

A bibliometric analysis of publications on precision poverty alleviation in China

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ABSTRACT

[Background] Since China's President Xi Jinping proposed the strategy of "precise poverty alleviation (PPA)", it has received increasing attention of many scholars. A bibliometric analysis of publications on PPA may provide a direction of hot topics and future research trends. [Methods] All the papers on PPA published between 2014 and 2018 were scanned in the Chinese Social Sciences Citation Index (CSSCI) database. "Precision Poverty Alleviation (精准扶贫)" was used as the keywords to get the relevant publications. VOSviewer was applied to perform the bibliometric analysis of these articles. [Results] The publications on PPA have been growing rapidly. There are relatively few high-productivity authors, so more in-depth study is needed. Journal publishing PPA papers are mainly distributed in the field of humanities and social sciences. From the results of clustering analysis, it can be seen that the research field focuses on the four aspects of PPA: connotation and definition, operation mechanism, realization path and performance evaluation. Therefore, precise identification of the poor population, effective implementation of assistance measures, and clear procedures and criteria for poverty quitting are crucial to the completion of the task of poverty eradication.

KEYWORDS

Bibliometric analysis; Precision Poverty Alleviation; trends; Co-occurrence clustering analysis

Introduction

Poverty is a major problem that all countries in the world face and need to solve. China has implemented poverty alleviation and development since the mid-1980s, and has made brilliant achievements after 30 years of efforts, but problems, such as unclear base of the poor population, uncertain condition, lack of pertinence and inadequate use of funds are also particularly prominent. Compared with the traditional extensive poverty alleviation, in order to truly solve the problem of poverty in China, precise poverty alleviation should be achieved.

When China's President Xi Jinping visited Xiangxi, Hunan Province, he put forward the important instruction of "seeking truth from facts, adjusting measures to local conditions, providing guidance on classification, and precisely alleviating poverty", which is the birth of the idea of "Precision Poverty Alleviation". In 2014, the "Opinions on Innovative Mechanisms to Promote Poverty Alleviation and Development in Rural Areas" was issued, promoting the

idea of “precise poverty alleviation” . Subsequently, when attending the deliberations of delegations at the two sessions of the National People's Congress, China's President Xi further explained the concept of precise poverty alleviation by emphasizing that we need to implement precise poverty alleviation through targeting the poor and implementing focused strategies. In 2015, Chinese President Xi Jinping made field visits to poor areas and poor households, enriching the connotation of PPA even more. Precise poverty alleviation is a key task that must be adhered to in the work of poverty alleviation and development, the highlight of the Party and State's poverty alleviation work in the new era and an important guarantee for building a well-off society and realizing the great "Chinese dream" of the Chinese nation.

Since the idea of PPA has been put forward in 2014, scholars have done a lot of research. In terms of research connotation, Fu (2017) elaborated the connotation of precise poverty alleviation from the perspective of national governance, and Huang (2016) systematically elaborated the connotation of the ideological system of precise poverty alleviation. In terms of realization paths, Qu and Ma (2016) introduced the definition of cultural precision poverty alleviation and discussed the realization paths from different perspectives of cultural precision poverty alleviation. Mo (2016) proposed the realization path of green poverty reduction in the process of the war against poverty from the perspective of green poverty reduction. Jin and Zhang (2018) elaborated on the path of achieving precise poverty alleviation from the perspective of tourism. Zou and Huang (2018) used the assessment method of government performance, third-party assessment, explored the influencing factors and the path of achieving precise poverty alleviation.

Researchers have studied precision poverty alleviation from multiple perspectives. However, the current status of the research on PPA and the present research hotspots and trends remain uncertain. In view of this, this study searches the CSSCI database for studies related to precision poverty alleviation and visualizes the analysis through annual publication volume, source journals, author distribution, keyword co-occurrence clustering, research hotspots and future development directions in this field from different perspectives, with a view to providing researchers with references for an in-depth study of the current situation in this field.

1 Data and method

The data containing the word “精准扶贫” in all fields were obtained from the CSSCI database with the time limit “2014-2018” . 787 papers collected were retrieved. The data were then pre-processed, “Author” “journal” “institution” and “keywords” were extracted through a self-compiled Python program and the keywords were cleaned and merged.

