



# Analysis of Research Trends and Developments in Trade Unions and Labor Relations Based on CiteSpace

Xian'en Wang

Trade Unions, Zhejiang Ocean University, Zhoushan, China  
Email: wxel123@zjou.edu.cn

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## Abstract

With the ongoing reform of China's economic system and the development of a market economy, labor relations have become a key factor in social stability and economic development. Trade unions, as representatives of employees' interests, play a particularly important role in coordinating labor relations. This study utilizes relevant literature from the CNKI database and employs CiteSpace visualization software to analyze and deeply explore the research dynamics and development trends of trade unions and labor relations. Through the visualization analysis of the temporal distribution of literature, authors, research institutions, and research hotspots, this study reveals the shifts in research focus and identifies key research trends. The aim is to provide theoretical and empirical references for future research on trade unions and labor relations. The results indicate that despite fluctuations in research activity, the functions of labor relations and trade unions have been increasingly emphasized over the years, demonstrating a trend towards diversified and in-depth research themes.

## Subject Areas

Business Finance and Investment, Business Management

## Keywords

Chinese Trade Unions, Labor Relations, CiteSpace, Research Trends

## 1. Introduction

Throughout the long history of social development in China, labor relations have always been one of the most fundamental and important social relations. They not

only form the cornerstone of productive activities but also profoundly reflect the essential attributes of human beings. Labor relations, the economic and social relationships formed between labor subjects during the process of material transformation, follow the objective laws of social and historical development and are influenced by the consciousness of the labor subjects [1]. In the context of globalization and modernization, particularly in the “Recommendations of the Central Committee of the Communist Party of China on Formulating the Fourteenth Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035” issued in 2020, it was explicitly pointed out that trade unions should strengthen their functions in safeguarding workers’ rights and promoting harmonious labor relations. This document provided clear direction for the development of trade union organizations in the new era, presenting new tasks and requirements. Following this, the report of the 20th National Congress of the Communist Party of China further emphasized the need to “improve labor laws and regulations and enhance the mechanisms for labor relations consultation and coordination” to build more harmonious labor relations. The release of these policies and reports demonstrates the country’s high emphasis on constructing harmonious labor relations. General Secretary Xi Jinping pointed out in his “Excerpts from Discussions on the Work of the Working Class and Trade Unions” that wholeheartedly working for the interests of the working class and the broad masses of working people is a requirement and sacred duty of the socialist system. Trade unions should focus on employees, proactively address and resolve the most pressing issues of concern to the workers, and earnestly fulfill their basic duties. By participating in legislative and policy-making processes, trade unions institutionally safeguard and develop workers’ interests, promoting the development of socialist harmonious labor relations and laying the foundation for achieving common prosperity for all people. In 2023, the 18th National Congress of the Chinese Trade Unions was held in Beijing. This conference further deepened the understanding of the importance of trade union work and proposed that trade unions should play a greater role in the construction of socialism with Chinese characteristics in the new era. It particularly emphasized the need for trade unions to make new contributions in areas such as safeguarding workers’ rights and coordinating labor relations, underscoring the importance of trade unions fulfilling more significant responsibilities and missions in the new era.

Since its establishment, the Chinese trade union has always shouldered the historical mission of achieving national independence and national liberation. With the development of the socio-economic landscape and the transformation and upgrading of labor relations, the functions of trade unions have evolved from a singular “administrative system” to a “diversified” role, encompassing the protection of employee rights, assisting enterprise development, and more. Currently, trade unions not only bear the responsibilities of maintaining stability, protecting rights, and maintaining order but also play important roles in worker assistance, labor relations coordination, and participation in democratic management. To further study the complex relationship between trade unions and labor relations,

this paper will utilize the CNKI database and the bibliometric software CiteSpace to create knowledge maps that detail the temporal distribution of literature, main authors and institutions, and changes in research hotspots. This approach will not only help readers more accurately grasp the cutting-edge dynamics of research on trade unions and labor relations, broaden research horizons, and promote the integration of domestic research with international standards, but also draw on advanced experiences from theoretical construction, research methods, and empirical testing. This will enrich the existing theoretical system in China and provide important reference value for comprehensively understanding and mastering the progress in research on trade unions and labor relations.

## 2. Data Sources and Methods

Accurate data selection and confirmation are the cornerstones of research work. Precise data not only provide a solid foundation for research but also ensure the reliability and validity of the research results. Systematic and precise research methods effectively enhance the specificity and accuracy of the research, which is crucial for ensuring the quality of the study.

### 2.1. Data Sources and Selection

All research literature was selected from the China National Knowledge Infrastructure (CNKI) database. Compared to other databases such as Weipu and Wanfang, CNKI has advantages in the comprehensiveness of literature collection and the accuracy of search results, thus providing a more comprehensive and objective sample dataset. A search was conducted in the CNKI database using the keywords “trade union” and “labor relations.” The search period was set from January 1, 2015, to May 8, 2024, spanning a ten-year timeframe. The journal search was limited to those indexed by CSSCI, CSCD, and core journals recognized by Peking University. To enhance the reliability and authority of the research results, manual screening was conducted to exclude duplicate publications, conference papers, reports, statements, newspapers, and other non-relevant literature as well as documents with incomplete author information. Ultimately, 392 articles that met the search criteria were identified.

