Paving the Way to the Gig Economy: A Bibliometric Analysis of Workers' Decade-Long Involvement

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Abstract

The gig economy, which comprises flexible, temporary, freelance jobs connecting workers with clients through online platforms, has garnered significant attention as a growing segment of the economy. The objective of this study is to understand the conceptual framework related to workers' participation in the gig economy. To that end, we utilized the databases of Scopus, employing the bibliometric software VOSviewer. The dataset spans the last 10 years, from 2014 to December, 2023. Through our search, we initially identified 1429 articles, among which 1192 papers are from economics, econometrics, and business, and 856 papers are articles and review papers. Subsequently, we narrowed the selection to 821 articles written in English. The research is divided into two main parts: performance analysis and science mapping. Performance analysis focuses on developing visual representations of data, such as co-authorship, citation networks, and collaboration networks among authors, institutions, and journals. On the other hand, science mapping focuses on co-citation networks, co-occurrence networks, cluster analysis of the keywords, and thematic mapping. Over the past decade, there has been a significant increase in publications about the gig economy, reflecting the growing presence of gig workers. Policymakers must now prioritize integrating gig workers' perspectives into policy development to ensure their unique needs are met effectively. The study represents one of the most comprehensive and meticulous bibliometric analyses of workers' participation in the gig economy to date.

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Introduction

The gig economy has seen a remarkable transformation that has significant worldwide importance over the past ten years (Friedman, 2014; Gandini, 2019; Van Doorn et al., 2023) and its importance is growing with digital development (Graham et al., 2017). With the rise of digital platforms and technological advancements, people increasingly rely on gig work to meet their diverse needs. Whether it's hiring a freelance designer for a one-time project or finding a rideshare driver for a quick commute, the gig economy has become an integral part of modern life. This shift is driven by people's preferences for flexibility, allowing them to choose when and how they work. The evolution of the gig economy impacts millions of individuals worldwide, highlighting the need for a balance between flexibility and worker protection in this rapidly evolving landscape. Furthermore, COVID-19 disrupted traditional employment patterns and led to a significant increase in the number of people turning to gig work, either as a primary source of income or as a supplementary means of financial support. As the world continues to navigate the ongoing effects of the pandemic, the gig economy is likely to remain an essential part of the employment landscape for many individuals seeking flexibility, diverse opportunities, and alternative income streams.

The gig economy is an economy with a temporary, flexible labor exchange via online platforms that clients or companies tend to hire. Its primary goal is to provide quality services at a cheaper and sustainable rate. The gig economy is a system of labor-sharing where workers engage in short-term projects or freelance work instead of permanent jobs, and various market mechanisms are used to match consumers and suppliers flexibly and to determine pricing. The gig economy has gained prominence in recent years due to technological advancements and changing labor market dynamics (Gandini, 2019). Technological progress, particularly the rise of digital platforms and connectivity, has played a pivotal role in facilitating this transformation. Online platforms and mobile apps have made it easier for individuals to find freelance opportunities, connect with clients, and manage their work schedules. However, the working environment within the gig economy has undergone substantial changes over the past decade. Workers often face challenges related to job security, benefits, and fair compensation. As a result, there is a growing global discussion on labor rights and regulations to ensure that gig workers receive the protections they deserve (Ashford et al., 2018).

This bibliometric study on gig workers' behavioural intention in participation in the gig economy tries to find the answers, such as what are the trends in the gig economy from 2014 to 2023? Which publications, countries, and scholars are the most well-known and have contributed the most in the field of the gig economy? Similarly, what are some of the keywords that are used most frequently in the fields of the gig economy? Lastly, what are the networks that collaborate in the

area of the gig economy? The study's main goal is to measure the articles related to the gig economy, which are listed in the Scopus database, and find the patterns and trends in tabular and visual forms. The specific objectives of this bibliometric analysis are a) To develop a bibliometric profile gig economy. b) To identify any patterns or trends in the growth of knowledge in the gig economy. The increased development of software like Gephi, Leximancer, and VOSviewer and databases such as Scopus and Web of Science have gained the popularity of bibliometric analysis. The bibliometric analysis consists of scientific papers and highly cited publications (Ellegaard & Wallin, 2015). The focus of bibliographic analysis lies on a variety of general or more specialized topics related to publishing trends. This encompasses geographical and institutional factors, as well as performance indicators that track development over specific periods. The analyses cover diverse types of materials, ranging from journal articles, books, theses, and patents (Ellegaard & Wallin, 2015).

