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A DECADE OF GIG ECONOMY RESEARCH (2014-2025): A BIBLIOMETRIC AND SCIENTIFIC MAPPING OF DIGITAL LABOR SCHOLARSHIP

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Abstract:

This study investigates how the academic discourse on the gig economy has evolved between 2014 and June 2025, particularly in response to the rise of digital labor platforms and algorithmic work coordination. Despite growing scholarly attention, the literature remains conceptually fragmented and lacks conceptual clarity and methodological coherence. Drawing on 1,303 Scopus-indexed publications, this study applies a comprehensive bibliometric and scientific mapping approach using tools such as OpenRefine, BiblioMagika, Biblioshiny, and VOSviewer, through co-authorship analysis, keyword co-occurrence mapping, thematic clustering, and trend visualization, the study uncovers both structural foundations and dynamic shifts in the field. The findings highlight a notable surge in gig economy research after 2020, largely influenced by the proliferation of digital labor platforms and the acceleration of remote work and algorithmic coordination during the COVID-19 pandemic. Research focus has shifted from early descriptive accounts to more critical investigations into algorithmic management, digital trust, governance, and platform-enabled labor control. Five major thematic clusters were identified, revealing increasing interdisciplinarity and convergence with domains such as information systems, innovation policy, and digital transformation. While the study is limited by its reliance on Scopus and exclusion of full-text analysis, it provides a timely and methodologically robust overview of the field. It also identifies conceptual blind spots and regional disparities in current scholarship. This paper contributes to the literature on digital labor and platform technologies by clarifying the knowledge base of gig economy studies and offering strategic insights for future research, platform governance, and the management of digital work ecosystems in both emerging and advanced economies.

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Keywords:

Gig Economy Research, Digital Labor Platforms, Algorithmic Management, Bibliometric Analysis, Scientific Mapping, Thematic Clustering, Research Trends

Introduction

Background

The gig economy has experienced revolutionary and dramatic expansion over the past decade, reshaping labor markets and employment trends across sectors (Cho & Cho, 2020; Mahadevan et al., 2024). Characterized by short-term, task-based, and platform-mediated work arrangements, gig work is accountable for the employment of a significant share of global labor activity. The global gig economy market size in 2024 was an estimated $556.7 billion, and the market is likely to soar to $1.847 trillion by 2032 (World Economic Forum, 2024), reflecting a compound annual growth rate (CAGR) of 20.4% between 2024 and 2030 (QYResearch, 2024).

This growth is driven by three dynamics: (1) technological advancements, particularly the rise of digital platforms such as Uber, Airbnb, Upwork, and Deliveroo, facilitate short-term, task-based, and on-demand work arrangements (Talukder et al., 2025). Such platforms, based on breakthrough in the Internet of Things (IoT), artificial intelligence (AI), and blockchain notably accelerated this process by way of driving automation, connectivity, and scalability (Olorundare et al., 2022). (2) socio-economic disruptions caused by the COVID-19 pandemic significantly altered labor trends, pushing many workers to seek more flexible, decentralized work models (Mulugeta et al., 2021). (3) increased engagement of Generation Z, who enter the labor market, has further fueled desires for autonomy, flexibility, and technology-integrated income sources (Ellis, 2021). Together, these developments have propelled the gig economy from a marginal phenomenon into the dominant labor model, and with them, the new employment relations, managerial control, and social protection in digitally mediated work environments.

Opportunities and Challenges

The gig economy offers flexibility, autonomy, and diversified income for workers, while enabling firms to scale rapidly, access specialized talent, and improve cost efficiency (Manyika et al., 2016). Yet these benefits are offset by vulnerabilities such as lack of formal contracts, social protection, and collective representation (Tran & Sokas, 2017). Classifying workers as independent contractors often restricts access to labor rights and benefits (Cherry & Aloisi, 2016). Increasing reliance on algorithmic management for task allocation, monitoring, and pay raises concerns over transparency, accountability, and autonomy (Duggan et al., 2020). These tensions highlight the need for stronger academic and policy engagement on fairness, regulation, and digital control in platform work (Jain, 2024).

Problem Statement

Although the expansion of the gig economy has become an increasingly prominent feature of the global labor landscape, scholarly attention to this topic has increased enormously during

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the intervening decade. Expansion of effort, however, has simultaneously made the literature both highly fragmented and difficult to synthesize. Despite good work extending over diverse fields (Kovalainen & Poutanen, 2024), studies often emerge in isolation, lacking thematic integration or shared conceptual foundations. This fragmented character has kept an integrated intellectual apparatus from being developed and limited the possibilities of discerning dominant trends of inquiry. Whereas there have been several reviews have examined proximal regions such as the sharing economy or platform work, very few have included a comprehensive, field-specific mapping of gig economy research itself. As a result, researchers face challenges in consolidating existing knowledge and advancing theoretical understanding. To address these limitations, the paper adopts a bibliometric and scientific mapping approach that takes into account only the literature explicitly referring to the "gig economy." This targeted scope ensures conceptual clarity and allows for a more precise analysis of thematic structures, inter-cluster relationships, and underexplored areas within the literature.

Research Questions

To provide a structured, field-specific overview of gig economy research, this study analyzes publication patterns, thematic clusters, and intellectual networks. It addresses four questions:
RQ1: What are the main intellectual foundations and collaboration patterns in gig economy research?
RQ2: What are the core themes and research hotspots that structure the current literature?
RQ3: How are the core thematic areas interconnected, and what does this reveal about the structural coherence of gig economy research?
RQ4: Which areas of gig economy research remain underdeveloped, and what directions are promising for future investigation?
By answering these questions, this study contributes to a more coherent understanding of the gig economy's academic landscape and offers a foundation for future research and policy development.

Literature Review

Overview of Gig Economy Research

The term "gig" initially emerged in the 1920s among jazz musicians, referring to a recording session, live concert, or other musicians (Dalzell & Victor, 2015). It was later popularized beyond the music industry by Jack Kerouac to extend to temporary employment (Parigi & Ma, 2016). The gig work model has evolved significantly during the last decade, from informal, project-based arrangements to digitally mediated labor facilitated by online platforms (Jarrahi et al., 2020). Scholars now distinguish between the traditional gig economy**,** which emphasizes short-term work independent of digital technologies (Manyika et al., 2016), and the platform-based gig economy, which leverages technologies such as algorithmic matching, mobile applications, and digital payment systems to coordinate labor in real time (Dedema & Rosenbaum, 2024).

