



Bibliometric Analysis on Economic Development in Cities

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Abstract: A bibliometric analysis has been conducted to contextualize the research on economic development in urban areas and clarify its scholarly purpose. Data were retrieved from the Scopus database, covering publications from 1973 to May 2024, using the keywords “Economic Development” and “City,” resulting in the identification of 475 documents for analysis. The findings reveal longitudinal trends in the literature on economic development in cities, demonstrating a significant upward trend since 2000, interspersed with fluctuations. The study examines various aspects, including publication types, subject areas, leading publishing platforms, global perspectives, organizational contributions, prominent authors, and thematic regions, providing a comprehensive overview of the scholarly engagement with this domain. The dynamic interplay between academic inquiry and contextual factors is underscored, advocating for continued scholarly vigilance and adaptive methodologies to effectively navigate the evolving discourse on urban economic development. The insights gained contribute to a nuanced understanding of the interdisciplinary nature of urban economic development research, highlighting the importance of diverse publication formats, interdisciplinary collaboration, and international knowledge exchange in addressing complex urban challenges and fostering sustainable urban futures.

Keywords: Bibliometric analysis; Cities; Economic development; Urban development; Urban studies

1 Introduction

Urban development and economic growth are intricately intertwined, shaping the trajectory of cities worldwide [1]. As cities evolve into epicenters of economic activity, understanding the dynamics of economic development within urban settings becomes paramount [2]. Economic development in cities encompasses a complex interplay of factors, ranging from infrastructure investment to entrepreneurial ecosystems, from social equity to environmental sustainability [3]. Exploring these dynamics not only illuminates the forces propelling urban economies forward but also underscores the challenges and opportunities inherent in fostering inclusive and sustainable urban development.

Despite the wealth of literature on economic development and urbanization, certain gaps persist in our understanding of this multifaceted phenomenon. While numerous studies have examined economic development from macroeconomic perspectives, there remains a need for nuanced analyses that delve into the micro-level intricacies of urban economic dynamics. Moreover, the literature often overlooks the interdisciplinary nature of urban development, neglecting to integrate insights from diverse fields such as social sciences, environmental studies, and engineering.

In light of these gaps, there is a pressing need to conduct comprehensive bibliometric analyses to map the landscape of economic development research within cities. By synthesizing existing literature, identifying trends, and uncovering research priorities, such analyses can inform future scholarly endeavors and policy interventions aimed at fostering sustainable and inclusive urban economies.

The primary objective of this study is to conduct a bibliometric analysis of economic development research within cities. By leveraging the extensive repository of the Scopus database, this analysis aims to: (1) Identify longitudinal trends in publications related to economic development in cities. (2) Explore the distribution of publication types and subject areas within this thematic domain. (3) Investigate the geographical distribution of research contributors and organizational affiliations driving scholarly discourse on urban economic development. (4) Examine prominent

themes and emerging research areas to elucidate current research trajectories and identify future directions for scholarly inquiry.

The subject of urban economic development is complex and far-reaching, touching on everything from infrastructure investment to entrepreneurial ecosystems to social equity and environmental sustainability. Even though there is an abundant literature method available, several reasons justify why bibliometric analysis becomes necessary. First, in identifying research gaps, the macroeconomic part is well catered to in the existing literature, much less so if we look at micro-level complexities. Bibliometric analysis can systematically identify these gaps by mapping the current landscape and pointing out areas that need more research. The second is interdisciplinary integration. City economic development is an intersecting field of study, touching on social sciences, environmental studies, engineering, and others. Current research may need to draw more from these related disciplines. The depth of interdisciplinary collaboration and how it may be improved can be observed through the bibliometric analysis process. Third, urban economic development is dynamic, with trends and hotspots continually shifting. Bibliometric analysis can trace these longitudinal patterns and provide a historical view of how the research focus has evolved or will evolve. Lastly, information on policy/practice. However, contemporary and detailed information on which policymakers and metropolis organizers rely is not offered. By synthesizing existing research and using bibliometric analysis and finding new emerging themes, we can provide insights into how policies and practices.

Using a large dataset from the Scopus database, this study surveys research on economic development in cities. This involves looking at types of publications, subjects, and the locations where studies have been contributed. Through a systematic review of publications between 1973 and 2024, this study will unveil longitudinal trends, shedding light on how interest in urban economic development has shifted. This can help identify entire periods of high research output and critical moments in the field. The study will determine the leading themes and topics from urban economic development literature. Thematic findings Analysis of the themes enables future research to benefit from identifying current emphasis and potential novel trajectories for scientific investigation.

This study will offer a comprehensive overview of urban economic development research internationally. It does this by examining the geographic distribution of author participation and institutional affiliation, which gives insights into regional disparities and global patterns in academic collaboration. The study, therefore, offers a more holistic understanding by mapping linkages within and between sectors.

This study should provide valuable insights for policymakers, urban planners, and academic researchers. It adds to previous literature by offering a more nuanced view of the interdisciplinary nature of urban economic development, informing policy interventions, and linking planning practices with academic research to create sustainable and inclusive economies.

2 Methodology

2.1 Data Collection and Search Strategy

The data for this bibliometric analysis was collected from the Scopus database, spanning from 1973 to May 2024. The search was conducted using the “Search within Article Title” feature with the keywords “Economic Development” and “City”, resulting in the identification of 475 documents relevant to the study.

The Scopus database was selected because of its extensive coverage in many disciplines, providing a broad and multi-dimensional view of the economic development of cities for this bibliometric analysis. Scopus for bibliometric studies, Scopus is the most robust system in terms of the breadth of indexing and other citation tracking and analysis features. This study chose the search terms Economic Development and City to be broad enough to locate articles directly related to what this project is looking at. Therefore, this targeted search approach ensures a comprehensive dataset for analysis, including studies from multiple perspectives on various aspects of economic development within urban settings.