Data and Methodology

In conducting this bibliometric analysis, the initial phase of our analysis involves the extraction of reliable data from Scopus. Since Scopus's status as the largest database, boasting over 80 million documents, it serves as our primary resource for selecting pertinent bibliometric data. This step is fundamental as it forms the foundation for our subsequent bibliometric analysis. When we restricted our search for documents on Scopus by using the terms "gig economy" in the title, abstract, and keywords, we originally found 1429 publications globally. Following that, we focused just on business, economics, and econometrics and found 1192 publications. Since our goal is to demonstrate the trends and advancements in research, we excluded unpublished work and books and kept only published empirical articles and review papers. As a result, we once again limited our search to papers and review papers, and this time we found 823 papers. Following that, we eliminated any papers published in languages other than English, leaving us with 821 papers. The same documents were examined again. The data collection process is carried out, guided by the search strategy outlined in Figure 1.

Figure 1: Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA)
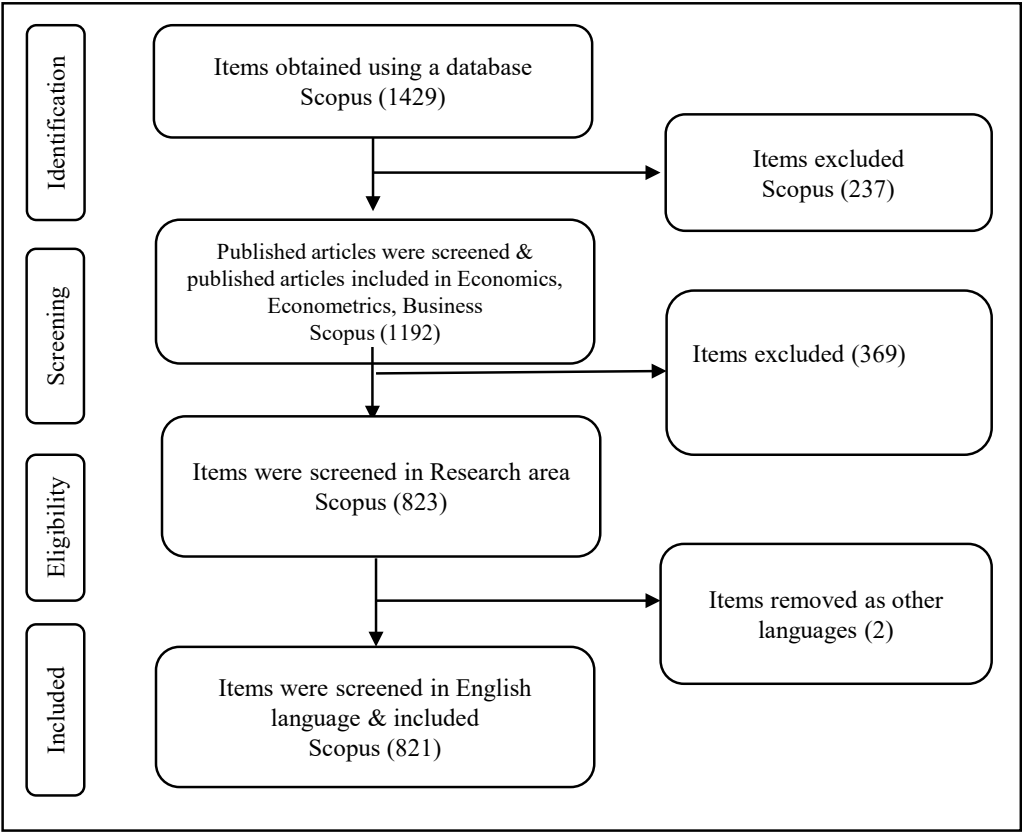
Source: Author's construction as per PRISMA guidelines

Result

A typical literature review includes performance analysis of bibliometric data, focusing on sources/journals, authors, and documents. This section covers various descriptive analytical dimensions. In this study, we have extended this approach to encompass both performance analysis and science mapping, including network analysis techniques. The work of several authors, such as (Crayne et al., 2023; Cohen et al., 2014) broadly categorizes bibliometric analysis into two primary sections: (i) performance analysis and (ii) science mapping. In this context, our study aligns with this categorization, contributing to a comprehensive understanding of the literature by integrating both performance analysis and science mapping methodologies. The study takes into account 821 publications, of which 232 are written by a single author. The average number of citations per document is 21.3.

Table 1: Summary of the extracted dataset

Description	Results
Timespan	2014 – 2023
Sources (Journals, Books, etc)	474
Documents	821
Annual Growth Rate %	34.24
Document Average Age	2.99
Average citations per doc	21.3
References	42156
DOCUMENT CONTENTS	
Keywords Plus (ID)	1196
Author's Keywords (DE)	2270
AUTHORS	
Authors	1664
Authors of single-authored docs	232
AUTHORS COLLABORATION	
Single-authored docs	258
Co-Authors per Doc	2.42
International co-authorships %	21.44
DOCUMENT TYPES	
Article	775
Review	46