Although widely adopted in academic and policy discourse, the term "gig economy" is often conflated with adjacent concepts such as the platform economy and the sharing economy. Each represents a distinct model of value exchange (Liang et al., 2022). The platform economy is all the digitally mediated activities that match supply and demand, ranging from labor, services, to goods (Malik et al., 2021). Within this broader framework, the gig economy specifically refers to labor-centric, task-based, and non-standard work facilitated by platforms like Uber, Deliveroo, or Upwork, typically without formal employment relationships (Akhmedova et al.,

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2020; Gleim et al., 2019; Kaine & Josserand, 2019). In contrast, the sharing economy centers on granting temporary access to underutilized physical assets, such as cars or homes, and is primarily asset-based rather than labor-intensive (Huang & Kuo, 2020). Although the three models rely on digital intermediation, they differ fundamentally in the type of value exchanged: labor in the gig economy, assets or services in the sharing economy, and digital coordination mechanisms in the platform economy (Mazzella et al., 2016).

To ensure conceptual precision and thematic consistency, this study focuses exclusively on the gig economy as a labor-oriented segment of the broader platform economy. This approach aligns with prevailing definitions that emphasize digitally mediated, on-demand work conducted by independent workers on a task-by-task (Duggan et al., 2023)basis. Accordingly, literature addressing general platform transactions or asset-sharing models without direct labor involvement is excluded from the analysis. By adopting this focused lens, the study contributes to a more coherent understanding of how digitally mediated employment has evolved, been conceptualized, and debated in the academic literature.

Key Research Themes

Research on the gig economy spans management, labor economics, sociology, information systems, and public policy. Over the last decade, scholarly research has increasingly converged on several core themes that reflect the complexities of platform-mediated labor. One dominant strand of research revolves around the precarity of platform labor, highlighting concerns around worker misclassification, the absence of social protections, and income instability (Gupta, 2021; Wood et al., 2019). Closely related is the theme of algorithmic management, examining how digital platforms use data-driven systems to assign tasks, monitor performance, and determine pay, often constraining worker autonomy and transparency(Kellogg et al., 2020; Rosenblat & Stark, 2016). Research has also revisited the flexibility and autonomy, arguing that while gig work offers scheduling freedom, this often coexists with economic insecurity and platform-driven constraints (Koutsimpogiorgos et al., 2020; Pichault & McKeown, 2019).

Further work explores worker well-being, including mental health, occupational stress, and the role of both regulation and collective organizing in mitigating these risks. Digital trust and platform governance have gained prominence, with studies showing how institutional, legal, and cultural contexts influence perceptions of fairness (Heeks et al., 2021; Schor et al., 2020). Finally, scholars examine inequality and exclusion, focusing on algorithmic bias, gender and racial disparities, and calls for more inclusive platform design (Shestakofsky, 2020).

Despite its multidimensionality, the literature remains theoretically and empirically fragmented, often confined to specific platforms, countries, or worker groups. This fragmentation hinders understanding of the field's intellectual evolution and limits cross-study synthesis. Addressing these gaps, the present study applies a comprehensive bibliometric and scientific mapping approach to systematically map thematic contours and identify emerging directions.

Previous Bibliometric Studies on the Gig Economy

Over the past few years, several bibliometric and scientometric studies have investigated the evolution of gig economy research, covering themes from worker well-being and sustainability to entrepreneurship and regulation. Most draw on Scopus or Web of Science data and employ tools such as VOSviewer, CiteSpace, and Biblioshiny.

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While these reviews have revealed keyword clusters, publication trends, and collaborative patterns, several limitations remain. Conceptually, many studies use broad or overlapping terms—such as "platform work," "freelancing," or "sharing economy"—which dilute the analytical focus on labor-centric gig work. Methodologically, most prior research adopts descriptive techniques without employing deeper structural mapping approaches such as co-citation analysis, bibliographic coupling, or longitudinal thematic evolution. Consequently, the field still lacks an integrated view of its intellectual structure and conceptual development.

To illustrate prevailing approaches and typical limitations, five representative studies in Table 1 were selected based on three criteria: (1) explicit focus on the gig economy, (2) application of bibliometric or scientometric tools, and (3) diversity in data sources and period.

This study addresses these gaps through a comprehensive bibliometric and science mapping analysis of labor-focused gig economy literature (2014–2025). It combines co-authorship, keyword co-occurrence, and citation network analysis with temporal visualizations to trace thematic trajectories, thereby narrowing conceptual scope and broadening methodological depth to produce a more coherent and forward-looking map of gig economy scholarship.

Methodology

This study employed a bibliometric analysis to systematically examine the evolution of gig economy research over the past decade, ensuring transparency and replicability. The process comprised three phases: search and data collection, data cleaning and harmonization, and analytical visualization through network mapping.

Search Strategy and Data Collection

A systematic bibliometric search was conducted in June 2025 using Scopus, covering January 2014–June 2025 to capture a decade of gig economy research, including COVID-19–related shifts. The search, restricted to article titles, used the query *TITLE ("gig" OR "gig economy" OR "gig work" OR "freelanc" OR "crowdwork")*, and included only English-language articles, notes, and conference papers. This yielded 1,491 records, exported in CSV format for VOSviewer and Biblioshiny. After removing duplicates and manually excluding irrelevant items (e.g., music gigs, artistic freelance work), 1,303 documents remained. The full workflow is shown in Figure 1.

Data Cleaning and Harmonization

Data were cleaned in OpenRefine to standardize author names, institutions, and keywords, ensuring consistency across records. Synonyms and spelling variants (e.g., "crowdwork" vs. "crowd work") were merged, and generic or non-informative keywords were removed. This harmonization improved the accuracy of subsequent co-authorship, keyword, and citation analyses.

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Table 1: Overview of Representative Bibliometric Studies on Gig Economy Research