2.2 Publication Trends Analysis

The longitudinal trends in publications pertaining to “Economic Development in City” were analyzed to understand the evolution of scholarly engagement in this thematic domain [4]. The analysis commenced with the earliest entry in 1973 and examined fluctuations over time, identifying notable inflection points and discernible trends. Figures depicting publication trends were sourced from Scopus.com to visualize the trajectory of scholarly output.

2.3 Distribution of Publication Types

The distribution of publication types within “Economic Development in Cities” research was examined to delineate prevalent modes of scholarly dissemination. Hierarchical analysis was conducted to ascertain the predominance of article publications in peer-reviewed journals, followed by book chapters, conference papers, and other publication formats [5]. Data for this analysis was sourced from Scopus.com (2024).

2.4 Distribution of Subject Areas

The distribution of subject areas within “Economic Development in Cities” research was scrutinized to elucidate the interdisciplinary nature of scholarship in this field. Various disciplinary domains contributing to urban economic development research were identified, highlighting the diverse lenses through which this thematic domain is explored [6].

2.5 Prominent Publishing Platforms

To understand the key venues shaping academic dialogue, the leading publishing platforms driving scholarly discourse in “Economic Development in Cities” were identified. A hierarchical analysis was conducted to delineate prominent journals in this thematic domain, showcasing their significance in catalyzing scholarly inquiry and dissemination [7]. Data regarding the top publishing platforms was obtained from Scopus.com (2024).

2.6 Geographical Distribution of Research Contributors

The geographical distribution of research contributors shaping the discourse on “Economic Development in Cities” was examined to highlight regional dynamics and global research landscapes. A hierarchical analysis was conducted to identify leading countries regarding research output, underscoring their contributions to urban economic development scholarship [8]. Data for this analysis was sourced from Scopus.com (2024).

2.7 Organizational Landscape of Research Contributors

The organizational landscape of research contributors driving the discourse on “Economic Development in Cities” was scrutinized to identify key academic entities shaping scholarly inquiry. A hierarchical analysis was conducted to delineate leading research organizations and showcase their contributions to urban economic development scholarship [9]. Data for this analysis was obtained from Scopus.com (2024).

2.8 Scholarly Contributions of Leading Authors

The scholarly contributions of leading authors shaping the discourse on “Economic Development in Cities” were examined to identify prolific researchers and their impact on the field. A hierarchical analysis was conducted to ascertain the publication output of individual authors, highlighting their significant contributions to advancing knowledge within this domain [10]. Data for this analysis was sourced from Scopus.com (2024).

2.9 Thematic Areas Analysis

Thematic areas within “Economic Development in Cities” research were identified using VOSviewer version 1.6.19 to visualize clusters of related research themes. Different colors were used to represent distinct thematic clusters, with each cluster encompassing a range of research topics. The analysis provided insights into prevalent themes and emerging areas of research interest within the field. Data for this analysis was visualized using VOSviewer version 1.6.19.

2.10 Definition and Measurement of Bibliometric Indicators

Bibliometric indices were identified and calculated to offer a detailed account of publishing activity in urban economic development. First, publication count. The primary metrics were the number of publications. The quantity of documents released within the given timeframe was analyzed about trends obtained over time. Second, collaboration patterns. Measured by studying the co-authorship networks to find meaningful collaborations between authors, affiliations, and countries. Third, thematic clusters. Uncovered with VOSviewer - an application designed for constructing and visualizing bibliometric maps that help make the relationships between research topics visible inside a dataset. Some of the above indicators were extracted and analyzed through tools available within the Scopus database along with VOSviewer for a comprehensive bibliometric analysis.

3 Results

3.1 Longitudinal Trends in Publications Related to “Economic Development in Cities”

The present analysis scrutinizes the longitudinal trends in publications concerning economic development in cities, leveraging the extensive repository of the Scopus database. Commencing with the inaugural entry in 1973, the study delineates a compelling narrative of evolving scholarly engagement with this thematic domain. Despite fluctuations, the overarching trajectory reveals a discernible uptrend punctuated by notable inflection points.

The trajectory of publications, as depicted in Figure 1, unfolds a nuanced narrative that mirrors broader socio-economic dynamics. The dataset, starting from its inception in 1973, reveals a steep decline leading to zero publications in 1999, which could be indicative of transient shifts in research focus or methodological frameworks. However, the subsequent resurgence since 2000 marks a paradigmatic shift, with publications witnessing a relentless

ascent until 2021, reaching a peak of 38 publications. This sustained growth echoes the escalating urbanization trends, globalization imperatives, and attendant scholarly interest.

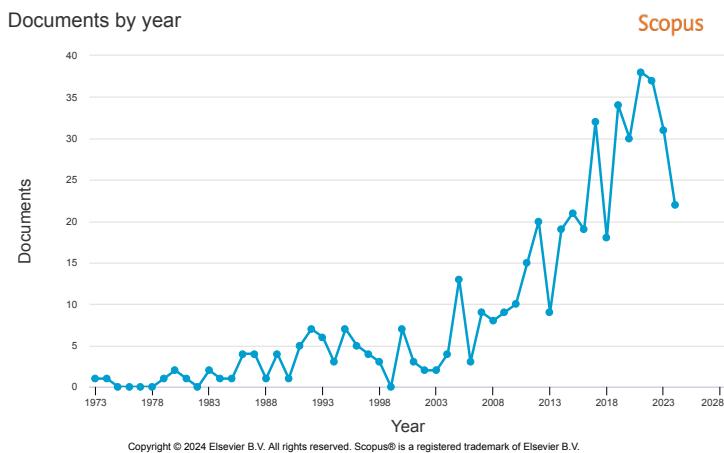


Figure 1. Publication trends about economic development in cities

Source: Scopus.com (2024)

The dataset highlights several inflection points, notably the marginal decline to 37 publications in 2022 and a more pronounced downturn to 31 publications in 2023. These inflection points demand careful interpretation, as they reflect the multifactorial determinants influencing scholarly production. Plausible explanations include macroeconomic fluctuations, evolving research priorities, and perhaps, thematic saturation necessitating novel scholarly avenues.

