is considered to have an impact on enterprise performance, but different scholars hold different views on the effect of this impact. For example, Lambert et al. (1993) [31], Liu (2007) [32] believes that there is a positive correlation between executive pay dispersion and enterprise performance. This view is often based on tournament theory. It is believed that the executive pay dispersion will have an incentive effect on employees and promote enterprise performance and enterprise innovation [13,14]. Zhang (2008) believes that a large pay dispersion will not be conducive to enterprise performance, but the author believes that under the high technical requirements of enterprises and more people, the executive pay dispersion is conducive to the improvement of enterprise performance [22]. Qiang (2011) believes that the existence of non-internal promotion mechanism will have a negative impact on enterprise performance [15]. This view is also held by Wei et al. (2015) [33]. The above scholars take 509 manufacturing enterprises in the SME board and GEM as samples. The study finds that the executive compensation gap is significantly negatively correlated with the R & D intensity of enterprises, and the relationship will be strengthened when the chairman and general manager are combined and the number of non-CEO executives increases. Siegel and Hambrick (1996) found that in industries where management collusion is more serious, reducing the pay dispersion will be conducive to the improvement of stock returns [34]. Later in 2005 they proposed that the pay dispersion can be divided into two dimensions: horizontal and vertical [35]. Li et al. (2012) showed that the vertical pay dispersion of TMT was positively correlated with enterprise performance [36]. Xu et al. (2015) also proved this point of view, that the vertical pay dispersion of TMT is positively correlated with performance, while the horizontal pay dispersion has no significant impact on performance [37].

Shi and Yang (2013), Gao et al. (2015) put forward different views. They believe that the pay dispersion between the executive team and the enterprise performance is not a simple linear relationship, showing a U-shaped relationship [38, 39]. Li (2024) through empirical research has proved that the executive-employee pay dispersion, the degree of compensation incentives for non-core executives and enterprise performance also shows an inverted U-shaped relationship [40]. Differently, the research of Sun Kai et al. (2019) shows that the executive team pay dispersion plays a moderating role in the impact of average education level and professional background heterogeneity on the performance of start-ups [4].

2.2.2. The impact of executive-employee pay dispersion

Reasonable salary incentives also have an impact on enterprise management and ordinary employees. The executive-employee pay dispersion can better reflect the company's internal salary distribution model and has an important impact on the company. In China, especially after the outbreak of COVID-19, small and medium-sized enterprises are generally negatively impacted [41]. Due to the particularity of the nature of the enterprise itself, the income of state-owned enterprise employees, especially executives, is relatively less affected, and the issue of executive-employee compensation has once again attracted the attention of all sectors of society.

The impact of executive-employee pay dispersion on enterprise performance is also controversial. Foreign studies such as Rudolf (1986), Winter et al. (1999), Hibbs et al. (2000), Lallemand et al. (2004), and Kato et al. (2011) selected companies in Austria, Australia, Sweden, Belgium, and China as samples. The research results all support the positive correlation between the executive-employee pay dispersion and enterprise performance [42-46]. In China, Liu and Sun (2010), Li and Hu (2012), Sun et al. (2019) used Chinese listed companies and state-owned enterprises as samples to verify the positive role of executive-pay dispersion in promoting enterprise performance and daily business performance [47-49]. Cowherd et al. (1992), Bloom (1999), Wu et al. (2016), Qiao (2018), Wen et al. (2020) hold the opposite view. They believe that the executive-employee pay dispersion is significantly negatively correlated with the company's product quality. When the executive-employee pay dispersion is large, employees will slack off due to unfairness, and ultimately inhibit enterprise performance. They advocate reducing the executive-employee income gap to improve individual and organizational performance [8,50-53]. Wu et al. (2016) also confirmed that although on-the-job consumption is used as a salary indicator, this negative correlation is still significant [51].

Similar to the internal pay dispersion of executives, some scholars believe that the executive-employee pay dispersion and enterprise performance also shows an inverted U-shaped relationship [54]. Ren (2015) found that the inflection points of the inverted U-shaped is different in companies with different property rights [55]. Among them, the inflection point of non-manufacturing enterprises appears late, that is, non-manufacturing employees can accept a larger pay dispersion. This phenomenon still exists between state-owned enterprises and non-state-owned enterprises. The research of Bao (2018) found that there are different phenomena in enterprises with different life cycles [56]. Different from enterprises in growth and maturity, there is a U-shaped relationship between executive-employee pay dispersion and enterprise performance in enterprises in recession.