### 2.2. Research Methods

CiteSpace, a Java application developed by Chaomei Chen’s team at Drexel University, is used for identifying and visualizing new trends and dynamics in scientific literature. It has become one of the most influential information visualization software tools in the field of information analysis. In recent years, the Chinese academic community has increasingly used scientific knowledge mapping methods to grasp the development dynamics of research frontiers and knowledge bases within disciplines. This study employs CiteSpace 6.1. R6 to conduct a visual analysis of authors, research institutions, and research hotspots in literature related to trade unions and labor relations, aiming to comprehensively understand the

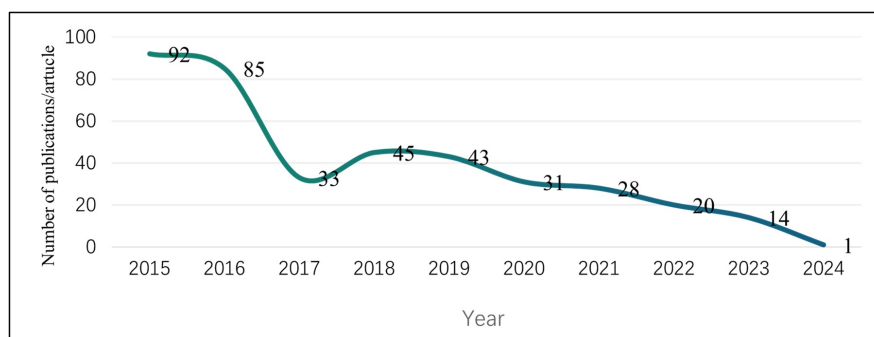
current research status and development trends in this field.

The specific steps are as follows: First, the retrieved literature records were exported in Refwork format, including titles, publication years, authors, keywords, journals, research institutions, and abstracts. Then, the format converter in CiteSpace was used to convert the Refwork format files into a format usable by CiteSpace (download\_\*\*\*.txt). Next, the final data was imported into CiteSpace, and parameters such as time slices, node types, data selection modes, and network clipping paths were set. Authors, institutions, and keywords were selected as node types for analysis. Finally, a visual analysis of the data was conducted to obtain visual maps of authors, institutions, and keywords.

### 3. Knowledge Mapping of Trade Unions and Labor Relations

#### 3.1. Analysis of Publication Trends

The annual publication volume reflects the research activity and the degree of attention an academic field receives, serving as a key indicator for evaluating research trends. As shown in **Figure 1**, the annual publication volume on trade unions and labor relations totals 392 articles, averaging about 39 articles per year. The highest publication volume was recorded in 2015, with 92 articles, while the lowest was in 2024, with only 1 article. Analyzing the overall trend in publication volume, a sharp decline is observed between 2016 and 2017, followed by a gradual recovery starting in 2018. However, from 2019 to 2024, there is a sustained decline in publication volume. This trend indicates that although trade unions and labor relations have consistently been hot research topics, academic attention in this field has weakened in recent years.



**Figure 1.** Line chart of the number of research papers.

The reason for only one article being published in 2024 is twofold: on the one hand, the search end date was set to May 8th, 2024, which was too short, and the relevant papers were not officially published. On the other hand, the research direction of domestic scholars has changed, focusing on new employment forms, platform employment models, and other directions. This is because the rapid development of the digital economy has made new employment forms characterized by “platform participants” a “timely need” for social development. Among them, Gao (2024), due to the characteristics of “de unitization” of platform employment



models, scattered distribution of workers, and digitalization of work environments, the traditional negotiation system based on traditional employment models is facing application difficulties. Therefore, it is necessary to vigorously promote the platform employment negotiation dialogue mechanism to enter the path of standardization and institutionalization as soon as possible [2]. Qi (2023) believes that providing comprehensive rights protection for new forms of employment workers, enhancing the sense of gain and happiness of the people, and promoting social stability and high-quality economic development are of great significance in the context of the digital economy [3]. Li (2023) pointed out that in response to the adverse effects of the “de labor relations” of platform employment, it is necessary to accelerate the formulation of labor benchmark laws, strengthen government supervision of platform enterprise employment, clarify the main responsibilities of platform enterprises in employment, build a unique social security system for gig workers, leverage the unique role of the labor union in safeguarding the legitimate rights and interests of gig workers, and strive to build a harmonious labor capital relationship with Chinese characteristics, so that gig workers can share the fruits of digital economy development [4].

This trend reflects new dynamics in the research direction of Chinese scholars on trade unions and labor relations. With the rapid development of the digital economy, new forms of employment are rapidly emerging, posing new challenges to traditional labor relations. Scholars are shifting their research focus from traditional labor relations to emerging employment models, demonstrating a keen awareness and response to current issues. In addressing the problems brought about by platform employment models, researchers have proposed constructive suggestions, such as promoting the institutionalization of negotiation mechanisms, enhancing rights protection, strengthening government supervision, and building a social security system. These recommendations provide valuable references for policymakers, helping to build harmonious labor relations, protect workers’ rights, and promote healthy social and economic development in the new economic landscape. Additionally, this trend highlights the important role and responsibilities of trade unions in the new era, emphasizing their unique role in safeguarding workers’ rights and constructing harmonious labor relations.

### 3.2. Analysis of Author Collaboration

Running CiteSpace, we imported the data and set up new groups, configuring the parameters with a time span of “2015-2024” and choosing one year as a time slice. The node type was set to “Author,” with  $k = 25$ . This study produced the co-authorship network map for research on trade unions and labor relations from 2015 to 2024 (as shown in **Figure 2**).

