

Eudemonia and Freedom: A Bibliometric Research on Frontiers and Evolution of Labour and Employment in China

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Eudemonia and Freedom: A Bibliometric Research on Frontiers and Evolution of Labour and Employment in China

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Abstract

Eudemonia, the highest and ultimate aim of moral thought and behaviour, is a rational activity pursuing what is worthwhile in life, and its integral part, virtue, is honoured as the noblest self-actualisation. Freedom, a human right naturally belonging to each citizen, should be balanced and valued together with eudemonia as they conjointly allow citizens to determine action avoiding intervene. In the contemporary, it can be seen as a virtue and a human right for citizens to be devoted to valuable work freely and independently. It is essential to ensure citizens' eudemonia and freedom deserved and promised, and the key is to stabilise and sustain employment, improving citizens' livelihood and well-being with appropriate positions and quality work, incidentally developing the economy. The paper researches the situation and solutions for labour and employment, using the literature from 2015 to 2021, and conducts spatiotemporal and co-occurrence analysis by bibliometric methods with citespace and vosviewer, sorting out the frontiers and evolution, followed by deduction and inference. The paper makes a summary and review, putting forward the optimality of eudemonia and freedom, and recommends China to adopt and guarantee.

Keywords: Labour; Employment; Eudemonia; Freedom; Bibliometrics; Co-occurrence Network; Information Visualization

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1. Introduction

Eudemonia, according to Plato and Aristotle, is the highest and ultimate aim of both moral thought and behavior, and virtue, considered as integral to eudemonia, can be expressed as wisdom, courage, moderation and justice, which is about lives lived and actions taken in pursuit of what is worthwhile in life, summarized as a rational activity. Freedom, the state of being free or at liberty, opposition to bondage, is another significant concept cited in the paper. It endows citizens with exemption from external control, interference or regulation; it means that the power to determine action without restraint should be citizens' due. Freedom should be guaranteed, as its value in playing an important role in democratic politics, discovery of truth and social tolerance, and it is related to personal healthy development as well. Conjointly, eudemonia and freedom allow citizens to make decisions freely and independently, which offers philosophical insights and implications for institutional arrangements of today's society and social economy.

Nowadays, that citizens can be devoted to valuable work making lives full and wonderful freely and independently is necessary for adopting and guaranteeing eudemonia and freedom; however, whether China has achieved remains an open question, or, conservatively, there may be still much room for improvement to ensure that citizens are connected well to the virtue and human right deserved and promised.

Although the number of working-age citizens in China has been slowly declining since 2012, the problems of labour and employment, supported by a huge base of active labour, were not obvious and did not immediately produce a series of social reactions. Since the reform and opening up, the employment situation in China has changed and evolved in a fluctuating manner. For example, in 2016 China's urban survey unemployment rate was below 5%; the number of new employees has remained above 13 million for seven consecutive years up to 2020. However, according to many scholars, there may be a misrepresentation and much false information of the number of new employees in China; at the same time, after 2018, the problem of ageing population has intensified, and against the background of complicated international relations, the industrial structure of the previous Chinese domestic economy has had to accelerate its transformation, but the transformation cannot be achieved quickly in the short term, so the pressure on employment in China has gradually increased recently and many labour problems have become increasingly difficult to settle. With as many as 8.74 million graduates from Chinese universities in 2020, as well as a large number of international students returning to China, while the domestic high-end industries are in urgent need of further development, and the possibility of an exodus from the middle and low-end industries, i.e. labour-intensive

industries, may be beginning to exist due to relevant international policies, and China's existing positions are unable to fully absorb the new labour. Behind the number of employment lies a absolute serious problem of matching labour supply and demand, and a relative problem of insufficient labour numbers in different levels, which is relative to the different demands. In the short term, the externalities of the epidemic will have a significant impact on the employment market; in the long term, a series of global political and economic risks will aggravate the contradictions in the employment structure, allowing regional differences in employment to widen, such as treatment and security. In an increasingly difficult situation, the legal rights of China's employees are increasingly unprotected. For example, China's labour laws may be a sham for many people, existing in name only as local firms prefer to ignore them because there is little cost. There are many problems with the employment of Chinese citizens in eudemonia and freedom, and it is therefore a consideration in the government's decisions to properly mitigate employment conflicts. In recent years, the government has attached great importance to stabilising and sustaining employment. Relevant policy has been formally incorporated into the authoritative policy system.

Employment and economic development are closely related, and whether employment problems can be properly dealt with has a bearing on the sustainable development of society and social economy of China. Without a healthy economy, eudemonia and freedom of employment cannot be realised. At the turn of the century, Cai and Wang (1999) had already analysed the sustainable development of the Chinese economy and the contribution of labour. They found that China's employment growth and the country's rapid economic take-off were in parallel; that labour substituted for capital, allowing employment to be boosted even as average wages fell, but in reality, the fact was an exploitation of China's employed citizens, and that the take-off also brought a series of inequalities that led to a failure that the laws cannot be enforced and human rights cannot be better protected. Cai and Wang pointed out that human capital or the quality of the labour would have a major impact on China's economic development in the future. Subsequently, the economic growth slowed due to fluctuations and it became increasingly difficult to effectively drive employment. There must be a mismatch in human capital or labour quality, so Fang Cai et al. (2004) discussed the phenomenon in depth, pointing out that the important factors influencing China's economic development in the last 20 years ought to be a high savings rate and an adequate supply of young labour, while macro policies, due to inefficiency and indirectness, were unable to improve the employment of labour countercyclically, and the demographic dividend may disappear. Then, the real estate bubble drained the cash flow of Chinese citizens, while social security funds became scarce, leading to a stumble in consumption. Wei Liu et al. (2015) noted that while

industrial development still drove employment within a decade, only a small part of secondary and tertiary industries were still more significant. The current decline of traditional industry, a certain degree of labour-intensive industry outflow, and the underdevelopment of advanced manufacturing and new services in China will make employment more challenging if the economy lacks momentum or stimulus for sustainable development; employment, eudemonia and freedom, are closely related to each other and must receive attention in such a case especially where many of their rights may be weighed and forfeited.

To attract academic attention to the eudemonia and freedom of employment, the paper, through bibliometric analysis, will focus on the domestic Chinese literature and international English literature from 2016 to 2021, to find traces of virtue and human right, sorting out the frontiers and evolution of labour- and employment-related research about China and providing new ideas. The second part of the paper will review the literature, and analyse some typical existing literature. In the third part, the research premises, literature selection methods and software application techniques will be explained; in the fourth part, the literature will be visualised and measured through citespace and vosviewer to obtain the results; in the fifth part, based on the inductive analysis, the paths of improving employment for Chinese citizens will be discussed, with the paper summarising the ideas of eudemonia and freedom of the employed and demonstrating the feasibility; finally, the sixth part will discuss the paper, covering the whole text, while summarising the conclusions and making recommendations.

