Bibliometric Analysis of Urban and Rural Economic Inequality

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Article Info

Article history:
Received June, 2024
Revised June, 2024
Accepted June, 2024

Keywords:
Rural Economy
Urban Economy
Economic Inequality
Bibliometric Analysis
VOSviewer

ABSTRACT

This bibliometric study provides a comprehensive analysis of the scholarly landscape surrounding research on economic inequality, utilizing VOSviewer to visualize the thematic clusterization, temporal trends, emerging research opportunities, and collaborative networks in the field. The analysis begins with the identification of key thematic areas, revealing a complex interplay between income inequality, urban-rural disparities, and their socioeconomic impacts. A temporal examination traces the evolution of research themes from foundational studies focusing on regional disparities to more comprehensive explorations of socioeconomic outcomes. Emerging research opportunities are identified in less explored areas, suggesting potential for significant contributions through novel investigations. Furthermore, the study delves into collaborative networks, highlighting the pivotal roles of central researchers and the impact of academic partnerships. This study not only maps out the current academic terrain but also proposes strategic directions for future research, aiming to enhance the understanding and resolution of economic inequalities.

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1. INTRODUCTION

Economic inequality, particularly between urban and rural areas, remains a pivotal issue influencing sustainable development worldwide [1]. Urban regions often benefit from concentrated economic activities, technological advancements, and infrastructure, leading to higher living standards and greater income levels compared to their rural counterparts [2]. Conversely, rural areas frequently contend with limited access to education, healthcare, and employment opportunities, perpetuating a cycle of poverty and underdevelopment [3]. This disparity not only affects the quality of life but also hampers economic cohesion and social stability within countries, necessitating a thorough examination and understanding of its dynamics and impacts [4], [5].

The rise of bibliometric analysis offers a unique lens through which the academic discourse surrounding urban-rural economic inequality can be systematically explored [6], [7]. By mapping out the existing research landscape, bibliometric methods allow scholars to identify seminal works, key themes, and evolutionary trends in this field.
This approach also highlights the methodological frameworks and regional focuses that have shaped understanding and policy responses to this enduring issue [9]. By examining scholarly output, bibliometric analysis helps delineate the intellectual contours of urban-rural inequality, providing a meta-analysis of how academic attention in this area has grown and transformed over the years [10].

Despite the extensive documentation of urban-rural disparities, there remains a significant gap in comprehensive, data-driven studies that aggregate global research efforts on this topic [5], [11], [12]. Most existing studies tend to focus on specific countries or regions, often overlooking comparative analyses that span different geographic and socio-economic contexts [12]–[14]. This lack of a holistic view hinders the ability of policymakers and stakeholders to formulate effective, scalable solutions that address the root causes of economic inequality between urban and rural areas.

The fragmented nature of research on urban-rural economic inequality poses a challenge for synthesizing findings and translating them into actionable strategies. There is a critical need to integrate diverse studies to understand the breadth and depth of this issue universally. Additionally, the varying methodological approaches and regional biases in existing research may lead to incomplete or skewed interpretations of the data, complicating efforts to address inequality effectively. A bibliometric analysis could therefore serve to bridge these gaps by providing a consolidated view of the research landscape, identifying underexplored areas, and suggesting future directions for study.

The primary objective of this research is to conduct a comprehensive bibliometric analysis of the literature on urban and rural economic inequality, aiming to outline the main themes, track the evolution of discourse, and identify gaps in the current body of knowledge. This study is significant as it will equip policymakers, scholars, and practitioners with a clearer understanding of the academic terrain surrounding economic disparities between urban and rural settings. By offering a systematic review of past and present research efforts, the findings will facilitate more informed decision-making, contribute to more balanced development policies, and ultimately help reduce economic inequalities across different societal sectors.

