

BIBLIOMETRIC ANALYSIS BETWEEN GLOBALIZATION, INFORMATION TECHNOLOGY, AND ECONOMIC GROWTH

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***Abstract.** In the contemporary epoch, globalization, spurred by rapid advancements in information technology (IT), is conjectured to be a significant driver of economic growth. This research embarks on unravelling the nuanced interrelations among globalization, IT, and economic growth through a bibliometric analysis of extant scientific literature. Employing VOSviewer for the bibliometric scrutiny, an exhaustive sample of scholarly articles from Scopus was meticulously examined. The principal objective was to ascertain the thematic nucleus within this academic ambit. The findings accentuate that trade and financial globalization, technological innovations, and economic development are the cardinal themes. Particularly, the analysis sheds light on the convoluted relationships of economic growth intertwined with trade globalization and IT. However, an important observation made is that the dividends of global trade are not equitably distributed across countries globally. As a consequence, while numerous sectors flourish owing to digitization, others wrestle with structural metamorphoses. This inequity, amalgamated with technological progressions like automation and digital transformation, foments escalating sentiments of scepticism, protectionism, and reticence towards globalization among certain scholarly factions, notwithstanding other experts extolling the myriad benefits of the globalization trajectory. The research method's meticulous bibliometric approach, utilizing VOSviewer, has enabled a holistic understanding of the prevalent discourse, thereby providing a robust foundation for future inquiries into this multifaceted interplay.*

***Keywords:** Bibliometric analysis, globalization, information technology, economic growth, digitization.*

***JEL:** F60, O33, O47.*

***UDC:** 338(100)+338.1+004*

Introduction. In the modern era, the triad of globalization, information technology (IT), and economic growth has been pivotal in shaping the economic landscapes of nations. Globalization, which denotes the intensification of cross-border interactions and interdependence among countries, is significantly fueled by the meteoric advancements in IT. These technological innovations have not only erased the erstwhile insurmountable geographical and temporal barriers but have

also catalyzed economic growth by enhancing productivity, fostering innovation, and facilitating access to global markets.

The synergy between globalization, IT, and economic growth has engendered a rich body of academic literature, striving to delineate the multifaceted dynamics among these crucial phenomena. The scholarly discourse encompasses a spectrum of perspectives, ranging from the unequivocal endorsements of globalization and IT as catalysts for economic prosperity to a more critical examination of the associated disparities and discontents.

This research seeks to contribute to this burgeoning field of inquiry by employing bibliometric analysis, a quantitative method used to ascertain the thematic and structural patterns within a specific academic domain. Through the lens of VOSviewer, an assiduous examination of a comprehensive sample of scientific articles sourced from Scopus was undertaken. The primary aim is to discern the core themes and elucidate the intricate relationships among globalization, IT, and economic growth as manifested in the scholarly narrative.

Furthermore, this study endeavours to provide a nuanced understanding of how global trade and technological innovations are intertwined with economic development, and how they collectively impact nations differently. The juxtaposition of flourishing sectors against those grappling with structural shifts paints a complex picture, inviting a deeper exploration of the overarching implications for the global economy and the diverging academic viewpoints surrounding globalization.

This introduction sets the stage for the ensuing bibliometric analysis, where a more granular examination of the academic discourse will be conducted, thereby shedding light on the extant understanding and laying down avenues for future scholarly exploration.

Research methodology: The methodology delineated for this study hinges on a bibliometric analysis, aiming to traverse the scholarly terrain concerning globalization, IT, and economic growth. The process commenced with a comprehensive data collection from Scopus, utilizing precise search parameters encompassing keywords like "globalization", "information technology", and "economic growth." The meticulous data processing followed, ensuring the exclusion of duplicities and irrelevant entries. The crux of the analysis was executed using VOSviewer, a potent tool for bibliometric examination, facilitating the visualization of co-authorship, co-occurrence, and citation networks. This methodological framework enabled a rigorous exploration, casting light on the thematic nucleus, key contributors, and the academic resonance within this domain.

Main results: In the backdrop of accelerating globalization processes over recent decades, the specialized literature has mirrored, in both scope and diversity, the countless facets and implications of this phenomenon. The chapter "Systematic and Bibliometric Analysis of Specialized Literature" is dedicated to the meticulous examination of the literary corpus concerning globalization, between the years 1990 and 2023.

By implementing the VOSviewer analysis tool, we developed a robust methodology aimed at identifying connections between themes, ideas, and approaches in over 1000 academic articles. This allows us to examine the co-occurrence of keywords, isolating those terms that have predominated, appearing at

Within our bibliometric endeavour, we investigated a vast corpus of 1347 articles published over the period 1990-2023, with a primary focus on the theme of "Economic Globalization." This extensive analysis allowed not only the quantification but also the calibration of thematic changes and dominant trends in the specialized literature concerning economic globalization.