Source: Author's construction based on bibliometric data

Performance Analysis

The purpose of conducting performance analysis in bibliometrics is to thoroughly examine the activities of various scientific actors, with an emphasis on their impact within a bibliographic dataset. These actors encompass a wide range of entities, including countries, universities, scholars, and departments (Noyons et al., 1999). To provide a descriptive overview of the dataset under analysis, pertinent statistics are presented in Table 2. The emergence of the gig economy has led to a surge in related research articles, with authors actively contributing to this field. Among the plethora of articles published on the subject, certain papers stand out for their remarkable impact. In particular, works by Alex J Wood, Mark Graham, Vili Lehdonvirta, and Isis Hjorth in 2019, and another by Rahul De, Neena Pandey, and Abhipsa Pal in 2020, have captured widespread attention within the academic community. Their average citation rates of 118.83 and 104.2, respectively, which highlights the significance of their contributions to the evolving discourse surrounding the gig economy. Therefore, these papers not only reflect the growing interest in this area but also emphasize the importance of understanding its dynamics for scholars, policymakers, and practitioners alike.

Table 2: Most Relevant Papers in Gig Economy (2014-2023)

Authors	Journal	Total Citations	TC per Year	Normalized TC
Wood Aj et al. (2019)	Work, Employment, and Society	713	118.83	17.38
Pandey, & Pal (2020).	International journal of information management	521	104.2	15.78
Graham M et al. (2017)	Transfer	481	60.13	6.33
Sutherland & Jarrahi (2018)	International Journal of International Management	390	55.71	7.12
Gandini A (2019)	Human Relations	366	61	8.92
Friedman (2014)	Review of Keynesian Economics	356	32.36	1
Petriglieri et al. (2019)	Administrative Science Quarterly	346	57.67	8.43
Spreitzer et al. (2017)	Annual Review Organizational Psychology Organizational Behaviour	344	43	4.53
Tassinari & Maccarrone (2020)	Work, Employment and Society	303	60.6	9.18
Duggan et al. (2020)	Human Resource Management Journal	287	57.4	8.69
Veen & Goods (2020)	Work, Employment and Society	283	56.6	8.57
Burtch G, 2018	Management Science	247	35.29	4.51
Fleming (2017)	Organization Studies	244	30.5	3.21
Lehdonvirta, V. (2018).	New Technology, Work and Employment	242	26.89	3.62
Lehdonvirta (2018)	New Technology, Work and Employment	234	33.43	4.27
Howcroft & Bergvall-Kåreborn (2019)	Work, Employment and Society	234	39	5.7
Ashford et al. (2018)	Research in Organizational Behaviour	233	33.29	4.26
Kässi & Lehdonvirta (2018)	Technological Forecasting and Social Change	196	28	3.58
Wood et al. (2018)	New Technology, Work and Employment	193	27.57	3.53
Goods et al. (2019)	Journal and Industrial Relations	170	28.33	4.14

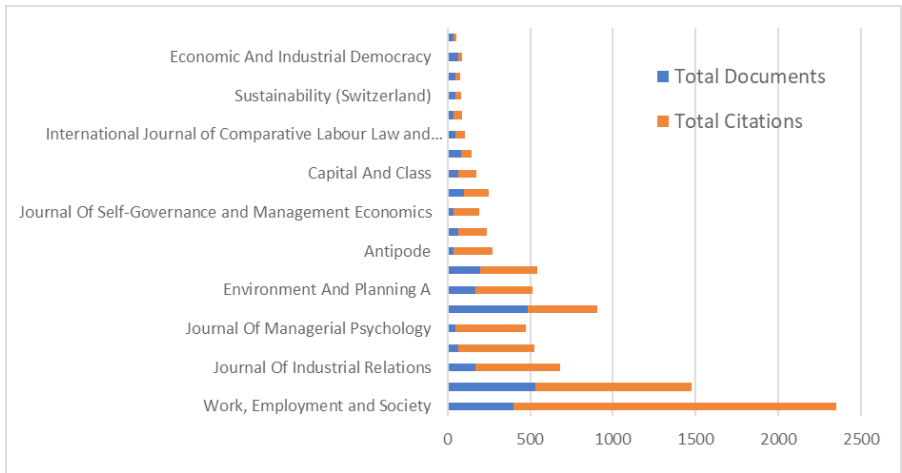*Source*: Author's construction based on bibliometric data

Table 3 shows UK and the USA lead in gig economy paper production, with 5006 and 2808 citations respectively. While the UK produced 267 papers (14.36% of its production), the US produced 476 (25.61%) papers. Despite fewer papers, the UK boasts a higher average article citation count of 45.5 compared to the US's 21.4, indicating higher impact per paper. Besides the UK and the US, Australia, India, France, and Norway also contribute to gig economy research. While Australia has 1620 citations and India has 671, France and Norway have fewer citations but higher average article citation counts, indicating significant impact per paper. These diverse contributions reflect global interest in gig economy studies. Canada, Netherlands, and Germany have 507, 390 and 329 citations, respectively. Ireland has 332, while Spain, Italy, and China have 263, 182, and 244. Most countries maintain solid average article citation counts, indicating significant impact per paper. Finland and Denmark also contribute, though with fewer citations, showcasing a diverse global landscape of gig economy research. These 15 countries are the most impactful countries, which include about 80% of the publications. Therefore, these findings highlight the substantial contributions of countries to gig economy research.