2. Literature Review

With regard to employment, many Chinese scholars pragmatically consider it to be an economic issue and also believe that it should be studied and examined rationally through the lens of economics.

According to Yong Zhang (2020), from 1978 to 2017, China's technological progress contributed poorly to economic growth, with economic growth mainly coming from other contributions. Among them, the level of contribution of human capital was about 10.8%. However, the problem of "employment difficulties" has now been occurring frequently and its impact has continued to grow. Firstly, in terms of society as a whole, multiple social conditions such as population ageing, childlessness and class entrenchment may lead to a widening employment gap, creating a multi-level and multi-dimensional burden (Angang Hu et al., 2012; Feng Gong et al., 2015; Xuesong Li et al., 2020; Wei Wang et al., 2020; Muyuan Qiu et al., 2020). Secondly, from the perspective of the individual employees, due to the inadequate and imperfect vocational or professional education, individuals are not guaranteed to be

effectively shaped into highly skilled personnel who can adapt to the needs of modern enterprises, which also can lead to a widening gap between the supply and demand of high-level labour. It is evidenced by a significant increase in demand from enterprises for knowledge-based and skilled personnel in the industrial chain, such as the manufacture, operation and maintenance of intelligent equipment, but corresponding highly qualified personnel are insufficient until now. Furthermore, the real estate price bubble has made it difficult for graduates to find local employment as they cannot afford it, not accommodated, and the distance from their hometowns affects the quality of employment for migrant workers. In addition, the impact of public health events on the balance between supply and demand in the labour market exacerbated conflicts, with Chunling Li (2020) indicating that, due to the epidemic, the conflict between "difficulties in employing" and "difficulties in being employed" is relatively more prominent than in previous years. Under the conditions, the form and content of employment are in need of transformation, but there are two major differences between it and industrial transformation: one is that employment transformation lags behind industrial transformation, and the other one is that industrial transformation makes it more challenging for citizens with poor employability. Qiao Wang and Xiaobo Yin (2019) argued that attention must be paid to the problem between industrial upgrading and labour, and that talent training, technological development and enterprise transformation should be promoted to achieve a balance between the employment and economy through a combination of measures. Zongyu Wen (2021) suggested that to mitigate the contradictions and narrow the gap, it is necessary to start from the added value of industrial products. The above are the views of many representative Chinese scholars on the economy and employment, and many of them probably believe that improving employment is only about promoting the economy, rather than virtue and human right. Good or bad employment is actually connected to eudemonia and freedom, so tentatively focus on employment and what affects it for now, continuing to look for some more perspectives along these lines.

Multi-dimensional factors all have a great impact on employment. Although the overall employment situation in China is not positive enough, it is still vulnerable to a state of relative inequality and instability, and the impact is more obvious in the terms of science and technology, trade and finance. First, as to science and technology, the world is transitioning from the third industrial revolution to the fourth¹. According to Klaus Schwab, industrial networking, informatisation and intelligence will inevitably have a significant impact on all aspects of employment (Genliang Jia, 2016; Dan Shi,

¹ The fourth industrial revolution, Industry 4.0, was first introduced in Germany and connotes the use of information technology to promote industrial change. Using the Cyber-Physical System for the data and intelligent processing of supply, manufacturing and sales information in production to achieve a fast, efficient and personalised supply of products.

2020; Yifu Lin, 2020). In terms of industry and region, the transfer of employment through robotics applications can not only increase employment quality in the industry, improving efficiency and efficiency, but also optimise wages in the medium to long term, reducing the cost of employing but giving the proper salary. While the expansion of its application may reduce future local employment number and lead to frequent crowding-out effects because technological factors in the labour market, i.e. advanced equipment replacing relatively low-educated labour; at the same time, the application of robotics also has spillover effects, i.e. expanding the demand for highly-educated labour while improving employment in local similar industries with low levels of robotics applications and in the same industries abroad (Zao Sun and Yulin Hou, 2019; Xiaogang He et al., 2019; Gaowen Kong et al., 2020). Then taking agriculture as an example, industrial intelligence reduces the salary level of the agricultural transfer population, which Huan Liu (2020) argued that will leave rural employment in a very precarious position. They used to be farmers, but due to the ownership of land, low farming income and lack of social security, they choose to leave the land to become workers and join in factories or enterprises. As Liu pointed out, intelligence can make it harder for them to adapt to the new manufacturing industry, leaving them in a dilemma. Kaiming Guo (2019) noted that the impact of AI development on wages is uncertain across regions and industries, implying that Liu's conclusion may have broad applicability across regions and industries too, when it comes to transfer of employment about industries and work.

Second, in terms of international trade, global industries have moved into China over the past 40 years, especially after 2002, and China has achieved high economic growth and employment optimisation through trade liberalisation (Bing He and Shen Zhou, 2019; Qilin Mao and Senhui Fang, 2020). Qilin Mao and Jiayun Xu (2015) found that over a longer period of time, market-based reforms have led to significant net growth in employment in China, both by increasing 'creation' and reducing 'destruction'. In recent years, however, there has been a clear trend towards rising protectionism, marked by trade wars, and Binggian Yan (2020) argued that the potential adverse effects of the risk that in the future industries from capital-intensive economies may shift out must be taken into account. Then, starting from the integrated trade and finance, for the manufacturing sector, Weicheng Xu and Aijun Fan (2013) demonstrated through an import-export transmission mechanism test that RMB appreciation hinders employment gains in China's manufacturing refined industries, but its increased indigenisation level alleviates employment problems and wage problems; for non-trading firms, Yalin Liu and Yaqi Wang (2020) found that the bilateral exchange rate and employment, and wages are positively related. Dai et al. (2013) argued that exchange rate changes in China affect employment more by

changing firms' hiring decisions. Chuanchuan Zhang (2015) refined the former research on the divisions of industries by showing that exports have the ability to equalise (raise) the income of urban citizens, but imports do not have corresponding employment and wage effects, but rather increase inequality. The above discussion shows that domestic research from various perspectives on employment has been abundant; and in addition, some scholars have recently explored the philosophical individual values for citizens, such as virtue and human right, and its relation to employment, as well as the impact of new forms of labour on employment and on labour autonomy or self-determination, and some literature of such a direction has been published, but the systematisation and theorisation of the published Chinese literature may be still relatively low, without real philosophically support. It may also be argued that the above values have not been taken seriously by Chinese scholars.

From the above-mentioned highly cited, typical and authoritative research from renowned researchers, few of them have been viewed from the perspective of individual virtue and human right; in other words, the pragmatic scholars may ignore the eudemonia and freedom behind employment in the economies and societies of the contemporary world. Hereinafter, the paper will therefore attempt to add to the margin by preliminarily suggesting some directions for Chinese scholars studying the real meaning of employment for individuals, and even for contemporary humanity.

