Quality & Quantity
https://doi.org/10.1007/s11135-026-02701-5

A bibliometric analysis of the trends and topics in global value chain participation research between 2006 and 2024

Zalán Márk Maró[1] · **Attila Jámbor**[1] · **Sándor Kovács**[2] · **Áron Török**[1]

Received: 22 December 2024 / Accepted: 12 March 2026

Abstract
In recent years, there have been notable shifts in global processes and supply chains. Increasing numbers of countries and companies have integrated into global value chains (GVCs), reflecting broader shifts in globalisation and economic interconnectivity. This paper employs an integrated bibliometric approach, including performance analysis, science mapping and network analysis, to a comprehensive dataset of 912 publications on GVC participation (2006–2024). The novelty of the paper lies in systematically mapping the intellectual, thematic and collaborative structures of GVC participation research, offering the first consolidated overview of how the field has evolved over nearly two decades. This review makes a significant contribution by synthesising existing research, including key themes and emerging topics, identifying gaps, and proposing directions for future research. The study highlights the evolution of GVC participation research, revealing thematic shifts over time and the influence of global events such as economic crises, trade conflicts, and the COVID-19 pandemic. Furthermore, the paper identifies leading contributors, impactful publications, and collaborative networks as well as the geographical distribution of research and the dynamics of international collaboration. It underscores the need for research on GVC sustainability, regionalisation, and the impacts of digital transformation as well as provides better understanding on GVCs' evolving role in shaping global trade and economic policy.

Keywords Global value chain · GVC participation · International trade · Globalisation · Supply chain · Bibliometric review

1 Introduction

In recent decades, the global economy and international production networks have undergone significant change and transformation (Du and Wang 2022; Gawande et al. 2015; Johnson 2018). This includes the global economic and financial crisis in 2008–2009 (Bénassy-Quéré et al. 2009; Gawande et al. 2015), the increasing role of geographic proximity resulting in fragmentation patterns in global trade (Johnson 2018), the shock of the Covid-19 pan-

Extended author information available on the last page of the article

Published online: 23 March 2026

demic (Chowdhury et al. 2021; Meier and Pinto 2020), and the impact of trade wars and conflicts between countries (Du and Wang 2022; Mao and Görg 2020). As a consequence, an increasing number of companies are organising their production and services on a global scale, with their activities and value creation occurring in two or more countries (Baldwin and Lopez-Gonzalez 2015; Timmer et al. 2014). In recent decades, the global value chain (GVC) model of production has become the predominant paradigm for understanding how production is structured on a global scale (Baldwin and Lopez-Gonzalez 2015; Coe and Yeung 2015). According to Antràs (2020), GVCs consist of a sequence of production stages, each carried out in different locations, that collectively determine the value of the final good or service. A firm is therefore considered to be part of a GVC when it is involved in producing at least one stage of a product within the chain. Borin and Mancini (2015) refine this definition by distinguishing GVC-related trade from direct trade based on the number of border crossings: while direct trade involves movement across a single border, GVC trade requires at least two.

The combination of advanced information and transport technologies with globalisation has resulted in the unbundling of production into a number of discrete stages and tasks, which are carried out in a variety of countries (Morrison and Pietrobelli 2007; Wang et al. 2021). This has led to a significant increase in the value added to the trade of intermediate goods on a global scale since the 1980s (Kong et al. 2022; Timmer et al. 2014). World trade expanded at nearly twice the rate between 1995 and 2010 compared to the 1980s (Cigna et al. 2022), largely driven by multinational enterprises (MNEs) operating as integrated networks that allocate different stages of production across locations. Through this organisation of production, GVCs enable countries to specialise according to their comparative advantages, thereby increasing overall efficiency in global production systems (Dosi et al. 2022; Maró and Török 2022).

These developments have significant implications for macroeconomic policy. Prior to 2008, the increasing globalisation led to a rise in opportunities for both developed and developing countries to participate in and integrate into global supply chains and trade flows, thereby strengthening connections between distant regions of the world (Feenstra and Hanson 1996; Hummels et al. 2001). Participation in GVCs and international trade is a significant driver of economic growth, productivity gains and development (Fagerberg et al. 2018; Kummritz et al. 2017; Raei et al. 2019). Through these mechanisms, GVC engagement can contribute to higher local incomes, improved employment opportunities, greater economic stability and food security (McMillan et al. 2014; Yanikkaya and Altun 2020). Even countries with limited domestic resources can benefit from global trade through GVCs (Matthess and Kunkel 2020; McMillan et al. 2014). However, a considerable number of economically disadvantaged and developing countries remain unable to fully participate in GVCs and global trade due to deficiencies in their infrastructure and financial resources, a lack of skilled human capital, or the presence of weak institutional systems and political and business environments (Anderson and Valenzuela 2007; Bamber et al. 2014; Mizik et al. 2025).

Since the 2008 global economic and financial crises, the global economy has entered a period often described as ‘slowbalisation’, characterised by the deceleration of globalisation processes (Kandil et al. 2020; Witt 2019). This shift has also affected the structure and geography of GVCs. Recent research documents a gradual move from globally dispersed production networks toward more regionalised and shortened value chains, driven by ris-

ing geopolitical tensions, the US–China trade war, and disruptions caused by the Covid-19 pandemic (Gereffi 2020; Miroudot 2020). The war between Russia and Ukraine has further intensified these pressures, reinforcing the trend toward reconfiguration and localisation of supply chains (Dadush 2023). In response to these successive shocks, GVCs, thus firms, have been forced to adapt, prioritising resilience, redundancy, and risk diversification (Gereffi 2020; Miroudot 2020).

In addition, the field of international trade theory has recently experienced a new wave of growth and evolution, expanding beyond the traditional focus on constant and increasing returns, homogeneous and heterogeneous products, and comparative advantages (Lam 2015; Mansouri 2022). This evolution has introduced new analytical areas such as *trade in tasks or unbundling* and the empirical examination of production fragmentation (Baldwin 2006; Grossman and Rossi-Hansberg 2008). Furthermore, the expansion of digital technologies has also led to the fragmentation of production processes into multiple distinct segments, often spanning several national borders (Baldwin and Lopez-Gonzalez 2015; Timmer et al. 2014). GVC research therefore examines not only trade in final products but also international organisation of tasks and the value added embodied in production flows (Koopman et al. 2014). The growing globalisation of production has led many firms to outsource components, sub-assemblies and other services to suppliers in foreign countries complicating attempts to identify a single geographical "origin" of a product (Baldwin and Lopez-Gonzalez 2015). The theoretical foundations of fragmentation were initially developed by Jones and Kierzkowski (2018) and advanced by authors such as Campa and Goldberg (1997), Feenstra and Hanson (1996), and Yeats (1998). In addition, the methodologies applied in the analysis of GVCs have been developed and refined (Gereffi et al. 2005). The integration of new trade theory, 'new-new trade theory' and the GVC approach was first formalised by Antràs and Helpman (2004).

Despite the growing volume of GVC research, existing (bibliometric) reviews remain limited in scope. Most rely on a single database, cover only earlier time periods, or examine GVCs in a very narrow way (Dai and Xu 2024; Hernández and Pedersen 2017; Johnson 2018; Kano et al. 2020). Moreover, previous studies offer only partial insight into the intellectual structure, thematic evolution and emerging research fronts of the field (Dai and Xu 2024; De Marchi et al. 2017). These gaps highlight the need for a comprehensive and up-to-date bibliometric analysis that integrates Scopus and WoS data and systematically maps how GVC participation research has evolved over time. Thus, this bibliometric review makes a significant contribution to the existing literature. Firstly, this analysis introduces a novel approach by considering GVCs from a comprehensive standpoint. The number of studies on GVCs has recently increased, making it essential to synthesise the existing research. Secondly, the two most comprehensive databases (Scopus and Web of Science (WoS) were integrated, in contrast to the majority of existing bibliometric reviews, which utilise a single database (typically Scopus or WoS). Recent bibliometric reviews show no agreement regarding which database Google Scholar, WoS, and/or Scopus) should be used (Harzing and Alakangas 2016). Current bibliometric research in business studies commonly relies on either WoS (Alonso-Muñoz et al. 2022; Hernández-Perlines et al. 2022; Martín-Navarro et al. 2022) or Scopus (Gupta et al. 2021; Krishen et al. 2021; Misra and Mention 2021), while only a limited number of studies employ both databases simultaneously (Török et al. 2024; Verma and Gustafsson 2020). In this study, both WoS and Scopus were used to capture a broader spectrum of high-quality, peer-reviewed publications, considering the

strengths and limitations of each resource (Mongeon and Paul-Hus 2016) and offering a more comprehensive contribution to the literature.

Thirdly, the most sophisticated analytical tools of bibliometric analysis, namely science mapping and network analysis, were employed. This paper presents a descriptive review of citation trends, journal sources, the most important countries and institutions, and publication trends. Subsequently, a computer-assisted bibliometric analysis is presented, offering insights into past and present research topics and trends. It also highlights notable studies from recent years that have been pivotal in understanding GVCs and defining specific paths for further research by decision-makers, policymakers and scholars. Thus, the objective of this study is to systematically map the intellectual structure, thematic evolution and emerging research fronts of the GVC participation literature through a comprehensive bibliometric analysis of publications indexed in Scopus and WoS. Building on the gaps identified above, this study addresses the following research questions (RQs):

- RQ1: What are the key developments in the literature on GVC participation?
- RQ2: Which authors have made the most significant and influential contributions?
- RQ3: Which countries and institutions are particularly prominent? What is the current state of research networks and groups developing?
- RQ4: Which publications are the most important and influential in this field?
- RQ5: Which scientific journals are the primary sources?
- RQ6: What are the most prevalent themes and topics in recent years?

The remainder of this article is structured as follows. Section 2 presents the data sources, search strategy and bibliometric methods applied in the study. Section 3 contains the main results, including performance analysis, thematic evolution, co-citation structures and bibliometric coupling patterns. Section 4 discusses the key findings considering the existing literature and recent developments in GVCs. Finally, Sect. 5 concludes by summarising the main contributions of the paper, outlines the study's limitations and proposes directions for future research.