2.2.3. The impact of executive and external pay dispersion

Chinese scholars have increasingly examined the relationship between executive pay dispersion relative to the external market and enterprise performance. For instance, Zhang and Yang (2013) found that a wider external pay dispersion among executives in Chinese listed companies correlates positively with better enterprise performance [57]. Li et al. (2014) suggested that this relationship depends on firm ownership: the correlation is weaker (or insignificant) in state-owned enterprises (SOEs) [48]. However, other scholars argue that significant external pay dispersions can adversely affect firms. They contend that executives who perceive their compensation as below the industry benchmark may develop "comparison psychology"[58], which increases the likelihood of enterprise misconduct–indicating a potential incentive distortion effect. Specifically, large external pay dispersions may prompt executives to compensate for perceived income disparities through alternative means, such as engaging in unfair competition to boost performance. Simultaneously, firms may experience increased on-the-job consumption, tunneling behavior, related-party transactions, and earnings management [59]. Additionally, some research posits an inverted U-shaped relationship between the external executive pay dispersion and firm performance [60]. Qin and Jin (2015) further observed that this inverted U-shaped curve steepens during economic booms [61].

2.2.4. The impact of pay dispersion between employees

Behavioral theory suggests that the pay dispersion between employees can adversely affect enterprise performance, and the rationality of internal salary distribution also influences the overall income distribution pattern in society [62]. Therefore, reasonable salary distribution is critical. However, compared to studies on executive pay dispersion, scholars have given inadequate attention to pay disparities among employees. Ma et al. (2023) are among the few scholars focusing on the impact of pay dispersion between grassroots employees. They examined labor-intensive enterprises listed on China's Shanghai and Shenzhen A-shares, and their empirical findings indicate that larger enterprise scales (i.e., greater numbers of employees) correlate with more significant pay dispersions [63].

Based on the existing literature analysis, it is evident that divergent perspectives persist in the discourse on the relationship between executive pay dispersion and enterprise performance. Furthermore, our review indicates that while scholarly interest in this topic has declined globally over the past two years, research activity among Chinese scholars focusing on domestic contexts has intensified. To validate these observations and identify emerging research trends, this study employs CiteSpace software to conduct a quantitative analysis of relevant literature in the Chinese academic domain.

3. Study process

In order to investigate the research landscape of domestic scholars on the relationship between pay dispersion and enterprise performance, and to verify the hypotheses derived from the literature review, this study conducts visualization analysis of domestic research hotspots and publication trends. This approach aims to examine the research characteristics and trends of the research direction.

3.1. Research method

Quantitative analysis methods can reduce the influence of subjectivity and knowledge blind areas in literature review [64,65]; therefore, this paper uses Citespace visualization software [66] to analyze the literature on the relationship between pay dispersion and enterprise performance at home and abroad. This paper makes statistics on the time series, subject distribution and published journals of domestic literature, realizes keyword co-occurrence analysis and research hotspot analysis at different times, and comprehensively summarizes the research status of the relationship between salary gap and enterprise performance.

CiteSpace is an analysis software focusing on the visualization of literature citations. It is a scientific literature analysis tool jointly developed by Professor Chen of Redsell University and WISE Laboratory of Dalian University of Technology. It presents the structure, law and distribution of scientific knowledge through visual means. This study uses CiteSpace bibliometric analysis software, version 6.3.R1, to visually analyze the relevant research from CNKI on the relationship between pay dispersion and enterprise performance, and to study domestic research status and trends from different dimensions.

3.2. Data collection

In order to objectively describe the research status and trend of salary gap and enterprise performance, this paper selects CNKI, a well-known authoritative database in China, which covers the vast majority of domestic literature. The article uses "pay dispersion" and "performance" as the subject words to search in the CNKI database, and a total of 2170 articles were obtained. By further screening according to the time span of 2014-2024, 1705 articles were finally obtained as the data source of this study.