3. Methods and Materials

3.1 Prerequisites and Premises

The paper uses the bibliometric softwares vosviewer and citespace to analyse the literature related to employment indexed in internationally renowned journals and shows the frontiers of research and the evolution of theoretical and practical ideas. The scientific literature accepted in the international SSCI and domestic CSSCI indexes has been rigorously reviewed by experts and professional editors in the field, so the research in the paper is based on the following prerequisites and premises.

(1) SSCI and CSSCI indexed journals are highly authoritative, and the literature they include has high reference value and strong typical representation, reflecting the scientific research direction and general achievements of the academic community.

(2) The literature collected is of high rigour and scientific validity, with rigorous proof of its academic value and extension.

(3) The knowledge maps and output infographics produced by vosviewer and citespace are accurate and reliable.

3.2 Materials and Literature Selection

Web of Science, WOS, is an internationally recognised important scientific research database, containing a large number of authoritative academic journals from the academic community all over the world, covering many fields such as natural sciences, social sciences, engineering and technology, arts and humanities, etc. China National Knowledge Infrastructure, CNKI, is China's main knowledge infrastructure, an important platform to support knowledge innovation, learning and application in various industries across the country, and an important way to achieve the sharing of knowledge resources across the society and to open up information channels in the production, diffusion and utilisation of knowledge.

The materials analysed in the paper were mainly from the Social Sciences Citation Index of WOS core database, SSCI, and Chinese Social Sciences Citation Index of CNKI, CSSCI. A search was established for Article "TS =(Employment* OR Labour)" in WOS core database and an advanced search was established for journal articles "Subject: Employment* OR Labour; Source: CSSCI; Funded Literature; Enhanced Publication; Ranked by Citation and H index" in CNKI, and then the source journals and authors of the two databases' literature were filtrated for processing, collecting 20,023 literature in WOS and 6,209 literature in CNKI. After searching a total of 26,232 materials of related literature in WOS and CNKI, a total of 9,732 texts with incompatible conditions were excluded, and then further refined to collate a total of 16,500 valid materials.

3.3 Methods and Software Application

The paper mainly applies the Knowledge Graph and inductive deductive method to analyse the literature related to employment by means of keyword co-occurrence, hierarchical clustering, high-frequency time-zone map and emergent analysis, including spatio-temporal statistical analysis and keyword co-occurrence analysis.

Citespace, developed by Chaomei Chen, is a software of citation information visualisation and analysis, which uses time slicing and data network refinement to perform an analysis of the literature collected, presenting information on countries, authors, institutions and hotspots within which the established literature clusters, and showing evolutionary paths as a scientific knowledge map. And vosviewer is a Java-based mapping software developed in 2009 by NJ van Eck and L Waltman of the Centre for Science and Technology Studies, Leiden University, Netherlands. Researchers can do visual analysis with the it, presenting a variety of knowledge in a scientific knowledge map with good graphical presentation capabilities.

The paper uses a total of 16,500 records of literature information to produce a knowledge map with a pathfinding algorithm to analyse the authors, institutions they affiliated with and co-occurring keywords of the literature, setting up three nodes of authors, institutions and keywords. Then, by frequency and centrality statistics, the

paper obtains the spatio-temporal distribution, high-frequency buzzwords, frontiers and evolution of labour and employment research. Finally, statistics of related years, authors and institutional literature in CNKI and WOS are sorted out and charts are presented, and then the knowledge map is matched with the charts for a comprehensive analysis of the literature as a whole, as shown in Figure 1.

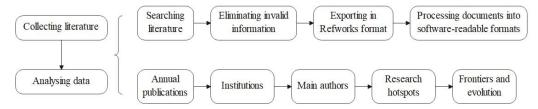


Figure 1. Process of bibliometric analysis

4. Bibliometric Results

4.1 Spatiotemporal Analysis

The number of publications directly reflects the degree of attention paid to "labour and employment" in different periods of time, and presents the development path with different stage characteristics. Here, the search results of CNKI and WOS directly show that in the "all time" interval, 35,888 related papers are included in CSSCI and 76,232 related papers are included in WOS core database. The annual statistics of the publications (as shown in Figures 2,3) visually show the distribution and changes in the number of papers over the past years, with an overall upward development but with some fluctuations.

According to the academic papers included in CNKI, issues of labour and employment have always been highly valued in China's academic sector, and when CNKI was established in 1998, its database already included 751 related papers. After a brief decline of 572 papers in 2000, the implementation of the government's active employment policy kept the number of related papers rising at a high rate from 2001 to 2009, reaching a peak in the past two decades with a high number of 2712 papers in 2009. The number of related papers, however, declined slowly in the next seven years from 2010 to 2017, and the policy of "employment priority" since 2012 has also played a certain role in promoting, but labour and employment still suffers from a slight lack of attention in domestic academic sector, ushering in a relatively sharp decline in 2018. Due to China's shift from rapid economic development to high-quality development and continuous scientific and technological progress in recent years, the number of related researches rebounded slightly in 2019, and the research methods in the literature became more advanced and the objects became more extensive, and now tends to stabilise after fluctuations, although there is a certain tendency to shrink.

The policy directions at each stage, from the employment stabilisation policy, complete management by planning, from 1949 to 1956, to the unified distribution policy from 1956 to 1978, and then from the guarantee policy from 1978 to 2002 to the market-oriented reforms thereafter, are either reflected in the relevant literature or reviewed and critiqued in the more recent literature. Reference can be made to Changes in Employment Policies in New China over 70 Years, by Xiujun Xie and Yue Chen, published in Journal of Reform in 2019, which can be representative. The annual change in the number of academic papers included in WOS, on the other hand, is relatively flatter, with its wide range and number of topics included, and its total volume far exceeding that of CNKI. In some ways Chinese scholars still need to expand the scope of their research, for example by not just limiting it to economic issues, but by focusing on the values and rights of individuals.

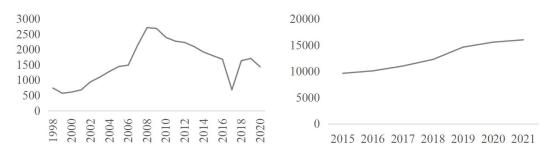


Figure 2,3. Statistics of CSSCI & SSCI labour- and employment-related annual publications

Notes: The data are from specific important literature of CNKI and WOS.

The focus of the paper is on Chinese journals. The statistics of CNKI journals reflect the number of Chinese publications in different journals related to labour and employment in China, the level of influence in different fields and the extent of research on labour and employment in different disciplines, as shown in Figure 4.