Table 3: Most Producing Countries of Gig Economy Related Papers

Country	Total Citations	Average Article Citations	Production	Percentage of production
UK	5006	45.5	267	14.36%
USA	2808	21.4	476	25.61%
Australia	1620	26.1	169	9.09%
India	671	21	86	4.63%
France	554	46.2	32	1.72%
Norway	538	53.8	27	1.45%
Canada	507	18.8	73	3.93%
Netherlands	390	20.5	53	2.85%
Ireland	332	36.9	32	1.72%
Germany	329	13.7	69	3.71%
Spain	263	14.6	44	2.37%
China	244	10.2	76	4.09%
Italy	182	15.2	51	2.74%
Finland	136	22.7	16	0.86%
Denmark	108	15.4	20	1.08%
Others				19.79%

Source: Author's construction based on bibliometric data

Figure 2: Top 20 Journals According to Publication and Citations

Source: Author's construction based on bibliometric data

The figure presents a comprehensive overview of several academic journals within the field of work, employment, and related disciplines, detailing their total documents published, total citations received, and rank according to citation. Notably, "Work, Employment and Society" emerges as the most influential journal, boasting the highest rank with a substantial citation count of 1,954. Conversely, "Safety Science" holds the lowest rank, indicating a comparatively lower impact within the academic community, with only 18 citations. The total citations across all journals vary significantly, reflecting the diverse levels of recognition and influence within the academic landscape. This data highlights the importance of citation metrics in assessing the significance and reach of scholarly publications, guiding researchers and professionals in identifying key sources of knowledge and research in their respective fields.

Science mapping

Science mapping encompasses several crucial steps, including data extraction, cleaning, processing, network mining, plotting, investigation, and visualization, as outlined by Cobo, López-Herrera, et al. (2011). The primary questions addressed through science mapping in bibliometric analysis are identifying, examining, and producing social networks related to research topics. The complexity of science mapping arises from the requirement to utilize various distinct software tools (Aria & Cuccurullo, 2017). Practices employed in science mapping encompass citation analysis, co-citation analysis, bibliographic coupling, co-word analysis, and co-authorship analysis, all of which can be integrated with network analysis to understand intellectual structures (Donthu et al., 2021). It dramatically aids researchers in understanding the research landscape comprehensively, enabling them to make well-informed decisions regarding research priorities. Moreover, it

enhances the accessibility and usability of scholarly knowledge by transforming bibliometric data into visual representations.

Co-citation Network Analysis

Co-citation Analysis is used to determine the underlying ideas and the conceptual framework of a certain topic of study. This analysis is useful to determine the level of knowledge development in a field. In the network map presented in Figure 3, the cited reference is represented by the nodes, and the size of the node indicates the number of publications that have cited it. The analysis was performed using VOSviewer. Out of 41024 cited references, 51 have met the threshold of co-cited references with at least 15 citations each.

The examination of the content associated with the four distinct clusters depicted in the network map (See figure 3) provides insight into the unique themes within each cluster and first red 19 items (Cluster I), 16 green items (Cluster II), 11 blue items (Cluster III) and 4 yellow items (Cluster IV) are presented. The four different clusters are:

Cluster I: "Navigating New Frontiers in the World of Work"
Cluster II: "Exploring the Dynamics of Online Labor Platforms"
Cluster III: "Unveiling the Mechanisms of Gig Economy Labor"
Cluster IV: "Evolving Narratives in the Era of Digital Labor"

Cluster I, "Navigating New Frontiers in the World of Work," focuses on the emerging trends and challenges in the modern workplace. This includes the impact of technology on work, changes in organizational structures, evolving job roles and skills, and the rise of remote work and digital freelancing (Scully-Russ et al., 2020). These themes reflect broader societal shifts influencing how individuals and organizations interact within the work place. An automation and AI's impact on job markets have been extensively studied, there remains a need for research into how these technologies affect different sectors and job types, considering both displacement and potential job creation. Existing studies on remote work mainly address productivity, leaving gaps in understanding the psychological well-being of remote workers, social isolation issues, and effective collaboration strategies for remote teams. Additionally, with job roles evolving rapidly, there is a lack of clarity on future skill demands. Hence, study is needed to forecast these skills to guide educational institutions in adapting their curriculums and training programs accordingly.