2. LITERATURE REVIEW

2.1 The Concept of Urban and Rural Economic Inequality

Economic inequality between urban and rural areas is a well-documented phenomenon with deep-rooted implications for social and economic development [5], [15]. According to [16], urban areas tend to accumulate resources and infrastructural benefits, fostering environments conducive to economic growth and innovation. In contrast, rural areas often suffer from a lack of investment, leading to inferior healthcare, education, and economic opportunities [17]. This dichotomy contributes to a widening gap in income and quality of life between urban and rural populations, a pattern that is evident across both developed and developing countries [18]. Such disparities are further exacerbated by globalization and technological advances that disproportionately benefit urban centers [11].

2.2 Bibliometric Analysis in Economic Research

Bibliometric analyses have become increasingly popular in economic research as they provide a quantitative approach to reviewing extensive literature. [19] describe bibliometric methods as crucial for uncovering the structural and dynamic aspects of scientific fields. These methods help identify the most influential studies, authors, and regions that contribute to a particular area of research, thereby mapping the
intellectual landscape. In the context of urban-rural economic inequality, bibliometric analysis offers tools for tracking the evolution of research trends and thematic priorities over time, revealing how scholarly focus and methodologies have shifted in response to changing economic realities.

2.3 Studies on Urban-Rural Disparities

Several key studies have addressed the issue of urban-rural disparities from various perspectives. [20] focus on income inequality, showing how urbanization in China has led to increased economic disparity between urban and rural residents. Their findings highlight the role of policy in either mitigating or exacerbating these disparities. In contrast, [21] examine access to services and infrastructure, illustrating how rural areas lag behind urban counterparts, impacting overall socio-economic development. These studies collectively emphasize the multifaceted nature of urban-rural inequality, involving economic, social, and infrastructural dimensions.

2.4 Global Perspectives on Urban-Rural Inequality

Research on urban-rural inequality is not confined to any single region but is a global issue with localized characteristics. Studies by [22] in Latin America, and by [23] in India, explore how different government policies and historical contexts shape urban-rural divides. These works demonstrate that while the manifestations of inequality may vary, common underlying factors such as land distribution, education accessibility, and healthcare availability are central themes globally. Comparative studies, therefore, provide valuable insights into the effectiveness of various interventions aimed at reducing disparities.

2.5 Gaps and Future Directions in Research

Despite the breadth of research, there remain significant gaps in the literature, particularly in longitudinal and comparative studies that span multiple regions or countries. As noted by [24], there is a pressing need for more comprehensive analyses that integrate data from various socio-economic backgrounds to foster a more inclusive understanding of urban-rural dynamics. Additionally, there is a lack of studies that directly link economic policies to changes in urban-rural inequality metrics, an area ripe for future research.

3. METHODS

3.1 Research Design

This study employs a bibliometric analysis to systematically review and synthesize the body of literature concerning urban and rural economic inequality. The approach is quantitative, focusing on the publication patterns, thematic developments, and citation networks within the field. This method allows for an objective assessment of the scope and impact of research on urban-rural disparities over a defined period. The primary sources of data for this analysis are peer-reviewed journal articles, conference proceedings, and academic theses that have significantly contributed to the discourse on this topic.

3.2 Data Collection

The data for the bibliometric analysis will be extracted from Google Scholar. This platform was selected for their comprehensive coverage of the literature across various disciplines and their accessibility to detailed bibliographic metadata. The search strategy involves using a combination of keywords such as "urban-rural inequality", "economic disparity", "urban-rural disparity", and "economic disparity".
"regional development", and "socio-economic divide". The search will be refined by applying filters for publication date, aiming to cover works published from 1930 to the present to capture the evolution of the research landscape over time.

3.3 Inclusion and Exclusion Criteria

The inclusion criteria for selecting studies are based on relevance to the central theme of urban and rural economic inequality, the use of empirical data, and publication in English. Exclusion criteria include non-peer-reviewed articles, opinion pieces, and studies that focus on unrelated dimensions of urban-rural dynamics, such as purely geographical or environmental studies without a clear economic component. Further refinement will be based on the citation count, as highly cited works are likely to have had a significant impact on the field.

3.4 Data Analysis

The bibliometric data will be analyzed using VOSviewer, which is a tool for constructing and visualizing bibliometric networks. This tool will aid in identifying the most influential authors, documents, and journals within the domain of urban-rural economic inequality. Analysis techniques include citation analysis to determine the most impactful works, co-citation analysis to explore relationships between key papers, and content analysis to map out the major themes and trends. Additionally, a longitudinal analysis will be conducted to observe changes in the research focus and methodology over the decades.