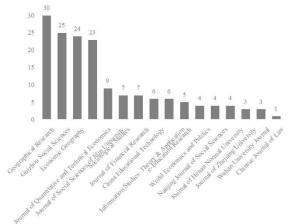


Figure 4. Statistics of distribution of relevant journals Notes: The data are from specific important literature of CNKI.

Due to the number of conditions and requirements set, not many high-impact, highly cited and notable papers are filtered out. The results of CNKI show that in terms of journal distribution (see Figure 4 and Table 1), citizen employment-related literature is mainly concentrated in Geographical Research, Guizhou Social Sciences and Economic Geography, among which Geographical Research ranks first. Its research field is geography, many of the literature related to human geography, with an impact factor of 7.499, and Economic Geography ranks third with 23 papers, its research field is the intersection of economics and geography, i.e. spatial economics. The research field of Guizhou Social Sciences covers the traditional direction of economics, as well as Sociological Studies, Nanjing Journal of Social Sciences, Journal of Social Sciences of Jilin University, etc., among which Sociological Studies, one of the most authoritative and influential journals in its field in Chinese, has a high impact factor of 8.537. There are also traditional significant economics-related journals such as Journal of Quantitative and Technical Economics, Journal of Financial Research and World Economics and Politics, and education-related journals such as China Educational Technology, which also have a coverage of the literature on labour and employment well.

| Journal | Number of published papers |
|---|----------------------------|
| Geographical Research | 30 |
| Guizhou Social Sciences | 25 |
| Economic Geography | 24 |
| Journal of Quantitative and Technical Economics | 23 |
| Journal of Social Sciences of Jilin University | 9 |
| Sociological Studies | 7 |
| Journal of Financial Research | 7 |
| China Educational Technology | 6 |
| Information Studies: Theory & Application | 6 |
| e-Education Research | 5 |
| World Economics and Politics | 4 |
| Nanjing Journal of Social Sciences | 4 |
| Journal of Henan Normal University | 4 |
| Journal of Zhejiang University | 3 |
| Wuhan University Journal | 3 |
| Chinese Journal of Law | 1 |

Table 1. Statistics of distribution of relevant journals

Notes: The data are from specific important literature of CNKI.

The statistics of authors and research units reflect the level of research related to labour and employment in different institutions.

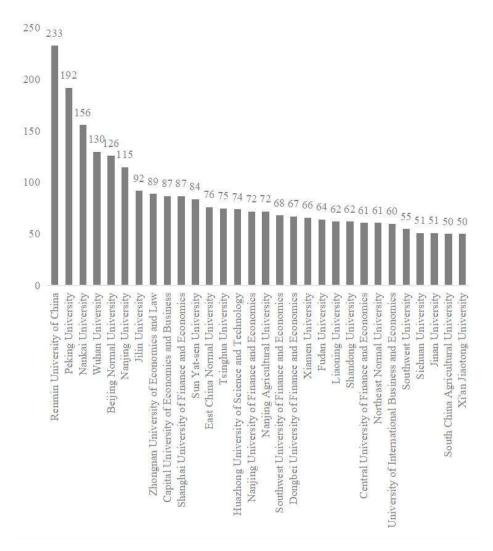


Figure 5. Statistics of relevant institutions

Notes: The data are from specific important literature of CNKI.

In terms of domestic institutions (as shown in Figures 5, 6 and Table 2), Renmin University of China ranked first with a high output of 233 publications, followed by Peking University with 192. Nankai University, Wuhan University, Beijing Normal University and Nanjing University all have more than 100 papers, which shows the high degree of importance their scholars attach to labour employment research. As the chart shows, the top comprehensive institutions in China, represented by Jilin University, Sun Yat-sen University, Xiamen University, Fudan University and Tsinghua University, and the economic research institutions, represented by Zhongnan University of Economics and Law, Capital University of Economics and Business, Shanghai University of Finance and Economics, Nanjing University of Finance and Economics, Southwest University of Finance and Economics and Northeast University of Finance and Economics, are more ahead among the universities in China in terms of research on labour and employment.

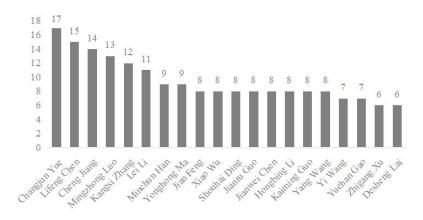


Figure 6. Statistics of related authors Notes: The data are from specific important literature of CNKI.

As to academic teams and the influential individual authors, Professor Yue of Peking University, Professor Chen of Guangdong Institute of Administration, Professor Jiang of Peking University, Professor Luo of South China Agricultural University, Professor Zhang of Dongbei University of Finance and Economics, and Professor Li of Nankai University, are prominent, all with more than 10 widespread publications in recent years.

| Institution | Author | Number of published papers |
|---------------------------------------|---------------|----------------------------|
| | Changjun Yue | 17 |
| Dolving Llaivoroity | Cheng Jiang | 14 |
| Peking University | Jian Feng | 9 |
| | Jianru Guo | 8 |
| Guangdong Institute of Administration | Lifeng Chen | 15 |
| South China Agricultural University | Mingzhong Luo | 13 |
| Dongbei University of Finance and | Kangsi Zhang | 12 |
| Economics | Kangsi Zhang | 12 |
| Nankai University | Lei li | 11 |
| Huazhong University of Science and | Minchun Han | 9 |
| Technology | | 3 |
| Beihang University | Yonghong Ma | 9 |

Table 2. Statistics of relevant authors and institutions

Notes: The data are from specific important literature of CNKI and Wanfang database.

4.2 Co-occurrence Analysis

The clustering analysis of the literature is designed to parse and label the taxonomic areas of the discipline research. The main algorithms are LSI, LLR, etc. The LLR algorithm is the most common in citespace clustering.

 k_{11} represents events A and B, k_{21} represents events not A and B, k_{12} represents events A and not B, k_{22} represents events not A and not B. k_{11} and k_{12} are on one row, k_{11} and k_{21} are on one column, and so on.

Details are as follows:

$$\begin{cases} LLR = 2sum(k)(H(k) - H(rowSums(k))) - H(colSums(k))) \\ H(k) = -\sum \frac{k_{ij}}{sum(k)} log \frac{k_{ij}}{sum(k)} \end{cases}$$

Vosviewer shows the relationship of the mapping items in terms of strength of association. C is the number of times the items co-occur, W is the number of times the items occur or co-occur separately, and S indicates the similarity of the items.