Cluster II revolves around the dynamics of online labor platforms, which include gig economy platforms such as Upwork, Fiverr, and Uber. These platforms represent a new frontier in the labor market, offering flexibility and a broad range of opportunities for both workers and employers. Despite extensive research on online labor platforms, several gaps remain. Research on online labor platforms primarily focuses on developed economies like the US and Europe,

neglecting insights into their operations in developing economies and diverse cultural contexts. Understanding how regulatory environments influence these platforms and their stakeholders remains inadequately explored. Furthermore, exploring the implications of emerging technologies like artificial intelligence on these platforms could offer valuable insights into reshaping work dynamics.

Cluster III highlights understanding how the gig economy operates, particularly from the workers' perspective. The study should investigate how emerging technologies, such as AI-driven job matching, affect gig work, considering both positive and negative impacts. Research is also needed on how various identities, such as gender, race, and age, intersect and affect gig workers' experiences, which can help create more inclusive policies and interventions. Cluster IV, titled "Evolving Narratives in the Era of Digital Labor," examines how technological advancements such as AI and robotics reshape job roles, workforce dynamics, and income distribution. Future research could explore ethical concerns such as job displacement, algorithmic bias, and the ethical use of AI in employment contexts. There is also a need to study the psychological and social impacts on workers, including job satisfaction, work-life balance, and mental health in automated workplaces. Therefore, addressing these themes and gaps can deepen our understanding of evolving narratives around digital labor, offering insights into broader societal, economic, and cultural implications. This study informs current discourse and prepares us to tackle emerging challenges and opportunities in the digital transformation era.

Figure 3: Co-citation Network
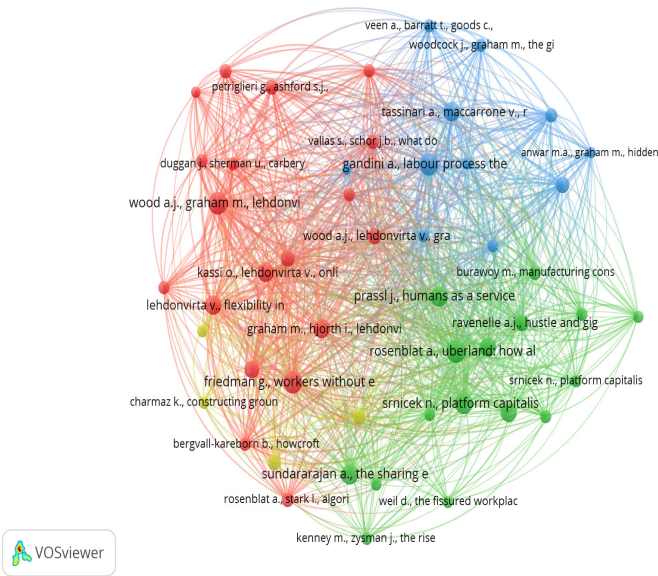
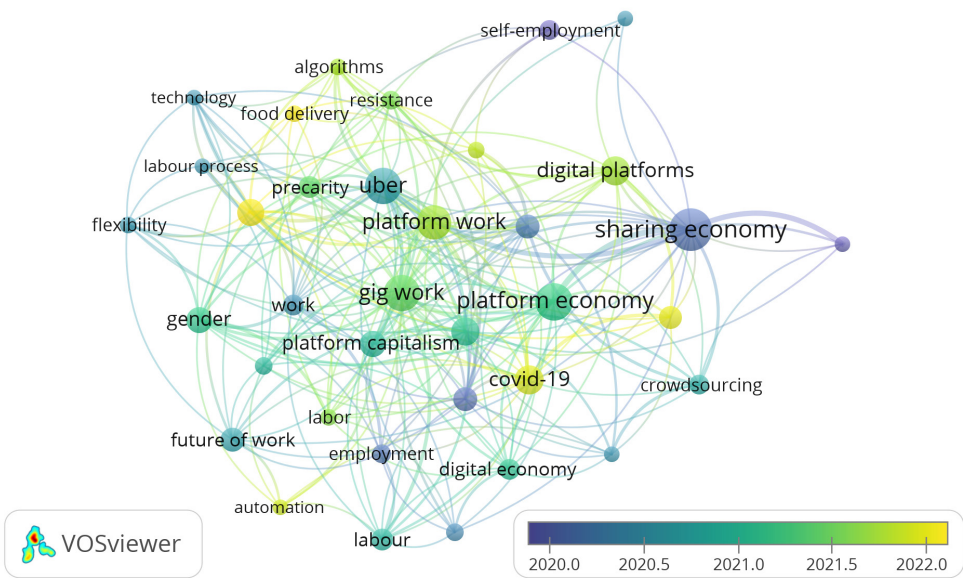*Source:* Author's construction based on bibliometric data Using VOSviewer