The observed trends underscore the dynamic interplay between scholarly inquiry and contextual contingencies. The surge post-2000 aligns with burgeoning urbanization and accompanying challenges and opportunities, catalyzing heightened scholarly engagement. Conversely, recent downturns may signal saturation effects or perturbations induced by extraneous factors such as the global COVID-19 pandemic, which disrupted research ecosystems. Moreover, the incremental decline in 2022, followed by a more steep downturn in 2023, intimates potential fatigue or redirection of scholarly focus, necessitating introspection and adaptive research paradigms.

The analysis unveils a compelling trajectory of scholarly interest in economic development in cities, underscored by a persistent uptrend, albeit punctuated by recent fluctuations. These fluctuations, while reflective of broader socio-economic vicissitudes, underscore the imperative of adaptive research agendas and nuanced interpretation. This study advocates for sustained scholarly vigilance and adaptive methodologies to effectively navigate the evolving contours of urban economic development discourse.

3.2 The Distribution of Publication Types and Subject Areas Within the Thematic Domain

This analysis delves into the distribution of publication types within “Economic Development in Cities” research, elucidated through Figure 2. By dissecting the prevalence of diverse publication formats, this examination sheds light on the predominant vehicles through which scholarly discourse in this field is disseminated.

Figure 2 delineates a hierarchical distribution of publication types, with articles commanding the lion’s share at 71.4%. This dominance underscores the importance of articles in peer-reviewed journals as the preferred mode of scholarly communication within the ambit of “Economic Development in Cities.” Following articles, book chapters emerge as the second most prevalent format, comprising 10.9% of the total publications. This highlights the significance of comprehensive, in-depth analyses often encapsulated within book chapters. Concurrently, conference papers constitute a noteworthy proportion at 10.7%, indicative of the pivotal role played by academic conferences in catalyzing scholarly exchange and dissemination. Another publication encompasses a collection of formats, including books, reviews, errata, notes, editorials, and retractions. While individually constituting minor proportions, collectively, they contribute to the diverse tapestry of scholarly output within “Economic Development in Cities” research.

The prominence of articles in peer-reviewed journals as the predominant publication type underscores the imperative of rigorous empirical inquiry and scholarly synthesis within the field. Articles, characterized by their depth, rigor, and capacity for nuanced argumentation, serve as the cornerstone of academic discourse, facilitating the advancement of knowledge and the delineation of theoretical frameworks. Conversely, the prevalence of book chapters reflects the propensity for comprehensive, expansive treatments of thematic domains within edited volumes, often catering to interdisciplinary audiences and affording multifaceted perspectives. The substantial representation

of conference papers underscores the catalytic role played by academic conferences in fostering scholarly exchange, networking, and collaborative endeavors, thereby enriching the discourse on “Economic Development in Cities.”

The analysis of Figure 2 elucidates a nuanced panorama of publication types within “Economic Development in Cities” research. While articles reign supreme, book chapters and conference papers constitute significant conduits for scholarly dissemination and knowledge generation. The collection of other publication formats further enriches the scholarly tapestry, contributing to the multifaceted discourse surrounding urban economic development. This examination underscores the importance of diverse publication formats in facilitating comprehensive, interdisciplinary engagement and advancing understanding within this critical domain.

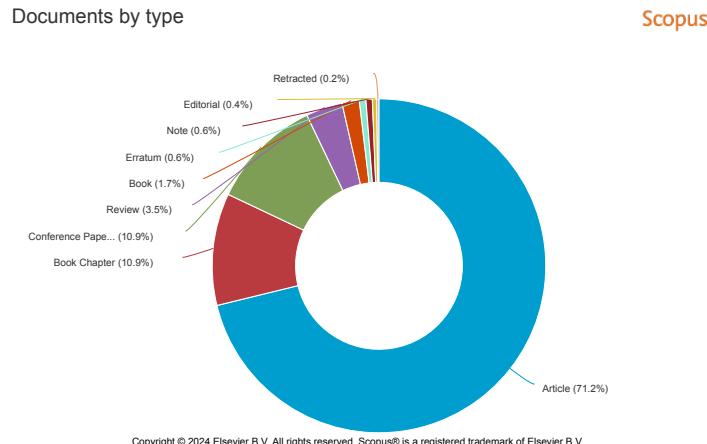


Figure 2. Publication by types

Source: Scopus.com (2024)

This analysis scrutinizes the distribution of subject areas within “Economic Development in Cities” research, elucidated through Figure 3. By delineating the prevalence of diverse disciplinary domains, this examination offers insights into the interdisciplinary nature of scholarship in this field and the multifaceted lenses through which urban economic development is explored.

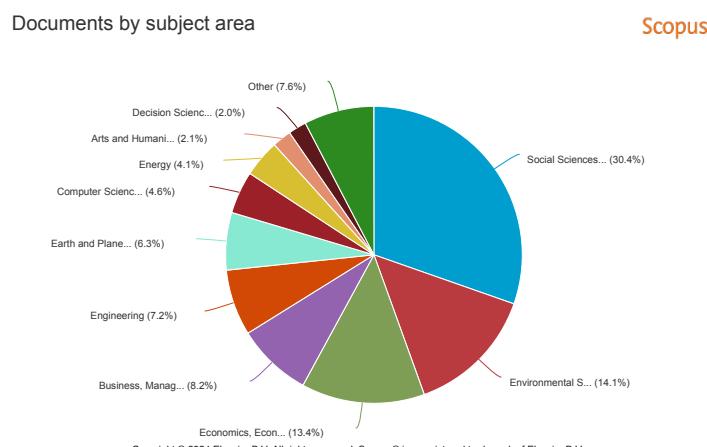


Figure 3. Publication by subject area

Source: Scopus.com (2024)

Figure 3 unveils a diverse landscape of subject areas engaged in “Economic Development in Cities” research. Social Science is the preeminent domain, commanding the most significant share at 30.4%. This underscores the foundational role played by social science methodologies and perspectives in unpacking the intricate socio-economic dynamics underpinning urban development paradigms. Following Social Science, Environmental Science assumes prominence, comprising 14.3% of the total publications. This highlights the growing recognition of the interplay between urbanization, environmental sustainability, and ecological resilience, underscoring the imperative of interdisciplinary approaches in urban planning and policy formulation.