Quantitative analysis of author publication volume in the sample literature can identify representative scholars in trade union and labor relations research and reflect the collaborative relationships among these researchers. In the author collaboration network map, there are a total of 227 nodes and 111 links. The size of each node represents the author’s publication volume, with larger nodes indicating

greater contributions to the field. The thickness and density of the lines between nodes represent the degree of collaboration between authors. The network density is 0.0043, indicating that most researchers in trade union and labor relations are conducting independent studies, resulting in relatively dispersed research without forming stable, cohesive research groups. The collaboration between authors needs further strengthening.

Core authors, who are prolific and influential researchers leading in their fields, provide insights into research dynamics and trends. Thus, analyzing core authors is crucial. The Price's Law formula is used to identify core authors in this field. The formula is as follows:

$$M = 0.749 * \sqrt{N_{\max}}$$

where  $N_{\max}$  is the publication volume of the most prolific author, and  $M$  is the minimum publication volume for core authors. Authors with publications equal to or greater than  $M$  are considered core authors. When the total number of publications by core authors accounts for 50% of the total publications in the field, it forms the core author group of that field.

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 Nodes Labeled: 1.0%  
 Pruning: None

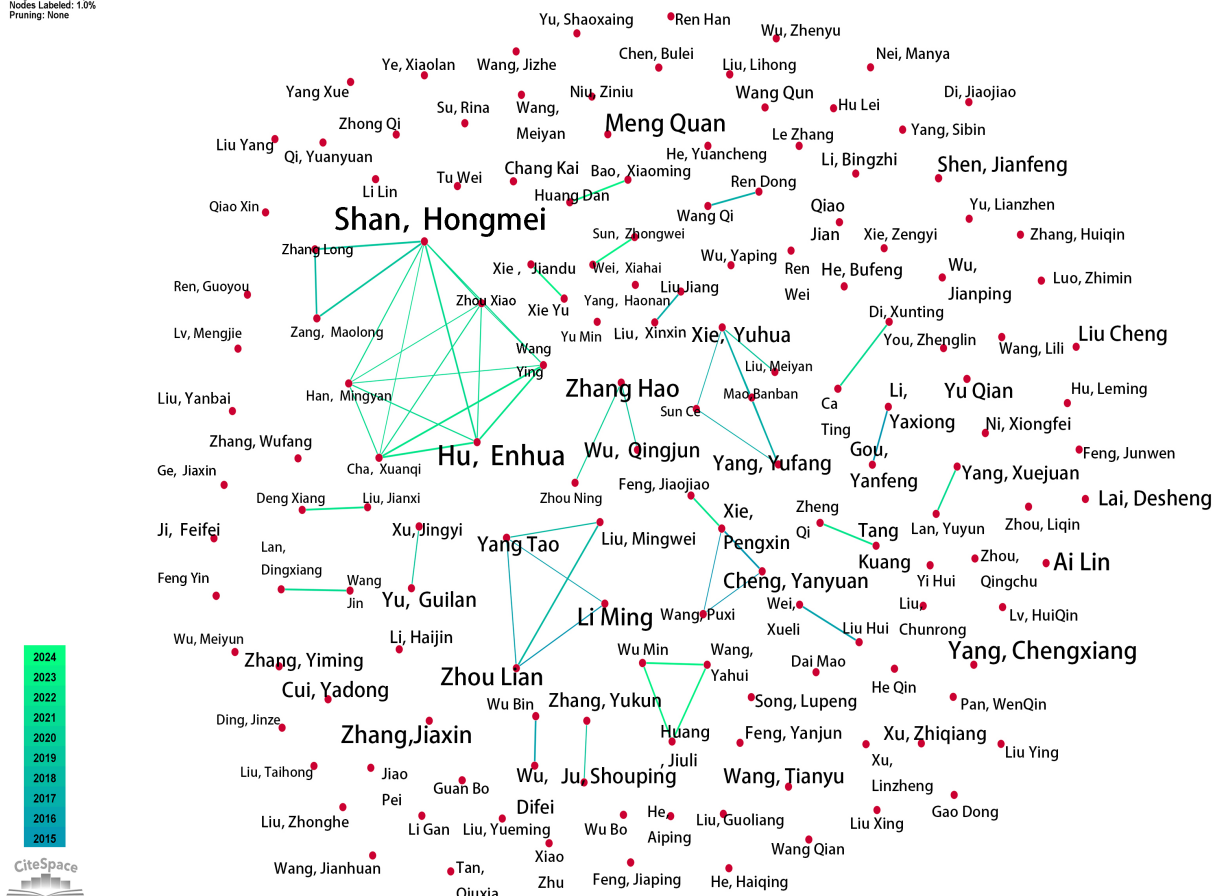


Figure 2. Co-authorship network map.

Based on the sample data, Meng Quan is the most prolific author with 9 publications, so  $N_{max} = 9$ . Using the formula,  $M \approx 3$  means authors with 3 or more publications are considered core authors. As shown in **Table 1**, there are 21 core authors, with 3 authors having more than 5 publications: Meng Quan, Li Min, and Shan Hongmei. Four authors have 5 publications each: Xie Yuhua, Hu Enhua, Yang Chengxiang, and Zhang Jiabin. Five authors have 4 publications each: Cheng Yanyuan, Shen Jianfeng, Yang Tao, Zhang Hao, and Zhou Lian. Nine authors have 3 publications each: Xie Pengxin, Ai Lin, Wang Ying, Wang Tianyu, Yang Yufang, Shou Juping, Wu Qingjun, Liu Cheng, and Yu Guilan. The total publication volume of these core authors is 90, accounting for approximately 23% of the total papers.