2 Materials and methods

The use of literature reviews, particularly bibliometric reviews, is a common practice in identifying trends and tendencies within specific research domains. This process involves statistical softwares to analyse a vast range of documents (Paul and Criado 2020). These methods and tools enable researchers to analyse the structural and specific characteristics and trends of a defined research area or field (Zupic and Čater 2015). The number of studies utilising this methodology in the sciences is on the rise (Nederhof 2006). Therefore, this article employs a bibliometric examination to identify the most relevant research trends and pathways, thereby enhancing comprehension of the research patterns associated with GVC participation. In many cases, among the published bibliometric reviews, Google Scholar, Scopus, and WoS have been applied (Harzing and Alakangas 2016). Google Scholar was not applied in this review, as the focus was only on peer-reviewed, English-language publications. It is relatively rare for publications to use Scopus and WoS at the same time (Verma and Gustafsson 2020); either only the publications of Scopus (Gupta et al. 2021;

Misra and Mention 2022) or WoS (Hernández-Perlines et al. 2022; Martín-Navarro et al. 2023) typically form the basis of bibliometric reviews. To ensure the most comprehensive coverage of the literature, the authors merged two distinct bibliographic databases, WoS and Scopus (Verma and Gustafsson 2020). This procedure overcame the technical difficulties associated with metadata incompatibility. The key to this successful integration was the harmonization of export formats. Scopus data was retrieved in Comma Separated Values (.csv) format, whereas WoS data was exported in Plaintext (.txt) format to guarantee that all metadata, specifically cited references, were preserved. These datasets were harmonized into a standardized data frame in R using the convert2df function from the bibliometrix package. Therefore, the datasets were integrated using the mergeDbSources function, which automatically identified and removed duplicate entries. Finally, the openxlsx package was employed to export the merged, de-duplicated dataset into an .xlsx format, which was then imported into the biblioshiny interface for the final citation network analysis (Aria and Cuccurullo 2017).

Thus, at different stages, several software and platform solutions were applied: EndNote for managing the datasets downloaded from Scopus and WoS, Covidence for identifying duplications and to screen titles and abstracts applying the PRISMA protocol, R to merge the two databases (Scopus and WoS), while Bibliometrix to conduct the bibliometric analysis (Aria and Cuccurullo 2017; Babineau 2014; Bramer et al. 2016; Gupta et al. 2021). In order to identify relevant publications, a search was conducted using the following criteria: "GVC" or "Global value chain" and "participation" in the title, abstract, author keywords of articles, books and book chapters written in English. In the case of WoS, the search terms were expanded to include keywords plus in the WoS Core Collection. The study was carried out in November 2024 (the datasets were downloaded on the 11th of November 2024). The initial database contained 1455 hits (863 from Scopus and 592 from WoS), and the final database consisted of 912 items, after removing 512 duplications and 31 irrelevant studies. To determine the existence of irrelevant documents, a manual screening of titles and abstracts was performed on the merged dataset to ensure compliance with document-type criteria, resulting in the exclusion of 28 proceedings papers, 2 editorial material, 1 meeting abstract (Fig. 1.). The guidelines of Paul et al. (2021) and the bibliometric techniques suggested by Donthu et al. (2021) and Mukherjee et al. (2022) were followed. Furthermore, insights from a wide range of published bibliometric review studies were incorporated to inform the design and presentation of figures and tables (see e.g., Blanco-Mesa et al. 2017; Merigó and Yang 2017; Mulet-Forteza et al. 2019 Török et al., 2024). First, descriptive statistics and quantitative results of the bibliometric analysis are presented. This is followed by an assessment of the potential impact and strategic importance of the topic, identifying the most influential authors, countries and collaborative networks.

The next part of the paper is about science mapping. The most influential journals indicate the most important outlets for publications, while the most influential publications show the most relevant and important published studies. The most pertinent research avenues are indicated using journal co-citations, while bibliometric coupling groups publications by topic. Thematic analysis examines how themes change over time in GVC participation. The final part includes a network analysis of authors and their research groups.

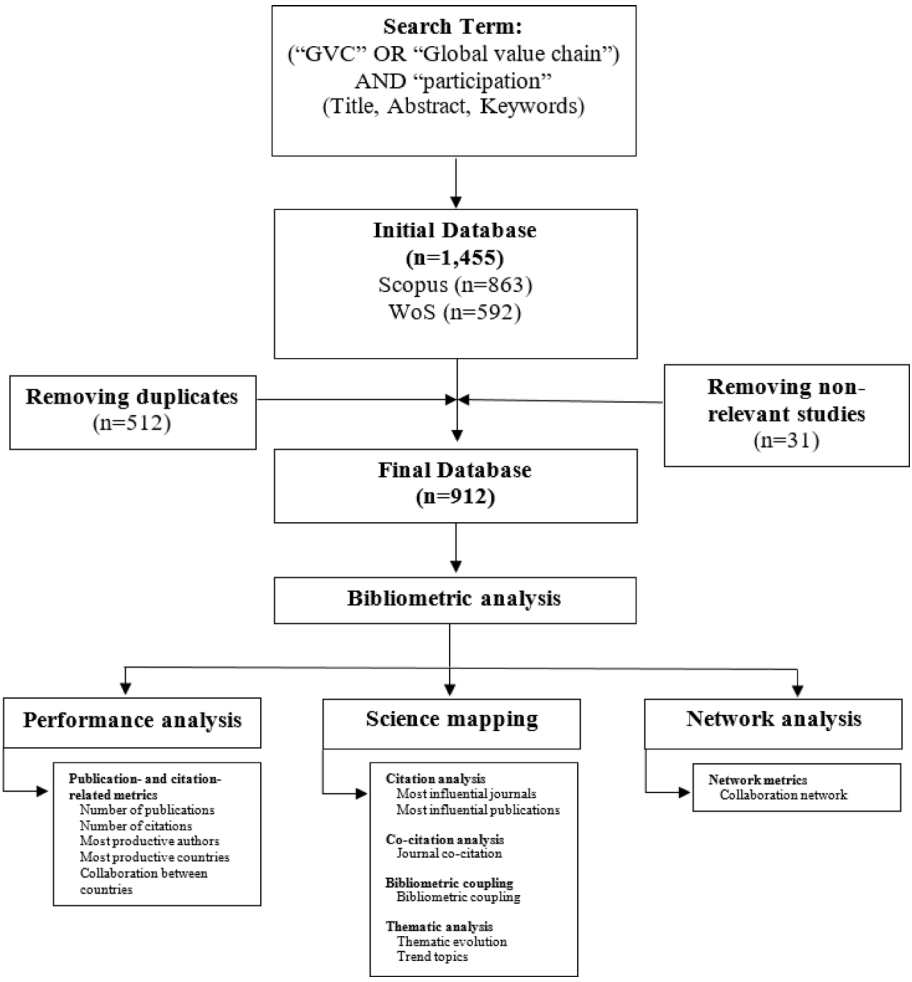

Fig. 1 Research design for the literature review. *Source* Authors' composition

3 Results and discussion

The database consisted of 912 documents drawn from 452 sources and authored by 1765 contributors between 2006 and 2024. The overwhelming majority of the identified publications are research articles, with 814 such articles identified. In addition to these research articles, 6 books were identified, some of which have a considerable number of citations. Furthermore, 75 book chapters and 17 reviews were identified. The mean number of authors per publication was 2–3, with a foreign co-author present in only 18.97% of articles. The mean age of the scientific articles is 2.93 years, indicating an increase in the number of publications on this topic. A total of 37,347 references were identified, with an average of 11.23 citations per article (the total number of global citations were 10,246). The annual growth rate in the number of articles was found to be 3.72%. More and more journal articles are

being published, showing that scientists are becoming interested in the field. Figure 2 shows how publications on GVCs have developed over time.

The evolution of annual publication counts shown in Fig. 2 reveals a clear initiation–development–expansion trajectory in the literature. The first studies appearing in the mid-2000s primarily focused on conceptual foundations of global production, fragmentation, and upgrading within value chains. Early influential contributions and related work on fragmentation and outsourcing (e.g., Gereffi et al. 2005; Morrison and Pietrobelli 2007) established the analytical building blocks for understanding governance, technological capabilities, and task specialisation within GVCs. These initial publications framed GVCs as a lens through which to analyse industrial development, particularly in emerging economies, and therefore grounded the earliest thematic directions observed in this period. The slow but steady increase in publications until around 2015 reflects the developmental phase of the field. During this period, researchers expanded the thematic scope from conceptual and governance-related questions to more empirical analyses of trade in value added, upgrading trajectories, and country case studies. The diffusion of input–output based GVC indicators by international organisations (e.g., OECD–WTO TiVA) provided new measurement tools, which in turn stimulated more rigorous empirical work. This methodological shift explains why the field began to attract economists, development scholars, and policy-oriented researchers simultaneously. The growing availability of global datasets and the institutionalisation of GVC participation research agendas in international organisations further contributed to this gradual expansion.

A sharp acceleration in publication activity is visible after 2015, marking the beginning of the expansion phase. This surge is closely linked to several reinforcing trends: (i) the maturation of GVC measurement techniques; (ii) increased policy interest in upgrading and industrial competitiveness; and (iii) rising concerns about the resilience of global production systems following economic and geopolitical shocks. The COVID-19 pandemic, US–China trade tensions, and renewed debates on regionalisation intensified academic attention by revealing systemic vulnerabilities in supply chains. The bibliometric results reflect this shift, with more recent research focusing on digitalisation, environmental sustainabil-

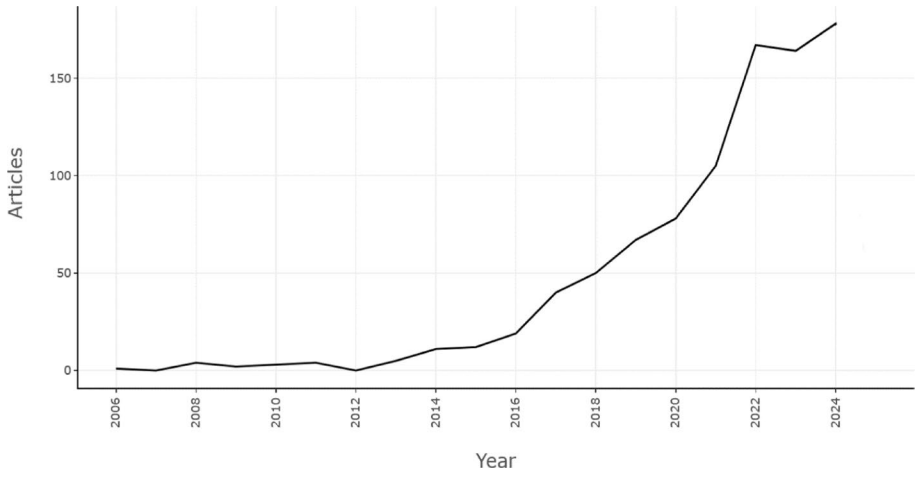

Fig. 2 Annual scientific production of GVC participation research. *Source* Authors' composition. *Note* 2024 was not a full year because the database was created on 11 November

ity, resilience strategies, and the regional reconfiguration of production networks. Taken together, the trends in Fig. 2 demonstrate not only an increase in publication volume but also a progressive deepening of the analytical agenda. The early phase established foundational concepts, the developmental phase broadened empirical inquiry, and the expansion phase integrated GVC research into broader debates about economic resilience, sustainability, and technological transformation. This trajectory reflects the evolving complexity of global production and the growing recognition of GVCs as a central framework for understanding contemporary trade and development dynamics.