In this paper, quantitative statistics and VOSviewer clustering visual analysis are mainly used to analyze and mine the current research hotspots and trends in this field. Excel is used as quantitative statistics to analyze the annual publication volume, author institution publication volume, and source journals (Zuo & Xiao, 2015).

2 Results

2.1 Scientific productivity

There has been a substantial increase in the total number of articles on Precision Poverty Alleviation research over the past five years, as depicted in Figure 1, which shows distribution

of publications per year. The number of publications on Precision Poverty Alleviation research has increased rapidly since 2015.

2.2 Bibliometric analysis of author productivity

During the years between 2014 and 2018, the total number of authors with articles more than 3 is 22, including Wang Sangui 6 records, Zuo Ting, Zheng Ruiqiang, Zhang Yongli 5 records, which indicates that high-level researches on precision poverty alleviation are relatively few. Therefore, more scholars should be encouraged to conduct in-depth research.

2.3 Bibliometric analysis of journals

The distribution of the 787 records published in journals was collected and analyzed. As depicted in Table 2, among the top 30 journals with over 7 related articles, the Journal of Rural Economy ranks at the top of the list, with the most articles of 37, followed by Journal of Northwest A&F University (Social Science Edition) with total 31 articles and the Journal of Guizhou Social Science and the Journal of Southwest University for Nationalities (Humanities and Social Sciences Edition), both containing a total of 27 articles. On the whole, the articles on precise poverty alleviation are mainly published in journals related to economics, agriculture, social science and ethnicity, and the regions involved are mainly distributed in the west part of the provinces and areas, such as Guizhou, Gansu, Yunan, where more ethic minorities are living. The disciplines involved are mainly in the humanities and social sciences.

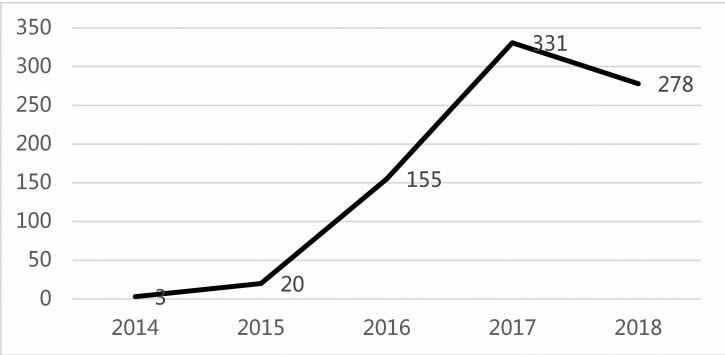


Figure 1 Evolution of publications in Precision Poverty Alleviation research.

Table 1 Articles issued by precise poverty authors

Author	Total publications	Author	Total publications
Wang Sangui	6	Xing Chengju	3
Left stop	5	Xie Yumei	3
Zheng Ruiqiang	5	Wang Xiaoyi	3
Zhang Yongli	5	Wan Jun	3
Mok Kwong Fai	5	Tang Xuewen	3
Li Bo	5	Sun Yongmei	3
Chen Chengwen	5	Lu Yilong	3
Xu Hanze	4	Lu Hanwen	3
Wang Yulei	4	Liu Jianping	3
Zhou Changchun	3	Huang Chengwei	3
Yin Limin	3	Dai Xiaowen	3

2.4 Bibliometric analysis of the keywords

Keywords can, to a certain extent, reflect the core and essence of the research content in the field of precise poverty alleviation, and summarize the theme of the article. Keywords with high frequency can identify the research hotspots in a certain field.

Keywords provided by authors of the paper and occurred for more than 5 times were enrolled in the final analysis. We use social network analysis software VOSviewer to cluster the 63 high frequency keywords (≥ 5) to form a subnetwork of Co-occurrence (Figure 2). In the figure, the scale of a node represents the number of keywords and the color of a node indicates which cluster the node belongs to. As Figure 2 shows, four themes of Precision Poverty Alleviation studies were found.