Author	Domain & Search Query	Objective of the Study	Total Document, Data Source & Coverage	Attributes Examined	Main Findings
Batmunkh et al. (2022)	Domain: gig economy. Search Query: TITLE-ABS-KEY("Gig Economy")	Explore publication trends, key themes, and collaboration networks in gig economy research.	206 documents; Web of Science; (2012-2022)	Annual output, countries, organizations, authorship, keywords	Identified emerging themes and top contributors; emphasized fragmented collaboration structure.
Gürsoy (2023)	Domain: Gig economy. Search Query: TITLE("Gig Economy" OR "Gig Economies" OR "Gig Economics")"	To provide a holistic scientometric analysis of the gig economy using CiteSpace, identifying trends, clusters, and knowledge structures.	732 documents; Web of Science; (date of data acquisition: 31.08.2022	Keyword analysis, co-authorship, country collaboration, author productivity, thematic clustering, representative documents.	Identified rising research trend post-2017, dominant themes include labor relations, precarity, digital platforms, and socio-economic impacts; highlighted the USA, UK, and Australia as key contributors; suggested gaps in labor rights and social security discussions.
Taneja (2024)	Domain: Gig economy. Search Query: keywords('Well-being', 'Gig Workers', 'Freelancers', 'Temporary Workers')	To analyze literature on gig workers' well-being and identify key research trends, gaps, and future directions.	862 documents; Scopus; (2000–2023)	Research trends, citation patterns, productive authors, journal impact, geographical distribution, keyword analysis, thematic areas	Recent surge in gig well-being research post-2019; identified prominent authors (Isaksson, Chambel), key journals (Economic & Industrial Democracy); highlighted gaps in physical/emotional well-being studies.
Vadavi & Sharmiladevi (2024)	Domain: Gig economy. Search Query: keywords("gig economy", "gig" AND "economy")	To identify publication trends, collaborative networks, and thematic clusters; propose future research agenda.	341 documents from Scopus; (Jan 2016 – Mar 2024)	Publication trends, co-authorship, keyword co-occurrence, cluster themes, top countries, journals, and organizations.	Three cluster themes: (1) Digital age work environment, (2) Contemporary labour dynamics, (3) Empowering future workforce. Highlighted research gaps and suggested future directions.
Malik et al. (2021)	Domain: gig economy. Search Query: keywords('gig economy')	Map gig economy research; clarify distinctions between gig and platform economies; identify emerging themes and underexplored areas.	269 documents; WoS; (cutoff date February 2020)	Keyword co-occurrence; strategic diagrams; thematic networks using SciMAT.	Identified motor, basic, emerging, and specialized themes; revealed conceptual ambiguity between gig and platform economies.

Source: Generated by the Author(s)

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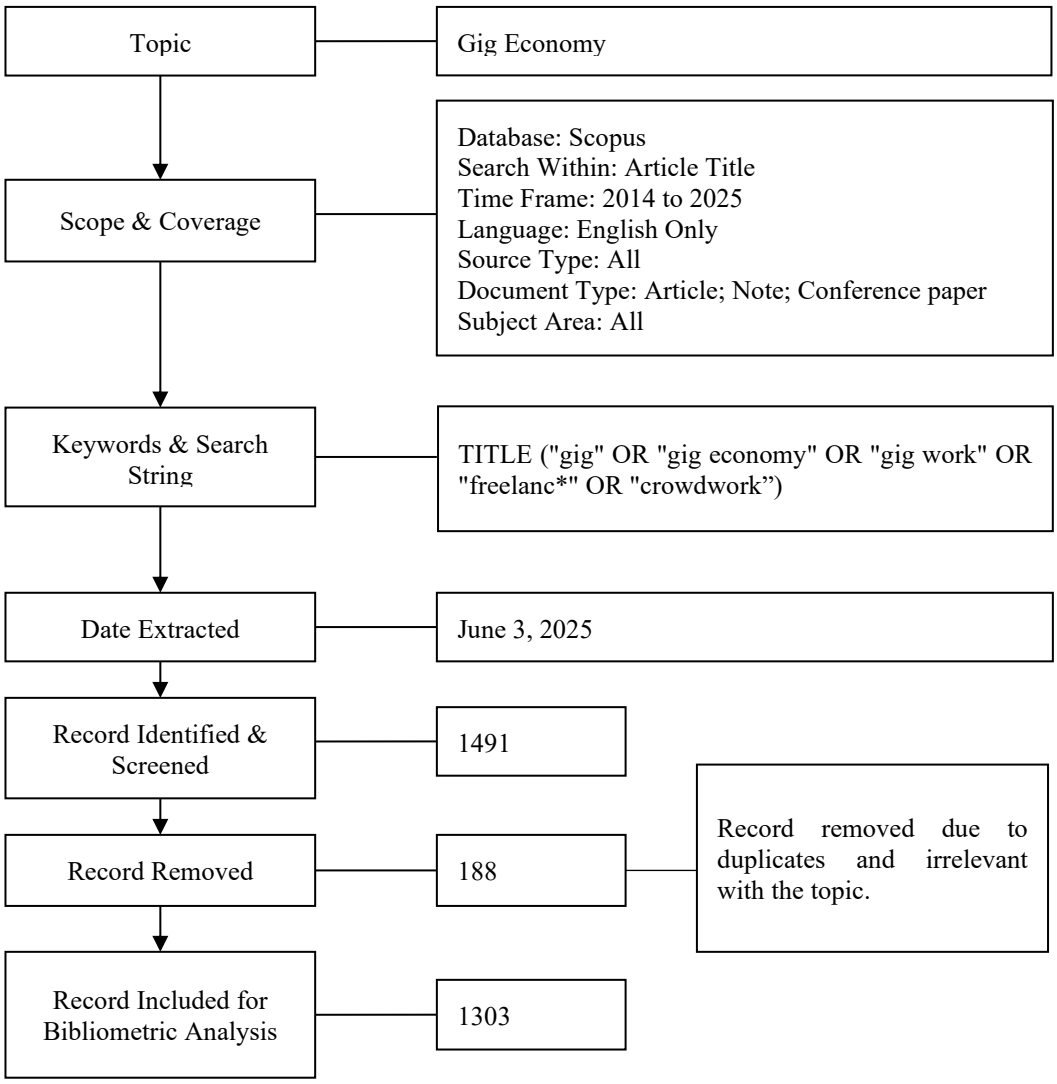

Figure 1: Flow Diagram of the Search Strategy

Source: Generated by the Author(s)

Tools

Four tools were used for bibliometric and scientific mapping: OpenRefine for cleaning and harmonizing bibliographic data; BiblioMagika (Ahmi, 2023) for deduplication, metadata harmonization, and Scopus data export configuration; Biblioshiny as the web-based interface of the Bibliometrix R-package (Aria & Cuccurullo, 2017) for statistical analysis, thematic mapping, and trend analysis; and VOSviewer (Van Eck & Waltman, 2010) for constructing and visualizing co-authorship, collaboration, keyword co-occurrence, and co-citation networks. Together, they provided an integrated environment for structural and thematic analysis of gig economy research (2014–2025).

Results

Descriptive Overview

From 2014 to 2025, academic interest in the gig economy expanded significantly, resulting in a total of 1,303 publications authored by 3,449 contributors (Table 2). These documents

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accumulated 26,672 citations, averaging 20.47 citations per paper, indicating a growing scholarly impact. The majority of contributions appeared in peer-reviewed journals (80.28%), followed by conference proceedings (16.65%) and book series (2.69%) (Table 3).