Among the items identified in this study, the average number of total citations fluctuates enormously (Fig. 3). "Total citation" means the total number of citations in Scopus and WoS, including those from outside the studied database (10,246). In addition, the local citation (755) is the number of times a publication was cited from the database of 912 documents. Overall, only 2 publications had more than 200 global citations (see more details in Table 4), and only 10 publications had been cited more between 100 and 200 times. Approximately 70% (639 publications) were cited less than 50 times and 26% (233 publications) had no citations. While Fig. 3 illustrates the overall distribution of citation counts within the dataset, Table 4 (see below) provides a clearer interpretation by identifying which types of publications accumulate higher levels of scholarly impact. The most highly cited papers are typically conceptual or methodological contributions that introduced influential analytical frameworks (see e.g., Coe and Yeung 2015; Morrison and Pietrobelli 2007), such as value-added trade measures, upgrading trajectories, and fragmentation theories, which shaped large areas of empirical research. In contrast, moderately cited papers tend to be country- or sector-specific empirical studies (see e.g., Matthess and Kunkel 2020; Wang et al. 2021), while lower cited publications are often more recent or narrower in scope (see e.g., Du et al. 2023; Eegunjobi and Ngepah 2022).

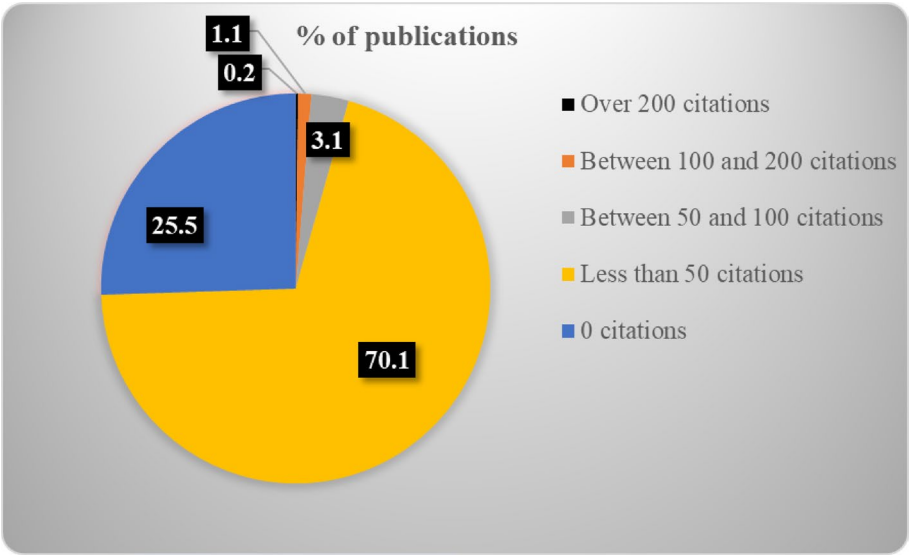

Fig. 3 General citation structure of the GVC participation literature (2006–2024). *Source* Authors' composition

Table 1 shows the authors with the most citations and publications in the database; thus, these authors are the most influential in the field. Wang, S. and Wang, Z. have published the most, followed by Nadeem, M. and Pietrobelli, C. All other authors have fewer than 10 publications. Rabelotti, R. is the most locally cited author. Pietrobelli, C., Ruta, M., Sanfilippo, M. and Mattoo, A. are also well cited (over 40 local citations). Pietrobelli, C. (2008-) and Wang, S. (2017-) have the longest publishing history. Pietrobelli, C. is active in Italy and often publish under several institutions, while Wang, S. is active in China.

The scientific publications are spread over 68 countries (Fig. 4). Examination of the countries hosting the institutions associated with the authors of the publications shows that China leads, with 207 publications (22.7% of the total), of which only 34 (16.7%) had co-authors from other countries (collaborations). India was in second place with 56 articles (6 collaboration, 10.7%), followed by Italy with 42 documents (16 collaborations, 38.1%), the USA (37 articles and 13 collaborations, 35.1%), Japan (31 publications and 7 collaborations, 22.6%). Among the top five countries, Italian, and American publications were relatively high in collaborating with authors from another country (Fig. 4). Among countries with more than 10 publications Australia was the leader in terms of collaborations with 11 publications and 9 collaborations (81.8%).

The growth of GVCs has attracted the attention of scholars and researchers around the globe, with the promotion of global social networks emerging as a significant area of interest. The co-authorship of publications is an effective indicator of international cooperation. Therefore, the institutional location of the corresponding author is employed as a criterion for analysing such collaborative networks. China has the largest number of international collaborations, mainly with the United States, Australia, Pakistan, the United Kingdom, and Canada. Italian authors collaborate most often with British, Danish, Dutch, French and American authors (Fig. 5). It is noteworthy that the topic has not been extensively explored by researchers from the developing world, as illustrated in Table 2. Relatively small group of countries accounts for many GVC-related publications, with USA, UK and Australia among the most productive contributors. The country collaboration network indicates that these leading economies are also highly interconnected, forming a dense core of co-authorship links rather than working in isolation. Their joint publications are mainly concentrated in topics such as GVC governance, upgrading, trade in value added and, more recently, resilience and regionalisation in response to global shocks (see Table 1).

The most important publisher (in terms of journals and books) is Oxford University Press, whose GVC-related publications are associated with 714 citations. The top three journals with the most citations are World Economy (461 citations), World Development (326 citations) and the European Journal of Development Research (315 citations). As shown in Fig. 6, articles and books written by Chinese authors were cited 2204 times, followed by Italian (1115 citations) and US authors (931 citations).

Table 3 shows the top ten journals concerning relevance (the highest number of published articles) and number of local citations. These journals serve as the cornerstone of GVC participation research, and it is worth attempting similar research in these journals. The left side of the table represents 16.2% of the total sample, including 148 articles from 912 documents. The World Economy is the most relevant journal, with 32 published articles, followed by Sustainability (18), Journal of Cleaner Production (17), Structural Change and Economic Dynamics (14), and International Economics (13). The most relevant journals in terms of local citations are not the same as the journals with the highest number of

Table 1 Top 10 most important authors in the GVC participation literature*

Author	Institution	Number of published articles	Author	Institution	Number of local citations
Wang	Ocean University of China, China	13	Rabelotti	University of Eastern Piedmont, Italy	75
Wang	College of Resources and Environment, Huazhong Agricultural University, Wuhan, 430,070, China	11	Pietrobelli	Roma Tre University, Italy; Georgetown University, USA; United Nations University, Netherlands	68
Nadeem	Nanjing University of Aeronautics and Astronautics, Nanjing, People's Republic of China	10	Ruta	World Bank, USA	51
Pietrobelli	Roma Tre University, Italy; Georgetown University, USA; United Nations University, Netherlands	10	Sanfilippo	University of Bari, Italy; University of Antwerp, Belgium	45
Altun	Informatics and Information Security Research Center, The Scientific and Technological Research Council of Turkey, Gebze/Kocaeli 41,470, Turkey	9	Mattoo	DECRG, World Bank, Washington, DC, USA	40
Reddy	Indian Institute of Technology Madras, Chennai, India	9	Amendolagine	University of Pavia, Italy	37
Wang	College of Economics and Management, Nanjing University of Aeronautics and Astronautics, Nanjing, People's Republic of China	9	Morrison	Utrecht University, Netherlands	37
Sasidharan	Indian Institute of Technology Madras, Chennai, India	8	Presbitero	International Monetary Fund, USA	37
Yanikkaya	Gebze Technical University, Kocaeli, Turkey	8	Ndubuisi	Maastricht University, Netherlands	35
Campos-Romero	Universidade de Santiago de Compostela – ICEDE Research Group, Faculty of Economics and Business Sciences, Santiago de Compostela, Spain	8	Owusu	Maastricht University, Netherlands	35

*in terms of the number of publications meeting the criteria defined in this bibliometric analysis and the number of citations referring to such publications

Source Authors' composition

articles. However, the Journal of International Economics, World Economy, and the Journal of Cleaner Production also ranked highly in terms of local citations (second, fourth, and fifth, respectively). The journals with the highest number of local citations are the American Economic Review, with 919 local citations, the Journal of International Economics, with 890 local citations, and World Development with 585 local citations.

Table 4 presents the ten publications that have exerted the greatest influence on research in the field of in terms of the total number of local and global citations they have received. A t-test was employed to ascertain whether there was a statistically significant difference between the local citation and total citation values. Although these studies vary widely in scope and methodology, they all contribute to the intellectual foundations of GVC participation research. The most cited publication (714 total citations and 0 local citation), Coe and Yeung (2015), is central to GVC scholarship. Their global production network (GPN) framework provides a theoretically rich alternative to the GVC approach, offering insights into value creation, coordination and territorial embeddedness that are extensively used in GVC studies. Morrison and Pietrobelli (2007), the most locally cited paper, contributes to GVC theory through its analysis of technological capabilities and innovation trajectories in developing countries, themes at the core of upgrading research within GVCs. Several of the highly cited papers focus on emerging transformations relevant to the contemporary GVC landscape. Li et al. (2020) and Matthess and Kunkel (2020) examine the digital economy and digitalisation, key drivers of recent GVC restructuring. Wang et al. (2021) extend GVC analysis into environmental sustainability, highlighting uneven ecological outcomes along global chains. Lee et al. (2018) connect GVC participation to national innovation systems, while Riisgaard et al. (2010) integrate poverty and environmental concerns into value-chain analysis, thus expanding the development-oriented dimensions of GVC scholarship. Other publications provide methodological or conceptual tools that are now standard in GVC research. Johnson (2018) develops measures for analysing GVCs, and Antràs (2020) synthesises the conceptual foundations of GVC theory from a trade-economics perspective. It GVC research covers a lot of ground, looking at topics like monetary policy (Georgiadis 2016), agriculture (Johns et al. 2013; Mancini 2013) and the automotive industry (Wad and Govindaraju 2011).