Economics, Econometrics, and Finance constitute another significant domain, contributing 13.6% of the publications. This underscores the centrality of economic analyses and financial modeling in elucidating urban development

trajectories and crafting evidence-based policy interventions. Business, Management, and Accounting, alongside Engineering, represent complementary domains, contributing 8.3% and 7% of the total publications, respectively. Their contributions underscore the nexus between entrepreneurial ecosystems, infrastructure development, and economic vitality within urban settings.

Beyond traditional disciplinary boundaries, Figure 3 delineates the engagement of diverse domains in “Economic Development in Cities” research. From Earth and Planetary Sciences to Computer Science, Energy, and Arts and Humanities, each domain offers unique insights and methodological approaches to understanding and addressing urban economic development’s complex challenges and opportunities.

The distribution of subject areas depicted in Figure 3 underscores the interdisciplinary nature of “Economic Development in Cities” research, necessitating holistic and integrative approaches to problem-solving. The prominence of Social Science reflects the recognition of cities as socio-economic organisms shaped by intricate networks of human interactions, cultural dynamics, and institutional frameworks. Concurrently, the representation of Environmental Science underscores the imperative of sustainability and resilience in shaping urban futures amidst mounting ecological pressures.

Figure 3 presents a nuanced panorama of subject area distribution within “Economic Development in Cities” research, underscoring the interdisciplinary nature of scholarly inquiry in this domain. From social science to environmental science, economics, engineering, and beyond, each disciplinary lens offers unique insights and methodological tools to unravel the complexities of urban economic development. This analysis not only highlights the importance of interdisciplinary collaboration but also inspires and motivates the academic and professional community to continue cross-fertilization of ideas, fostering innovative solutions and inclusive urban futures.

This analysis scrutinizes the prominent publishing platforms driving scholarly discourse in “Economic Development in Cities,” as depicted in Figure 4. By delineating the leading journals in this thematic domain, this examination provides insights into the dissemination landscape and the key venues shaping academic discourse on urban economic development.

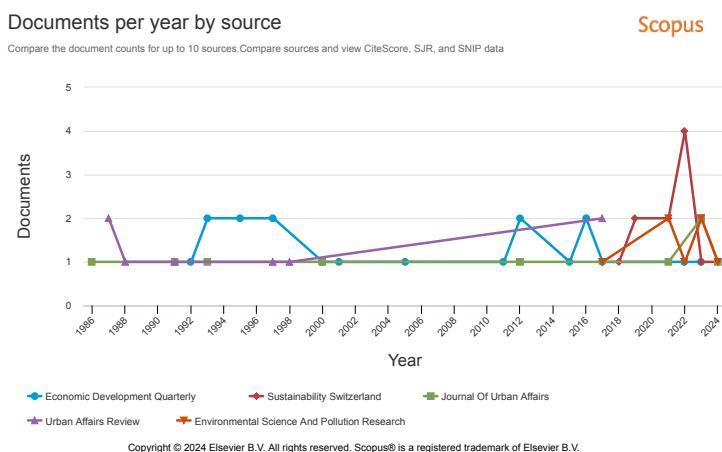


Figure 4. Top platforms

Source: Scopus.com (2024)

Figure 4 elucidates a hierarchical distribution of publishing platforms, with *Economic Development Quarterly* claiming the premier position. This underscores the pivotal role of *Economic Development Quarterly* as a cornerstone publication, catalyzing scholarly inquiry and facilitating the dissemination of cutting-edge research on urban economic development. Following closely, *Sustainability Switzerland* emerges as the second most prominent platform, reflecting the growing emphasis on sustainability paradigms within urban planning and economic development discourse.

The *Journal of Urban Affairs* secures the third position, underscoring its significance as a leading forum for interdisciplinary scholarship on urban issues, including economic development, governance, and social equity. *Urban Affairs Review* follows closely in the fourth position, highlighting the prominence of journals specializing in urban studies and policy analysis. *Environmental Science and Pollution Research* rounds off the top five, highlighting the interdisciplinary nature of urban economic development research, focusing on environmental sustainability and pollution mitigation strategies.

The prominence of *Economic Development Quarterly* as the leading publishing platform underscores its pivotal role in shaping scholarly discourse and setting the agenda for research in “Economic Development in Cities”. Its rigorous editorial standards and focus on empirical research make it a premier outlet for scholars and practitioners

alike. *Sustainability Switzerland*'s ascendancy reflects the growing recognition of sustainability imperatives in urban development paradigms, underscoring the interdisciplinary nature of contemporary urban scholarship.

Figure 4 elucidates a nuanced panorama of leading publishing platforms driving scholarly discourse in "Economic Development in Cities" research. From *Economic Development Quarterly* to *Sustainability Switzerland, Journal of Urban Affairs, Urban Affairs Review*, and *Environmental Science and Pollution Research*, each platform offers unique perspectives and thematic foci, enriching the scholarly tapestry and fostering interdisciplinary dialogue. This analysis underscores the pivotal role of publishing platforms in shaping academic discourse and advancing understanding in the critical domain of urban economic development.

3.3 The Geographical Distribution of Research Contributors and Organizational Affiliations

This analysis delves into the geographical distribution of research contributors shaping the discourse on "Economic Development in Cities", as depicted in Figure 5. By delineating the leading countries regarding research output, this examination provides valuable insights into the global landscape of urban economic development scholarship and the regional dynamics underpinning research production.