Table 2: Citation Metrics

Main Information	Data
Publication Years	2014 - 2025
Total Publications	1303
Citable Year	12
Number of Contributing	3449
Number of Cited Papers	1009
Total Citations	26,672
Citation per Paper	20.47
Citation per Cited Paper	26.43
Citation per Year	2424.73
Citation per Author	7.73
Author per Paper	2.65
Citation sum within h-Core	21,023
h-index	79
g-index	135
m-index	6.583

Source: Generated by Author(s) Using BiblioMagika® (Ahmi, 2024)

Table 3: Source Type

Source Type	Total Publications	Percentage (%)
Journals	1046	80.28
Conference Proceedings	217	16.65
Book Series	35	2.69
Trade Journal	5	0.38
Total	**1303**	**100.00**

Source: Generated by Author(s) Using BiblioMagika® (Ahmi, 2024)

As shown in Figure 2, publication growth follows three stages:The initial stage (2014–2016) was characterized by exploratory research, with relatively few papers and citations. The second stage (2017–2019) marked a steep rise in both publication volume and scholarly attention, especially in 2019, which saw a citation peak of 6,434. This can be attributed to the emergence of regulatory and ethical debates that intensified academic engagement. The third stage (2020–2024) witnessed a rapid expansion of research, partly driven by the COVID-19 pandemic. The crisis exposed the precarity and essential role of gig workers, triggering a wave of publications on algorithmic control, labor rights, and platform governance. Publication output peaked in 2024 (n=266), but a drop in 2025 (n=123) is likely due to incomplete data for that year. Notably, citation rates for recent publications remain low, reflecting the natural citation lag.

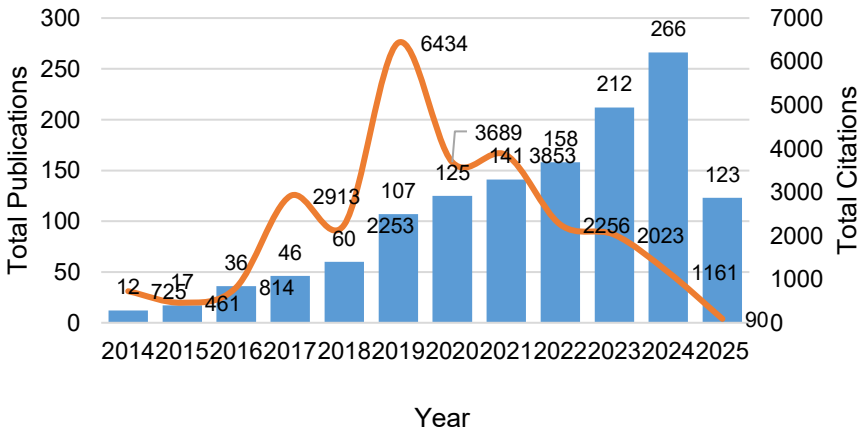

Figure 2: Total Publications and Citations by Year

Source: Generated by Author(s) Using BiblioMagika® (Ahmi, 2024)

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Productivity & Collaboration

Building on the descriptive overview, this section examines the productivity and collaborative dynamics shaping scholarship in the gig economy. As depicted in Table 4, a small group of scholars, such as Mark Graham and Vili Lehdonvirta from the University of Oxford, lead the field in publication count and citation indicators. Other notable contributors are scholars affiliated with Universitas Indonesia and HSE University in Russia, reflecting a growing participation from emerging economies. Citation indices such as h-index and m-index indicate their influence within the literature.

Table 4: Most Productive Authors (TOP 5)

Author's Name	Current Affiliation	Country	TP	NCP	TC	C/P	C/CP	*h*	*g*	*m*
Graham, Mark	University of Oxford	UK	13	12	3119	239.92	259.92	10	13	1.111
Gandhi, Arfive	Universitas Indonesia	Indonesia	11	11	67	6.09	6.09	5	8	0.625
Sucahyo, Yudho Giri	Universitas Indonesia	Indonesia	11	11	67	6.09	6.09	5	8	0.625
Lehdonvirta, Vili	University of Oxford	UK	11	10	3167	287.91	316.70	10	11	1.111
Shevchuk, Andrey	National Research University	Russian Federation	10	10	252	25.20	25.20	8	10	0.667

Note: TP=total number of publications; NCA=Number of contributing authors; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; g=g-index; m=m-index.
Source: Generated by Author(s) Using biblioMagika® (Ahmi, 2024)

Figure 3 visualizes the author co-authorship network. Mark Graham serves as a central node, linking collaborators across continents. Vili Lehdonvirta forms part of a European cluster, and more recent entries into the network, highlighted in lighter colors, suggest expanding participation from 2022 onwards. While this indicates a diversification of contributors, the centrality of a few figures also reflects a relatively concentrated intellectual core.

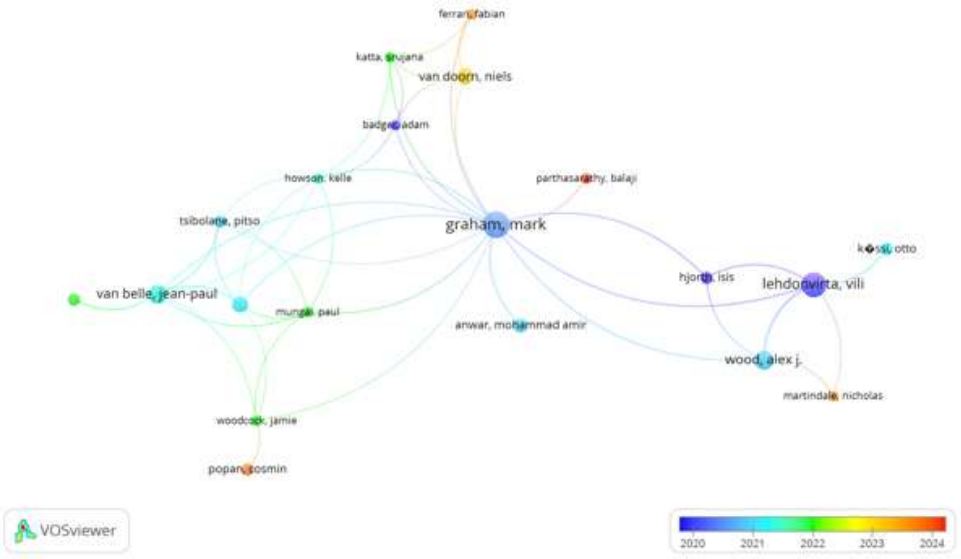

Figure 3: Overlay Visualization of Author Co-Authorship
Source: Generated by the Author(s) Using VOSviewer (Van Eck & Waltman, 2014)

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At the institutional level, the University of Oxford leads with the highest publication and citation count (Table 5). Prominent U.S. universities such as Michigan, Texas, and North Carolina also contribute significantly. Institutions from Canada, Indonesia, Norway, and Australia further signal a broadening international base. However, citation impact remains uneven, with institutions in the Global North continuing to dominate scholarly influence.