As illustrated in Fig. 7, the co-citation network reveals the existence of three principal clusters of journals. The visualisation uses a bibliometric co-citation network that was generated entirely within the Bibliometrix R package to map how frequently journals are cited together. The proximity of the nodes and the thickness of the lines represent the strength of this co-citation link (co-citation strength). Colours denote distinct research clusters or communities, which are identified through network clustering algorithms. Journals within the same colour cluster focus on similar subfields or paradigms (e.g., core economics, development economics and environmental economics). The size of each node indicates the total number of citations that the journal received within the dataset. The initial cluster encompasses the most pivotal journals within the domain of international economics. The journals include the Journal of International Economics, the American Economic Review, and the World Economy. These journals cover a range of international economic topics, including trade, policy, finance, and development. The second cluster encompasses journals that concentrate on policy or management concerns, including World Development, Review of International Political Economy, Journal of International Business Studies, and Research Policy. The aforementioned journals disseminate scholarly works pertaining to a myriad

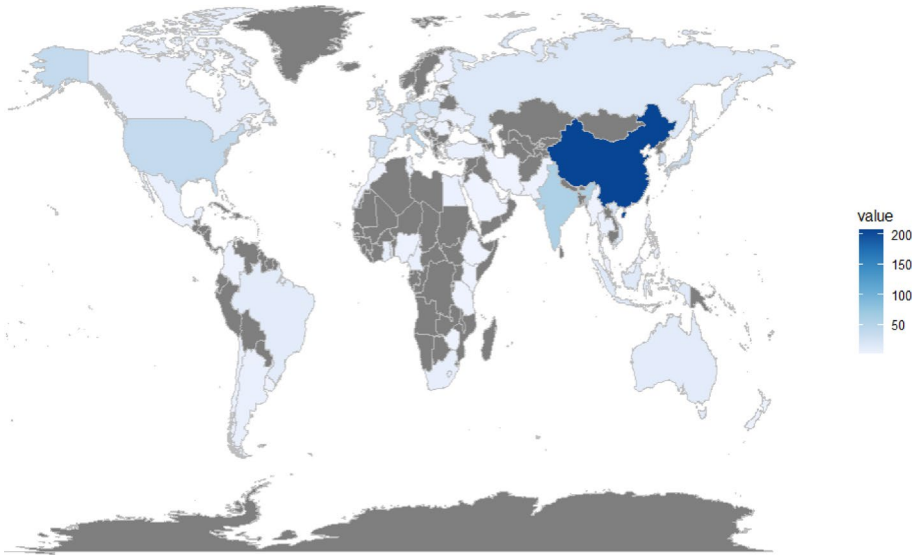

Fig. 4 Most productive countries associated with the publication of GVC participation literature. *Source* Authors' composition

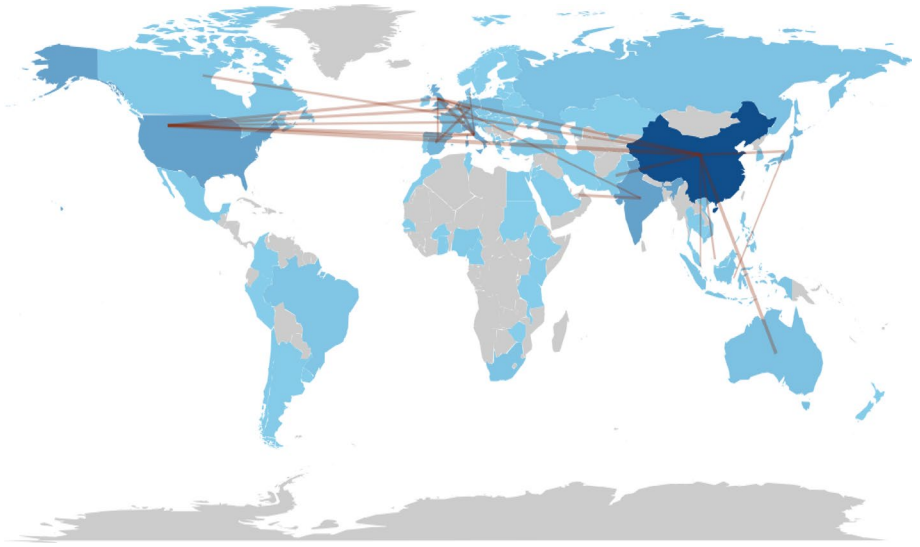

Fig. 5 Collaboration map among countries associated with publishing of GVC participation literature *Source* Authors' composition

of interdisciplinary fields, including international political economy, the enhancement of standards of living and the human condition (such as the alleviation of poverty and the reduction of unemployment), the managerial praxis of multinational enterprises, and the nexus between innovative practices, technological advancement and research. Additionally,

Table 2 Collaboration among countries in the GVC participation literature

Country 1	Country 2	Published articles	Country 1	Country 2	Published articles
China	USA	14	China	Japan	4
China	Australia	13	China	Malaysia	4
Italy	United Kingdom	11	Italy	France	4
China	Pakistan	6	Italy	USA	4
Italy	Netherlands	6	United Kingdom	France	4
USA	Germany	6	USA	Switzerland	4
USA	United Kingdom	5	China	Singapore	3
China	United Kingdom	5	India	United Kingdom	3
India	United Arab Emirates	5	Italy	Denmark	3
Spain	Germany	5	Japan	Inonesia	3
China	Canada	4	Netherlands	Germany	3

Source Authors' composition

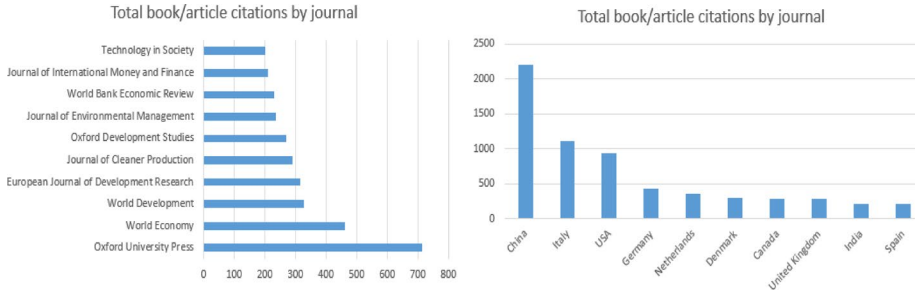

Fig. 6 Performance analysis and article citations of journals and countries associated with the GVC literature. *Source* Authors' composition

a third cluster, comprising seven main journals (Energy Policy, Journal of Cleaner Production, China Economic Review, Energy Economics, Economic Systems Research, Ecological Economics and Environmental Science and Pollution Research) addresses broader issues pertaining to environmental and ecological sciences. In light of the above, the thematic distribution depicted by the journal co-citation map is an accurate reflection of the most significant research avenues pertaining to GVC participation.

Figure 8 illustrates the intellectual structure of the field using a journal bibliometric coupling analysis. The visualization identifies the most relevant journals based on shared references in their bibliographies. The relationship between nodes (journals) is based on coupling strength. Journals are considered 'coupled' if they cite the same third-party source in their reference lists. The proximity of the nodes and the thickness of the lines represent the strength of this shared reference connection. The colors denote distinct research clusters or communities identified through network clustering algorithms. Journals within

Table 3 Top 10 journals in the GVC participation literature concerning relevancy and citations

Journals	Number of Articles (published)	SJR (2024	IF (2024)	Journals	Number of Articles (local citations)	SJR (2024)	IF (2024)
World Economy	32	0.803	2.4	American Economic Review	919	25.102	11.6
Sustainability	18	0.688	3.3	Journal of International Economics	890	4.371	4.0
Journal of Cleaner Production	17	2.174	10.0	World Development	585	2.161	4.8
Structural Change and Economic Dynamics	14	1.406	5.5	World Economy	531	0.803	2.4
Journal of International Economics	13	4.371	4.0	Journal of Cleaner Production	380	2.174	10.0
Environmental Science and Pollution Research	11	1.004	–	Energy Economics	359	3.919	14.2
Journal of International Trade and Economic Development	11	0.658	2.2	Econometrica	308	21.091	7.1
Review of World Economics	11	0.515	1.2	Energy Policy	266	2.692	9.2
World Development	11	2.161	4.8	Quarterly Journal of Economics	263	35.955	12.7
Applied Economics	10	0.616	2.1	Research Policy	256	3.443	8.0

Source Authors' composition

the same color cluster frequently share research foundations and typically focus on similar sub-fields or paradigms. The size of each node refers to the journal's importance (e.g., total publications in the dataset). With the help of bibliometric coupling, the most relevant journals could be identified based on the keywords of the articles. In Fig. 8, the nodes' size refers to the journal's importance. There are two clusters that indicated the most concentrated research focus areas of GVCs. The first cluster (keywords: exports, productivity, and international trade) includes Structural Change and Economic Dynamics, World Economy, Review of World Economics, European Journal of Development Research. These journals create a forum for work dealing with trade and trade policies, finance (e.g., foreign direct investment, currency systems and exchange rates, income distribution, monetary and fiscal policies), migration and labour and economic change (e.g., instability or crisis). The second cluster (keywords: economic growth, China and developing countries) includes journals focusing on the environmental effects of GVCs or globalisation and industrial issues like Environmental Science and Pollution Research, International Journal of Environmental Research and Public Health, Frontiers in Environmental Science, the Journal of Cleaner Production, and Sustainability. These journals serve the international community in all areas of environmental science (e.g., environmental change, adaptation, the natural world and its various intersections with society, sustainability, resource management, environmental system modelling, and optimisation).

The difference between Figs. 7 and 8 should be more emphasised. Figure 7 illustrates the field's foundational and historical intellectual structure. Co-citation analysis looks backwards in time, mapping how frequently two older, foundational journals are cited together

Table 4 Most influential (globally cited) publications

Rank	Author(s)	Title	Year	Journal/publisher	Local citations	Total citations	TC per year
1	Coe and Yeung	Global production networks: Theorizing economic development in an interconnected world	2015	Oxford University Press	0	714	71.40
2	Morrison et al.	Global value chains and technological capabilities: a framework to study learning and innovation in developing countries	2008	Oxford Development Studies	37	270	15.88
3	Li et al.	How should we understand the digital economy in Asia? Critical assessment and research agenda	2020	Electronic Commerce Research and Applications	0	169	33.80
4	Georgiadis	Determinants of global spillovers from US monetary policy	2016	Journal of International Money and Finance	1	167	18.56
5	Antras	Conceptual Aspects of Global Value Chains	2020	The World Bank Economic Review	0	150	30.00
6	Wang et al.	Global value chains, technological progress, and environmental pollution: Inequality towards developing countries	2021	Journal of Environmental Management	0	149	37.25
7	Riisgaard et al.	Integrating poverty and environmental concerns into value-chain analysis: a strategic framework and practical guide	2010	Development Policy Review	2	127	8.47
8	Lee et al.	From global value chains (GVC) to innovation systems for local value chains and knowledge creation	2018	The European Journal of Development Research	25	125	17.86
9	Johnson	Measuring Global Value Chains	2018	Annual Review of Economics	0	119	17.00
10	Matthess and Kunkel	Structural change and digitalization in developing counties: Conceptually linking the two transformations	2020	Technology in Society	0	117	23.40

The underlying data underwent a rigorous manual cleaning and verification process

Source Authors' composition

in the current literature. The purpose of this analysis is to reveal the core, established paradigms and the historical 'pillars' of the research domain upon which current studies are built. However, Fig. 8 illustrates the current and emerging research areas of the field. In contrast, bibliometric coupling looks forward and concurrently in time, mapping how frequently two current journals cite the same third-party sources in their reference lists. The purpose of this analysis is to group together current journals that are working on very similar contemporary research topics, thereby revealing active and emerging communities of practice within the GVC participation literature. In conclusion, Fig. 7 shows the field's origins, while Fig. 8 shows its current direction. Both perspectives are essential for a complete bibliometric overview.