Details are as follows:

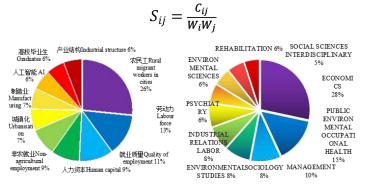
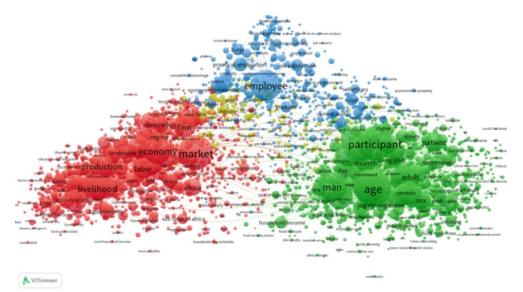


Figure 7. Statistics of high frequency co-occurring keywords

The paper applies citespace and vosviewer to visualise and measure the information in the literature selected. Using the literature from 2015 to 2021 as a sample, the paper produces literature networks and heatmaps for citizen employment (see Table 3 and Figures 8-13). In the analysis of literature co-occurrence in employment research, node clustering shows the structure of employment-related knowledge and hotspots. The paper finds that since 2015, hotspots in employment research have focused on age and gender, "three rural areas", as well as graduates, livelihoods, employment quality, enterprises, human capital, urbanisation and artificial intelligence.



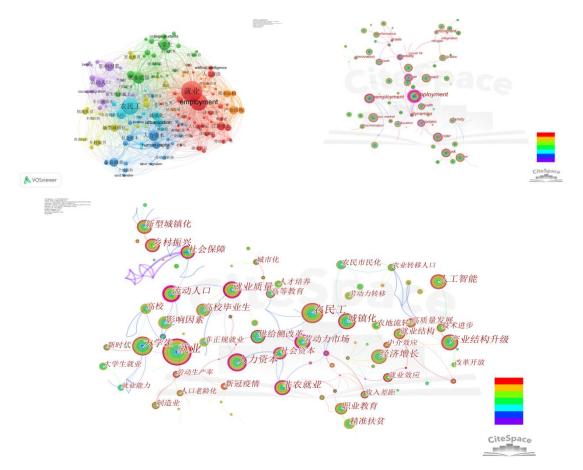


Figure 8-11. Networks of co-occurrence



Figure 12,13. Heatmaps of co-occurrence

Corresponding tables are as follow, and they have been simplified.

| | | <u> </u> | <u> </u> | |
|-------------|----------|---------------|------------------------------|----------|
| Occurrences | Keywords | Serial Number | Norm. Citations | Keywords |
| age | 1406 | 1 | fiscal policy | 7.24 |
| market | 1307 | 2 | energy efficiency | 6.163 |
| participant | 1286 | 3 | coronavirus disease | 5.5591 |
| association | 1209 | 4 | public discourse | 5.5178 |
| employee | 1031 | 5 | general health questionnaire | 5.3691 |
| economy | 850 | 6 | defense | 5.0062 |
| livelihood | 792 | 7 | energy consumption | 4.5322 |
| child | 745 | 8 | criminal justice | 4.3381 |

Table 3. Statistics of high frequency co-occurring keywords

| | | | (Table. 3 | continued) |
|-------------------|-----|----|---------------------------|------------|
| care | 706 | 9 | infectious disease | 4.2102 |
| production | 685 | 10 | labor shortage | 3.9507 |
| employment status | 652 | 11 | fossil fuel | 3.823 |
| farmer | 577 | 12 | health inequity | 3.7092 |
| firm | 556 | 13 | environmental performance | 3.7009 |
| capital | 517 | 14 | hr manager | 3.6841 |
| labor | 513 | 15 | journalist | 3.6587 |
| agriculture | 508 | 16 | stress disorder | 3.515 |
| treatment | 479 | 17 | environmental regulation | 3.4761 |

The relationship between keywords, i.e. research hotspots, has been mined through clustering analysis, and the LLR algorithm has been used to cluster and analyse the topics named for each cluster, filtering the clustering modules with less than 10 nodes (see Figures 14 and 15). The keyword clustering is significant, with cluster module values (Q-values) of 0.8535, 0.8072 (more than 0.3) and cluster mean profile values (S-values) = 0.9689, 0.9679 (more than 0.7), which indicates that the clustering is convincing, focused and thematic, and that the results of the clustering visually demonstrate the areas and directions of labour- and employment-related research since 2015.

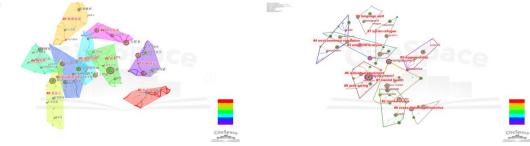


Figure 14,15. Networks of co-occurrence

Through the analysis, the clustering keywords can be divided into three categories, namely the subjects of employment, the relationship between employment and individuals, and the relationship between employment and society. From 2015 to the present, employment-related topics include migrant workers, employment structure, wage flexibility, etc. The "three rural issues" have been so important for a long time, but with the impact and renewal of industrial structure upgrading, artificial intelligence, technological progress and other forms of employment, the effect of traditional employment policies and measures is less significant, and citizens' demand for new policies is high. The former relationship includes human capital, mental health, individual supported employment, marital status, etc. Studies for individuals are no longer limited to the employed, such as person's own skills, capital, and their connotations continue to be enriched and diversified, while turning to the study of the

citizen's psychology and family, focusing on the emotional characteristics of them, and showing potential reflection on personal values, i.e. virtues and human rights. Additionally, the latter includes urbanisation, social security, environmental regulation, and such topics have been popular.

4.3 Frontiers and Evolution Analysis

In order to further analyse the time-zone distribution and evolution mechanism of hotspots and themes in the field of labour and employment, the period from 2015 to 2021 is divided into seven time zones by year, and the time-zone mapping of high-frequency co-occurring keywords has been drawn (see Figures 16-20), which show a trend of diversification in terms of the evolution process of research themes. Based on citespace (see Figure 18), the research hotspot in 2015 is mainly "social security", while the number of research hotspots in the time-zone mapping in 2016 shows a characteristic of "hollowing-out" in the matter of emergence, with a concentration of multiple keywords, including university students, employment structure and migrant population, while keywords such as new urbanisation have been focused on. In 2018, the hotspots of research are "income distribution" and "rural revitalisation", indicating that the frontiers of employment research are more sensitive to domestic policies. In 2020, there are many studies on Japan. The paper also provides a statistical chart based on Vosviewer for reference (see Figures 16 and 17).