Table 4: Cited Reference

Cited Reference	Citations	Total Link Strength	Cited Reference	Citations	Total Link Strength
Burawoy (1979)	23	101	Lehdonvirta (2018)	43	186
Braun and Clarke (2006)	15	59	Prassl (2018)	46	118
Hollis (2001)	16	0	Rosenblat (2018)	58	227
Charmaz (2006)	16	43	Shapiro (2018)	19	96
Kalleberg (2009)	25	79	Ticona and Mateescu (2018)	16	65
Standing (2011)	40	67	Wood et al. (2018)	28	120
Bergvall et al. (2014)	20	79	Cant (2019)	28	106
Friedman (2014)	54	152	Churchill and Craig (2019)	21	92
Weil (2014)	16	34	Gandini (2019)	54	251
Kenney et al. (2016)	16	52	Gray (2019)	21	109
Rosenblat and Stark (2016)	22	78	Howcroft et al. (2019)	29	129
Rosenblat and Stark (2016)	17	55	Macdonald and Giazitzoglu (2019)	15	57
Rosenblat and Stark (2016)	41	127	Petriglieri et al. (2019)	25	102
Srnicek (2016)	17	52	Ravenelle (2019)	28	128
Fleming (2017)	27	103	Wood et al (2019)	54	221
Graham et al. (2017)	41	154	Woodcock and Graham (2019)	19	62
Kuhn and Maleki (2017)	19	70	Zuboff (2019)	19	65
Scholz (2017)	16	58	Duggan et al. (2020)	21	106
Srnicek (2017)	52	149	Kellogg et al (2020)	21	121
Kalleberg (2009)	25	79	Tassinari and Maccarrone (2020)	39	169
Stanford (2017)	17	55	Vallas and Schor (2020)	24	111
Van (2017)	24	106	Vallas and Schor (2020)	17	64
Ashford et al. (2018)	19	69	Veen and Barratt (2020)	21	95
Kassi et al. (2018)	39	130	Woodcock and Graham (2020)	21	70

Source: Author's construction based on bibliometric data

Table 4 show that the range of citations varies widely, spanning from a minimum of 0 citations for Hollis (2001) to a maximum of 82 citations for Wood et al. (2018). The top three highest-cited references include Wood et al. (2018) with 82 citations, followed by Rosenblat (2018) with 58 citations, and Gandini (2019) with 54 citations. On the other hand, the top three lowest cited references are Hollis (2001) with 0 citations, followed by Macdonald and Giazitzoglu (2019) and Braun and Clarke (2006) with 15 citations each. The average number of citations is approximately 29.5, with a total of 1,195 citations across all references. Likewise, the data displays varying total link strengths among cited references, indicating differing levels of scholarly influence. Higher strengths, like Wood et al. (2018) with 341, signify significant impact, while lower ones, such as Hollis (2001) with 0, suggest limited influence. These values reveal both citation frequency and a reference's broader impact and interconnectedness within academia, offering insights into scholarly communication dynamics.

Figure 4: Co-occurrence Network of Keywords

Source: Author's construction based on bibliometric data Using VOSviewer

Co-occurrence analysis aims to discern the predominant research themes within the Gig Economy literature. The objective of this analysis is to enhance the understanding of interconnections between concepts by identifying closely associated words that frequently co-occur.

Table 5: Top 36 keywords Based on the frequency of occurrence

Rank	Keyword	Occurrences	Total Link Strength
1	Sharing Economy	54	51
2	Platform Economy	44	50
3	Gig Work	41	57
4	Uber	41	49
5	Platform Work	37	37
6	Covid-19	28	24
7	Digital Platforms	28	23
8	Platforms	27	33
9	Algorithmic Management	26	28
10	Gender	24	25
11	Platform Capitalism	23	23
12	Digital Labour	21	25
13	Future of Work	21	15
14	Precarious Work	20	21
15	Gig Workers	19	14
16	Labour	18	19
17	Precarity	18	21
18	Work	17	22
19	Digital Economy	16	16
20	Crowdsourcing	15	17
21	Self-Employment	15	7
22	Employment	14	13
23	Resistance	14	18
24	Gig-Economy	13	11
25	Social media	13	11
26	Algorithms	12	17
27	Food Delivery	12	8
28	Platform Labour	12	11
29	Flexibility	11	13
30	Labor	11	14
31	Automation	10	9
32	Collaborative Consumption	10	14
33	Crowdwork	10	13
34	Entrepreneurship	10	4
35	Labour Process	10	9
36	Technology	10	16