Figure 9 illustrates the thematic evolution of the field since 2006. The figure clearly depicts the history of key themes and, based on the keywords, their evolution. In the first area (until 2009), the most frequently used keyword is "global value chain", which unsurprisingly dominates the research agenda all the time. In the very first period, the keyword "global value chain" was the most commonly applied. New keywords like "competitiveness", "globalization", and "smallholders" appeared between 2009 and 2015. In this period, authors began to deal with the topic even more widely. In the third period (2016–2019), publications have focused on specific topics building on the previous period. The longitudinal thematic map clearly shows how sophisticated GVC-related studies have become in previous years, now covering topics such as added value, economic growth, and globalization, while governance, institutions and regional studies (Asia, EU, developing countries) have also come to the fore again. The third period covered a range of topics, many of which were subsequently integrated into the examination of different issues in the last period (2020–2024) such as economic development, international trade, employment.

Figure 10 illustrates the most frequently used keywords and the research period they were used. First, the author keywords were extracted from the dataset. To ensure consistency, terms were standardized through both basic processing (e.g., lowercasing) and manual grouping of synonyms into key terms like "global value chain", "international trade", and "global value chain participation". The software then performed a time-sliced co-occurrence analysis of these standardized keywords to identify frequently appearing terms and cluster them into distinct themes for each period. Finally, a Sankey diagram was generated to visualize the thematic flow across time, where the width of the connecting bands ('flow') represents the volume of shared publications or transitioning terms. The most popular and common keywords ("global value chain", "international trade", "China", "productivity", "economic growth") were used between 2020 and 2023, while the latest publications tend to address environmental regulation, digital transformation/digitalization, global value chain participation, and deal with Africa. This figure also suggests that, in recent years, the literature has focused on more sophisticated and specific topics (like input-output analysis), instead of general competitiveness-related studies.

Figure 11 shows the central themes and strength of connections within research topics on GVC participation. Analysis of centrality and frequency reveals the term 'global value chain' to be the dataset's core topic. The strength of relationships, visualised by edge thickness, highlights core linkages. Strong, thick grey lines connect 'global value chain' to 'global value chain participation' and 'international trade', indicating that these core economic topics are consistently connected in the research. A few specific red edges connect 'global value chain' to 'globalisation', 'manufacturing productivity', 'China' and 'Latin America'.

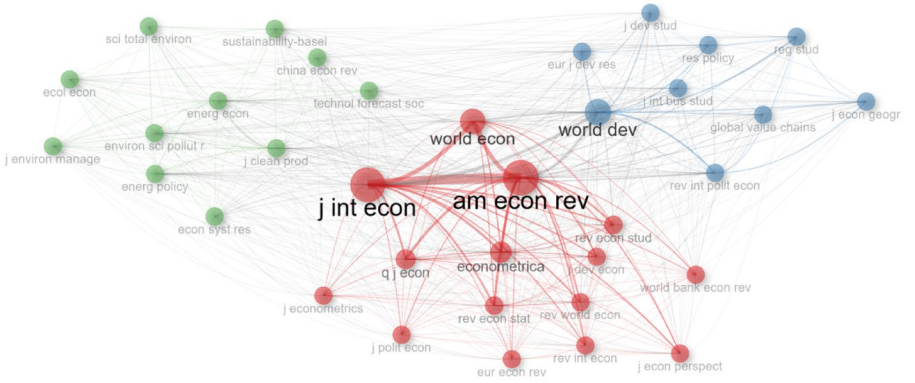

Fig. 7 Co-citations network of journals in the GVC participation literature. *Source* Authors' composition

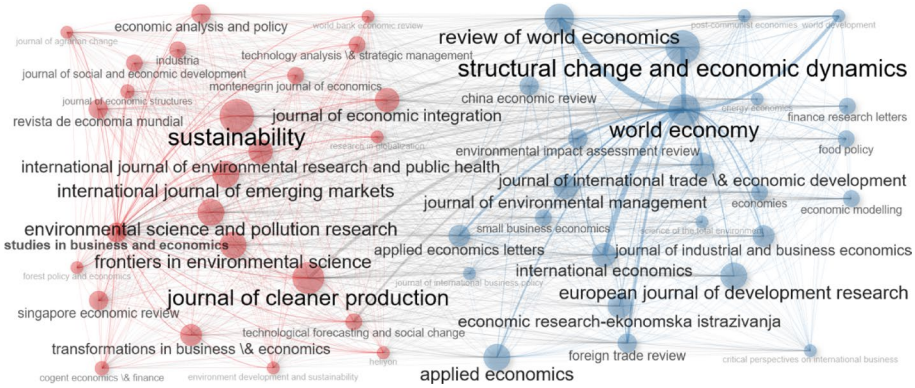

Fig. 8 Bibliometric coupling of GVC participation literature. *Source* Authors' composition

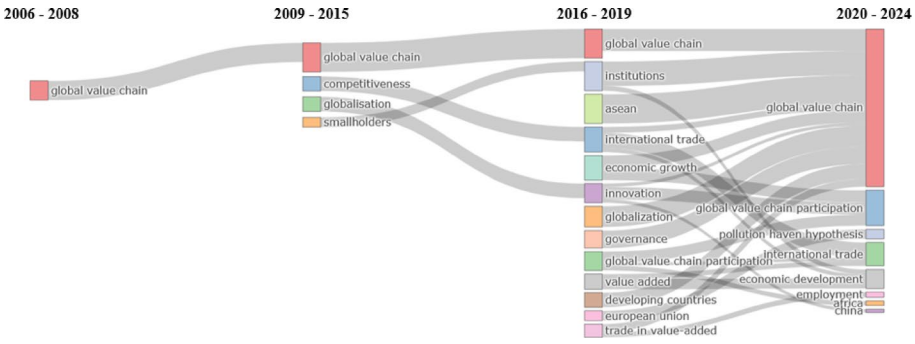

Fig. 9 Thematic evolution of GVC participation literature based on keywords using a Sankey diagram. *Source* Authors' composition

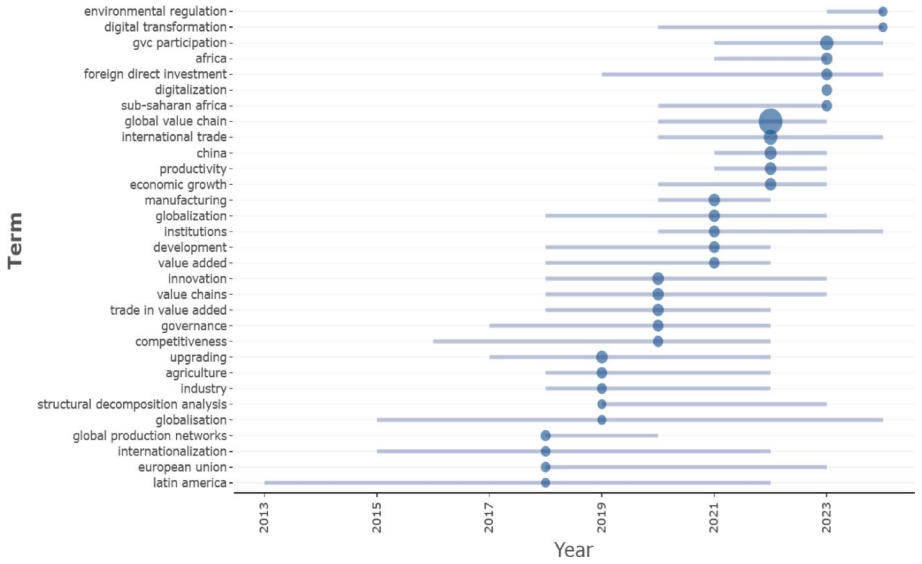

Fig. 10 Trend topics in the GVC participation literature based on keywords. *Source* Authors' composition

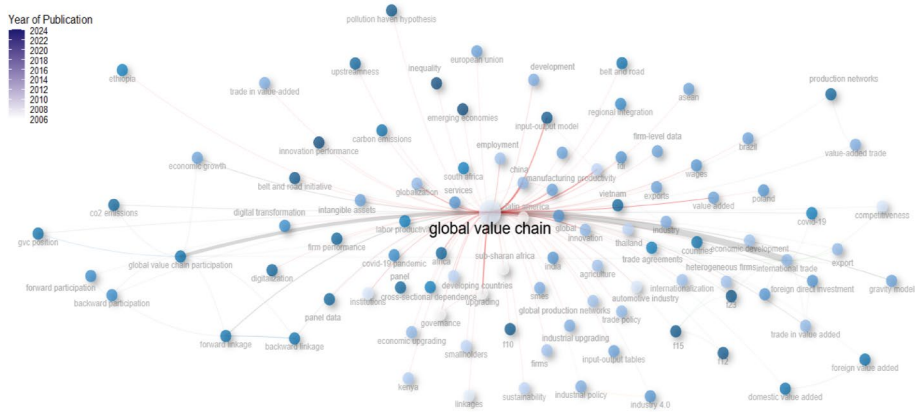

Fig. 11 Keyword co-occurrence network of the GVC participation research by Louvain clustering and Fruchterman & Reingold layout. *Note* Node size is proportional to the frequency of the keyword, while edge thickness indicates the strength of co-occurrence between keywords. colour gradient, with lighter blue nodes representing older research topics (closer to 2006), and darker blue and purple nodes highlighting recent, emerging themes (closer to 2024). *Source* Authors' composition

This highlights the strong, focused research links involving specific countries and industrial outcomes. Spatial proximity effectively groups related topics into clusters and themes. The lower half contains clusters related to economic and industrial upgrading, governance, and development, exploring how countries can improve their position within GVCs. In the top left corner, a cluster addresses environmental concerns, including carbon and CO_2 emissions and the pollution haven hypothesis, indicating a growing body of research on the environmental impact of GVCs. Furthermore, the middle right features terms such as 'input-