Table 5: Most Productive Institutions (TOP 10)

Affiliation	Country	TP	NCA	NCP	TC	C/P	C/CP	*h*	*g*	*m*
University of Oxford	UK	31	61	28	4135	133.39	147.68	17	31	1.889
University of Toronto	Canada	21	27	16	668	31.81	41.75	11	21	1.222
University of Michigan	U.S.	18	39	16	1202	66.78	75.13	10	18	0.833
University of Texas	U.S.	17	33	14	248	14.59	17.71	7	15	0.583
University of North Carolina	U.S.	16	20	12	1009	63.06	84.08	11	16	1.222
Universitas Indonesia	Indonesia	15	44	14	101	6.73	7.21	6	10	0.750
University of Melbourne	Australia	14	22	12	456	32.57	38.00	9	14	1.000
University of Sydney	Australia	14	21	12	722	51.57	60.17	10	14	1.111
University of California	U.S.	14	20	13	328	23.43	25.23	8	14	0.727
University of Minnesota	U.S.	14	17	10	623	44.50	62.30	6	14	0.600

Note: TP=total number of publications; NCA=number of contributing authors; NCP=number of cited publications; TC=total citations; C/P=average citations per publication; C/CP=average citations per cited publication; h=h-index; g=g-index; m=m-index.
Source: Generated by the Author(s) Using BiblioMagika® (Ahmi, 2024)

As shown in Figure 4, the United States leads global gig economy research with 349 publications, followed by the United Kingdom (182), which records the highest citation impact. China, India, and Malaysia have shown notable growth but remain peripheral in citation performance. Research is heavily concentrated in North America and Western Europe, while Africa and Latin America are significantly underrepresented.

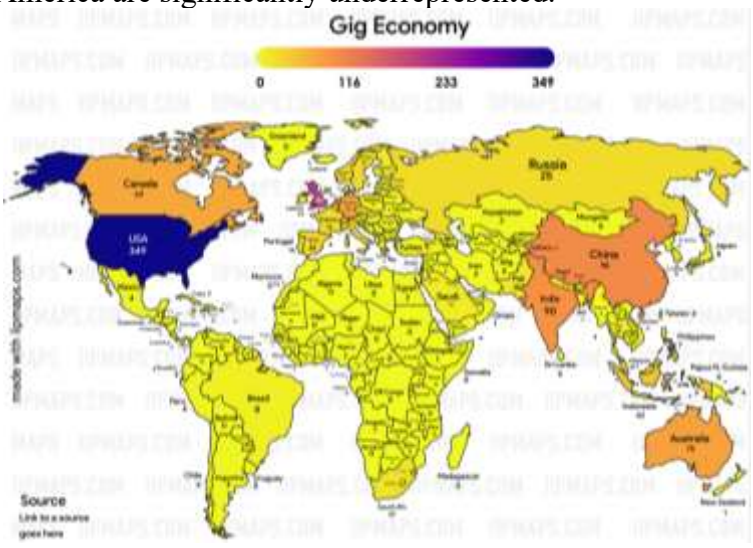

Figure 4: Worldwide Scientific Production Indexed by Scopus on the Gig Economy
Note: Project Link: iipmaps.com/view/q6DC0XOPO4pRVGTN1Jkv
Source: Generated by the Author(s) Using iipmaps.com

International collaboration patterns (Figure 5) reinforce this centralization. The United States and the United Kingdom act as primary hubs, maintaining strong ties with countries like Germany, Australia, and Canada. In contrast, emerging economies are less integrated into these global research networks, suggesting opportunities for more inclusive partnerships. While

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South–South collaboration remains minimal, enhancing such ties could diversify perspectives and enrich the field.

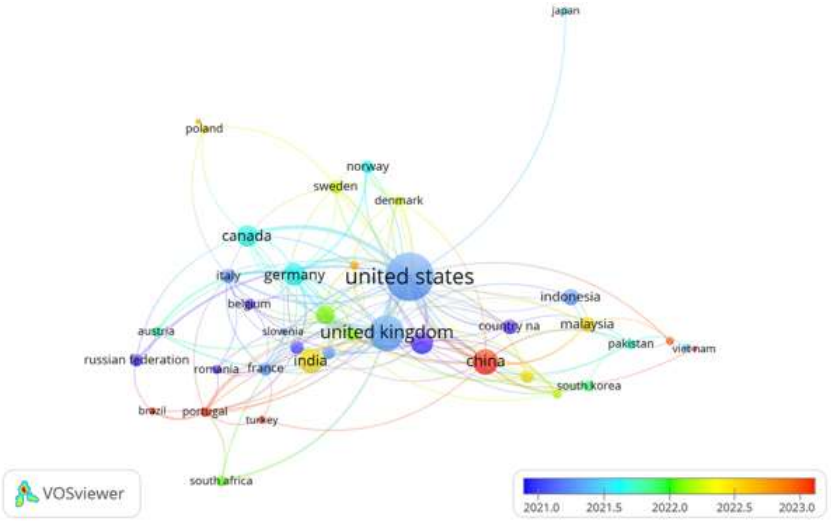

Figure 5: Overlay Visualization of Country Co-Authorship

Source: Generated by the Author(s) Using VOSviewer (van Eck & Waltman, 2014)

Intellectual Structure

Table 6 lists the ten most highly cited articles, which represent seminal contributions to the field. These works—by authors such as Wood, Graham, Lehdonvirta, Hjorth, and Petriglieri—explore foundational topics including algorithmic control, labor precarity, digital autonomy, and platform governance. Their high citation rates and frequent appearance in co-citation networks suggest these studies have shaped the early trajectory and conceptual framing of gig economy scholarship. Notably, these influential articles span across journals from sociology, management, labor studies, and economics, highlighting the interdisciplinary character of the field.

Table 6: Highly Cited Articles (TOP 10)

No.	Authors	Title	Source Title	Cites	Cites /Year
1	Wood A.J.; Graham M.; Lehdonvirta V.; Hjorth I. (2019)	Good Gig, Bad Gig: Autonomy and Algorithmic Control in the Global Gig Economy	Work, Employment and Society	1179	168.43
2	Graham M.; Hjorth I.; Lehdonvirta V. (2017)	Digital labour and development: impacts of global digital labour platforms and the gig economy on worker livelihoods	Transfer	652	72.44
3	Gandini A. (2019)	Labour process theory and the gig economy	Human Relations	549	78.43
4	Petriglieri G.; Ashford S.J.; Wrzesniewski A. (2019)	Agony and Ecstasy in the Gig Economy: Cultivating Holding Environments for Precarious and Personalized Work Identities	Administrative Science Quarterly	514	73.43