To ensure data consistency, all institutional affiliations in the references were standardized to their parent institutions following data collection. For example, both the "School of Public Finance and Taxation" and the "School of Accounting" at Southwest University of Finance and Economics were consolidated under "Southwest University of Finance and Economics" for publication statistics. Concurrently, consolidation and deduplication were applied to keywords with synonymous expressions—such as merging "enterprise performance" and "firm performance" into the unified term "enterprise performance" Data analysis and results.

4. Data analysis and results

4.1. Trends in publication and main author institutions

4.1.1. Publication timelines reveals

Liu (2002) examined and addressed issues in enterprise power allocation, employing pay dispersion as an indicator of centralization to explore their relationship with firm performance. This marks the inception of related research in China. Subsequently, publications investigating pay dispersion and enterprise performance demonstrated sustained growth, reaching a peak in 2016. A temporary decline occurred, followed by renewed research intensity with emerging focus such as "innovation output", culminating in a second peak in 2020. Recent years have seen diminished scholarly attention.

To visualize these trends, we present a publication volume timeline. Figure 1 displays the annual distribution of literature on pay dispersion-enterprise performance relationships, illustrating Chinese scholars' research progression characterized by initial growth followed by gradual moderation.

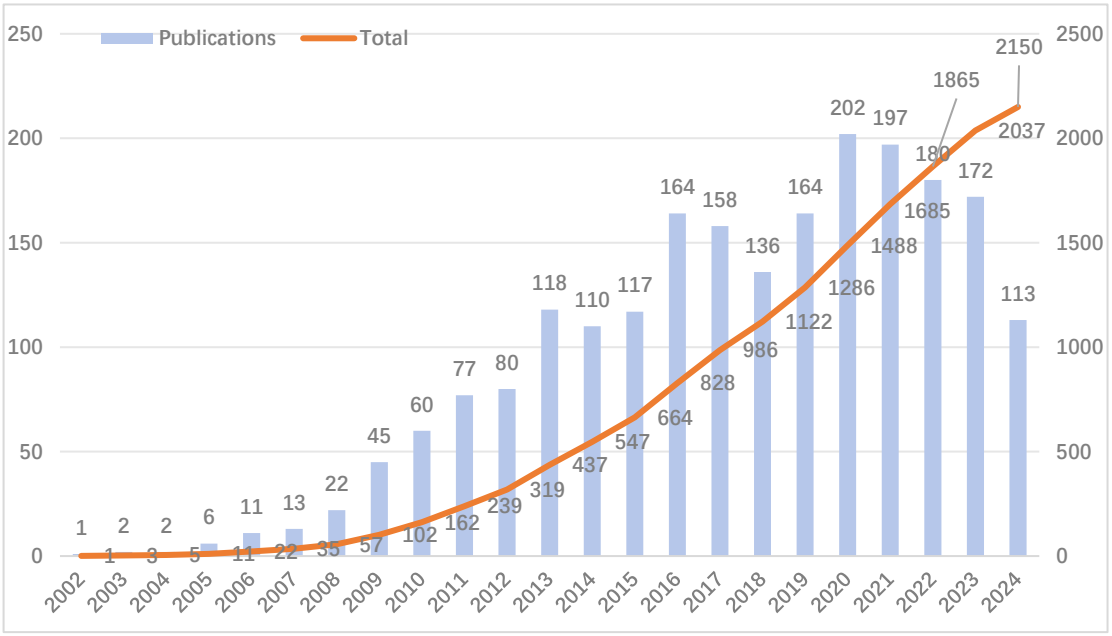

Figure 1. Annual number and total number of Chinese literatures from 2002 to 2024

4.1.2. Analysis of High Frequency Research Institutions

This paper analyzes publication volumes by research institutions and their cooperative relationships. As shown in Table 1, most relevant Chinese literature originates from Southwest University of Finance and Economics, with publications originating from this institution constituting 103 entries. It is followed by Northeast University of Finance and Economics, Shandong University of Finance and Economics, Xi'an University of Technology, Shandong University, Hunan University, and other institutions — a cohort primarily composed of Chinese finance and economics universities.