4. RESULTS AND DISCUSSION

4.1 Research Data Metrics

Table 1. Data Citation Metrics

<table>
<thead>
<tr>
<th>Publication years</th>
<th>1930-2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citation years</td>
<td>94 (1930-2024)</td>
</tr>
<tr>
<td>Paper</td>
<td>980</td>
</tr>
<tr>
<td>Citations</td>
<td>85,234</td>
</tr>
<tr>
<td>Cites/year</td>
<td>906.74</td>
</tr>
<tr>
<td>Cites/paper</td>
<td>86.97</td>
</tr>
<tr>
<td>Cites/author</td>
<td>52,782.86</td>
</tr>
<tr>
<td>Papers/author</td>
<td>557.13</td>
</tr>
<tr>
<td>Author/paper</td>
<td>2.37</td>
</tr>
<tr>
<td>h-index</td>
<td>149</td>
</tr>
<tr>
<td>g-index</td>
<td>260</td>
</tr>
<tr>
<td>hI,norm</td>
<td>114</td>
</tr>
<tr>
<td>hI,annual</td>
<td>1.21</td>
</tr>
<tr>
<td>hA-index</td>
<td>32</td>
</tr>
<tr>
<td>Papers with ACC</td>
<td>: 1,2,5,10,20:841,704,447,253,92</td>
</tr>
</tbody>
</table>

Source: Publish or Perish Output, 2024

Table 1, titled "Data Citation Metrics," provides an extensive summary of bibliometric indicators for a set of publications spanning from 1930 to 2024. It reports that across the 94 years, a total of 980 papers have been cited 85,234 times, averaging approximately 907 citations per year and about 87 citations per paper. The data also reveals a high level of collaboration and productivity among authors, with an average of 2.37 authors per paper and approximately 557 papers authored per author, suggesting a prolific and collaborative research community. Notably, the citation efficiency per author is substantial at 52,782.86 citations per author. The table includes robust citation indices such as an h-index of 149 and a g-index of 260, indicating that a significant
number of these papers have been widely recognized and cited within the academic community. The normalized and annualized h-index (hI,norm and hI,annual) stand at 114 and 1.21, respectively, reflecting sustained influence over time. The hA-index is recorded at 32, suggesting depth in highly cited papers. Additionally, the breakdown of papers with a specified number of citations (ACC) shows that a large majority of the works have been cited multiple times, highlighting the impactful nature of the research in this dataset. This comprehensive citation analysis underscores the significant and enduring influence of the publications in this field.

Table 2. Top Cited Research

<table>
<thead>
<tr>
<th>Citations</th>
<th>Authors and year</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>4840</td>
<td>[25]</td>
<td>The origins of the urban crisis: Race and inequality in postwar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>detroit—Updated edition</td>
</tr>
<tr>
<td>1286</td>
<td>[27]</td>
<td>Poverty and inequality in India: a re-examination</td>
</tr>
<tr>
<td>1271</td>
<td>[28]</td>
<td>Economic inequality and democratic political engagement</td>
</tr>
<tr>
<td>1140</td>
<td>[29]</td>
<td>Remittances and inequality</td>
</tr>
<tr>
<td>1027</td>
<td>[30]</td>
<td>Income inequality in today’s China</td>
</tr>
<tr>
<td>950</td>
<td>[31]</td>
<td>The urban–rural income gap and inequality in China</td>
</tr>
<tr>
<td>922</td>
<td>[32]</td>
<td>Chinese social stratification and social mobility</td>
</tr>
<tr>
<td>913</td>
<td>[33]</td>
<td>Work and inequality in urban China</td>
</tr>
<tr>
<td>789</td>
<td>[34]</td>
<td>Which regional inequality? The evolution of rural–urban and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inland–coastal inequality in China from 1983 to 1995</td>
</tr>
</tbody>
</table>