**Table 1.** Core authors and publication volume in research literature (2015-2024).

Number of Publications/Articles	Authors
9	Meng Quan
8	Li Ming
6	Shan Hongmei
5	Xie Yuhua
5	Hu Enhua
5	Yang Chengxiang
5	Zhang Jiabin
4	Cheng Yanyuan
4	Shen Jianfeng
4	Yang Tao
4	Zhang Hao
4	Zhou Lian
3	Xie Pengxin
3	Ai Lin
3	Wang Ying
3	Wang Tianyu
3	Yang Yufang
3	Shou Juping
3	Wu QingJun
3	Xie Pengxin
3	Ai Lin

This indicates a relatively low concentration of authors in the field of trade union and labor relations research in China, suggesting that the field has not yet formed a strong core group of scholars. The lack of core authors means there are not enough academic leaders to guide research directions or establish influential research agendas. Additionally, the small size of the core author group limits the

continuity and depth of research work, affecting the accumulation of research outcomes and systematic knowledge transfer.

Therefore, it is crucial to strengthen the construction of research teams in this field.

### 3.3. Analysis of Institutional Collaboration

Running CiteSpace, we set the parameters to a time span of “2015-2024” with one year as a time slice, chose the node type “Institution,” and set  $k = 25$ . This study produced a co-occurrence network map of institutions researching trade unions and labor relations from 2015 to 2024 (as shown in **Figure 3**).

In the institutional collaboration network map (**Table 2**), there are a total of 221 nodes and 91 links, with a network density of 0.0037. The size of each node represents the publication volume of the research institutions, with larger nodes indicating greater contributions to the field. The thickness and density of the lines between nodes represent the degree of collaboration between research institutions. The top 10 institutions by publication volume are: School of Labor and Human Resources, Renmin University of China (23 papers), School of Labor Economics, Capital University of Economics and Business (17 papers), China Institute of Industrial Relations (14 papers), School of Business Administration, South China University of Technology (8 papers), School of Economics and Management, Nanjing University of Aeronautics and Astronautics (8 papers),

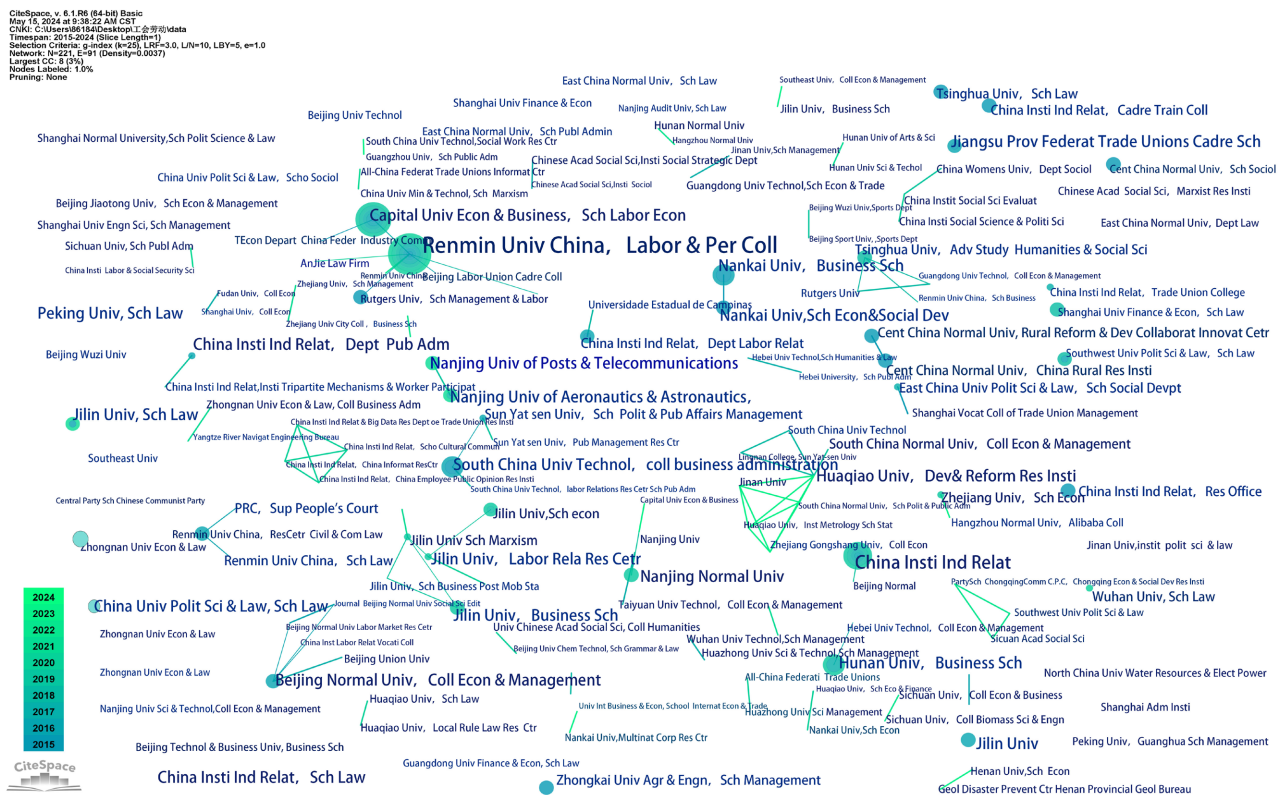


Figure 3. Co-occurrence network map of institutions.