Table 1. Top 20 research institutions in China

Numble	Amount	Time	Institution
1	103	2007	Southwestern University of Finance and Economics
2	45	2010	Dongbei University of Finance and Economics
3	38	2014	Shandong University of Finance and Economics
4	37	2011	Xi'an University of Technology
5	37	2012	Shandong University
6	35	2006	Hunan University
7	34	2011	Zhongnan University of Economics and Law
8	34	2006	Nanjing University
9	33	2008	Anhui University of Finance and Economics
10	33	2007	Jinan University
11	32	2007	University of International Business and Economics
12	31	2005	Xiamen University
13	30	2010	Yunnan University of Finance and Economics
14	29	2009	University of Chongqing
15	29	2013	Capital University of Economics and Trade
16	24	2008	Lanzhou University
17	22	2009	Finance and Economics University of Jiangxi
18	22	2010	Zhejiang Gongshang University
19	22	2002	Zhejiang University
20	22	2011	Jilin University

Further refinement of the literature published over the past decade reveals that 10 Chinese research institutions have each produced 20 or more relevant articles since 2014 (Table 2). Among these institutions, Southwest University of Finance and Economics leads with 66 publications, followed by Northeast University of Finance and Economics, Xi'an University of Technology, Zhongnan University of Economics and Law, Shandong University of Finance and Economics, among others.

Table 2. Chinese research institutions that published more than 20 papers after 2014

Numble	Amount	Institution
1	66	Southwestern University of Finance and Economics
2	39	Dongbei University of Finance and Economics
3	33	Xi'an University of Technology
4	31	Zhongnan University of Economics and Law
5	29	Shandong University of Finance and Economics
6	26	Shandong University
7	25	Xiamen University
8	24	Yunnan University of Finance and Economics
9	22	University of International Business and Economics
10	21	Capital University of Economics and Trade

Figure 2 shows the co-occurrence map of major research institutions, which shows some institutions with close cooperation in the field. The size of circles in the figure represents the influence of the institution in the field, and different colors represent different relationship networks, in which universities have certain cooperative relationships in the field.