Source: Publish or Perish Output, 2024

Table 2, titled "Top Cited Research," lists the most highly cited papers focusing on various aspects of urban and rural economic inequality and social stratification. The leading paper, authored by TJ Sugrue, titled "The Origins of the Urban Crisis: Race and Inequality in Postwar Detroit—Updated Edition," garners the highest number of citations at 4,840, reflecting its significant impact on the discourse surrounding racial and economic disparities in urban settings. Following this, the paper by C Bambra and colleagues, addressing the amplification of health inequalities due to the COVID-19 pandemic, has also resonated widely, accumulating 1,992 citations. Other notable works include studies by A Deaton and J Dreze on re-examining poverty and inequality in India, and by F Solt on the relationship between economic inequality and democratic engagement, each contributing to a nuanced understanding of inequality in different socio-economic and geographical contexts. The list also features multiple studies on China, reflecting a focused scholarly interest in the evolving patterns of income disparity and social mobility within one of the world’s most populous countries. This collection of papers, with citations ranging from 789 to 4,840, underscores the diverse yet profound interest in understanding and addressing the multifaceted issues of inequality in urban and rural settings globally.
The first figure above shows various clusters of terms that represent key themes or topics within the broader field of research, presumably on economic inequality. Several key themes and clusterization can be identified as follows:

1. **Income Inequality Cluster**
   - Yellow
   - This cluster is centrally located and acts as a hub connecting various themes, indicating that income inequality is a core focus in the literature. Associated terms include "rural income inequality," "urban rural income inequality," and "rural poverty," suggesting that this cluster particularly addresses disparities in income between urban and rural settings as well as the broader economic conditions affecting rural populations.

2. **Urban Cluster**
   - Red
   - This cluster includes terms like "urban China," "urban inequality," "rural urban inequality" pointing to a geographical and locational aspect of inequality research. It highlights specific concerns about urban centers in China, which may reflect studies on the rapid urbanization and its impact on regional disparities.

3. **Socioeconomic Status and Health Inequality Cluster**
   - Green
   - Terms such as "socioeconomic inequality," "health," "child," and "socio economic status" suggest this cluster focuses on the broader social implications of economic disparities. This cluster connects economic factors with health outcomes and the status of children, indicating research on how economic inequalities...
translate into health and social inequalities.

4. Regional Inequality and Rural Inequality (Blue)
   This cluster seems to specifically address issues related to “urban rural inequality”. It stands out as a thematic group that examines the disparities between urban and rural areas from various perspectives. The terms in this cluster suggest an emphasis on understanding how differences between urban and rural settings contribute to economic and social inequalities.

Figure 2. Overlay Visualization
Source: Data Analysis Result, 2024

The second figure above is a temporal bibliometric map produced by VOSviewer, illustrating the research trends over time related to economic inequality, with specific focus areas and their evolution from 2010 to 2018. Each node (circle) represents a key term used in the literature, and the size of the node often correlates to the term’s prominence within the dataset. The colors of the nodes indicate the time frame in which the terms were most prominent, following the color gradient from blue (earlier years) to yellow (later years).

1. Early Focus (Blue Nodes, circa 2010)

   Early in the decade, the focus was strongly centered on "income inequality," "rural income inequality," and the broader conceptual discussions around "urban rural income inequality" and "regional inequality." These topics likely explored foundational aspects of economic disparities between different geographical areas, with a significant focus on rural vs. urban settings.

2. Mid-Decade Shift (Green Nodes, around 2014)

   Midway through the decade, the research emphasis appears to
shift towards nuanced areas like "urban inequality" and continues to address "rural urban inequality." This might indicate a deeper exploration into specific factors contributing to inequality or a response to evolving economic policies and their impacts. The presence of terms like "rural poverty" and "rural resident" suggests ongoing concerns with rural issues, but with possibly new methodologies or data.

3. Recent Trends (Yellow Nodes, circa 2018)

By the latter part of the decade, newer terms like "socioeconomic inequality," "health," and "child" begin to emerge in a more prominent yellow, indicating a broadening of the research to include the effects of economic inequality on health and the status of children. This suggests an interdisciplinary approach, linking economic disparities to health outcomes and social conditions, reflecting a more holistic view of inequality.