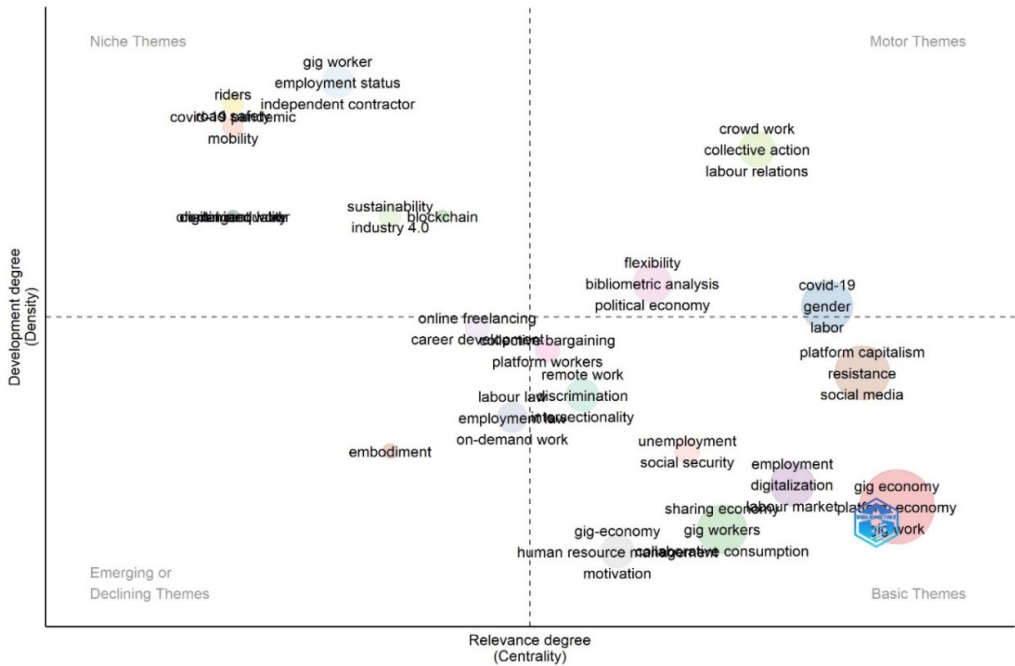*Source*: Author's construction based on bibliometric data

The analysis of keyword co-occurrence revealed significant trends and themes within the sharing and platform economies. Setting a threshold of 10 occurrences from 2270 keywords, only 36 met the criteria, with Sharing Economy emerging as the most frequent keyword, appearing 54 times. This term's popularity is driven by technological advancements, economic factors post-2008 financial crisis, and cultural shifts towards sustainability. Following closely are Platform Economy, Gig Work, and Uber. The platform economy, highlighted by the rise of tech giants like Amazon and Google, offers unprecedented scalability and efficiency. This has led to extensive research due to its transformative impact on traditional business models and the significant regulatory challenges it presents. Gig work has become more prominent due to shifting labor market dynamics, technological advancements, and economic necessity, offering flexible job opportunities during times of economic uncertainty. Similarly, Uber revolutionized the way people hail rides with its app-based platform, pioneering the ride-sharing service. This innovation provided an alternative to traditional taxis, offering users more affordable and efficient transportation options. The company's rapid expansion and seamless user experience made "Uber" synonymous with on-demand mobility solutions, capturing the spirit of the sharing economy in the early 21st century.

The emergence of COVID-19 as a theme, with 28 occurrences, underscores the pandemic's profound impact on work patterns, accelerating remote work adoption and reliance on digital platforms. This shift boosted interest in platform work and gig economy research, highlighting the vulnerabilities and essential nature of gig workers. Additionally, food delivery, appearing 12 times, reflects pandemic-driven demand and changes in consumer behavior towards convenience and contactless transactions. The surge in food delivery services like DoorDash and Uber Eats illustrates how digital platforms adapted and thrived during the crisis, becoming integral to restaurant operations and urban logistics. These trends collectively show how socio-economic and technological forces drive the evolution of themes in the sharing and platform economies, reshaping work dynamics and consumer behavior in response to global events like the COVID-19 pandemic.

Trending topic analysis reveals the evolving popularity of various themes over time, guiding future research directions. In 2017, self-employment and independent employment were prominent, reflecting the growing desire for job flexibility and autonomy. By 2019, the platform and digital economy gained momentum, driven by technological advancements and increased reliance on online platforms. The rise of gig workers and the platform economy in 2021 aligned with the COVID-19 pandemic, accelerating the shift towards remote work and digital services. Recently, keywords like delivery, freelancers, and systematic have surged, influenced by the booming demand for home delivery services, and the rise of freelance work due to emphasis on system efficiencies to manage complex operational needs. These shifts highlight the impact of societal changes, technological progress, and regulatory developments on employment trends.

Figure 5: Trending Topics over the Year

Source: Author's construction based on bibliometric data using R

Figure 6: Word cloud of 100 words

Source: Author's construction based on bibliometric data using R

Word cloud analysis was used to identify the main topic, thematic clusters, research areas, and content. Larger words in the word cloud indicate more frequent occurrences in the domain. Font size and color in the word cloud represent the frequency of words in the literature; the larger the size, the more frequently the word appears. The word cloud reveals that "employment," "gig economy," "labor market," "workers," and "working conditions" are prevalent keywords. This suggests that most research focuses on the gig economy, employment, gig workers, their working conditions, and the gig labor market.