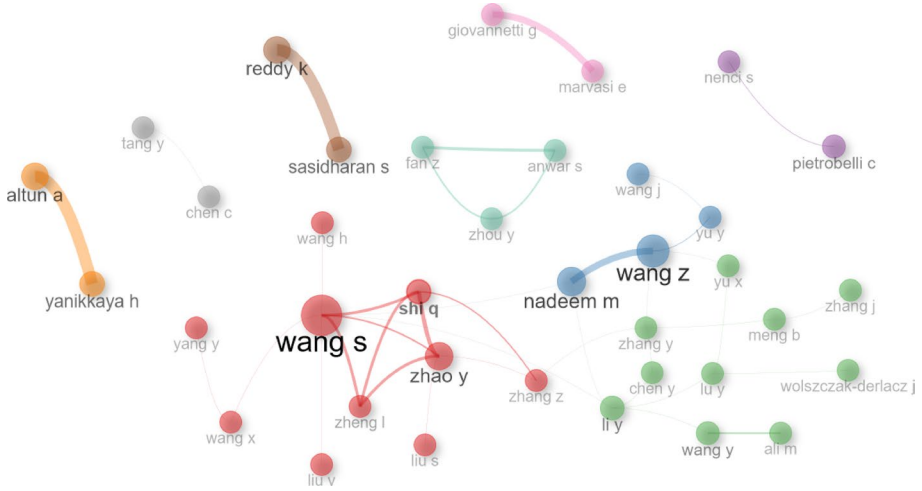

Fig. 12 Author collaboration in the GVC participation literature. *Note* The network visualisation was generated using the default blocking mechanisms within the Bibliometrix R package via Biblioshiny. Due to the large scale and scope of the full network, it was not possible to implement a comprehensive, systematic manual disambiguation process. *Source* Authors' composition

output model' and 'trade in value added', focusing on the methodological aspects of measuring GVC participation. In summary, Fig. 11 illustrates a well-established research field with a strong focus on core economic outcomes such as trade, employment and investment. While important topics such as sustainability and governance are present, the central focus of the map remains firmly rooted in traditional economic analysis and specific country case studies, as highlighted by the emphasised edges.

Figure 12 visualises the main academic co-authorship networks. Each node represents an author, and the node's size indicates their publication output/influence within the dataset. A link connecting two authors signifies a co-authored publication. The thickness of the line represents the frequency of their collaboration. Authors are automatically grouped into clusters and identified by different colours to denote distinct research teams working closely together. The proximity of authors on the map further emphasises the strength of their working relationship. A total of nine collaborative groups with a determinative research focus can be identified based on the articles co-authored (Fig. 12). These groups can be broadly classified into three main categories. Wang, S. is one of the central authors, and several smaller sub-networks may be connected to this collaboration group. The leading group (red) examines the environmental and green technological side of GVCs. The other network (green), containing many authors (e.g., Li, Y., Lu, Y., Wand Y.), deals mainly with China and the country's role in a globalizing world. Another important author in GVC participation research, Wang, Z. and his group (blue), mainly deal with energy-efficiency and environmental sustainability. In attrition, Anwar, S., Fan, Z. and Zhou Y. (turquoise blue group) are working on the connection of trade agreements and GVC participation.

In addition to the four main group, altogether five smaller two-author networks were identified, which are not connected to any other network. Nenci, S. and Pietrobelli, C. (purple group), mainly focuses on GVCs and productivity in Latin America, and agricultural value chains. Giovannetti, G. and Marvasi E. (pink group) mainly deal with firm heteroge-

neity globally and in Africa. The research of Reddy, K. and Sasidharan, S. (brown group) is firm-level analysis and has an India focus, in terms of location. Chen, C. and Tang, Y. (grey group) focuses on green innovation value chains and carbon mitigation. Altun, A. and Yanikkaya, H. (yellow group) deal mainly with productivity, profitability and output growth.

Overall, Fig. 12 presents the international collaboration network within the GVC participation literature. The purpose of this analysis is to identify how scientific knowledge in this field is produced and diffused across countries, revealing the major research hubs and the structure of global cooperation. Mapping co-authorship patterns helps to contextualise the thematic findings by showing which countries shape the dominant research agendas and how regional clusters of expertise emerge. As such, the collaboration network constitutes an essential element of science mapping, complementing co-citation and coupling analyses by highlighting the social and institutional foundations of knowledge production in GVC research.

4 Discussion

4.1 Interpretaion of the findings

The bibliometric analysis reveals a field that has expanded rapidly in scope, methods, and thematic orientation since 2006. Several overarching patterns emerge from the results. First, the growth trajectory of the literature (e.g., from conceptual origins to broad empirical application) reflects the increasing economic and policy relevance of GVC participation. Early research concentrated on governance structures, industrial upgrading, and fragmentation of production, laying a conceptual foundation that informed subsequent empirical studies (Baldwin 2006; Gereffi et al. 2005). The significant rise in publications after 2015 corresponds with the diffusion of global input–output datasets and value-added trade indicators, which enabled more sophisticated empirical and comparative analyses (see e.g. Koopman et al. 2014; Timmer et al. 2014). Second, the thematic evolution shows a clear shift from general analyses of competitiveness and globalisation toward specialised areas such as digital transformation, environmental sustainability, and regionalisation of production networks. This shift is in line with global economic developments that have exposed both the strengths and vulnerabilities of GVCs. For example, the increased emphasis on resilience and sustainability in recent years reflects the experience of disruptions associated with the 2008–2009 financial crisis, the US–China trade conflict, the COVID-19 pandemic, and more recent geopolitical tensions (Gereffi 2020; Maró et al. 2025). These events have pushed both researchers and policymakers to reconsider the balance between efficiency and robustness in global production systems.

Third, the geographical distribution and collaboration patterns reveal the emergence of strong research hubs, particularly in China, Italy, and the United States. China's dominant presence reflects its central role in global manufacturing networks (Li et al. 2019; Peng and Zhang 2020), while Italian and American authors contribute significantly to theoretical and policy-oriented advancements (De Marchi et al. 2017). At the same time, the limited involvement of developing-country researchers (Feyaerts et al. 2020) suggests a persistent imbalance between the empirical importance of these regions in research activity and their visibility in academic knowledge production. This imbalance highlights the need for

more inclusive research networks, capacity-building initiatives, and collaborative funding frameworks that support scholars in the Global South. Fourth, journal co-citation and bibliometric coupling patterns show that GVC participation research has become increasingly interdisciplinary, spanning international economics, development studies, business and management, and environmental science. This reflects a broader recognition that GVCs are complex socio-economic systems influenced by technological innovation, institutional environments, and sustainability considerations (Matthess and Kunkel 2020 rök et al., 2025; Wang et al. 2021). The dual clustering around trade/economic issues and environmental/industrial concerns suggests that future research will continue to integrate economic analysis with ecological and technological dimensions. This interdisciplinary shift also higlights a growing convergence between GVC participation research and broader discussions on industrial transformation, green transition, and digital competitiveness.

4.2 Implications

The findings of this study carry several important theoretical, methodological and policy-related implications. From a theoretical perspective, the results demonstrate that research on GVC participation continues to be grounded in well-established frameworks such as governance, upgrading and value-added trade, while simultaneously expanding toward new domains including digitalisation, sustainability and resilience. This highlights an ongoing shift from purely economic interpretations of GVCs toward more interdisciplinary conceptualisations. From a methodological perspective, the growing use of input–output modelling, network analysis and comparative cross-country designs suggests that GVC participation research is becoming more data-intensive and analytically sophisticated. The concentration of research activity in a few geographic hubs also implies that methodological innovations tend to diffuse unevenly across regions. This raises questions about the global accessibility of high-quality data and analytical tools, particularly for researchers in underrepresented regions. In terms of policy implications, the evolving structure of the literature highlights how countries‘ abilities to participate effectively in GVC increasingly depend on digital capabilities, environmental compliance and regional integration strategies. These findings strengthen the relevance of GVC participation for industrial policy, trade strategy, and long-term development planning, particularly in the context of rising geopolitical fragmentation and supply chain reconfiguration. Policymakers may therefore need to prioritise investments in digital infrastructure, green technologies, and institutional coordination to improve competitiveness.

4.3 Future research directions

Based on the patterns identified in the bibliometric analysis, several promising avenues for future research emerge. First, despite the growing interest in developing economies, Africa and Latin America remain underrepresented in the empirical literature. Greater attention to these regions could refine understanding of latecomer strategies, capability building and integration challenges. Second, future work could benefit from more sector-specific analyses, particularly in industries that are central to current transitions (e.g., renewable energy technologies, critical minerals, agriculture, and healthcare value chains). Third, although sustainability and resilience have become increasingly important themes, there is a need

for integrated metrics capturing environmental, social and governance (ESG) dimensions of GVC participation, beyond traditional value-added or trade-cost indicators. Developing such multidimensional frameworks would allow researchers to better assess trade-offs between economic benefits and environmental or social externalities. Fourth, the predominance of macro-level data suggests the value of firm-level, micro-oriented research that can reveal heterogeneity in supplier upgrading, innovation dynamics, and local spillovers. Linking firm-level evidence with macro-level patterns could significantly improve the explanatory power of GVC (participation) models.

5 Conclusions

The bibliometric analysis conducted in this study reveals several structural patterns in the evolution of GVC-related research between 2006 and 2024. First, the volume of publications has increased steadily, with a marked acceleration after 2015, reflecting both the academic and policy relevance of GVC participation. The thematic evolution shows a progression from broad discussions of competitiveness and globalisation toward more specialised topics, including environmental sustainability, governance, digital transformation, and input–output based measurement. The prominence of journals in international economics, development studies, and environmental sciences highlights the increasingly interdisciplinary nature of GVC scholarship. Moreover, the collaboration networks reveal strong and expanding research communities, particularly in China, Italy, and the United States, alongside emerging but still limited contributions from developing countries. Taken together, these patterns signal a field that has not only grown quantitatively but also diversified conceptually and methodologically.

When interpreted against broader global trends, the analytical results help clarify several dilemmas currently shaping debates on GVCs. The observed slowdown or stagnation in GVC participation corresponds with the thematic shift toward resilience, regionalisation, and risk management, reflecting how firms and governments have reassessed vulnerabilities associated with geopolitical tensions, rising trade barriers, and major structural transitions. The emergence of post-2015 themes (e.g., digitalisation, environmental regulation, and governance) highlight a broader transition toward long-term structural adjustment rather than temporary shock-driven fluctuations. By situating global disruptions within these empirical patterns, a more coherent understanding of contemporary GVC dynamics emerges. The financial crisis of 2008–2009, the US–China trade tensions, the COVID-19 pandemic, and the Russia–Ukraine conflict did not disrupt a stable system but rather accelerated trends already visible in the scholarly record: a move toward regionalisation, a growing concern for environmental and social sustainability, and a heightened interest in the resilience of supply networks. The shift in keywords toward digital transformation and environmental policy further indicates that scholars increasingly view GVCs through the lens of long-term structural change rather than temporary shocks. These results highlight the need for policy approaches that balance efficiency and resilience while integrating economic, technological, and environmental considerations.