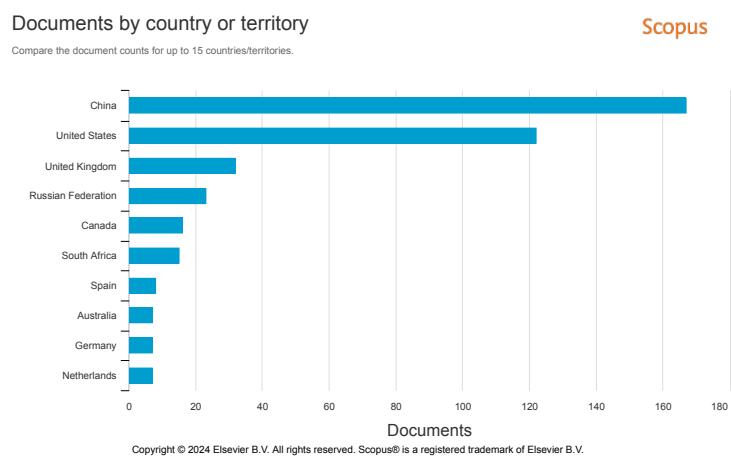


Figure 5. Publication by country

Source: Scopus.com (2024)

Figure 5 elucidates a hierarchical distribution of research contributor nations, with China claiming the top position. This underscores China's emergence as a formidable force in urban economic development research, propelled by its rapid urbanization, economic growth, and investments in research and innovation. Following closely, the United States occupies the second position, reflecting its longstanding leadership in urban studies and economic research, bolstered by robust academic institutions and research infrastructure.

The United Kingdom secures the third position, underscoring its historical legacy and continued prominence in shaping urban development paradigms through scholarly inquiry and policy interventions. The Russian Federation follows in the fourth position, indicative of its growing engagement with urban economic development issues amidst evolving socio-economic landscapes. Canada and South Africa occupy the fifth and sixth positions, respectively, highlighting their contributions to the global discourse on urban development in diverse geographical contexts.

Spain, Australia, Germany, and the Netherlands collectively occupy the seventh, eighth, ninth, and tenth positions, underscoring the diverse continental representation within the top echelons of research contributors. Each nation brings unique perspectives, methodologies, and empirical contexts to bear on studying Economic Development in Cities, enriching the global discourse, and fostering cross-cultural exchange and collaboration.

The prominence of China and the United States as leading research contributors reflects the evolving geopolitical dynamics and economic transformations shaping the global research landscape. Their substantial research output underscores the significance of urban economic development issues within national research agendas and underlines the imperative for international collaboration in addressing complex urban challenges.

Figure 5 offers insights into the geographical distribution of research contributors shaping the discourse on economic development in cities. From China and the United States to the United Kingdom, the Russian Federation, Canada, and beyond, each nation brings unique perspectives and contributions to studying urban economic development, enriching the global scholarly tapestry. This analysis underscores the importance of fostering international collaboration and knowledge exchange to address urban development's multifaceted challenges and opportunities.

This analysis scrutinizes the organizational landscape of research contributors driving the discourse on "Economic Development in Cities," as depicted in Figure 6. By delineating the leading research organizations, this examination

offers valuable insights into the institutional dynamics shaping urban economic development scholarship and the contributions of critical academic entities to this field.

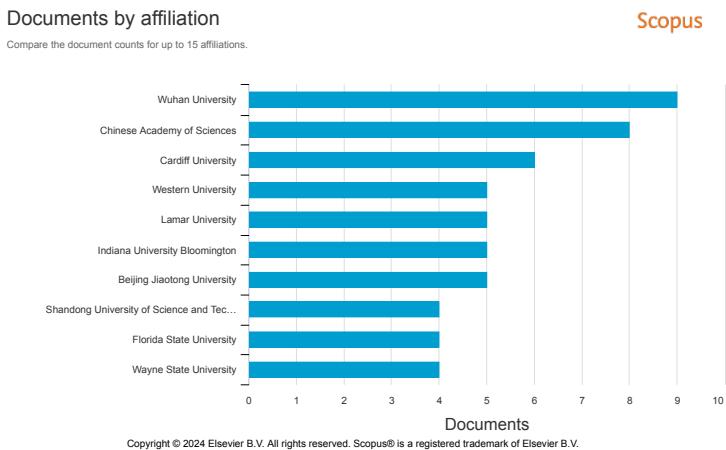


Figure 6. Publication by affiliation

Source: Scopus.com (2024)

Figure 6 reveals a hierarchical distribution of research organizations, with Wuhan University occupying the top position. Wuhan University's prominence underscores its pivotal role in advancing scholarship on "Economic Development in Cities," reflecting its institutional strengths, research capabilities, and strategic emphasis on urban studies and economic research. Following closely, the Chinese Academy of Sciences emerges as a formidable contributor, leveraging its vast research infrastructure and interdisciplinary expertise to address complex urban challenges.

Western University secures the third position, underscoring its contributions to the global discourse on urban economic development from a Canadian perspective. Lamar University, Indiana University Bloomington, and Beijing Jiaotong University collectively occupy the fourth position, reflecting diverse research institutions engaged in urban economic development scholarship across geographical contexts.

Shandong University of Science and Technology, Florida State University, and Wayne State University round out the top nine positions, representing a mix of domestic and international research institutions. Each organization brings unique strengths and perspectives to studying Economic Development in Cities, enriching the scholarly discourse and fostering interdisciplinary collaboration.

The prominence of Wuhan University and the Chinese Academy of Sciences reflects China's growing stature as a hub of urban economic development research and innovation. Their substantial contributions underscore the strategic investments made by Chinese institutions in advancing knowledge and addressing urban challenges. Concurrently, the representation of diverse international and domestic organizations underscores the global nature of urban economic development scholarship and the importance of collaboration across institutional boundaries.

Figure 6 offers insights into the organizational landscape of research contributors shaping the discourse on Economic Development in Cities. From Wuhan University and the Chinese Academy of Sciences to Western University, Lamar University, and beyond, each organization plays a crucial role in advancing understanding and addressing the multifaceted challenges of urban economic development. This analysis underscores the importance of fostering collaboration and knowledge exchange among diverse research institutions to drive innovation and promote sustainable urban development.