Department of Labor Relations, China Institute of Industrial Relations (7 papers), School of Management, Nanjing University of Posts and Telecommunications (6 papers), Business School, Nankai University (5 papers), School of Economics and Law, Southwest University of Political Science and Law (5 papers), and Political and Public Affairs Management, Sun Yat-sen University (5 papers). The network density of 0.0037 indicates that most scholars conduct research on trade unions and labor relations within independent institutions, with insufficient collaboration among institutions. There is a need for enhanced interdisciplinary and cross-regional cooperation among research institutions.

**Table 2.** Institutions and publications of research literature on trade unions and labor relations (2015-2024).

Number of publications	Institution
23	School of Labor and Personnel, Renmin University of China
17	School of Labor Economics, Capital University of Economics and Trade
14	China Institute of Industrial Relations
8	School of Business Administration, South China University of Technology
8	School of Economics and Management, Nanjing University of Aeronautics and Astronautics
7	Department of Labor Relations, China University of Labor Relations
6	School of Management, Nanjing University of Posts and Telecommunications
5	Business School, Nankai University
5	School of Economics and Law, Southwest University of Political Science and Law
5	Political and Public Affairs Management, Sun Yat-sen University

### 3.4. Keyword Co-Occurrence Network Analysis

Running CiteSpace with the parameters set to a time span of “2015-2024” with one year as a time slice, and choosing the node type “Keyword” and  $k = 25$ , this study produced the co-occurrence network map of keywords in trade union and labor relations research from 2015 to 2024 (as shown in **Figure 4**).

Keywords not only provide a concise and precise summary of the overall content of an article but also reveal the main research focuses and future development trends in the field through analysis. In the keyword co-occurrence network map (**Figure 4**), there are a total of 296 nodes and 461 links, with a network density of 0.0106. The size of each node corresponds to the frequency of keyword occurrence, while the thickness of the lines between keywords represents the number of co-occurrences in the literature.



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 Largest CC: 225 (76%)  
 Nodes Labeled: 1.0%

Pruning: None  
 Modularity Q=0.9842  
 Weighted Mean Silhouette S=0.9287  
 Harmonic Mean(Q, S)=0.7965

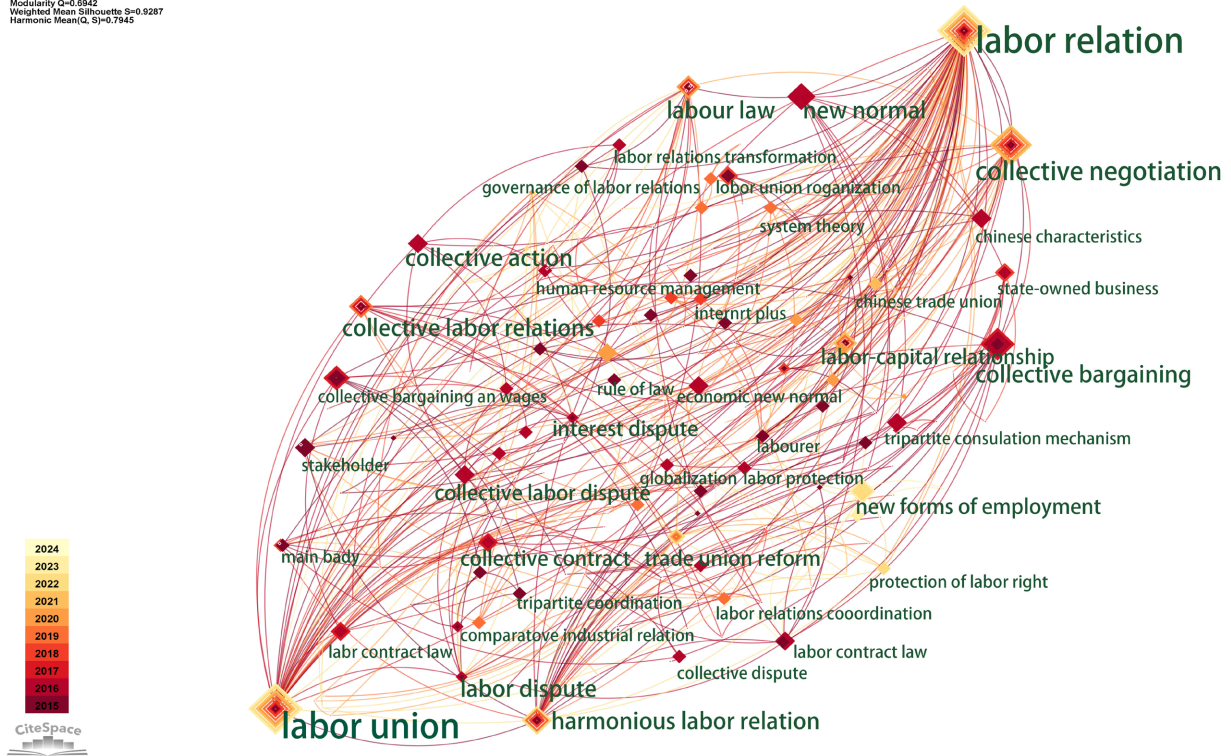


Figure 4. Co-occurrence network map of keywords.