There are several limitations of this study. Although this review examined a broad body of GVC-related research, the scope and scale of the dataset may have excluded some relevant contributions. Only the most-cited English-language articles were analysed. While this

review provides a comprehensive mapping of the GVC literature, its limitations (such as the focus on English-language publications and the reliance on keyword-based search strategies) suggest that additional work is needed to capture sector-specific dynamics, non-English contributions, and the perspectives of underrepresented regions. Furthermore, future research could complement this analysis by exploring sector-specific patterns, extending regional coverage, and incorporating multilingual sources. Finally, the application of bibliometric techniques introduces some bias, thus the present analysis emphasises present and past trends and directions, and may not fully capture emerging themes that have not yet accumulated sufficient citations.

Funding Open access funding provided by Corvinus University of Budapest. This project has received funding from the Horizon 2020 Framework Programme under grant agreement No 101000551.

Declarations

Conflict of interest The authors have no competing interests to declare that are relevant to the content of this article.

References

Alonso-Muñoz, S., García-Muiña, F.E., Medina-Salgado, M.-S., González-Sánchez, R.: Towards circular economy practices in food waste management: a retrospective overview and a research agenda. Br. Food J. **124**(13), 478–500 (2022). ttps://doi.org/10.1108/bfj-01-2022-0072

Anderson, K., Valenzuela, E.: Do global trade distortions still harm developing country farmers? Rev. World Econ. **143**, 108–139 (2007). ttps://doi.org/10.1007/s10290-007-0100-5

Antràs, P.: Conceptual aspects of global value chains. World Bank Econ. Rev. **34**(3), 551–574 (2020). ttps://doi.org/10.1093/wber/lhaa006

Antràs, P., Helpman, E.: Global sourcing. J. Polit. Econ. **112**(3), 552–580 (2004). ttps://doi.org/Doi 10.1086/383099

Aria, M., Cuccurullo, C.: bibliometrix: An R-tool for comprehensive science mapping analysis. J. informetrics. **11**(4), 959–975 (2017). ttps://doi.org/10.1016/j.joi.2017.08.007

Babineau, J.: Product review: Covidence (systematic review software). J. Can. Health Libr. Association/Journal de l'Association des. bibliothèques de la. santé du Can. **35**(2), 68–71 (2014). ttps://doi.org/10.5596/c14-016

Baldwin, R.E.: Globalisation: the great unbundling (s). (2006)

Baldwin, R., Lopez-Gonzalez, J.: Supply-chain Trade: A Portrait of Global Patterns and Several Testable Hypotheses. World Econ. **38**(11), 1682–1721 (2015). ttps://doi.org/10.1111/twec.12189

Bamber, P., Fernandez-Stark, K., Gereffi, G., Guinn, A.: Connecting local producers in developing countries to regional and global value chains: update. (2014)

Bénassy-Quéré, A., Decreux, Y., Fontagné, L.G., Khoudour-Casteras, D.: Economic crisis and global supply chains. (2009)

Blanco-Mesa, F., Merigó, J.M., Gil-Lafuente, A.M.: Fuzzy decision making: A bibliometric-based review. J. Intell. Fuzzy Syst. **32**(3), 2033–2050 (2017). ttps://doi.org/10.3233/jifs-161640

Borin, A., Mancini, M.: Follow the value added: bilateral gross export accounting. *Bank of Italy Temi Di Discussione (Working Paper) No*, *1026*. (2015)
Bramer, W.M., Giustini, D., de Jonge, G.B., Holland, L., Bekhuis, T.: De-duplication of database search results for systematic reviews in EndNote. J. Med. Libr. Association: JMLA. **104**(3), 240 (2016). ttps://doi.org/10.3163/1536-5050.104.3.014
Campa, J.M., Goldberg, L.S.: The evolving external orientation of manufacturing industries: evidence from four countries. In: National Bureau of Economic Research Cambridge, Mass., USA (1997)
Chowdhury, P., Paul, S.K., Kaisar, S., Moktadir, M.A.: COVID-19 pandemic related supply chain studies: A systematic review. Transp. Res. E. **148**, 102271 (2021). ttps://doi.org/10.1016/j.tre.2021.102271
Cigna, S., Gunnella, V., Quaglietti, L.: Global value chains: measurement, trends and drivers. ECB Occasional Paper (2022). (2022/289).
Coe, N.M., Yeung, H.W.-C.: Global production networks: Theorizing economic development in an interconnected world. Oxford University Press (2015)
Dadush, U.: The policy response to global value chain disruption. Global Policy. **14**(3), 548–557 (2023). ttps://doi.org/10.1111/1758-5899.13220
Dai, J., Xu, S.: Intellectual Structure of Global Value Chain Research: Visualization and Bibliometric Analysis Based on VOSviewer. Discrete Dynamics Nat. Soc. **2024**(1), 1055977 (2024). ttps://doi.org/10.1155/2024/1055977
De Marchi, V., Di Maria, E., Gereffi, G.: Industrial districts, clusters and global value chains: toward an integrated framework. In: Local clusters in global value chains, pp. 1–18. Routledge (2017)
Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., Lim, W.M.: How to conduct a bibliometric analysis: An overview and guidelines. J. Bus. Res. **133**, 285–296 (2021). ttps://doi.org/10.1016/j.jbusres.2021.04.070
Dosi, G., Riccio, F., Virgillito, M.E.: Specialize or diversify? And in What? Trade composition, quality of specialization, and persistent growth. Ind. Corp. Change. **31**(2), 301–337 (2022). ttps://doi.org/10.1093/icc/dtac008
Du, X., Wang, Z.: Multinationals, global value chains, and the welfare impacts of economic sanctions. Econ. Lett. **220**, 110870 (2022). ttps://doi.org/10.1016/j.econlet.2022.110870
Du, W., Fang, G., Gao, T., Jiang, W.: Public credit institutions, export activities, and global value chain participation: Evidence from China's credit demonstration city construction program. Econ. Model. **126**, 106409 (2023). ttps://doi.org/10.1016/j.econmod.2023.106409
Eegunjobi, R., Ngepah, N.: The Determinants of Global Value Chain Participation in Developing Seafood-Exporting Countries. Fishes. **7**(4), 186 (2022)
Fagerberg, J., Lundvall, B., Srholec, M.: Global value chains, national innovation systems and economic development. Eur. J. Dev. Res. **30**, 533–556 (2018). ttps://doi.org/10.1057/s41287-018-0147-2
Feenstra, R.C., Hanson, G.H.: Globalization, outsourcing, and wage inequality. Am. Econ. Rev. **86**(2), 240–245 (1996)
Feyaerts, H., Van den Broeck, G., Maertens, M.: Global and local food value chains in Africa: A review. Agric. Econ. **51**(1), 143–157 (2020)
Gawande, K., Hoekman, B., Cui, Y.: Global supply chains and trade policy responses to the 2008 crisis. World Bank Econ. Rev. **29**(1), 102–128 (2015). ttps://doi.org/10.1093/wber/lht040
Georgiadis, G.: Determinants of global spillovers from US monetary policy. J. Int. Money Finance. **67**, 41–61 (2016). ttps://doi.org/10.1016/j.jimonfin.2015.06.010
Gereffi, G.: What does the COVID-19 pandemic teach us about global value chains? The case of medical supplies. J. Int. Bus. Policy. **3**(3), 287–301 (2020). ttps://doi.org/10.1057/s42214-020-00062-w
Gereffi, G., Humphrey, J., Sturgeon, T.: The governance of global value chains. Rev. Int. Polit. Econ. **12**(1), 78–104 (2005). ttps://doi.org/10.1080/09692290500049805
Grossman, G.M., Rossi-Hansberg, E.: Trading tasks: A simple theory of offshoring. Am. Econ. Rev. **98**(5), 1978–1997 (2008). ttps://doi.org/10.1257/aer.98.5.1978
Gupta, R., Pandey, R., Sebastian, V.: International Entrepreneurial Orientation (IEO): A bibliometric overview of scholarly research. J. Bus. Res. **125**, 74–88 (2021). ttps://doi.org/10.1016/j.jbusres.2020.12.005
Harzing, A.-W., Alakangas, S.: Google Scholar, Scopus and the Web of Science: a longitudinal and cross-disciplinary comparison. Scientometrics. **106**, 787–804 (2016). ttps://doi.org/10.1007/s11192-015-1798-9
Hernández, V., Pedersen, T.: Global value chain configuration: A review and research agenda. BRQ Bus. Res. Q. **20**(2), 137–150 (2017). ttps://doi.org/10.1016/j.brq.2016.11.001
Hernández-Perlines, F., Ariza-Montes, A., Blanco-González-Tejero, C.: Intrapreneurship research: A comprehensive literature review. J. Bus. Res. **153**, 428–444 (2022). ttps://doi.org/10.1016/j.jbusres.2022.08.015
Hummels, D., Ishii, J., Yi, K.-M.: The nature and growth of vertical specialization in world trade. J. Int. Econ. **54**(1), 75–96 (2001). ttps://doi.org/10.1016/S0022-1996(00)00093-3
Johns, T., Powell, B., Maundu, P., Eyzaguirre, P.B.: Agricultural biodiversity as a link between traditional food systems and contemporary development, social integrity and ecological health. J. Sci. Food. Agric. **93**(14), 3433–3442 (2013). ttps://doi.org/10.1002/jsfa.6351

Johnson, R.C.: Measuring global value chains. Annual Rev. Econ. **10**, 207–236 (2018). ttps://doi.org/10.1146/annurev-economics-080217-053600

Jones, R.W., Kierzkowski, H.: The role of services in production and international trade: A theoretical framework. World Scientific Book Chapters, Issue. N. B. o. E. Research & Cambridge (2018)

Kandil, N., Battaïa, O., Hammami, R.: Globalisation vs. Slowbalisation: a literature review of analytical models for sourcing decisions in supply chain management. Annu. Rev. Control. **49**, 277–287 (2020). ttps://doi.org/10.1016/j.arcontrol.2020.04.004

Kano, L., Tsang, E.W., Yeung, H.W.-.: Global value chains: A review of the multi-disciplinary literature. J. Int. Bus. Stud. **51**, 577–622 (2020). ttps://doi.org/10.1057/s41267-020-00304-2