This analysis scrutinizes the scholarly contributions of leading authors shaping the discourse on Economic Development in Cities, as delineated in Figure 7. By elucidating the prolificacy and impact of individual researchers, this examination offers valuable insights into the intellectual landscape and key contributors driving research innovation in this field. Figure 7 unveils a hierarchical distribution of authors based on their publication output in "Economic Development in Cities" research. Reese emerges as the most prolific author, with five publications to its credit (see [11–15]). This underscores Reese's significant contributions to the scholarly discourse, reflecting her expertise, research acumen, and sustained engagement with urban economic development themes.

Arku and Feiock occupy the second position, with each author publishing four articles (see [16–19], then [20–23]). Their shared standing highlights the substantial contributions of multiple researchers to advancing knowledge within this domain. Arku and Feiock's collective output underscores scholarly inquiry's collaborative nature and interdisciplinary collaborations' synergistic impact.

The studies of Cleave [16–18], Glebova [24, 25], Mwaniki [26–28], Sands [11–13], Vanderleeuw [29–31], Van-

deleeuw [32–34], and Zhang [35–37] collectively occupy the third position, with each author having published three articles. Their shared position underscores the diverse researchers contributing to the multidimensional discourse on “Economic Development in Cities”, reflecting the plurality of perspectives and methodological approaches embraced within this field.

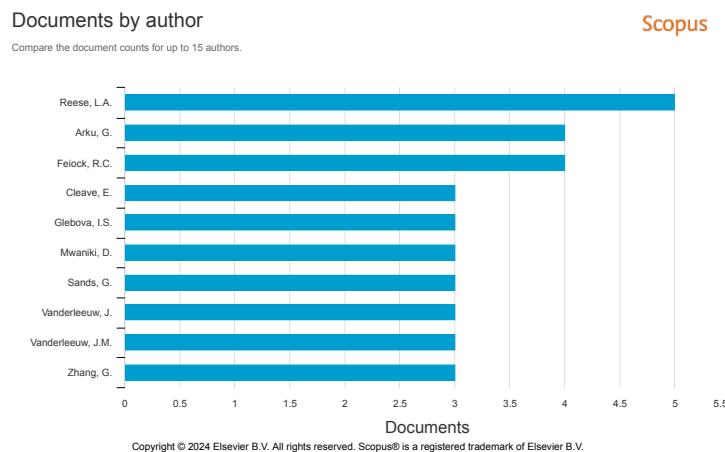


Figure 7. Publication by author

Source: Scopus.com (2024)

The prominence of Reese, Arku, Feiok, and other prolific authors underscores the importance of individual scholarly contributions in shaping the trajectory of research within economic development in cities. Their collective output reflects the depth and breadth of inquiry within this thematic domain, spanning diverse disciplinary perspectives, methodological approaches, and empirical contexts.

Figure 7 offers insights into the scholarly contributions of leading authors driving research innovation in economic development in cities. From Reese to Arku, Feiok, and beyond, each author's prolificacy underscores their significant impact on advancing knowledge and understanding within this critical field. This analysis underscores the importance of recognizing and celebrating individual scholarly contributions while acknowledging the collaborative and interdisciplinary nature of research endeavors in urban economic development.

3.4 Prominent Themes and Emerging Research Areas

The bibliometric analysis conducted using VOSviewer version 1.6.19 (Figure 8) reveals five distinct thematic clusters pertaining to research on “Economic Development in Cities.” Each cluster is delineated by a unique color, indicating thematic cohesion and differentiation. Cluster 1 is marked by themes in red, Cluster 2 by themes in green, Cluster 3 by themes in blue, Cluster 4 by themes in olive green, and Cluster 5 by themes in purple or lavender.

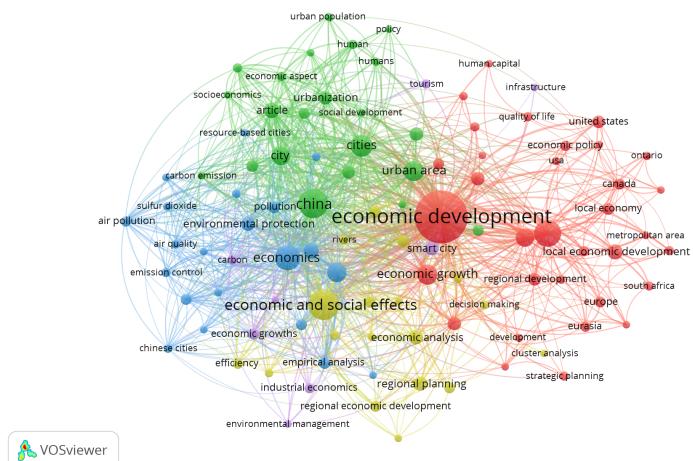


Figure 8. Network Visualization

Source: VOSviewer version 1.6.19 (2024)

Cluster 1, identified by the red color theme, encompasses a spectrum of themes central to economic development discourse, including business development, development strategy, economic development, economic growth, economic planning, economic policy, employment, globalization, human capital, industrial development, local economic development, metropolitan area, quality of life, regional development, socioeconomic conditions, sustainability, urban development, urban economy, urban growth, urban planning, and several other themes. This cluster represents a comprehensive array of topics encapsulating the multifaceted dimensions of economic development within urban contexts.

The substantive implications of this result are that the prevalence with which economic development themes are represented emphasizes cities as key levers and stakeholders in the (innovative) global economy. It leveraged the insights to identify how scholars and policymakers can leverage those in Cluster 1 for strategies that will support sustainable economic development, urban resilience, and inclusive growth.