Following the analysis of keyword co-occurrence, we identified a series of terms that, recurrent in nature, highlighted the central axes of academic discourse. Dominant terms such as "Investments," "national economy," "trade openness," "industry," "enterprises," "income inequality," "innovation," "efficiency," "international cooperation," and "direct investments" not only underscore the key themes addressed by researchers but also provide valuable insights regarding the interconnections and interdependencies among various aspects of economic globalization.

In the context of a continuously transforming world, driven by economic fluctuations, technological innovations, and geopolitical changes, this persistence and constant renewal of academic interest in economic globalization indicate the continuous and profound relevance of the subject. This also suggests that economic globalization, as a complex phenomenon, required dynamic approaches, with academic reflection evolving in parallel with practical realities.

The results obtained from this bibliometric analysis, therefore, not only quantify but also calibrate the academic contributions within the field, offering a complex panorama concerning the evolution and dominant directions in the research regarding economic globalization.

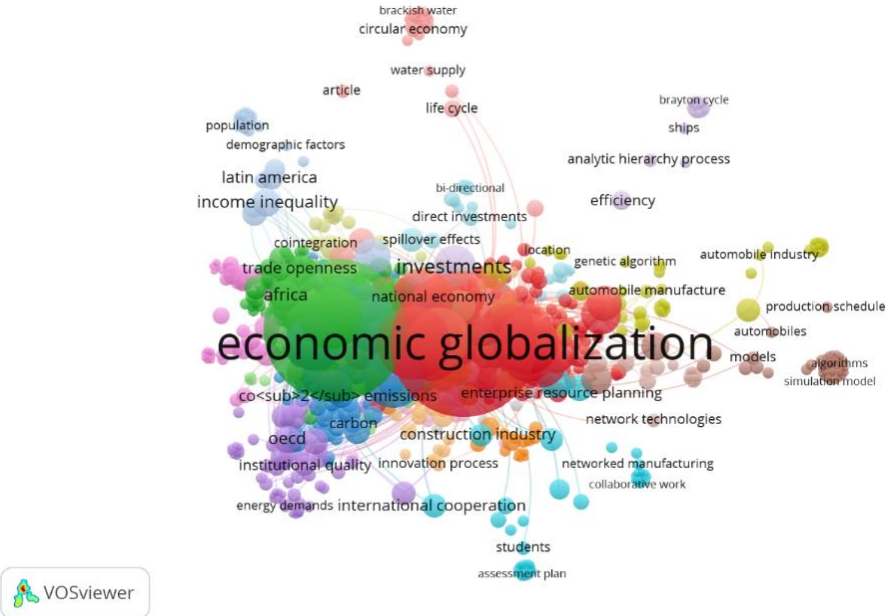


Figure 2 „Co-occurrence of Keywords Specific to the Theme of Economic Globalization”
 Source: Own research in VOSviewer

The cluster derived from the bibliometric examination, focused on the time span 1990-2023, illustrates the academic perseverance and coherence regarding the theme of „Trade Globalization”. The analysis identified approximately 1000 works which, over these decades, have significantly contributed to the shaping and understanding of the phenomenon, from the notable early contributions in 1990 to the recent articles in 2023.

Building on the established foundation from the analysis of the body of work spanning from 1990 to 2023, it becomes imperative to highlight the current state of knowledge within the domain of the thematic intersections between economic, trade, and financial globalization and socio-economic development. In the initial phase, we embarked on a bibliometric analysis utilizing the VOSviewer software, grounded on a comprehensive review of the specialized literature.

For this purpose, we accessed the available articles on the subject matter from the Scopus database. We then conducted a meticulous search for specialized studies published between 2010 and 2020, which contained in their title, abstract, and keywords the essential aspects we aimed to explore in the research project, and are under consideration for the doctoral thesis. The critical terms focused on were “globalization,” “digitalization,” “global integration,” “international trade,” “international investments,” “economic development,” “well-being,” “inequality,” “poverty,” and “employment.” The results obtained from this endeavor are showcased in Figures 3 and 4.

This detailed bibliometric analysis, underpinned by the extensive review of literature, aims to extend the understanding and insight into the dynamics surrounding the multifaceted relationship between globalization (in its economic, trade, and financial facets) and socio-economic development. By employing VOSviewer software for this analysis, an enhanced visualization of the co-occurrence of key terms and the thematic coherence within the specialized discourse is achieved. Moreover, utilizing the Scopus database, known for its extensive repository of academic works, ensures a broad and encompassing outlook on the prevailing academic discussions and emerging trends within the thematic domain. This endeavor significantly contributes to delineating the academic contours and understanding the evolving narratives surrounding the core themes of globalization, digitalization, and socio-economic development.