Kong, X., Feng, K., Wang, P., Wan, Z., Lin, L., Zhang, N., Li, J.: Steel stocks and flows of global merchant fleets as material base of international trade from 1980 to 2050. Glob. Environ. Change. **73**, 102493 (2022). ttps://doi.org/10.1016/j.gloenvcha.2022.102493

Koopman, R., Wang, Z., Wei, S.-J.: Tracing Value-Added and Double Counting in Gross Exports. Am. Econ. Rev. **104**(2), 459–494 (2014). ttps://doi.org/10.1257/aer.104.2.459

Krishen, A.S., Dwivedi, Y.K., Bindu, N., Kumar, K.S.: A broad overview of interactive digital marketing: A bibliometric network analysis. J. Bus. Res. **131**, 183–195 (2021). ttps://doi.org/10.1016/j.jbusres.2021.03.061

Kummritz, V., Taglioni, D., Winkler, D.E.: Economic upgrading through global value chain participation: which policies increase the value added gains? *World Bank Policy Research Working Paper*(8007). (2017)

Lam, T.-D.: A review of modern international trade theories. Am. J. Econ. Finance Manage. **1**(6), 604–614 (2015)

Lee, K., Szapiro, M., Mao, Z.: From Global Value Chains (GVC) to Innovation Systems for Local Value Chains and Knowledge Creation. Eur. J. Dev. Res. **30**(3), 424–441 (2018). ttps://doi.org/10.1057/s41287-017-0111-6

Li, F., Frederick, S., Gereffi, G.: E-commerce and industrial upgrading in the Chinese apparel value chain. J. Contemp. Asia. **49**(1), 24–53 (2019). ttps://doi.org/10.1080/00472336.2018.1481220

Li, K., Kim, D.J., Lang, K.R., Kauffman, R.J., Naldi, M.: How should we understand the digital economy in Asia? Critical assessment and research agenda. Electron. Commer. Res. Appl. **44**, 101004 (2020). ttps://doi.org/10.1016/j.elerap.2020.101004

Mancini, M.C.: Geographical Indications in Latin America Value Chains: A branding from below strategy or a mechanism excluding the poorest? J. rural Stud. **32**, 295–306 (2013). ttps://doi.org/10.1016/j.jrurstud.2013.07.008

Mansouri, S.A.: A Brief Review of the Evolution of International Trade Theories. Int. J. Bus. Dev. Stud. **14**(2), 93–108 (2022). ttps://doi.org/10.22111/ijbds.2022.7518

Mao, H., Görg, H.: Friends like this: the impact of the US–China trade war on global value chains. World Econ. **43**(7), 1776–1791 (2020). ttps://doi.org/10.1111/twec.12967

Maró, Z.M., Török, Á.: China's New Silk Road and Central and Eastern Europe—A. Syst. Literature Rev. Sustain. **14**(3), 1801 (2022)

Maró, Z.M., Mizik, T., Balogh, J.M.: Eat or what to eat: A systematic review of food consumption behaviour and responses to economic shocks. Trends Food Sci. Technol. **165**, 105291 (2025). ttps://doi.org/10.1016/j.tifs.2025.105291

Martín-Navarro, A., Lechuga Sancho, M.P., Martínez-Fierro, S.: Evolution of entrepreneurship research in the food sector: a bibliometric review. Br. Food J. **125**(5), 1537–1558 (2022). ttps://doi.org/10.1108/bfj-04-2022-0388

Martín-Navarro, A., Lechuga Sancho, M.P., Martínez-Fierro, S.: Evolution of entrepreneurship research in the food sector: a bibliometric review. Br. Food J. **125**(5), 1537–1558 (2023). ttps://doi.org/10.1108/BFJ-04-2022-0388

Matthess, M., Kunkel, S.: Structural change and digitalization in developing countries: Conceptually linking the two transformations. Technol. Soc. **63**, 101428 (2020). ttps://doi.org/https://doi.org/10.1016/j.techsoc.2020.101428

McMillan, M., Rodrik, D., Verduzco-Gallo, Í.: Globalization, Structural Change, and Productivity Growth, with an Update on Africa. World Dev. **63**, 11–32 (2014). ttps://doi.org/10.1016/j.worlddev.2013.10.012

Meier, M., Pinto, E.: Covid-19 supply chain disruptions. Covid Econ. **48**(1), 139–170 (2020)

Merigó, J.M., Yang, J.-B.: Accounting Research: A Bibliometric Analysis. Australian Acc. Rev. **27**(1), 71–100 (2017). ttps://doi.org/10.1111/auar.12109

Miroudot, S.: Reshaping the policy debate on the implications of COVID-19 for global supply chains. J. Int. Bus. Policy. **3**(4), 430 (2020). ttps://doi.org/10.1057/s42214-020-00074-6

Misra, A., Mention, A.-L.: Exploring the food value chain using open innovation: a bibliometric review of the literature. Br. Food J. **124**(6), 1810–1837 (2021). ttps://doi.org/10.1108/bfj-04-2021-0353

Misra, A., Mention, A.-L.: Exploring the food value chain using open innovation: A bibliometric review of the literature. Br. Food J. **124**(6), 1810–1837 (2022). ttps://doi.org/10.1108/BFJ-04-2021-0353
Mizik, T., Nagy, J., Molnár, E.M., Maró, Z.M.: Challenges of employment in the agrifood sector of developing countries—a systematic literature review. Humanit. Social Sci. Commun. **12**(1), 62 (2025). ttps://doi.org/10.1057/s41599-024-04308-3
Mongeon, P., Paul-Hus, A.: The journal coverage of Web of Science and Scopus: a comparative analysis. Scientometrics. **106**(1), 213–228 (2016). ttps://doi.org/10.1007/s11192-015-1765-5
Morrison, A., Pietrobelli, C.: Global value chains and technological capabilities: a framework to study industrial innovation in developing countries. In: Dynamic Capabilities Between Firm Organisation and Local Systems of Production, pp. 175–198. Routledge (2007)
Mukherjee, D., Lim, W.M., Kumar, S., Donthu, N.: Guidelines for advancing theory and practice through bibliometric research. J. Bus. Res. **148**, 101–115 (2022). ttps://doi.org/10.1016/j.jbusres.2022.04.042
Mulet-Forteza, C., Genovart-Balaguer, J., Mauleon-Mendez, E., Merigó, J.M.: A bibliometric research in the tourism, leisure and hospitality fields. J. Bus. Res. **101**, 819–827 (2019). ttps://doi.org/10.1016/j.jbusres.2018.12.002
Nederhof, A.J.: Bibliometric monitoring of research performance in the social sciences and the humanities: A review. Scientometrics. **66**(1), 81–100 (2006). ttps://doi.org/10.1007/s11192-006-0007-2
Paul, J., Criado, A.R.: The art of writing literature review: What do we know and what do we need to know? Int. Bus. Rev. **29**(4), 101717 (2020). ttps://doi.org/10.1016/j.ibusrev.2020.101717
Paul, J., Merchant, A., Dwivedi, Y.K., Rose, G.: Writing an impactful review article: What do we know and what do we need to know? J. Bus. Res. **133**, 337–340 (2021). ttps://doi.org/10.1016/j.jbusres.2021.05.005
Peng, J., Zhang, Y.: Impact of Global Value Chains on Export Technology Content of China's Manufacturing Industry. Sustainability. **12**(1), 432 (2020). https://www.mdpi.com/2071-1050/12/1/432
Raei, M.F., Ignatenko, A., Mircheva, M.: Global value chains: what are the benefits and why do countries participate? International Monetary Fund (2019)
Riisgaard, L., Bolwig, S., Ponte, S., Du Toit, A., Halberg, N., Matose, F.: Integrating Poverty and Environmental Concerns into Value-Chain Analysis: A Strategic Framework and Practical Guide. Dev. Policy Rev. **28**(2), 195–216 (2010). ttps://doi.org/10.1111/j.1467-7679.2010.00481.x
Timmer, M.P., Erumban, A.A., Los, B., Stehrer, R., de Vries, G.J.: Slicing Up Global Value Chains. J. Economic Perspect. **28**(2), 99–118 (2014). ttps://doi.org/10.1257/jep.28.2.99
Török, Á., Kovács, S., Maró, G., Maró, Z.M.: Understanding the relevance of farmers' markets from 1955 to 2022: A bibliometric review. J. Agric. Food Res. **16**, 101108 (2024). ttps://doi.org/10.1016/j.jafr.2024.101108
Török, Á., Kovács, S., Jámbor, A., Maró, Z.M.: Understanding the Determinants of Participation in Agri-Food Global Value Chains. J. Sustain. Res. **7**(3), e250062 (2025). ttps://doi.org/10.20900/jsr20250062
Verma, S., Gustafsson, A.: Investigating the emerging COVID-19 research trends in the field of business and management: A bibliometric analysis approach. J. Bus. Res. **118**, 253–261 (2020). ttps://doi.org/10.1016/j.jbusres.2020.06.057
Wad, P., Govindaraju, V.C.: Automotive industry in Malaysia: an assessment of its development. Int. J. Automot. Technol. Manage. **11**(2), 152–171 (2011). ttps://doi.org/10.1504/IJATM.2011.039542
Wang, S., He, Y., Song, M.: Global value chains, technological progress, and environmental pollution: Inequality towards developing countries. J. Environ. Manage. **277**, 110999 (2021). ttps://doi.org/10.1016/j.jenvman.2020.110999
Witt, M.A.: De-globalization: Theories, predictions, and opportunities for international business research. J. Int. Bus. Stud. **50**(7), 1053–1077 (2019). ttps://doi.org/10.1057/s41267-019-00219-7
Yanikkaya, H., Altun, A.: The Impact of Global Value Chain Participation on Sectoral Growth and Productivity. Sustainability. **12**(12), 4848 (2020)
Yeats, A.J.: Just how big is global production sharing? *Available at SSRN 597193*. (1998)
Zupic, I., Čater, T.: Bibliometric methods in management and organization. Organizational Res. methods. **18**(3), 429–472 (2015). ttps://doi.org/10.1177/1094428114562629

Authors and Affiliations

Zalán Márk Maró[1] · Attila Jámbor[1] · Sándor Kovács[2] · Áron Török[1]

✉ Zalán Márk Maró
zalan.maro@uni-corvinus.hu

Attila Jámbor
attila.jambor@uni-corvinus.hu

Sándor Kovács
kovacs.sandor@econ.unideb.hu

Áron Török
aron.torok@uni-corvinus.hu

[1] Department of Agricultural Economics, Institute of Sustainable Development, Corvinus University of Budapest, Budapest, Hungary

[2] Department of Economical and Financial Mathematics, Faculty of Economics and Business, University of Debrecen, Debrecen, Hungary