Betweenness centrality reflects the degree of academic attention a particular keyword receives and measures the extent of a node's connection with other nodes. Keywords with a betweenness centrality greater than 0.1 are considered to hold significant positions in the field. By ranking the top 15 keywords based on co-occurrence frequency, we can establish a table of keyword co-occurrence frequency and centrality (Table 3). From the keyword co-occurrence network map in Figure 4, we can see that the keywords “labor relations,” “trade union,” “harmonious labor relations,” and “collective negotiation” have large nodes. The connection lines between “labor relations” and “trade union” are particularly dense. Table 2 shows that the betweenness centrality of “labor relations” and “trade union” are 0.7 and 0.32, respectively, the highest among all keywords. This indicates that current academic research is still centered around labor relations and trade unions, emphasizing the importance of the trade union's role in building harmonious labor relations. Analyzing Table 2, the keyword “new employment forms” appears with a co-occurrence frequency of only 8, but its centrality is 0.09. This is due to the rapid development of new technologies, new economies, and new business forms, which have created new employment forms. The new demands created by internet platforms have generated millions of jobs, while the deepening of industrial restructuring and the “quick money” effect of the internet economy have further released the “dividend” of employment

promotion. This makes new employment forms a new driving force for employment growth, suggesting that new employment forms may be an emerging research hotspot.

**Table 3.** Co-occurrence frequency and centrality of high-frequency keywords.

Serial Number	Keywords	Count	Centrality
1	Labor relations	87	0.7
2	Trade union	51	0.32
3	Harmonious labor relations	26	0.27
4	Collective negotiation	24	0.11
5	Labor law	15	0.06
6	Industrial relations	12	0.04
7	Collective bargaining	12	0.09
8	Collective labor relations	11	0.05
9	Labor disputes	10	0.06
10	Collective wage negotiation	9	0.06
11	Chinese trade union	8	0.01
12	New forms of employment	8	0.09
13	Trade union	6	0.03
14	Union reform	6	0.07

### 3.5. Keyword Cluster Analysis

Keyword cluster analysis aggregates closely related keywords to form a cluster map, thereby identifying research themes from the keyword co-occurrence map. This method helps determine the thematic structure of the research field and visually presents the main research directions in the area of trade unions and labor relations. In CiteSpace, the clarity of clustering is usually represented by the modularity value (Q value) and the average silhouette value (S value). When the Q value is greater than 0.3, the cluster structure is considered significant, and when the S value is greater than or equal to 0.7, the clustering result is considered highly reliable and convincing. According to the keyword clustering network knowledge map derived from the sample literature data (as shown in **Figure 5**), the connections between various cluster modules and the displayed nodes represent the closeness between keywords. With  $Q = 0.6942$ , greater than 0.3, the clustering structure is significant, and with  $S = 0.9287$ , greater than 0.7, the clustering results are reasonable.

Using the LLR (log-likelihood ratio) algorithm and pathfinder network scaling to conduct keyword cluster analysis on the research literature, 14 clusters were derived. However, since the last four clusters had too few nodes to extract valuable information, the last three clusters were hidden. The symbol # represents a cluster, with cluster numbers ranging from #0 to #9. The smaller the number, the more



keywords the cluster contains. The thematic clusters are as follows: #0 labor relations, #1 trade union, #2 harmonious labor relations, #3 labor disputes, #4 wage collective bargaining, #5 collective negotiation, #6 new employment forms, #7 trade union reform, #8 labor-capital relations, #9 collective labor relations. The following is an analysis of the top five clusters:

Cluster #0: Labor Relations. This cluster focuses on analyzing the impact of different types of labor relations on enterprise operations and employee welfare. Zhang Yi *et al.* believe that good labor relations can enhance enterprise productivity and employee job satisfaction, thereby reducing labor turnover and increasing enterprise competitiveness [5]. Sun Yongbo *et al.* explore the coordination mechanism of enterprise labor relations from the perspective of subjects, emphasizing the importance of multi-party forces and coordination methods, and propose strategies for building harmonious labor relations [6]. Shou Juping *et al.* found that labor relations in private enterprises are transitioning from dependency to balanced cooperation, emphasizing the importance of optimizing labor relations and strengthening the “dual protection” of labor and capital property rights to create a favorable external environment [7].

Cluster #1: Trade Union. This cluster focuses on analyzing the impact and role of trade unions in various aspects, providing new perspectives and theoretical support for understanding the role of trade unions in labor relations. Some studies focus on the performance of trade unions in protecting workers’ rights. Fan Shaohua *et al.* point out that under the rule of law, trade unions should strengthen their function of protecting workers’ legitimate rights and provide legal protection for workers, thereby promoting enterprise democratic management and supervision [8]. Cheng Hong *et al.* found that trade unions have a significant positive effect on protecting employees’ employment rights, wage rights, and vocational training rights. Another category of research focuses on the impact of trade unions on enterprise operations and investment [9]. Wei Xiahai *et al.* indicate that the presence of trade unions can significantly promote the expansion of original product scale, new product development, and process innovation in enterprises, especially in enterprises where employee rights are well protected [10].

Cluster #2: Harmonious Labor Relations. This cluster explains the importance of building harmonious labor relations. Qiao Jian emphasizes China’s exploration and practice in constructing “harmonious labor relations with Chinese characteristics,” highlighting the concept nurtured by socialism with Chinese characteristics and introducing relevant governance systems and mechanisms [11]. Han Xiping discusses the paths and safeguard measures for constructing harmonious labor relations from the perspective of state-owned enterprises, including government guidance, balanced labor-capital forces, and collective consultation [12]. Tu Yongqian elaborates on the evolution of labor relations in China and the importance of building harmonious labor relations from the perspectives of historical development and policy discussion [13]. Chen Chen emphasizes the new challenges and opportunities in the field of harmonious labor relations under the new

normal of economic and social development, and the importance of constructing harmonious labor relations for promoting modern society and enterprise development [14].