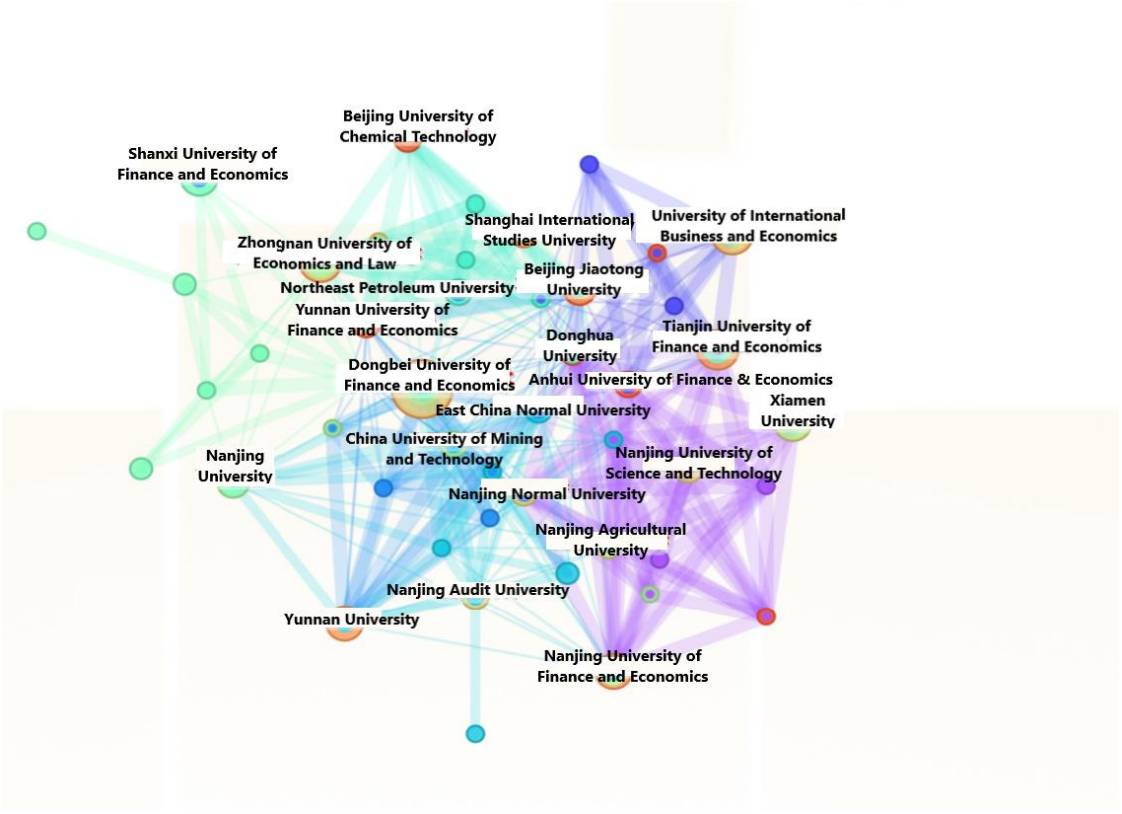

Figure 2. Co-occurrence of major research institutions in China in the field

4.2. Analysis of frontier hotspots

4.2.1. Literature keywords co-occurrence

Keywords encapsulate the core concepts and themes of the literature. High-frequency keywords reflect research focus that have garnered significant scholarly attention. Using CiteSpace, we analyzed 293 keywords from 2014 to 2024 in this field. Select the appropriate threshold (threshold = 9) and there are 32 nodes. The keyword co-occurrence network visualization (Fig.3) reveals relationships between keywords. Each circular node represents a distinct keyword, with node size proportional to the keyword's research attention level (larger nodes indicate higher focus). Connecting lines between nodes denote keyword correlations, where thicker lines indicate stronger relational intensity.

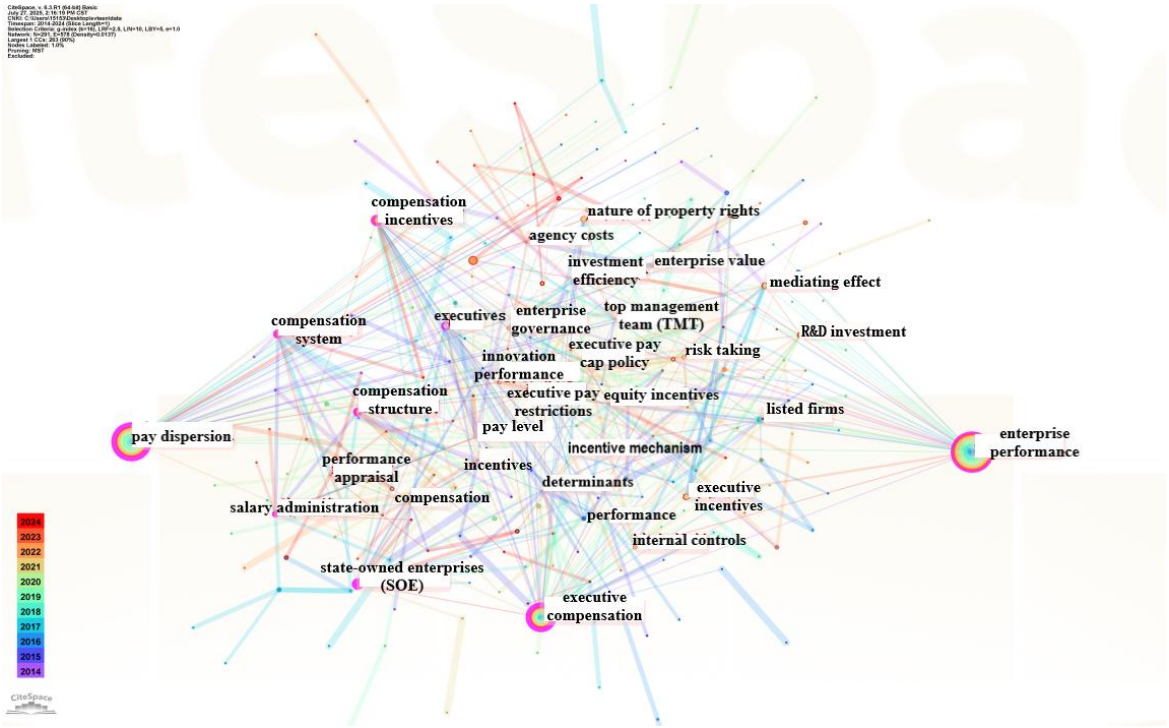

Figure 3. Knowledge map of keyword co-occurrence in Chinese literature from 2014 to 2024

Figure 4 reveals significant keyword co-occurrences with "pay dispersion", including core associations with "enterprise performance" "executive compensation" "executives" "innovation performance" "executive pay cap policies". Additional recurring connections involve "behavioral theory" "Chinese context" "excess compensation" "ambidextrous innovation" "CEO duality", and so on.