The orange cluster indicates the meaning of Precision Poverty Alleviation. In terms of the policy text, Precision Poverty Alleviation refers to the application of scientific and effective procedures for precise identification, precise assistance and precise management of the poverty alleviation objects under various conditions and in different poor areas.

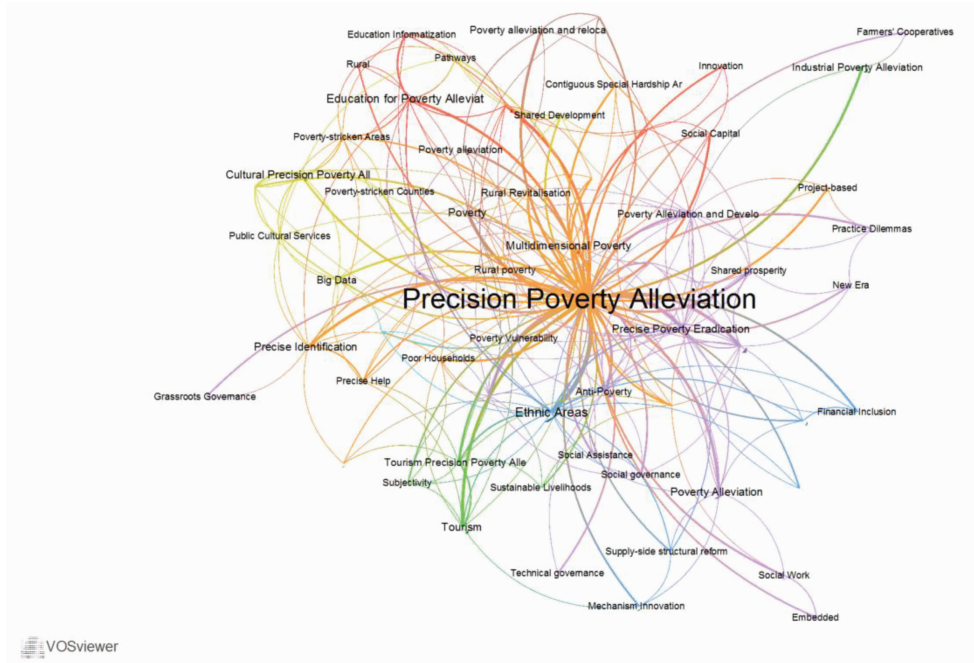


Figure 2 Bibliometric analysis of the keywords in publications of Precision Poverty Alleviation. Co-occurrence of keywords. The size of nodes indicates the frequency of occurrence. The curves between the nodes represents their co-occurrence in the same publication. The shorter the distance between two nodes, the larger the number of co-occurrence of the two keywords.

The purple cluster represents the context in which the idea of precision poverty alleviation was proposed and the different perspectives on precision poverty alleviation. Precise poverty alleviation is the latest strategic idea in China's fight against poverty and a major challenge to be overcome in the new era when China enters a moderately prosperous society. For the development-oriented poverty alleviation work to succeed, in order to achieve the final goal of building a moderately prosperous society by 2020, China's President Xi Jinping has pro-

Table 2 Journal load of Precision Poverty Alleviation

Journal Name	Total publications	Journal Name	Total publications
Rural Economy	37	Journal of Chinese Academy of Governance	9
Journal of Northwest A&F University (Social Science Edition)	31	Journal of Huazhong Agricultural University (Social Sciences Edition)	9
Guizhou Social Sciences	27	Issues in Agricultural Economy	9
Journal of Southwest Minzu University (Humanities and Social Science)	27	Statistics & Decision	9
Guizhou Ethnic Studies	23	Fujian Tribune	8
Journal of China Agricultural University Social Sciences	18	Journal of Hohai University (Philosophy and Social Sciences)	8
Chinese Public Administration	15	Inner Mongolia Social Sciences	8
Journal of South–Central University for Nationalities (Humanities and Social Sciences)	15	Modern Economic Research	8
Gansu Social Sciences	13	Journal of Public Management	7
Journal of South China Agricultural University (Social Science Edition)	13	On Economic Problems	7
Journal of Nanjing Agricultural University (Social Sciences Edition)	12	Economic Review Journal	7
Truth	12	Seeker	7
Journal of Yunnan Minzu University (Social Sciences)	11	Shandong Social Sciences	7
Study and Practice	10	Probe	7
Reform	9	Studies on Socialism with Chinese Characteristics	7