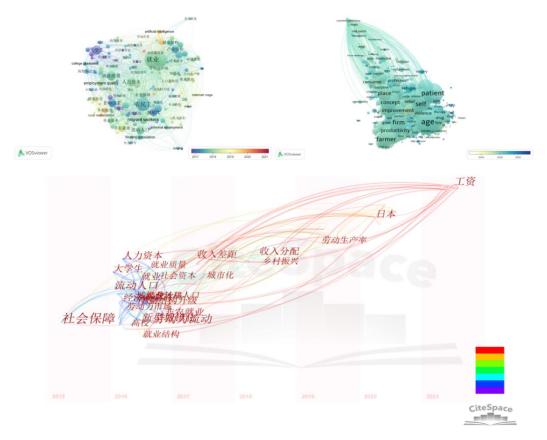


Figure 16-18 Time zones statistics of high frequency co-occurring keywords

The paper uses detection techniques of emergent words to find the related buzzwords, and plotted the emergence intensity and duration of 18 and 13 (see Figures 19,20). The paper finds that "employability", "supply-side reform", "global value chain", "reform and opening up" and "new era" have a higher emergent intensity (>5), while the emergent intensity of "globalisation" and "reform" is greater than 20, and the emergent intensity of "globalisation" is as high as 26.41. The high frequency exposure of emergent words such as entrepreneurship in 2019 indicates that new employment patterns will become persistent hotspots with the depth of research. It also partly reflects the decline of traditional employment.

Top 18 Keywords with the Strongest Citation Bursts

| Keywords | Year St | rength Begir | End 2015 - 2021 |
|----------|---------|------------------|-----------------|
| 就业能力 | 2015 | 6.89 2016 | 2018 |
| 失地农民 | 2015 | 4.81 2016 | 2017 |
| 创业 | 2015 | 4.58 2016 | 2018 |
| 北京 | 2015 | 3.85 2016 | 2017 |
| 劳动力市场分割 | 2015 | 3.37 2016 | 2017 |
| 劳动力流动 | 2015 | 2.95 2016 | 2017 |
| 供给侧改革 | 2015 | 7.74 2017 | 2018 |
| 全球价值链 | 2015 | 5.36 2017 | 2018 |
| 民族地区 | 2015 | 4.41 2017 | 2018 |
| 大学生就业 | 2015 | 3.89 2017 | 2018 |
| 改革开放 | 2015 | 7.86 2018 | 2019 |
| 新时代 | 2015 | 6.59 2018 | 2019 |
| 新生代农民工 | 2015 | 2.32 2018 | 2019 |
| 异质性 | 2015 | 4.84 2019 | 2021 |
| 人口老龄化 | 2015 | 3.92 2019 | 2021 |
| 劳动生产率 | 2015 | 3.63 2019 | 2021 |
| 农村劳动力 | 2015 | 3.63 2019 | 2021 |
| 劳动力 | 2015 | 3.2 2019 | 2021 |

Top 13 Keywords with the Strongest Citation Bursts

| Keywords | Year | Strength Begin | End 2015 - 2021 |
|---------------------------|------|----------------|-----------------|
| globalization | 2015 | 26.41 2015 | 2017 |
| search | 2015 | 21.06 2015 | 2016 |
| trade | 2015 | 12.93 2015 | 2016 |
| welfare | 2015 | 5.33 2015 | 2016 |
| dynamics | 2015 | 3.36 2015 | 2016 |
| country | 2015 | 22.17 2016 | 2018 |
| economic growth | 2015 | 21.6 2017 | 2018 |
| reform | 2015 | 24.84 2018 | 2019 |
| labor force participation | 2015 | 16.78 2018 | 2019 |
| immigration | 2015 | 4.62 2018 | 2019 |
| entrepreneurship | 2015 | 21.18 2019 | 2021 |
| people | 2015 | 20.77 2019 | 2021 |
| risk | 2015 | 6.06 2019 | 2021 |
| | | | |

Figure 19,20. Time zones statistics of high frequency co-occurring keywords

5. Ideas for Stabilisation and Sustainment

In addition to the traditional economic and political means of encouraging entrepreneurship and improving welfare, eudemonia and freedom needs to be given attention by scholars because of the philosophical reason behind it, which has an important role to play in the personal values of contemporary Chinese citizens. Indeed, it can contribute well to the stabilisation and sustainment of employment. However, the relevant theories have not been studied in depth. The paper uses vosviewer and citespace to perform a temporal sorting to find the hotspots from 2015 to 2021 (see Figures 16-20). Taking into account the impact of factors such as rural revitalisation, intergenerational differences and labour mobility on eudemonia and freedom, the paper incorporates the key words obtained from the above statistical analysis, making them an important anchor point for the theoretical and practical ideas. Therefore, in the following, the paper will identify two areas of research that need improvement, namely eudemonia and freedom, and presents arguments based on the perspectives.

5.1 Eudemonia

Eudemonia is a topical issue in the fields of economics, sociology and psychology, where fair and justicial social development creates happiness, and it acts on the whole process and scope of the development. Many previous studies have focused on how to enhance citizens' happiness, how to define happiness (Qiang He, 2011), and what can hinder happiness (Tao Li et al., 2011; Shuo Zhou et al., 2020). Lingli Xu et al. (2016) pointed out that after citizens exchange their labour for a primary distribution of wages, they gain happiness by saving or spending, which is in line with Shisong Qing (2016), who studied on "that work makes life better" and Shuo Zhou (2020), who studied on "that active entrepreneurship is beneficial". And is the relationship between employment and happiness only in that employment improves happiness? What is their deeper connection? Or how are they related? Is it possible to elevate simple happiness to eudemonia in a philosophical sense? Because of its outward manifestation is an emotional value, the paper first describes how to make citizens happy from such a perspective and then explores how to achieve eudemonia, the rational activity of great value.

Shu Li and Gang Chen (2015) found that an increase in happiness significantly can optimise citizens' probability of employment and can also be effective in helping unemployed citizens to re-enter the work, thus arguing that happiness can be effective in improving people's livelihoods. According to Li and Chen, although happiness does not directly and significantly affect the productivity of the labour, it can improve the labour's "social capital" and "job search effort", helping the labour to achieve employment through personal relationships and the constant search for new jobs. In terms of gender, men use less "social capital" than women and have higher job-seeking effort; in terms of age, both show an inverted U-shaped curve. Hongwei Pang and Yanhong Gong (2017) obtained essentially similar conclusions in terms of improving social capital and incentivising the willingness to search for work, but it may argue that happiness also has a boosting effect on productivity and improves the probability of employment mainly from the three aspects above together. The paper therefore argues that happiness has the ability to enhance the quality of economic development and improve people's livelihoods, and that its importance will be widely

recognised. It has an underlying basis and value to support employment.