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No.	Authors	Title	Source Title	Cites	Cites /Year
5	Tassinari A.; Maccarrone V. (2020)	Riders on the Storm: Workplace Solidarity among Gig Economy Couriers in Italy and the UK	Work, Employment and Society	486	81.00
6	Friedman G. (2014)	Workers without employers: Shadow corporations and the rise of the gig economy	Review of Keynesian Economics	454	37.83
7	Stewart A.; Stanford J. (2017)	Regulating work in the gig economy: What are the options?	Economic and Labour Relations Review	368	40.89
8	Burtch G.; Carnahan S.; Greenwood B.N. (2018)	Can you gig it? an empirical examination of the gig economy and entrepreneurial activity	Management Science	359	44.88
9	Lehdonvirta V. (2018)	Flexibility in the gig economy: managing time on three online piecework platforms	New Technology, Work and Employment	349	43.63
10	Howcroft D.; Bergvall-Kåreborn B. (2019)	A Typology of Crowdwork Platforms	Work, Employment and Society	328	46.86

Source: Generated by the Author(s) Using BiblioMagika® (Ahmi, 2024)

Figure 6 illustrates the author's co-citation network, where node size reflects citation frequency and proximity indicates conceptual closeness. The network reveals a dense and multi-clustered structure, suggesting the coexistence of several intellectual communities. A large green cluster centers on Graham and Lehdonvirta, reflecting a core body of work focused on digital labor, platforms, and governance. Adjacent clusters—such as the red group involving Ashford and Bakker—point to psychological and organizational studies on worker identity and well-being. Meanwhile, yellow and blue clusters reflect sociological perspectives on labor process theory and institutional critique.

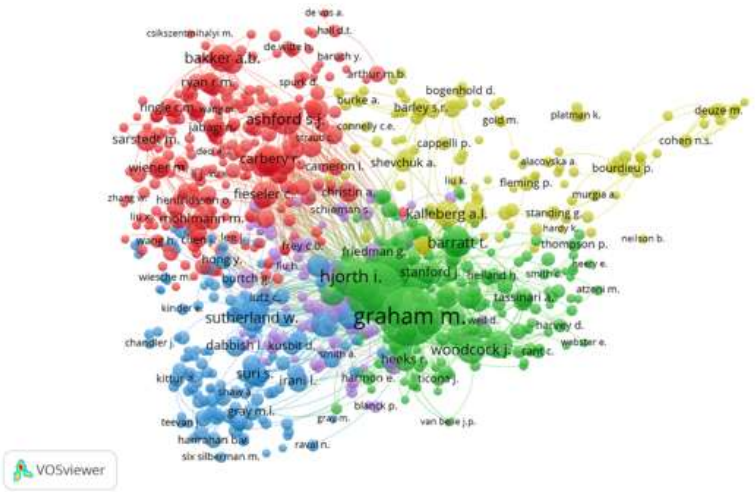

Figure 6: Network Visualization of Author Co-Citation

Source: Generated by the Author(s) Using VOSviewer (Van Eck & Waltman, 2014)

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Conceptual and Thematic Structure

In Figure 7, the keyword co-occurrence network identifies five interconnected thematic clusters. At the core is an anchor cluster (green), anchored by keywords like "gig economy," "platform economy," and "gig workers." This reflects a foundational discourse on platform-mediated labor and its socioeconomic implications. Surrounding this core are four distinct but overlapping subthemes. The red cluster highlights research on freelancers, creative labor, and self-employment, suggesting a concern with autonomy and non-standard work identities. The blue cluster centers on labor precarity, resilience, and governance, showing a sustained interest in regulatory and social protection mechanisms, particularly in response to COVID-19 disruptions. The purple cluster emphasizes algorithmic management, where research explores how digital systems reconfigure managerial power and worker control. The yellow cluster features emerging topics related to trust, motivation, and platform technologies like blockchain and machine learning, suggesting a future-facing concern with fairness, transparency, and digital infrastructure.

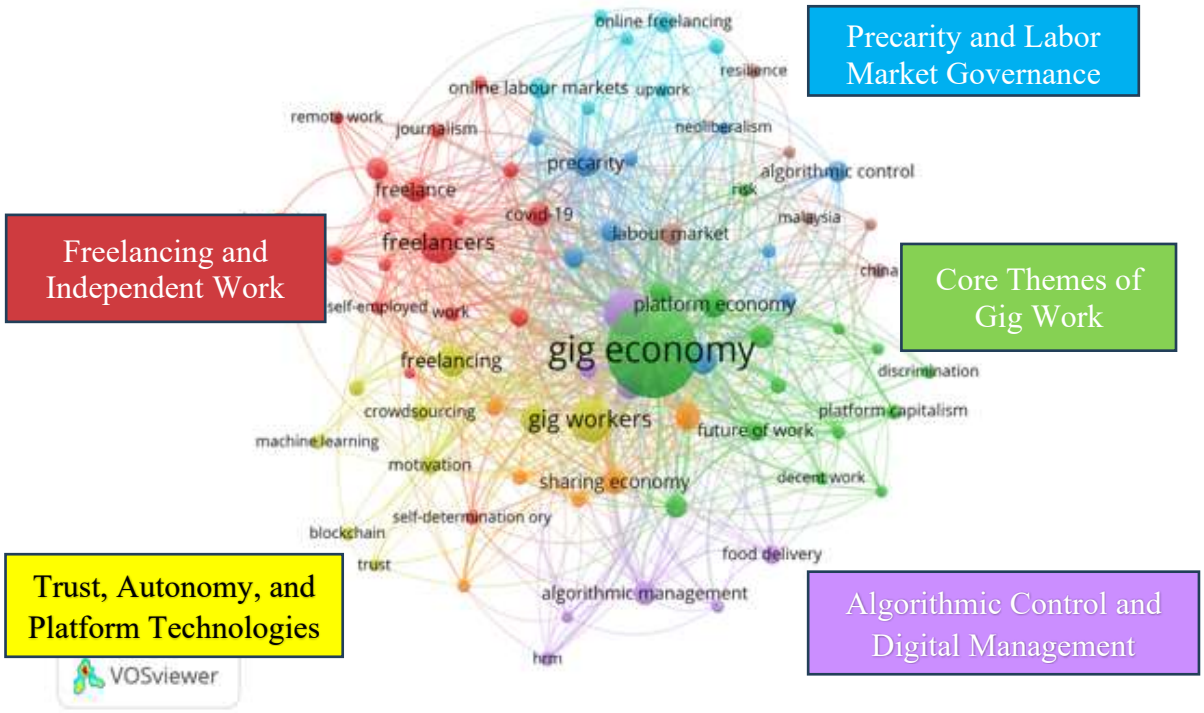

Figure 7: Network Visualization of Occurrence Analysis of author keywords

Source: Generated by the Author(s) Using VOSviewer (Van Eck & Waltman, 2014)

These themes are further examined in Figure 8, which maps them based on relevance (centrality) and development (density). The "gig economy" emerges as a well-established motor theme, central and theoretically mature. In contrast, areas like "freelance journalism" or "machine learning" occupy marginal or emerging positions. Some practical issues, such as "food delivery" and "blockchain," appear conceptually central but remain underdeveloped, highlighting gaps between industry relevance and academic theorization.