Cluster 2, characterized by the green color theme, focuses on themes related to environmental sustainability and socio-economic development. Key themes within this cluster include carbon emissions, cities, economic aspects, gross domestic product, gross national product, industry, policy, land use, social development, socio-economic development, urban area, urban population, urbanization, and several other themes. The thematic coherence within this cluster underscores the interconnectedness between environmental considerations and socio-economic progress within urban settings, highlighting the imperative of sustainable development paradigms.

This result suggests that policymakers may use Cluster 2 as a base for implementing comprehensive and systemic (urban) policies toward supporting green infrastructure development efficiency and resilience. This focus on development, not simply sustainability, but the emphasis being put more and more on socio-economics above environmental sustainability, presents an ideal annex for inter-disciplinary and practice-research integration to face complicated urban challenges successfully.

Cluster 3, denoted by the blue color theme, revolves around themes concerning environmental quality and pollution mitigation strategies. Core themes within this cluster include air pollution, air quality, atmospheric pollution, emission control, environmental economics, environmental policy, environmental pollution, environmental protection, resource-based cities, sustainable development, and several other themes. This cluster underscores the growing recognition of environmental sustainability imperatives in urban development discourse, emphasizing the need for proactive measures to address environmental degradation and promote ecological resilience.

This outcome is paramount, as it provides crucial policy implications for urban fosters in Cluster 3. These implications can help them arrange specific empowerments and set means to improve air quality directly, reinforce environmental preservation policies, and correct urban pollution. The Centre's Theme of Sustainability and Pollution Control underscores the urgency of these findings. The Centre aims to develop novel solutions, processes, and technologies for urban environmental management through research projects focusing on various cities' sustainability issues.

Cluster 4, represented by the olive green color theme, encompasses themes related to economic analysis, efficiency, industrial structure, and regional economic development. Key themes within this cluster include agglomeration, economic analysis, economic and social effects, efficiency, heterogeneity, high-quality economic development, industrial structure, railroad transportation, regional economic development, and several other themes. This cluster reflects economic development research's analytical and empirical dimensions, focusing on factors influencing economic efficiency, industrial dynamics, and regional disparities in economic growth and development.

Consequently, the implications of this finding in insight from Cluster 4 can provide support to policymakers and urban planners dealing with different policy objectives aiming at either promoting balanced regional development patterns (or enabling economic diversification more broadly) across disparate areas spiraling outwards away from floodplains or achieving equity between existing economies as they increasingly clump closer together. The cluster's industrial dynamics orientation allows for research collaborations that can provide a more comprehensive picture of the urban economic system and open avenues for designing policy measures based on empirical evidence.

Cluster 5, distinguished by the purple or lavender color theme, centers on energy utilization, industrial economics, infrastructure, and tourism themes. Key themes within this cluster include carbon, economic growth, energy utilization, environmental management, industrial economics, infrastructure, smart cities, and tourism. This cluster highlights the interplay between energy dynamics, industrial activities, infrastructure development, and tourism promotion in shaping urban economic trajectories and fostering sustainable urban development pathways.

Urban policymakers can use the insights from Cluster 5 to inform their decision-making on investments in smart infrastructure, renewable energy technologies, and sustainable urban mobility solutions. The cluster's approach to energy dynamics and infrastructure development underscores combined approaches that optimize resource use, reduce environmental footprints, and strengthen urban resilience.

The thematic clusters identified through bibliometric analysis play a crucial role in shaping the future of economic development in cities research. They not only highlight established and emerging research themes but also provide a unique perspective on the evolution of scholarly discourse. More importantly, they map out potential areas of future

inquiry and guide policy interventions. By addressing the interplay between economic, environmental, and social dimensions of urban infrastructure, researchers can collaborate with policymakers to shape more inclusive urban futures.

Figure 9 provides a nuanced insight into the temporal evolution of research themes concerning “Economic Development in Cities.” Themes highlighted in yellow signify the latest topics pertinent to research on this subject, often disseminated through prestigious platforms or indexed in Scopus. Conversely, themes shaded in purple or dark colors denote enduring research topics or publications that have been extensively explored by global researchers over an extended period. This visualization underscores the dynamic nature of research interests within the field, ranging from emerging trends to well-established areas of inquiry, and highlights the evolving scholarly discourse surrounding urban economic development.

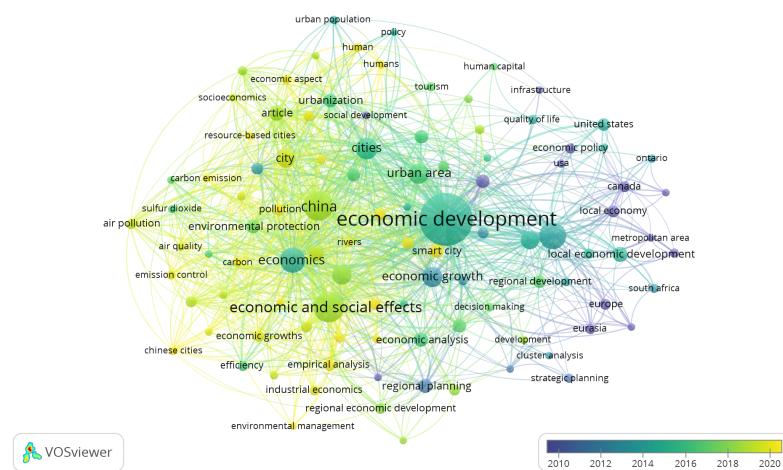


Figure 9. Overlay Visualization

Source: VOSviewer version 1.6.19 (2024)

In Figure 10, the fading blue backgrounds signify research themes that are currently underexplored or receive limited attention. Conversely, themes with thick blue backgrounds indicate areas that have garnered substantial research interest. Additionally, themes with yellow backgrounds, growing progressively thicker, denote topics that have been extensively studied by global researchers. This visualization offers valuable insights into the distribution of research attention across various thematic areas within the realm of “Economic Development in Cities.” It highlights both the gaps in existing literature and the saturation levels of research within specific topics, facilitating a nuanced understanding of the current state of scholarship in this field.