According to Tie Li (2021), the experience from Bhutan can also support the idea that happiness matters. Since the reign of King Jigme Singye Wangchuck III in 1972, the country's governance practices have placed a high priority on national happiness, and the concept of happiness has been popularised through a reformed approach to education. In 1998 and 2007, Eric Ezechielim and Jigmi Y Thinley analysed and identified the fundamental role and place of "national happiness education". Over the next two decades, many scholars have demonstrated that education for well-being, which emphasises individual engagement in productive work and a spontaneous focus on natural symbiosis, has effectively contributed to the modernisation of Bhutanese society and the achievement of sustainable development of economy through a combination of multidimensionality, social unity and ecology. While livelihood issues are addressed, happiness has a profound impact on the very essence of livelihoods.

What can be done to improve the happiness of citizens? The experience from Bhutan proves that education, introduced by government, has a huge role in improving citizens' happiness; while there are many other important factors affecting happiness that are equally worthy of attention, such as ecological environment (Huang and He, 2013; Yang and Zhang, 2014; Li, 2017), social security and public policy (Zhou et al., 2015; Song et al., 2016; Ding, 2016), and sports and cultural consumption (Zhang and Chen, 2018; Huang et al., 2021). It is worth adding that income has always had a strong positive effect on subjective well-being, but to a slightly lesser extent than health care. In recent years, family and social support have also become increasingly important. The factors have been studied intensively by scholars represented by Yue Li and Hongzhi Cui (2014), Yun Shen and Jin Jia (2016) and Xiaobin He and Yinxi Dong (2021), in addition to the individualised studies above. In short, the improvement of happiness requires the joint efforts of multiple aspects, including the government, social organisations and individual citizens, to promote it in a multidimensional and integrated manner through various means.

With regard to government and social organisations, many scholars have already made many suggestions, so the paper will not dwell on them here. As for the perspective of individual citizens, Zheng (2021) argued that the contagion effect of happiness is of primary concern. Individuals and families engage in spontaneous emotion sharing, and Zheng found that the happiness of others in the community had a significant effect on individuals after controlling for relevant factors. Individuals' capture or association of others' emotions affects happiness states through changes in social trust levels; in short, happiness is contagious. And in the Internet era, where emotional contagion is common with the development of social media, online emotional contagion is considered to be strongly present and manipulable, and must be taken seriously. According to Junfang Sun et al. (2021), there is not only homeostasis in happiness, but also homeostatic stress, i.e. a jump in homeostasis may be induced, which also provides some insights. Thus, as investors' sentiment should be channelled correctly, the creation of a positive employment environment is important, both for the country and for the citizens.

According to Fei Chen and Zhangjie Su (2021), a positive employment environment must be considered in terms of spatial and industrial economics, and city size causes a wage premium, which is closely related to local employment. As for urbanisation in relation to city size, the importance of urbanisation in improving employment was demonstrated by Yiyong Yang (2000) 20 years ago. And Changbing Chen et al. (2009) showed that industrial urbanisation is a continuous driver of population urbanisation, and that the level of agglomeration of industries determines urban class, which can have an impact on local employment. Urbanisation and industrial upgrading improve the physical and mental conditions of local citizens, which is also seen as a way to raise the level of well-being of employed people.

Intergenerational mobility is also vital. Moderate intergenerational mobility also contributes to subjective well-being, with its ability to significantly reduce income inequality and enhance subjective well-being by mitigating income inequality, and its inverted U-shaped characteristics are significantly present in the lower middle income group. The analysis by Fangzhi Li also highlighted the mediating significance of income. The basic source of income is the first distribution of social wealth, i.e. labour earning wages. Talking about labour brings us to the central issue of the paper, employment. To a certain extent, the improvement of employment is a process of self-reinforcing and self-optimising. In terms of happy employment, the improvement of itself increases the happiness, which further acts on employment. However, Lulu Li and Lei Shi (2017) pointed out that with the improvement of employment quality, there is an "inflection point" in the impact of income on happiness, and when income exceeds the "inflection point", happiness will not continue to expand with the increase of income. When the demand of residents turns to "enjoyment", the relative importance of the improvement of material status to happiness is decreasing, while the quality of life makes the happiness of residents relatively unchanged or slightly increased. Fundamentally, it is caused by the unequal distribution of social wealth and resources. However, the improvement of happiness has a positive effect on employment on the whole. Citizens with higher happiness generally have more positive emotions, which has an incentive effect on employment and even entrepreneurship. When faced with unemployment or unemployment, citizens with high happiness tended to be optimistic, while optimists may be more calm with setbacks. Moreover, high sense of happiness gives citizens the power and confidence

to continue to look for jobs after repeated failures, so that their employment ideas tend to be high-quality and their career choices tend to be rational. The unemployed with low happiness are forced to make career attempts due to pressure from family, economy and society, and may face the circular "curse" of "employment means unemployment", resulting in the continuation of the "dilemma" situation of large employment gap and high unemployment rate. In terms of improvement methods concerning employment, employment itself requires the construction of good and harmonious labour relations and redistribution regulation at the level of institutional security to improve citizens' employment happiness (Jiajun Lan et al., 2019); the government must also focus on many factors to improve citizens' happiness. Institutional safeguards such as household registration and social insurance (Hongyuan Song et al., 2002; Fei Guo and Zhanxin Zhang, 2013; Yinan Yang and Shangfeng Zhang, 2016), public services and talent subsidies (Wenwu Zhang and Weifu Zhang, 2020) have been shown to be socio-economic remedies that can improve employment, and these initiatives can improve both the happiness level of individuals and the quality and level of their employment. Thus, it is possible to improve employment by increasing citizens' happiness. In terms of distribution and redistribution, just as the study of Yangqin Ge and Jianguo Xie (2019) showed that in China's transformation from "world factory" to "global market", "global factory of services" and "global market of factors" are established. At this time, the change of industry demand drives employment, so the coordinated development of the three industries is crucial. In addition to industrial development and industrial structure, Haitao Ma and Feiran Wang (2020) believed that the related tax burden and tax structure are also important factors affecting employment, and the change of industrial structure and the increase of personal income tax will reduce the employment level in China. On the other hand, a stable, rational industrial structure and reducing the burden of taxation and cost can make citizens happy and secure employment.

In short, for citizens to be able to find their value in their work, there must be supporting social security and they must be given sufficient respect in their lives. The rational pursuit of citizens has to be based on enough material conditions, which can offer a nice living. Eudemonia can only become a reality if the series of irrational and old institutional arrangements are eliminated, when citizens can be provided with enough convenience and their minds can be changed at the root, so that they are philosophically engaged in valuable work making lives full and wonderful freely and independently and realise the self-worth in line with Maslow's views.

5.2 Freedom

There is a reality that many Chinese scholars are reluctant to talk about. It is that one of the fundamental drivers of the rapid development from the late 1970s to the present has been the advantage of "lower human rights" created by the continued disempowerment of ordinary workers. It was on the basis of such an "advantage", and with the large pool of workers, the previous thirty years of infrastructure and universal education, China created the fertile ground for maximising surplus value. It has been the underlying reason for the influx of foreign investment and remains the fundamental driver of the relative upswing in socio-economic activity to date.