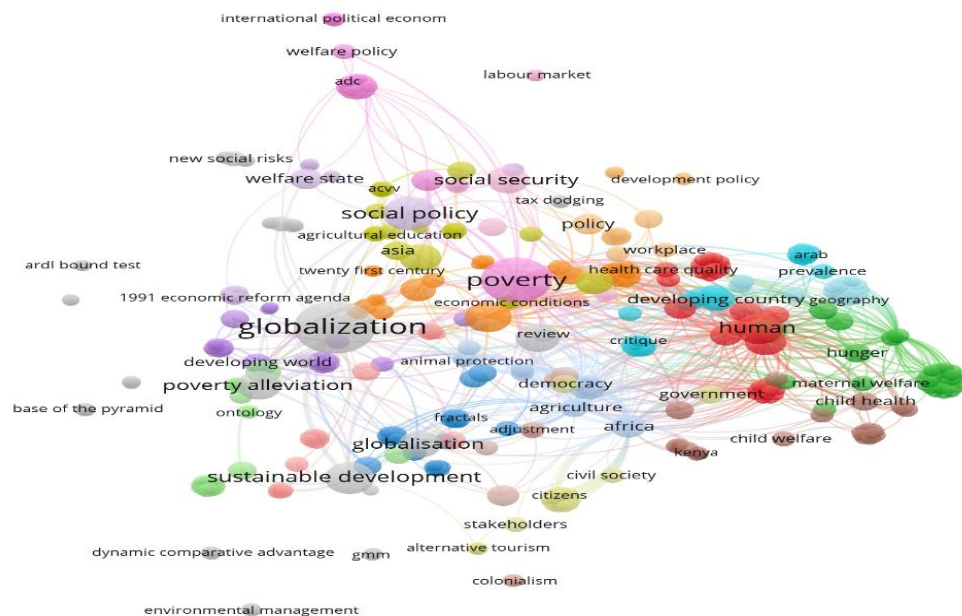


Figure 3 „Co-occurrence of specific keywords addressed in the theme (which are found at least twice in the analyzed articles)”
Source: Own research in VOSviewer

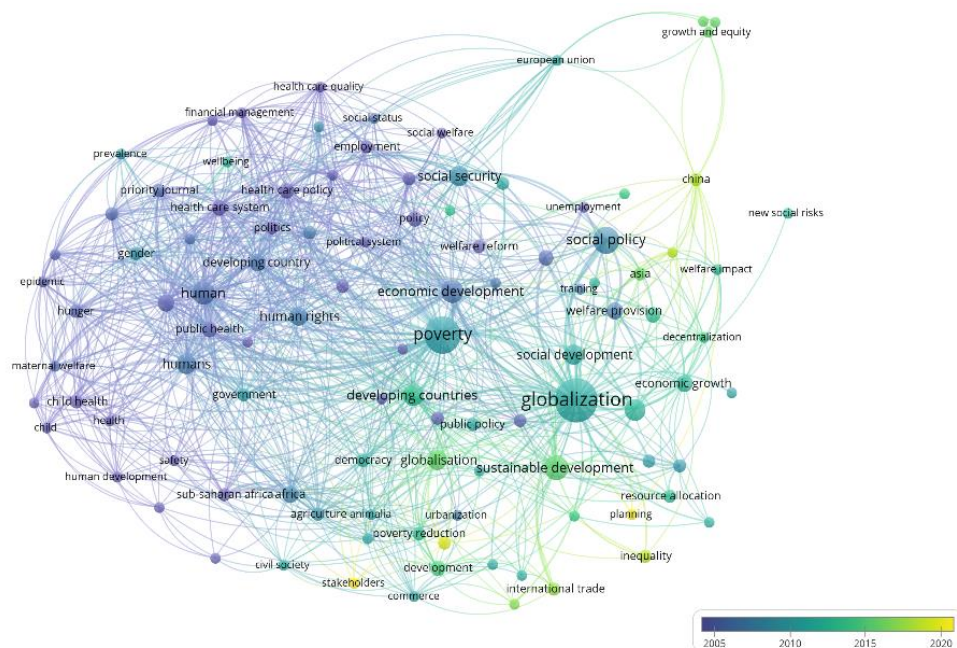


Figure 4 „Co-occurrence of specific keywords addressed in the theme (which are found at least 5 times in the analyzed articles)”
Source: Own research in VOSviewer

Analysing the co-occurrence of keywords that appear at least five times in articles published on the same theme and analysed bibliometrically, it was observed that globalization and poverty remain at the forefront of research, alongside economic growth, sustainable economic development, international trade, financial performance, inequalities, developing countries, and the European Union. Thus, the research undertaken in this project lays down the coordinates of the globalization process, with a focus on trade and financial globalization and its implications on economic development, in an innovative note and through a comprehensive approach at a global level, but also comparatively across geographical areas/groups of countries based on the level of economic development and degree of globalization.