Figure 7: Factor map cluster of high-frequency keywords

Source: Author's construction based on bibliometric data using R

A thematic map identifies themes by relevance and development, divided into four quadrants. Themes in the first quadrant have high development and high relevance, indicating extensive research has already been conducted, leaving less potential for new studies. Themes in the second quadrant show high development but low relevance, suggesting they are well-researched but not currently significant. Quadrant three contains emerging or declining themes with low relevance and low development, reflecting either new areas or those losing interest. Quadrant four, however, highlight themes with high relevance but low development, indicating significant future research potential. Themes such as platform capitalism, resistance, social media, gig economy, and gig work in quadrant four have gained attention due to their contemporary significance and the evolving nature of work and technology. Less publication in this

quadrant suggests these areas are underexplored and offer opportunities for new research. Moreover, theme on this quadrant help to identify the gap in research that needs to address. For instance, research on digitalization, social security and employment generation might be an interesting research topic. The researchers can also conduct the study on gig economy, digitalization and gig workers' motivation and so forth. Conversely, themes in the first quadrant have become well-researched "motors" due to their established importance and extensive examination, thus reaching a saturation point in academic studies.

Discussion

This bibliometric analysis reveals a significant development of gig economy research priorities since 2020, driven by global disruptions and technological acceleration. Performance analysis highlights the UK's vast influence (45.5 citations per article), contrasting sharply with the US's higher volume but lower per-paper impact (21.4 citations). This suggests a strategic move towards quality and specialized expertise in certain regions, potentially fuelled by targeted funding and concentrated research ecosystems focused on labor transformation (Woodcock & Graham, 2020; Vallas & Schor, 2020). The notable rise of India as a contributor (4.63% of publications) signals a crucial geographic diversification, yet its lower average citation rate (21.0) underscores persistent disparities in global research visibility and impact, reflecting the uneven distribution of scholarly infrastructure and access to high-impact publication venues (Pandey & Pal, 2020). Concurrently, the dominance of journals like the International Journal of Information Management alongside traditional sociological powerhouses signifies the field's everlasting technologization. This shift, amplified by the COVID-19 pandemic's acceleration of digital dependence, demonstrates how research is increasingly framed through lenses of platform architecture, data governance, and digital management.

Science mapping intensely captures the thematic development toward platform governance and crisis response. The prominence of keywords like "Algorithmic Management" and "Covid-19" (28 occurrences) marks a decisive move beyond earlier abstract debates on precarity. Research now intensely focuses on the concrete mechanisms of platform control—algorithmic scheduling, performance scoring, and automated decision-making—and their profound impacts on worker autonomy and well-being (Kellogg et al., 2020; Duggan et al., 2020). The surge in "Food Delivery" exemplifies the pandemic's direct effect, highlighting how crisis conditions rapidly reshaped research agendas towards essential service platforms and their labor practices (Veen & Goods, 2020). However, this necessary focus on operational mechanics and immediate crisis responses has arguably diverted attention from deeper structural critiques.

Crucially, the thematic map exposes a persistent and concerning gap between high-relevance concepts and their bibliometric development. Themes like

"Platform Capitalism", "Resistance", and "Social Media" lie in Quadrant IV (High Relevance/Low Development), despite their critical importance (Tassinari & Maccarrone, 2020; Wood et al., 2021). The minimal research traction of "Social Media", as a vector for worker organization, solidarity building, and counter-narrative creation, represents significant disconnect between scholarly focus and on-the-ground realities of gig worker agency. The research points out some implications. First, funding bodies and institutions should prioritize fostering equitable global research collaborations and supporting interdisciplinary hubs that bridge technological and socio-legal expertise to address the gig economy's multifaceted challenges. Second, the participation of global south is an urgent need to address geographic inequities as global south is characterised by low income and less development.

Conclusion

This study endeavors to illuminate pertinent literature concerning comprehensive inquiry on workers' participation in the gig economy, employing various tools and bibliometric analysis techniques. Our findings indicate that authors such as Alex J Wood, Mark Graham, Vili Lehdonvirta, Isis Hjorth, Rahul De, Neena Pandey, and Abhipsa Pal have captured widespread attention within the academic community. Furthermore, the journal *Work, Employment, and Society* boasts a substantial citation count in this field. The literature prominently features keywords like sharing economy and platform economy, among others, underscoring their relevance. The USA leads in the volume of literature on this topic compared to other countries. This research examination of publication trends over the years reveals a consistent upward trajectory in research output. However, the study has some limitations. First, it is worth considering the inclusion of additional keywords to broaden the scope and relevance of this research in multidisciplinary disciplines. Second, inclusion of other data base for selection of the relevant papers will make result more robust. Future research can be conducted focusing on the less explored area such as investigating how gig workers leverage digital tools for resistance, how platform ownership models concentrate power and wealth, and how social media shapes worker identity and collective action is essential

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