The existence of such an "advantage" directly determines the stability of social distribution under the current model, hence the political slogan "stability overrides everything". Therefore, many of the freedoms that Chinese citizens are entitled to are to some extent denied, for example, strikes and associations in China are considered illegal and subject to sanctions, and even the Constitution does not protect the rights. As a result, organisations such as labour unions exist in name only, as do other peaceful means of safeguarding the basic rights and interests of ordinary workers. The freedom implied in the employment of Chinese citizens is not guaranteed on the basis of the existing law, which does not allow for the organisation of any activities to safeguard the rights and interests of them. Induced by the government, the choices of occupations of Chinese citizens are becoming increasingly homogeneous, and they are unable both to freely and independently choose their preferred occupations and to freely and independently exercise the human creativity at work because of the intense management and high cost of disobedience.

But the truth is that stability comes from respect for the individuals. Forty years ago, the slogan "a hundred flowers blossom" was popular in China. The paper uses it as a metaphor for the freedom to choose one's career and to exercise one's creative abilities. In the past, freedom of employment was guaranteed and accompanied by economic development. Nowadays, although the concept of "flexible employment" is to some extent a fig leaf or cover for unemployment, it is worthwhile to refer to the real flexible employment.

Freelancing and flexible employment are new forms that differ from traditional employment methods in terms of salary, time, place, and insurance benefits. Under the future change of production relations of AI and machinisation of manufacturing positions, organisations and employees are facing a series of challenges of changes in employment relationships, psychological contracts and career management concepts, etc. According to Wenchen Guo et al. (2016), building new employment relationships, i.e. developing flexible employment (as well as freelancing), is a common desire and responsibility of enterprises and employees.

In Volume 5 of the State of the Nation Report 20 years ago, Angang Hu (2012) pointed out that in the future new employment would be created by freelance and flexible employment. New forms and patterns are important conditions for the

creation of vocational opportunities. The development of new opportunities will not completely replace traditional patterns; in the development of flexible employment, however, traditional employment patterns have the potential to undergo a liberalised transformation. In the future, a picture of multiple employment forms co-existing will be presented to citizens. At present, traditional freelance models are concentrated in individual, small-scale economic organisations, in a secondary labour market status. The main models are the work-from-home model, the outsourced model, the self-employed and employed odd jobs or short-term hired model, the pure odd jobs model, the traditional temporary model and the Axiom model. Of these, the approach where tasks are posted by a community platform and professional workers pick up work on the platform is particularly innovative, but some of the work must be subject to regulation to ensure quality and integrity.

In the context of productivity, the emergence of flexible workers stems from the deepening and refinement of the social division of labour, meaning the specialisation and independence of the division and production of social and economic activities, which has contributed to the positive development of the overall employment dynamics. Firstly, the new economic situation has given rise to new industries and models that not only revolutionise the objects and methods of labour, but also lower the threshold of employment, creating more opportunities for new graduates, rural residents and other groups in China. The new "service relationship" not only reduces wage costs, but also avoids some taxes and fees where justified. For the employed, flexible employment, such as part-time, hourly, temporary and seasonal work, offers a high degree of freedom. Flexi-employed citizens have relative freedom to control their working hours and have more access to better paid jobs. Secondly, there has been a significant shift in the group of flexi-employed towards voluntary choice groups such as university students, young entrepreneurs and skilled people, and self-employment in the group will bring more eudemonia and in the way attract more employed people into flexible employment. In the current high-pressure working environment of "996 or 007" and the frequent occurrence of "35-year-olds layoffs", the stability and security of traditional full-time employment is much less than it used to be, and it cannot meet the basic requirements of those employees today. As a result, the "35-year-olds" are actively or passively becoming flexi-employed, while those with superior skills are able to take advantage of the richness, freedom and higher pay that the mode offers them, while those with relatively less skills and experience are matched with many of the lower-end forms of employment. It is worth adding here that the lower-end employed workers are not well protected for the time being and new laws are needed to protect their rights. In addition, a shift in employment attitudes continues to take place. Flexible employment has led the new workforce to

seek to realise their life values in their careers, to balance life and work, and to maximise and highlight the achievements and embodiments of their life values in diversity and flexibility.

As to economy, under the development of the digital economy, in addition to traditional online flexible employment methods such as video bloggers, live streaming and paid online article creation and editing, new online flexible employment methods brought by the integration of multiple segments, under the background of "Internet+", have also been formed, such as short video production and live streaming with sales of goods combined with marketing. Taking the Tiktok platform as an example, the 2020 Tiktok Data Report showed that by December 2020, the number of daily active users of Tiktok reached 400 million, with countless sharing participants; during the same period, the number of users of Kwai exceeded 700 million, and the daily active users of Kwai was also considerable. The sprouting of new flexible employment methods such as short video production and live-streaming with sales activities on the platforms has become a breakthrough development with greater economic value.

The government must support the development of the new forms and improve the service system, such as promulgating the Guiding Opinions on Promoting the Development of Sharing Economy. The government should also expand the scope of support, vigorously explore new economic forms, formulate phased protection and support policies according to their potential, and develop mechanisms of protection and monitoring. Meanwhile, efforts should be made to build a long-term employment improvement, and to create new occupations so that freedom can be a new driving force for employment. The Chinese government must implement the laws it has enacted to protect workers, and do more to protect citizens' legitimate rights and interests in the future, boosting their confidence with practical safeguards.

6. Discussion and Conclusions

The paper uses a bibliometric approach to analyse the frontiers and evolution of research on labour and employment in China. The paper discusses the levels of attention and stage features of the literature, authors and institutions in various fields, with a spatiotemporal analysis; it identifies the frontiers and evolution of labour- and employment-related research and hotspots in different periods with a co-occurrence analysis, and makes them visible and tangible with a knowledge map. The main contribution of the paper may be the formation of the networks and evolutionary image of the hotspots, and the two ideas, eudemonia and freedom, are innovative and reasonable, taking the theoretical support from interdisciplinary knowledge into account, mainly different branches of economics.

Eudemonia and freedom are very important to the employment of China's labour.

Therefore, the government must pay attention to optimising citizens' eudemonia and facilitating the development of flexible employment, highly valuing humanistic care for the emotions of the employed, as well as working to safeguard the legal rights and interests of flexibly employed people by enforcing the laws. It is necessary for academic sector to continue to research more on labour and employment, to study in greater depth the solutions to a range of problems of labour and employment, and to integrate not only the latest science and technology but also the enlightening thoughts of liberal arts into education, making the Chinese citizens capable of unleashing creativity at work freely and independently and aware of such a rational activity that they should pursue virtue and uphold human right, namely eudemonia and freedom.

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