4. Geographic Specificity

There is a visible presence of research focused on specific regions, notably "urban China," which aligns with the significant socio-economic transformations and policy shifts occurring in China during this period. This indicates a strong geographical focus in the research community on how rapid economic development and urbanization in China are impacting regional and urban-rural inequalities.

The third figure is another bibliometric density map created using VOSviewer, focusing on the distribution of research intensity across different themes related to economic inequality. In these maps, the color intensity (brightness) typically
indicates the concentration of research activity or the density of topics within the field; brighter areas represent more heavily researched topics, while less bright or darker areas indicate less focus or emerging areas within the field.

The less bright areas in the map represent peripheral or emerging themes within the broader research on economic inequality. These could be newer topics that have begun to gain academic attention but are not yet as heavily studied as the central themes. They may also represent niche areas that are critical to understanding specific aspects of inequality but do not have a wide scope of literature. These less bright areas could also suggest potential for future research. Because these topics are not as densely covered, they may offer unique insights or new perspectives that could contribute to a more comprehensive understanding of economic inequality. Exploring these areas might reveal unaddressed questions or underexplored relationships between economic factors and social outcomes.

Sometimes, less bright areas in bibliometric maps may also indicate research that is highly specific, such as studies focused on particular demographic groups, regions, or even specific policies that have not been widely studied. For instance, if there is a faint area around terms like "rural resident" or "economic reform," it might suggest that detailed studies on the impacts of economic reforms on rural residents are relatively scarce.

Researchers interested in contributing novel findings or filling gaps in the literature might find it strategically advantageous to focus on these less bright areas. By targeting underexplored topics, they can potentially make significant contributions to the field and help expand the scope of knowledge on economic inequality. Moreover, funding agencies and academic institutions might also be interested in supporting research in these less saturated areas to encourage diversity in research topics and approaches within the field of economic inequality.

Figure 4. Author Collaboration Visualization

Source: Data Analysis, 2024
This last figure is a co-authorship network visualization from VOSviewer, highlighting various clusters of researchers engaged in the study of economic inequality or related areas. Each cluster, differentiated by color, represents a group of researchers who frequently collaborate, indicating different research teams or networks possibly focusing on distinct sub-themes or specializations within the broader field. For example, the red cluster featuring researchers like "Kanbur, R," "Zhang, X," and "Wang, X," suggests a well-defined, possibly more specialized group. Similarly, the blue cluster with "Liu, Z" and "Li, X," and the green cluster with "Srivastava, S" and "Patel, R," signify other collaborative groups that may explore different aspects or methodologies of the topic. Node sizes, which likely correlate with the number of publications or the prominence of the researchers, help identify key figures in each group, such as "Kanbur, R" in the red cluster, who appears central to those collaborations. This network not only reveals the main contributors and their connections but also suggests geographical or institutional ties that facilitate these collaborations. Moreover, the visualization provides insights into how information and influence flow within the academic community focused on economic inequalities, highlighting central figures and potential areas for new collaborative efforts.

5. CONCLUSION

The bibliometric analyses explored through various VOSviewer visualizations offer insightful revelations into the dynamics of research on economic inequality. Thematic clusterization reveals a robust interconnection between core areas like income inequality, regional disparities, and socioeconomic impacts, illustrating the multifaceted nature of this field. Temporal trends in the research highlight a significant evolution from foundational discussions of income disparities to more nuanced examinations of socioeconomic impacts, indicating a broader and more holistic approach to studying inequality over recent years. These analyses also identify less explored areas which present fertile ground for future investigations, particularly in under-researched or emerging themes that could potentially yield substantial contributions to the discourse. Furthermore, the analysis of author collaborations underscores the importance of academic networks and key researchers in driving the field forward, revealing both well-established groups and potential opportunities for new collaborative efforts. Collectively, these insights not only underscore the complexity and depth of research on economic inequality but also spotlight strategic directions for future scholarly endeavors.
REFERENCES


Vol. 02, No. 06, June 2024: pp. 921-932