posed “Precision Poverty Alleviation” . Precise poverty alleviation reflects the superiority of the socialist system in the pursuit of common prosperity, and enhances the modernization of the party government and the people's ability to govern the country (Jiang, 2018). Shen (2018a) and Jiang (2018) discuss the development of precision poverty alleviation work from the perspectives of technical governance and social governance, which enhances the productivity of the work of poverty alleviation and development and promotes the development of the overall work of poverty alleviation, but the problems in different areas also requires urgent solution to be urgently addressed. Bi (2018) discusses the mutual coordination of social assistance laws and legislation on precise poverty alleviation to optimize the system and achieve articulation and adaptation in the system in order to establish a better unified social welfare system. Zhu and Wu (2017) discuss the precise poverty alleviation strategy from the vulnerability theory, through which the significance of the implementing the precise poverty alleviation strategy can be deeply understood. Mu and Fang (2018) discuss the the issue of targeting of precision poverty alleviation policies and the enhancement of national ownership by means of embedded mechanisms. Therefore, articles explore and discuss PPA in terms of clearly locating its meaning and connotation, study its significance and the problems in terms of clearly locating the connotation and meaning of precise poverty alleviation, by examining its significance and the problems involved from the various perspectives in-

volved in precise poverty alleviation, and improve the targeted issues, such as issues related to regime and the implementation of measures, finally to improve the scientificity, accuracy and sustainability of the PPA policy.

The green, blue, red, golden and brown clusters represent the 'paths to achieve precise poverty alleviation, the ways to relieve the pressures of poverty, including tourism, finance, education, culture and relocation, respectively.

As the key to "blood-breeding" poverty alleviation, precision poverty alleviation through tourism can drive the economic development of poor households and ethnic areas through industrial development, as an important tool for sustainable livelihoods, the problems and solutions in the aid of the poor program by tourism have been expounded by various researchers. Tao (2018) elaborates on the implementation path of precision poverty alleviation through tourism in ethnic areas from the perspective of economic theory. He et al. (2018) consider the questions and challenges the old revolutionary areas are facing in developing tourism, such as historical factors, developing conditions and funding policies, etc, and propose a solution path from five aspects: precise identification of targets, rational selection of aid-the-poor program, effective use of the funds, precise assistance of the poor and optimisation of poverty alleviation performance assessment.

Financial precision poverty alleviation is an important part of the poverty alleviation and development strategy, serving as a foundation and prerequisite for revitalizing rural and ethnic areas and contributing to the victory in the battle against poverty (Chen & Wu, 2018). At this stage, we have entered the stage of inclusive finance, "blood-making" financial policies, and researchers have summarised the current achievements of inclusive finance of current stage and summarised the factors, modes and paths according to the existing problems. Zhang (2018) proposes to solve the current problems through constructing a rational financial system, establishing a risk mechanism and financial innovation mechanism. Zhou and Li (2017) put forward innovative development policies for inclusive finance. And the measures on talent training mechanisms, funding sources, competitive incentives, etc, are proposed as well to promote inclusive finance. In addition, supply-side structural reform is a major innovation of the new normal of economic development in precision poverty alleviation. The supply-side structural reform in poverty alleviation refers to optimizing the input structure of poverty alleviation and enhancing effective supply to improve the quality of poverty alleviation from the input side of poverty alleviation, thus promoting precise poverty alleviation and poverty eradication, the core of which is to further improve the pertinence and effectiveness of poverty alleviation (Lin, 2016).

