

A Framework for Analyzing Identification Funds in the Social Sciences under the Perspective of Country Mentions: An Example of China and the United States

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Introduction

Funded papers are those produced with research funds from government departments, funding organizations, and enterprises. Identification fund is a fund that specializes in funding as well as large-scale funding for research in the social science field. Research productivity grants support various scientific fields (Marcelo Perlin, 2024). Evaluating research funding effectiveness is valuable for policymakers (Guiyan Ou, 2024). They're interested in the effectiveness of competitive grant models (Alberto Corsini, 2023). Assessing academic research funding is tough due to diverse sources. So, identifying key aspects is crucial (Mike Thelwall, 2023). EU FPS funding is skewed (Fredrik Niclas Piro, 2024). The current research is mainly from the perspective of research managers, involving the management decision-making and performance evaluation of research funds, and lacks the excavation of the research content of fund support from the national level, especially for the field of humanities and social sciences.

This study presents the concept of Identification Fund in the field of social sciences, and its analytical framework. The framework analyzes the topics of papers funded by the Social Science Field Identification Fund at the content level of scientific knowledge carriers (research papers), and is able to observe the main research content of different research subjects at the national level when they are mentioned to each other. Taking China and the United States as the mentioned subjects, it reveals

how the American, British, German, and European focus on China and the United States is similar and different and how the research topics evolve.

Methods

First, screen paper data from the WOS database and determine the list of identified funds with the fund's official website. Then, select funded papers by identified funds. Next, use NEViewer (Wang X, et al. 2014), VOSviewer software and big data methods to analyze literature data.

We chose papers from the Web of Science database, screening 2,437,656 papers in 49 social - science fields from 2014 - 2023, and identified 22 funds. Using the database's advanced search, we input FO, WC, and PY to search for each fund, extract paper fields and topics, and keep only one for repeated fields. As shown in Fig.1.

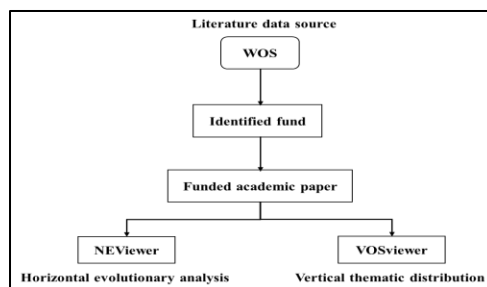


Figure 1. Technical Roadmap.

Result

Use VOSviewer to draw a distribution map with keywords of funded papers from different countries and extract main topics by key

keywords, as in Fig.2 and Fig.3. Use NEViewer for horizontal evolution analysis of funded papers, as shown in Fig.4 and Fig.5.

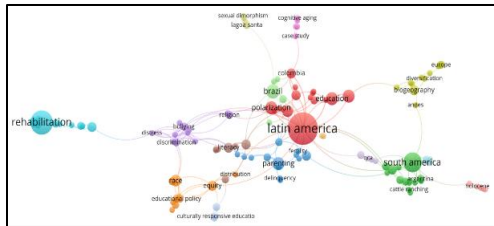


Figure 2. Distribution Map of Germany's Focus on US topics.

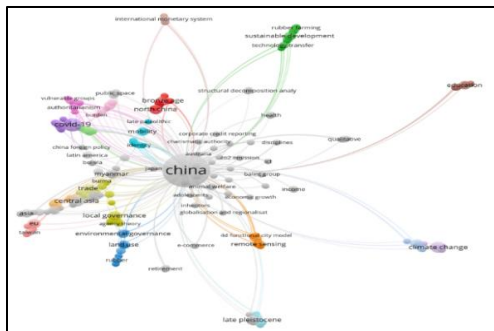


Figure 3. Distribution Map of Germany's Focus on Topics Related to China.

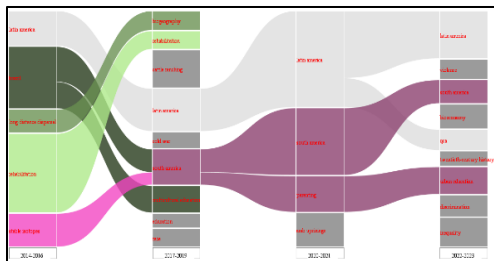


Figure 4. Evolution Analysis Chart of Germany's Focus on US topics.

From 2014 - 2023, research topics evolved dynamically in regions, disciplines, and social focus. Geographically, it shifted from local areas to Latin America, refined to South America, and deepened around them. In disciplines, it changed from practical fields to multi - disciplines, then to macro - social and urban fields, and finally to interdisciplinary areas. Socially, the focus moved from local social structure to industries and cultural communication, then to social development and urban construction, and finally to macro - social issues.

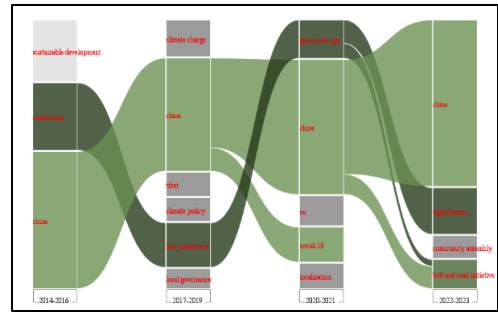


Figure 5. Evolution Analysis Chart of Germany's Focus on Chinese Topics.

From 2014 to 2023, relevant research topics evolved dynamically in development trends, research focuses, and policy correlations. For development trends, it went from emphasizing sustainable development in 2014 - 2016, to focusing on climate change in 2017 - 2019, then to energy issues in 2020 - 2021, and centered on water resources and deepened in 2022 - 2023. In research focuses, it was on resource management in 2014 - 2016, covered land policies etc. in 2017 - 2019, concentrated on ecological balance in 2020 - 2021, and involved interdisciplinary aspects like environmental security in 2022 - 2023. Regarding policy correlations, it related to local resource policies in 2014 - 2016, echoed national climate policies in 2017 - 2019, was associated with regional energy planning in 2020 - 2021, and linked closely to global water resources management policies in 2022 - 2023.

Conclusion

This study proposes a framework for analyzing the identification fund in the field of social sciences from the perspective of country mentioning. By analyzing the papers funded by the Identification Fund in the field of social sciences horizontally and vertically, we can obtain the main research topics and their evolution process of different scientific research subjects when mentioning other countries, which can help to grasp the scientific research trends in the field of social sciences at a higher level.

Acknowledgments

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