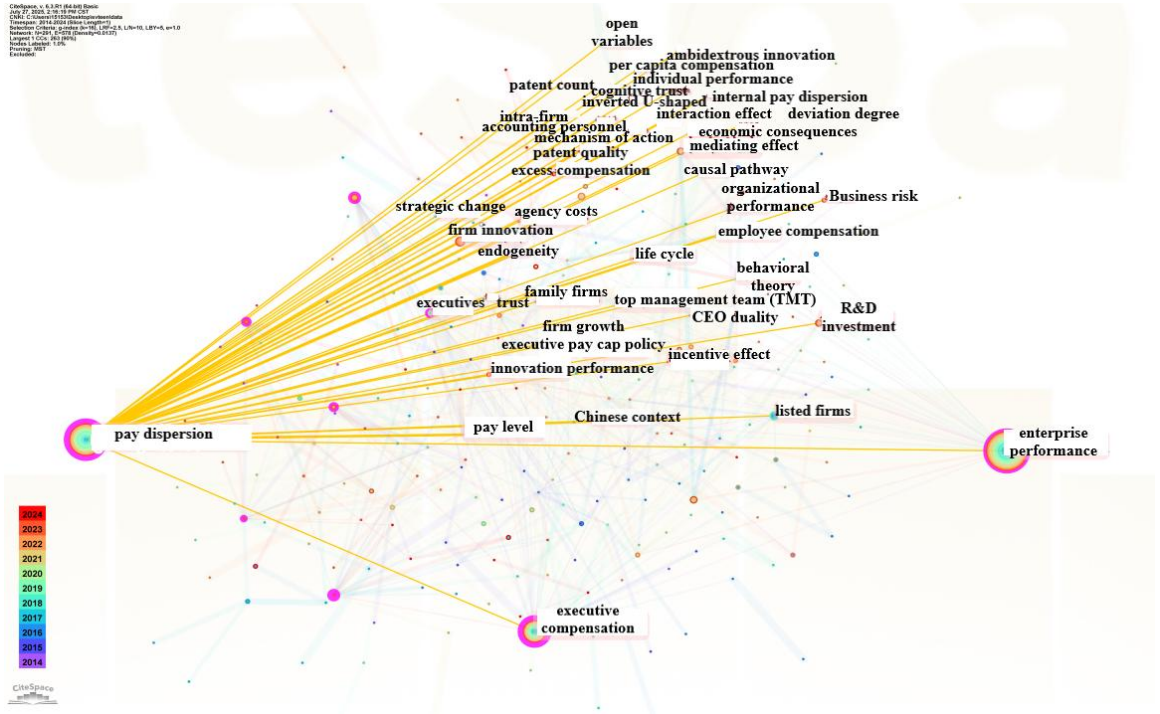

Figure 4. Keyword co-occurrences with "pay dispersion"

Major associations with "enterprise performance" in Figure 5 include "pay dispersion", "executive compensation", "compensation incentives", "enterprise governance", and "investment efficiency". Additionally, such as "earnings management", "perquisite consumption", and "behavioral theory" are also related.