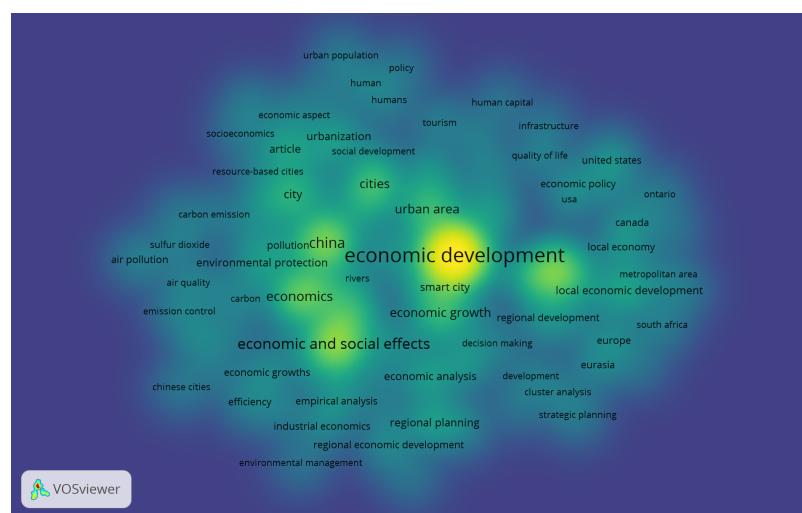


Figure 10. Density Visualization

Source: VOSviewer version 1.6.19 (2024)

4 Discussion

The bibliometric analysis adds a layer of understanding to the evolution, dispersal, and thematic dimensions of economic development research involving “cities.” These results highlight the reciprocal relationship between research and context, showcasing the need for flexible scholarship methods fueled by interdisciplinary collaboration. This study helps build on urban economic development research by identifying notable contributors and the most receptive journal outlets and understanding longitudinal trends within specific subject areas of interest. It calls for continuous scholarly involvement, policy interventions supported by evidence-based research, and collaborative endeavors to address urban challenges in order to strive toward resilient city futures while ensuring inclusivity.

Although this bibliometric review offers valuable insights into the changing research constituency of economic development in cities, it is important to recognize that it is not without its limitations. However, the value of the insights it provides should not be understated.

Most importantly, the analysis is limited to information obtained solely from Scopus. Scopus is a widely used international database that archives numerous scholarly publications; however, it does not include all possible relevant papers (especially non-indexed journals and regional titles with specific approaches concerning context-based urban economic development).

Secondly, the bibliometric method utilized quantitative indicators such as counts of publications and citations and citation indices that highlight where research appears through mapping theorematic clusters. Although these metrics offer a systematic method to quantify scholarly output and thematic change over time, they may not capture critical qualitative dimensions (e.g., the degree of analysis or level of contextual consideration that informs interpretation). In addition, the interpretation of thematic clusters detected by VOSviewer sheds light on prevailing research topics. Clustering approaches are based entirely on keyword co-occurrence patterns, which may oversimplify complex interdisciplinary interactions or overlook nascent and positively valued emerging issues in the academic literature.

Third, geographic and institutional analyses are only as good as the information contained in Scopus regarding author affiliations. Differences in the formatting of author affiliations or errors made during data input mean less precise geographic and organizational attributions, which could mislead conclusions regarding global research contributions.

Nevertheless, this study is intended to enrich the literature on urban economic development by providing an in-depth analysis of research trends, scholarly publication dynamics, and conversational landscapes. Future research must adopt a more comprehensive approach to further its understanding of urban economic development and guide evidence-based policy interventions. This includes using pluralistic data sources and qualitative methodologies that complement bibliometric analyses and tackle other spelled-out challenges in interdisciplinary work.

5 Conclusions

This bibliometric analysis, uniquely powered by the extensive repository of the Scopus database, offers a comprehensive overview of research trends and thematic landscapes in the realm of “Economic Development in Cities.” Through an exploration of publication trends, distribution of publication types, subject areas, prominent publishing platforms, geographical contributors, organizational affiliations, leading authors, and thematic clusters, this study illuminates critical insights into the evolving contours of scholarly engagement with urban economic development.

The trajectory of scholarly publications reveals a persistent uptrend, punctuated by fluctuations that mirror broader socio-economic dynamics. The prominence of articles in peer-reviewed journals as the predominant publication type underscores the imperative of rigorous empirical inquiry and scholarly synthesis within the field. Additionally, the interdisciplinary nature of research, as evidenced by diverse subject areas and collaborative thematic clusters, underscores the complexity of urban economic development challenges and the imperative of holistic problem-solving approaches.

Geographically, China and the United States emerge as leading contributors, reflecting evolving geopolitical dynamics and economic transformations shaping the global research landscape. Their substantial research output underscores the significance of urban economic development issues within national research agendas and, importantly, the imperative for robust international collaboration.

Institutionally, Wuhan University and the Chinese Academy of Sciences exemplify the growing stature of Chinese institutions in advancing knowledge and addressing urban challenges. Concurrently, diverse domestic and international organizations contribute to the global discourse, underscoring the importance of collaboration and knowledge exchange. The prolificacy of leading authors such as Reese, Arku, and Feiok highlights the significance of individual scholarly contributions in shaping research trajectories and advancing understanding of economic development in cities.

Thematic analysis reveals emerging and established themes, ranging from business development and economic growth to sustainability and smart cities. The identification of current and underexplored themes provides valuable in-

sights for future research directions, emphasizing the need for continued scholarly vigilance, adaptive methodologies, and interdisciplinary collaboration.

This study underscores the dynamic nature of scholarly inquiry into economic development in cities, highlighting its significance in addressing complex urban challenges and fostering inclusive, sustainable urban futures. While this analysis provides valuable insights, it has limitations. Future research endeavors should overcome methodological constraints and explore emerging thematic frontiers, thereby contributing to advancing knowledge and formulating evidence-based policy interventions in urban economic development.

Data Available

The data used to support the research findings are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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