Cluster #3: Labor Disputes. This cluster explores the comprehensive performance of enterprises in labor relations. Duan Hua points out that harmonious and stable labor relations are crucial for enterprise development, and trade unions play an important role in mediating labor disputes [15]. Gong Wenlong highlights that factors such as irregular labor contracts by some employers and increased awareness among workers have led to a yearly increase in labor disputes [16]. Wang Bei and Wang Meiyuan's studies both explore the causes of labor disputes and the deficiencies in resolution mechanisms, calling for optimizing system design and strengthening trade union systems [17] [18]. Zhou Jing's research focuses on strengthening source governance and improving the importance of internal labor dispute prevention and mediation mechanisms in enterprises [16]. These studies provide in-depth analysis and solutions for labor dispute issues, offering valuable references for the harmonious stability of future labor relations [19].

Cluster #4: Wage Collective Bargaining. This cluster focuses on revealing the impact of wage collective bargaining on employee income, labor-capital relations, and enterprise performance. Zhang Xukun *et al.* indicate that wage collective bargaining may lead to wage negative effects, particularly during the general wage increase process, where employees' opportunities to significantly raise wage levels may be impaired [20]. This result differs from the typical empirical research conclusions in Western countries and emphasizes the negative effects of upward wage rigidity caused by bargaining. On the other hand, Zhou Lian *et al.* discuss the impact of wage collective bargaining on employee attitudes from the perspectives of organizational support, organizational commitment, and job satisfaction, suggesting that conducting wage collective bargaining in enterprises helps enhance employees' sense of organizational support, thereby increasing organizational commitment and job satisfaction [21]. Xie Yuhua *et al.* analyze the formation mechanism of wage collective bargaining in China from the perspective of institutional change theory, proposing supply-led and demand-induced bargaining models and calling for further optimization of wage collective bargaining arrangements to mitigate wage negative effects and promote harmonious labor-capital relations [22]. Yang Fang emphasizes the importance of wage collective bargaining in improving workers' wage levels and achieving the urban residents' income doubling plan, but also points out that workers' understanding of wage collective bargaining is insufficient, requiring enhanced publicity and tripartite cooperation to realize its potential role [23]. These studies collectively reveal the multifaceted impact of wage collective bargaining on employees, enterprises, and society, providing important theoretical and empirical support for a deeper understanding and effective practice of wage collective bargaining.

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 Network: N=286, E=451 (Density=0.0196)  
 Largest CCs: 232 (79%)  
 Nodes Labeled: 1.0%  
 Pruning: None  
 Modularity Q=0.6942  
 Weighted Mean Silhouette S=0.9287  
 Harmonic Mean(Q, S)=0.7945

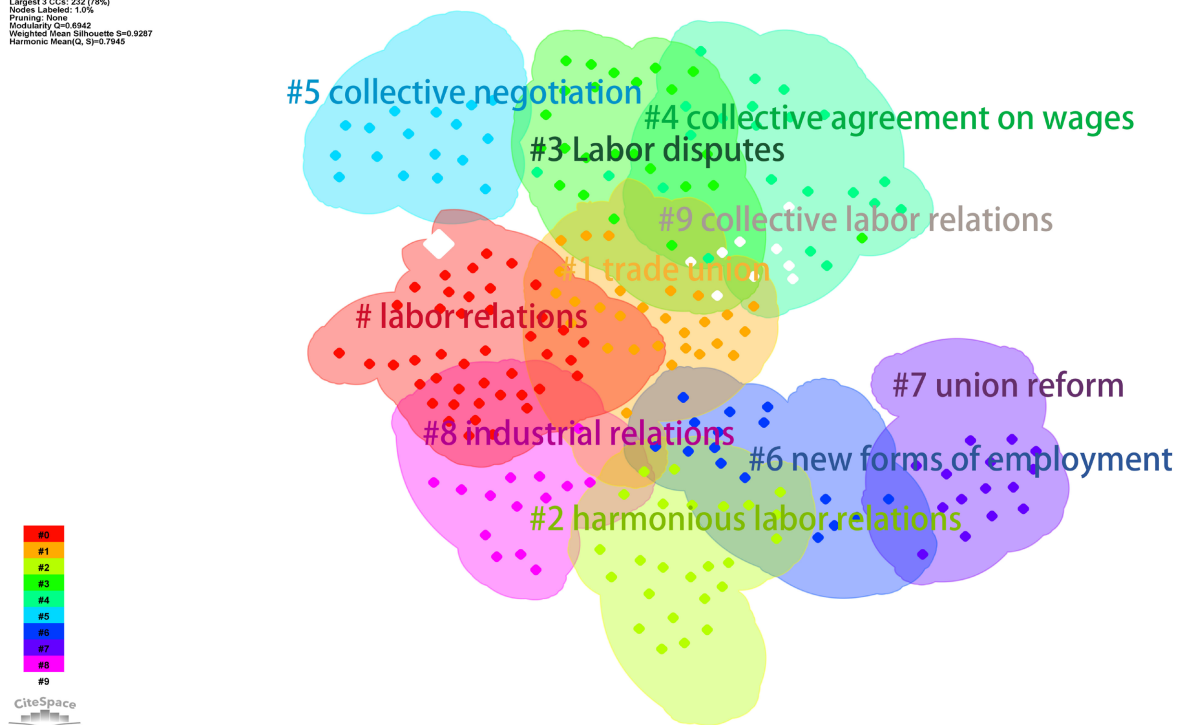


Figure 5. Keyword cluster map.