Transitioning towards the theme of interdependence between economic globalization, digitization, and economic growth, it becomes paramount to delve deeper into how these aspects intertwine and influence each other in the contemporary global economy. The emergence and proliferation of digital technologies have significantly accentuated the pace and scope of globalization, facilitating a more integrated and interconnected global economic system. This digital transformation has not only broken down geographical and temporal barriers but has also created new opportunities for economic growth and development.

The synergies between economic globalization and digitization are increasingly being recognized as critical drivers of economic growth. The digitization of trade and financial services, for instance, has enabled more efficient and seamless cross-border transactions, thereby fostering international trade and investment, which in turn, propel economic growth. Moreover, digital platforms and technologies have facilitated the dissemination of knowledge, innovation, and technology across borders, further bolstering economic globalization.

On the flip side, this intertwined relationship also brings forth challenges such as digital divides, data privacy issues, and increased vulnerability to cyber threats which necessitate a rethinking of regulatory frameworks and governance structures both at a national and global level.

Moreover, the bibliometric analysis suggests that academic discourse around these themes is evolving, reflecting the complex dynamics between economic globalization, digitization, and economic growth. This underscores the necessity for a holistic and nuanced understanding of these interactions to better navigate the policy implications and to harness the opportunities presented by the nexus of globalization and digital transformation for fostering economic growth and sustainable development.

Conclusions: The extensive bibliometric endeavor, spanning over three decades from 1990 to 2023, has unveiled the persistence and coherence of academic interest in the theme of globalization, especially emphasizing its economic, trade, and financial dimensions. A meticulous analysis of over 1300 articles revealed the enduring relevance of globalization in the academic discourse, further compounded by the emergence of digital technologies that have significantly reshaped the globalization landscape.

The evolving academic discourse over this period indicates a dynamic interaction between globalization, digitization, and economic growth. Core thematic nodes like “Economic Globalization,” “Trade Globalization,” and “Financial Globalization” emerged prominently, broadening the spectrum of concerns and interests within the academic community. Themes such as sustainable economic development, international trade, financial performance, and inequalities have consistently featured, elucidating the complex and multi-dimensional nature of globalization.

A notable finding is the critical role digital transformation plays in the modern globalization narrative. By facilitating enhanced global integration, international trade, and investment, digital transformation has become a driving force for economic growth. However, it also introduces a new set of challenges including digital divides, data privacy issues, and cybersecurity threats, necessitating updated regulatory frameworks to ensure a balanced and equitable digital globalization.

The analysis also unveils regional disparities and varying impacts of globalization. The differentiated impact of globalization and digitization based on regional and national contexts is evident, especially concerning developing countries and regions such as the European Union. This finding underscores the necessity for nuanced policy approaches to leverage the benefits of globalization and digital transformation, while addressing associated challenges such as income inequalities, poverty, and ensuring sustainable economic development.

Furthermore, the persistence of keywords like poverty, economic growth, international trade, and financial performance in the analyzed articles underlines the fundamental aspects of globalization that continue to dominate the academic discourse. The recurrence of these themes suggests a strong interdependence between economic globalization, digitization, and economic growth, which remains a pivotal area of academic inquiry.

Looking ahead, the continuous evolution of discourse and emerging concerns suggest that there are numerous avenues for future research. A more granular exploration of the nuanced interdependences between economic globalization, digitization, and economic growth across various geographical and developmental contexts will be crucial. Employing comprehensive and comparative approaches can yield richer insights, especially when examining globalization phenomena at a global level and comparatively across different geographical areas or groups of countries.

In conclusion, the detailed bibliometric analysis has provided a robust foundation to understand the multifaceted nature of globalization, its interrelations with digitization, and implications for economic growth. The insights garnered from this study not only quantify and calibrate the academic contributions within the domain but also offer a comprehensive panorama on the evolution and dominant directions in the research concerning economic globalization. This rich academic foundation paves the way for further exploration and policy formulation aimed at harnessing the benefits of globalization and digitalization for sustainable economic development.

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