Precision poverty alleviation through education strives to achieve the optimal performance of education poverty alleviation through limited education investment and enhances the social and human capital in poor regions such as rural areas in order to improve the quality of education, which make poverty alleviation efficient, fast and convenient (Yu, 2018). The researchers mainly discuss the significance and realization paths for precision poverty alleviation through education, and the role of education informatization in education precision poverty alleviation has been recognized by the majority of educators. Shen (2018b) researches and discusses the important role of education informatization and concludes that based on the concept of modern education informatization, in order to promote the development of education informatization in the countrysides, we are expected to build a community of urban-rural education informatization to enhance the integration of local culture and education informatization and to perfect the administrative system for the final accomplishment of

strategic goal of PPA through education in the rural areas. Chen and Chen (2017) affirm the important role of informatization technology, simultaneously, suggest that teachers' team construction and education informatization should be combined to solve the problem of endogenous development, so as to truly achieve poverty alleviation through education.

PPA through culture is to change the overall qualities of population from poor areas through the power of culture, such as their ways of thinking, skills of living and states of mind, so as to improve their literacy and the ability to shake off poverty and get rich. The scholars' related researches mainly focus on the connotation, the real problems and the way of implementation.

In poverty stricken areas, the key of public cultural services which undertake great responsibility and mission is the service of public libraries. While disseminating and communicating culture, libraries' measures of PPA through culture would be more effective if the poverty alleviation target is precisely identified, culture resources constructing is truly implemented and activities with local characteristics are held aiming at some targets.

Relocation of impoverished residents is an important strategy to address deep poverty, and is a crucial part of the work of precise poverty alleviation. The task of relocation and construction of the impoverished families is accomplished through registration, which followed by various challenges and problems in the implementation emerge as well. In the researches, scholars mainly discuss the constructive proposals on the process of implementing relocation. Zeng and Wang (2019) proposed solutions to the problems of imprecision in impoverished residents relocation, such as relocation objects, housing area, resettlement and a coherent mix of policies. In the relocation of poverty alleviation, we should fully understand the expectations of people who will relocate, coordinate all kinds of funds and resources for poverty alleviation, effectively increase the follow up support for them, and make every effort to promote industrial cultivation, employment assistance and vigorously enhance the sense of security and fulfillment of the people who relocate, and lay a solid foundation for the building a moderately prosperous society in all respects.

The turquoise cluster represents the performance assessment and evaluation of precise poverty alleviation. The third-party assessment mainly focuses on the accuracy of identifying and exiting the poverty-stricken population, the public's satisfaction with the helping and supporting work in each village and household, the implementation of the "two no worries, three guarantees" policy and the poverty alleviation measures within each household, and the problem of poverty-returning.

Conclusions

In this article, a total of 787 papers on "精准扶贫" collected from CSSCI database " were studied as the research objects with the aid of scientometric statistical methods and VOSviewer for a cluster analysis to analyze the current research situation and research hotspots in this field. We draw conclusions as follows:

(1) Precise poverty alleviation has been widely concerned by researchers since it was proposed by China's President Xi Jinping as a Chinese policy. Precise poverty alleviation has been widely concerned by various researchers since it was proposed by China's President Xi Jinping in 2014 as a Chinese policy. Since then, the increased interest in it has shown a general upward trend, with the highest number of articles issued in 2017. The authors are mainly teachers' and scientific researchers' in colleges, with Wang Sanguai, Zuo Ting, Zheng Ruiqiang, publishing more. Generally speaking, however, the quantity of articles for the same author is

still relatively low, leaving more intensive study on precise poverty alleviation by relevant researchers to be desired. The journals in which the articles are published are still mainly in the field of humanities and social sciences, and more intensive researches can be carried out from the perspective of multiple disciplines.

(2) Through analyzing keyword clustering and the semantic network framework, the relevant researches on precise poverty alleviation eventually settle around the four aspects of definition and connotation, realization path, performance assessment and evaluation, and operating mechanism. Along with the continuous improvement of precise poverty alleviation policies, its definition and connotation will also be constantly extended. In terms of realization paths for precise poverty alleviation, the main areas of concern are culture, education, tourism, finance and relocation. Research on the operation mechanism of precise poverty alleviation includes the four aspects of precise identification of the poor, precise supporting measures for them, precise management and precise assessment.

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