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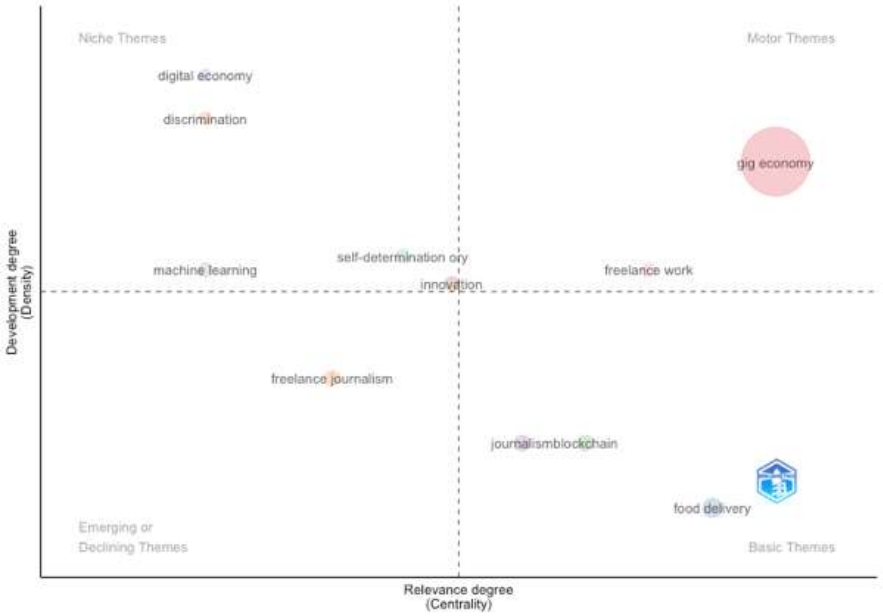

Figure 8: Thematic Map

Source: Generated by the Author(s) Using Biblishiny

Thematic Evolution

Around 2020, the COVID-19 pandemic served as a catalytic event, propelling terms like precarity, flexibility, and resilience into prominence. These topics highlighted systemic vulnerabilities in platform labor, especially for low-income and migrant workers. Rather than disrupting the gig model, the crisis seemed to reinforce its expansion—an observation that warrants deeper scrutiny of how economic shocks normalize precarious labor through digital infrastructures.

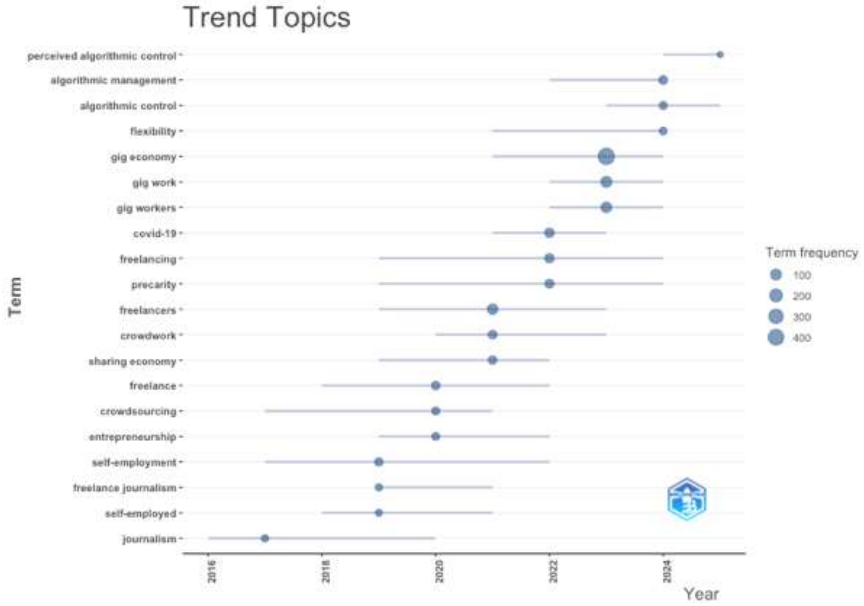

Figure 9: Trend Topics

Source: Generated by the Author(s) Using Biblishiny

Since 2022, research has increasingly converged on algorithmic control, platform surveillance, and trust terms now positioned at the conceptual frontier (Figure 10). This marks a significant shift toward unpacking the technological logic of platform governance, including how

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algorithmic decision-making shapes worker autonomy and accountability. Yet, while terms like "perceived algorithmic control" suggest nuanced engagement with worker experiences, much of this literature remains technologically deterministic, with limited integration of labor rights or institutional perspectives.

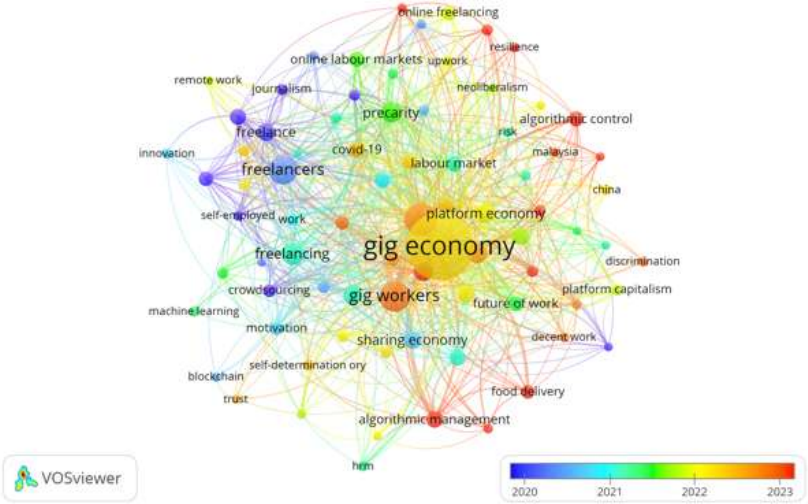

Figure 10: Overlay visualization of occurrence analysis of author keywords.
Source: Generated by the Author(s) Using VOSviewer (Van Eck & Waltman, 2014)

The conceptual structure map (Figure 11) reinforces this disciplinary reorientation. The dominant blue cluster centers on digital platforms and algorithmic governance, while the red cluster emphasizes freelance identity and qualitative approaches. A smaller green cluster on digital labor and crowdsourcing hints at underdeveloped but promising niches, particularly at the intersection of decentralized technologies and collective work models.