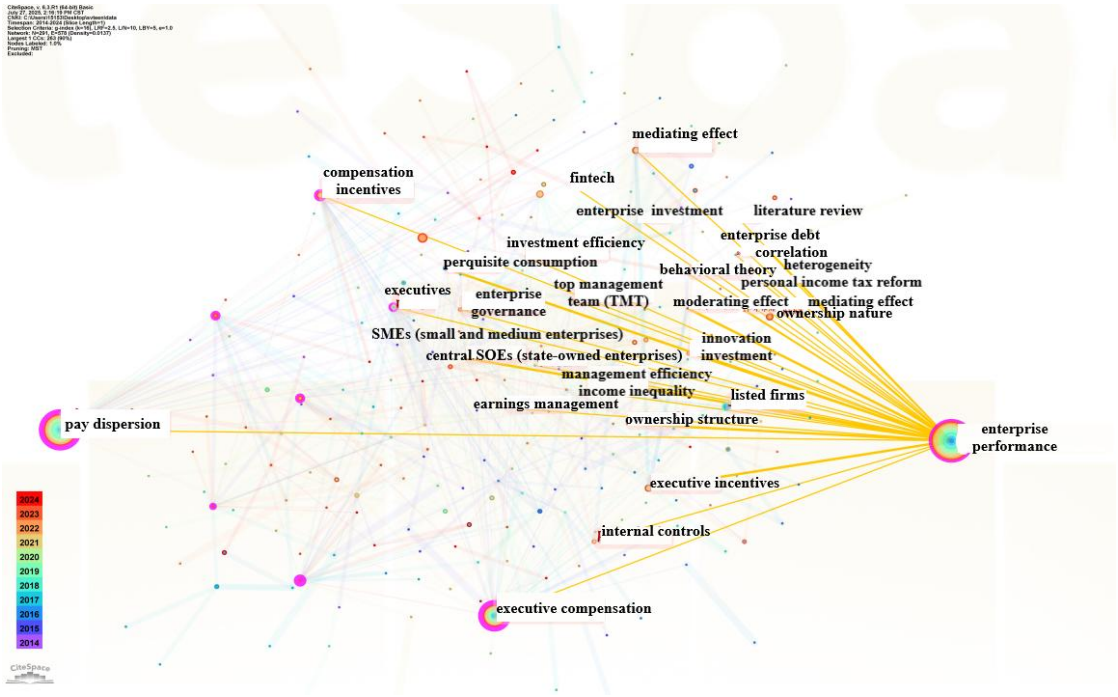

Figure 5. Keyword co-occurrences with "enterprise performance"

Keywords including "TMT", "executive compensation", and "listed companies" exhibit strong co-occurrence relationships with both "pay dispersion" and "enterprise performance". These keywords represent prominent research focus in China's domestic studies on the impact of executive pay disparity on organizational outcomes, indicating their playing a role in this relationship.

Table 3 shows all the top 20 keywords in the frequency ranking. Among them, "enterprise performance" appears the most frequently, reaching 419 times, followed by "pay dispersion", "executive compensation", "compensation incentives", "nature of property rights", "state-owned enterprises (SOE)", "compensation system", which appears more than 50 times. At the same time, it can be seen that the top 20 keywords except "enterprise innovation", "innovation performance" produced after 2019, other research topics have received the attention of scholars earlier.

Table 3. Top 20 keywords in Chinese literature from 2014 to 2024

Numble	Frequency	Time	Keywords
1	469	2014 or before	enterprise performance
2	393	2014 or before	pay dispersion
3	205	2014 or before	executive compensation
4	76	2014 or before	compensation incentives
5	68	2014 or before	nature of property rights
6	65	2014 or before	state-owned enterprises (SOE)
7	57	2014 or before	compensation system
8	49	2019	enterprise innovation
9	44	2015	salary administration
10	39	2014 or before	executive incentives
11	38	2014 or before	compensation structure
12	37	2014 or before	equity incentives
13	36	2014 or before	listed firms
14	35	2014 or before	enterprise governance
15	35	2017	R&D investment
16	34	2014 or before	TMT
17	32	2014 or before	executives
18	30	2019	innovation performance
19	29	2015	enterprise value
20	29	2014 or before	pay level

4.2.2. Burst Detection Analysis of Literature Keywords

In order to further reflect the hot spots that have emerged or continue to receive attention during the period of time, the research has constructed a keyword burst analysis table as shown in Table 4, which presents the top 20 keywords in the burst intensity. The high intensity of literature emergence and the earlier keywords are perquisite consumption, determinants. "Risk-taking" was highlighted in 2019, and the research heat has been maintained till now, and continues to be paid attention by Chinese researchers. Enterprise innovation, innovation performance, innovation input and executive incentives have emerged in 2020, and are also hot topics in current research.

Table 4. Keyword burst analysis results (Top 20)

Keywords	Begin	End	2014-2024
perquisite consumption	2014 or before	2016	
determinants	2014 or before	2016	
listed firms	2015	2017	
executives	2015	2017	
listed banks	2015	2016	
employee compensation	2016	2018	
nature of property rights	2018	2021	
compensation design	2018	2020	
risk-taking	2019	2024	
enterprise innovation	2020	2024	
innovation performance	2020	2024	
innovation input	2020	2024	
executive incentives	2020	2024	
innovation output	2020	2022	
internal controls	2020	2021	
female executives	2020	2024	
common prosperity	2022	2024	
R&D investment	2022	2024	
agency costs	2022	2024	
financing constraints	2022	2024	

According to Table 4, it can be seen that the hot topics emerging in the past three years include "common prosperity", "R&D investment", "agency cost", "financing constraints", "government subsidies" and "fintech", among which "common prosperity", "R&D investment", "agency cost" and "financing constraints" have maintained high popularity.