## 4. Research Conclusions and Future Prospects

### 4.1. Research Conclusions

1) From the publication trends in the research literature, it can be observed that although studies on Chinese trade unions and labor relations peaked in 2015, they subsequently exhibited fluctuations and a gradual downward trend. This decline may reflect a diminishing interest among researchers in the topic of trade unions and labor relations, or a shift in the research focus within the field to other issues. However, it is important to remain attentive to the significance of this area and to continue monitoring its developments. This shift underscores the importance of continued in-depth research, especially in the context of rapid globalization and technological advancement, to better understand and address the challenges and changes that trade unions and labor relations may face in the future.

2) From the perspective of research capabilities, the current field of labor relations and trade union studies shows great potential for collaboration. Despite this potential, a broad collaboration network among domestic scholars has not yet formed, and the density of cooperation remains relatively low. To enhance the quality and impact of research, it is crucial to promote interaction and collaboration between domestic and international research institutions and scholars. Advocating for knowledge sharing and resource complementation is essential to build a more cohesive and effective collaborative network. By strengthening interdisciplinary cooperation and expanding the scope of international collaboration,

a more comprehensive understanding of the complexities of labor relations and trade unions can be achieved. This will also provide innovative and effective solutions to the challenges in these areas. Such collaboration can bring new research perspectives and promote the diversification of academic ideas, thereby accelerating the innovation and implementation of solutions, and ultimately enhancing the academic and practical value of research in this field.

3) From the perspective of research hotspots, domestic studies on labor relations and trade unions are shifting from focusing on basic labor rights to exploring the new characteristics of labor relations and the new roles of trade unions. With the rapid development of China's economy and society, emerging issues such as flexible employment, matching of labor supply and demand, and the protection of workers' rights are gradually becoming research hotspots. Additionally, the mission and responsibilities of trade unions in the new era have received widespread attention, with a focus on how they can better adapt to new situations and play new roles becoming a key area of study. Therefore, it can be anticipated that future research on labor relations and trade unions will pay greater attention to practical issues, deeply exploring the role of labor relations and trade union organizations in promoting social harmony and protecting workers' rights. This will provide more theoretical support and practical guidance for the development of labor relations and trade unions.

## 4.2. Future Research Prospects

In the future, trade unions and labor relations will exhibit new development trends in various aspects to adapt to the changes in the economy and society and the development of the labor market.

1) Diversification and Deepening of Trade Union Roles. With the ongoing technological revolution and industrial restructuring, the role of trade unions is undergoing profound changes. Traditionally, trade unions have focused on protecting workers' basic rights and negotiating wages. However, in the face of rapidly developing emerging industries and flexible employment forms, trade unions need to continuously expand their functions and service areas to meet new challenges and demands. In the future, trade unions must not only continue to fulfill their traditional roles but also pay more attention to protecting the rights of emerging labor groups such as freelancers and platform economy workers. These workers have diverse work forms and complex legal statuses and face various issues such as occupational safety, income security, and social protection. Trade unions must actively adapt to these changes by providing legal aid, social security consulting, and other services to ensure these workers receive proper protection and support. Additionally, trade unions should invest more in vocational training, skill enhancement, and career development planning to help workers improve their competitiveness and adapt to the ever-changing labor market demands. Through these efforts, trade unions will gradually deepen their service content and comprehensively enhance workers' professional quality and living standards.

2) Innovation and Improvement of Labor Relations Consultation Mechanisms.

Future labor relations consultation mechanisms will become more flexible and diversified, with trade unions playing an increasingly important role. In the complex and changing labor relations environment, trade unions need to actively advocate for and participate in the establishment of fairer, more transparent, and sound labor laws and regulations, fostering a good atmosphere for labor-management relations. In the legislative process, trade unions should play an active role in ensuring that workers' voices are fully expressed and considered, promoting the adoption of more equitable labor policies. In terms of resolving labor disputes, trade unions should advocate for the use of flexible and efficient mediation and arbitration mechanisms, creating diversified dispute resolution platforms to help both labor and management communicate effectively at the early stages of conflicts, preventing escalation. Moreover, trade unions must continuously enhance their negotiation capabilities, cultivate professional negotiators, and use scientific negotiation strategies and techniques to help workers secure more reasonable wages and working conditions. By innovating and improving labor relations consultation mechanisms, trade unions will provide a solid foundation for building a harmonious labor relations environment.

3) Promoting the Construction of Socialist Harmonious Labor Relations. Trade unions play a crucial role in building socialist harmonious labor relations. In the future, trade unions will continue to play their role in protecting workers' legal rights and promoting equal consultation between labor and management while actively participating in the formulation of macroeconomic policies and the construction of the social governance system, fostering fairer, more just, and harmonious labor relations. Trade unions should strive to promote social equity and justice, ensuring that all workers enjoy equal opportunities and treatment at work. By participating in the formulation and implementation of social policies, trade unions can help achieve the goal of common prosperity for all people. Additionally, trade unions should work through various channels to improve workers' quality of life and welfare, such as advocating for higher minimum wage standards, improving working environments, and providing comprehensive social protection, ensuring that workers receive respect and care in their work. Trade unions should also actively participate in the construction of the social governance system, collaborating with the government, enterprises, and other social organizations to promote a cooperative social governance framework. Through the joint efforts of all sectors of society, trade unions can contribute to building harmonious labor relations and promoting social harmony and stability. In this process, the diversification and deepening of trade unions will provide a solid guarantee for achieving the grand goal of common prosperity for all people.

## Conflicts of Interest

The author declares no conflicts of interest.

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