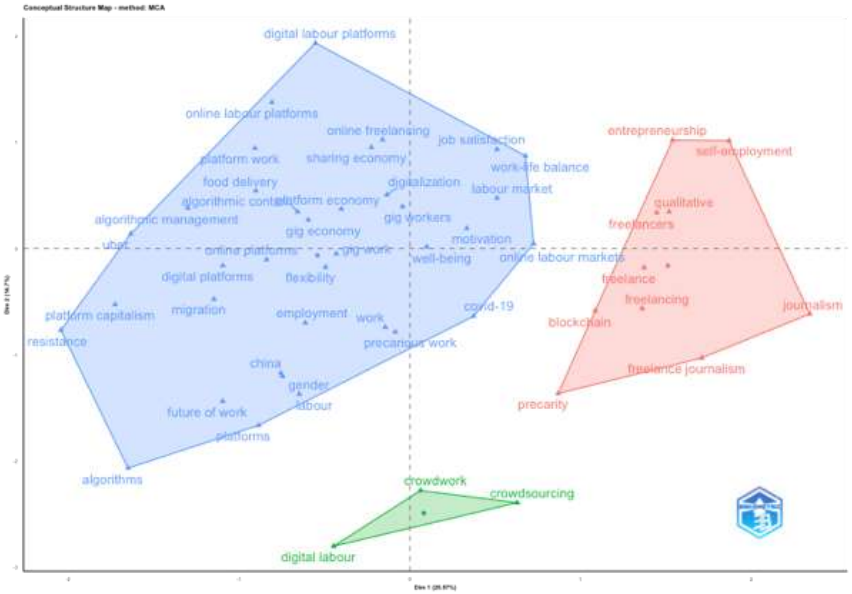

Figure 11: Conceptual Structural Map
Source: Generated by the Author(s) Using Biblishiny

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Discussion

Summary of Key Findings

This bibliometric review of gig economy research (2014–2025) shows rapid growth after 2019, driven by digital platform expansion and COVID-19. Early work emphasized labor flexibility and freelancing, while recent studies focus on algorithmic control, platform governance, and worker well-being. Yet the post-2020 surge appears reactive to events rather than sustained theoretical development, as seen in declining average citations.

The United States and United Kingdom dominate in output and citation impact, while China, India, and Indonesia show growth but limited influence. Collaboration remains fragmented, with few South–South or cross-disciplinary links, and a small group of authors and institutions serving as intellectual hubs.

Core areas—platform governance, digital labor, and precarity—anchor the field, but co-citation and thematic mapping reveal fragmentation. Five main clusters emerge: gig labor, freelancing, algorithmic management, precarity, and trust in technology. Emerging topics such as blockchain, AI, and mental health indicate diversification but remain weakly connected to dominant themes. Overall, the field is shifting toward critical, technology-driven questions but continues to face gaps in inclusivity, conceptual integration, and global representation.

Overall, gig economy studies have evolved from descriptive mapping to more critical and technology-driven questions, yet they still struggle with the challenges in inclusivity, conceptual integration, and global representation—gaps that will be addressed in the following section.

Theoretical and Scholarly Implications

This study maps a decade of gig economy research, showing its evolution into a more structured field anchored in recurring themes such as algorithmic control, worker autonomy, and platform governance. Three main theoretical orientations emerge: (1) **t**echnological-operational perspective, focusing on platform functionality, algorithmic management, and labor coordination. (2) a worker-centered approach, examining autonomy, motivation, and well-being. (3) a critical-political lens, concerned with precarity, labor exploitation, and digital inequality. These orientations reflect the interdisciplinary nature of the field, drawing from management, information systems, sociology, and political economy.

The growing overlap among these perspectives—particularly around fairness, trust, and regulation—offers opportunities for theoretical integration, such as applying institutional frameworks to algorithmic governance or trust-based theories to platform–worker relations.

Nonetheless, co-citation and network analyses reveal concentration among a few institutions and authors, mainly in the UK and US, risking limited epistemic diversity and neglect of Global South contexts. Greater inclusivity is essential for broader theoretical development. Methodologically, the application of science mapping provides a macro-level view of scholarly connectivity, supporting more systematic theory building and interdisciplinary collaboration.

Future Research Directions and Limitations

This study identifies five priorities for advancing gig economy research. First, algorithmic management and digital control require deeper investigation, moving beyond descriptive,

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Western-focused accounts to examine their effects on labor autonomy, performance evaluation, and emotional labor. Integrating perspectives from organizational behavior, digital governance, and institutional theory can yield stronger explanatory models. Second, worker well-being and resilience warrant sustained attention, particularly the long-term psychological and social impacts of precarious digital work. Mixed-method and longitudinal designs could illuminate coping strategies, burnout trajectories, and broader psychosocial dimensions, especially in low- and middle-income contexts. Third, governance, fairness, and regulation remain critical areas for inquiry, with cross-national comparative studies needed to clarify what constitutes "fair work" under algorithmic supervision and how legal frameworks mediate platform–worker–society relations. Fourth, technological infrastructures and digital trust present opportunities for innovation; empirical research should address adoption, resistance, and unintended consequences of transparency-oriented tools such as blockchain, including risks of data asymmetries and exclusion of low-digital-literacy workers. Fifth, improving geographical inclusivity is essential. Greater integration of perspectives from the Global South, alongside South–South and South–North comparative studies, could challenge prevailing assumptions and reveal alternative governance models.

Two methodological limitations also shape these recommendations. Reliance on a single database—Web of Science—risks selection bias by privileging English-language, Global North publications, potentially overlooking significant contributions from emerging economies and non-English sources. Furthermore, the present analysis emphasizes structural patterns, such as co-citation and keyword networks, without examining full-text content, limiting insights into how core concepts are defined and debated across contexts. Future bibliometric research should incorporate multiple databases (e.g., Scopus, Google Scholar, regional indexes) and combine structural mapping with qualitative content analysis or full-text thematic coding to capture conceptual evolution more comprehensively and support deeper theoretical integration.

Conclusion

This study presents a bibliometric and scientific mapping of gig economy research (2015–2025) using Web of Science data and tools such as VOSviewer and Biblioshiny, identifying key contributors, intellectual structures, and thematic trends. Publications grew rapidly after 2019, driven by digital platform expansion and the COVID-19 pandemic. The literature has shifted from descriptive accounts to more critical analyses of algorithmic control, worker well-being, trust, and regulation, though scholarship remains concentrated in the Global North.

Methodologically, the study highlights the value of bibliometric tools for mapping large-scale research, but reliance on a single database and the absence of full-text analysis limit theoretical depth. Future research should integrate multiple databases and qualitative approaches to enrich understanding. Overall, the findings clarify the field's development and point to the need for more diverse, theory-driven inquiry into the technological, institutional, and human dimensions of platform work.

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