5. Summary

5.1. Findings

Bibliometric analysis of publication timelines reveals that research on compensation gaps in China emerged in 2002, with annual publications peaking in 2020 after steady growth and cyclical fluctuations. Post-peak, publication volume has trended downward. Burst detection indicate an explosive surge in research hotspots during 2020, the majority of which remain influential. This phenomenon likely correlates with the nationwide emphasis on "mass entrepreneurship and innovation" around 2020, propelling keywords such as enterprise innovation, innovation performance, and innovation input to prominence. Concurrently, female executives garnered significant scholarly attention.

Temporal keyword clustering and time-series analysis identify current research frontiers in China, including risk-taking, enterprise innovation, innovation performance, innovation input, executive incentives, female executives, common prosperity, R&D investment, agency costs, and financing constraints. Notably, scholarship exhibits a strong policy orientation, with keywords such as government subsidies, common prosperity, and digital economy reflecting context-specific investigations aligned with China's institutional framework.

Third, scholars hold divergent views on the relationship between compensation gaps and enterprise performance. Some argue for a positive correlation, others suggest no significant connection, while some propose negative correlations or even non-linear relationships. Multiple perspectives persist, with the academic community yet to reach consensus on their interplay. This indicates potential unexamined influencing factors that warrant further investigation, particularly in identifying variables affecting their correlation patterns.

5.2. Limitations

Firstly, current literature predominantly examines the impact of monetary compensation gaps (e.g., salaries, bonuses) on firm performance, while largely overlooking the economic consequences of equity-based compensation disparities. As equity incentives become integral to listed firms' remuneration systems—with expanding implementation scope and grant intensity—equity-based compensation constitutes a growing proportion of total employee pay. Nevertheless, extant studies on internal pay dispersion remain primarily anchored in monetary compensation, paying scant attention to the economic outcomes of equity incentive gaps. This limitation impedes a holistic understanding of compensation effects and necessitates broadening research to diverse remuneration domains.

Secondly, extant research exhibits a pronounced bias toward executive pay gaps, neglecting compensation disparities among rank-and-file employees. Despite executives' hierarchical authority, non-managerial staff constitute the workforce majority—a critical yet understudied cohort. Within China's institutional context, where the "Common Prosperity" policy emphasizes labor rights for grassroots workers, understanding pay equity at this level is imperative. However, current studies predominantly focus on intra-executive gaps, executive-external stakeholder comparisons, and vertical executive-employee differentials, overlooking horizontal pay dispersion effects among non-managerial employees on firm performance.

Thirdly, many "Chinese context" studies inappropriately confine samples to state-owned enterprises (SOEs), an oversimplification given private firms' pivotal role in China's economy (contributing over 60% of GDP). Excluding private enterprises contradicts genuine contextualization. Furthermore, significant heterogeneity exists among SOEs: market-oriented SOEs—characterized by heightened market competition pressures ("involution")—hybridize public ownership attributes with private-sector characteristics. Research on Chinese firms must account for this ownership diversity and examine how marketization gradients reshape SOEs' organizational behavior.

5.3. Future Research Prospects

In summary, China's economic transition necessitates systemic reforms: dismantling institutional rigidities, revitalizing market dynamism, curbing income disparities, and implementing cost reduction and efficiency enhancement policies. These initiatives constitute a critical research frontier and an indispensable practical endeavor for sustaining long-term economic health.

First, future studies should extend beyond monetary compensation by investigating equity-based compensation disparities (e.g., shareholding gaps) and their differential effects on enterprise performance. Second, researchers must identify latent moderators—particularly micro-level individual heterogeneity—that reconfigure the pay-performance relationship across divergent cohorts. Third, horizontal pay dispersion among frontline employees should be prioritized to holistically assess how internal compensation differentials shape organizational outcomes. Finally, localized

studies in China necessitate incorporating diverse ownership typologies (e.g., market-oriented SOEs, private firms) to circumvent methodological oversights.

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