

Mapping the Gig Economy: A Systematic Review and Bibliometric Analysis of Gig Worker Research

Siti Nur Faizah¹, Tri Siwi Agustina²

^{1,2}Management Department, Airlangga University, Indonesia

¹Master Program in Master of Management, Faculty of Economics and Business, Airlangga University

Corresponding E-mail: siti.nur.faizah-2022@feb.unair.ac.id

Abstract

This study aims to map and analyze research trends on gig workers. Using the bibliometric method with Prisma flow diagram to show the transparent data mining flow. The data analyzed included 523 publications indexed in the Scopus database from 2020 to February 2025. Bibliometric analysis methods were applied to identify publication patterns, collaboration between authors and countries, and dominant keywords in the literature. The results of the analysis showed a significant increase in the number of publications related to gig workers, with the United States being the most productive country. This study provides a comprehensive overview of research on gig workers, which can be used by researchers to identify research gaps and formulate relevant research questions. Future researchers can explore keywords that are not yet interconnected. However, the results of the bibliometric analysis in this study only provide a quantitative overview of research trends but do not provide deep insights into the content or quality of publications.

Keywords: Gig Worker, Gig Economy, Bibliometric Analysis, Future Research

Abstrak

Penelitian ini bertujuan untuk memetakan dan menganalisis tren penelitian tentang gig worker. Menggunakan metode bibliometric dengan Prisma flow diagram untuk memperlihatkan alur penambangan data yang transparan. Data yang dianalisis mencakup 523 publikasi yang terindeks di database Scopus dari tahun 2020 hingga Februari 2025. Metode analisis bibliometrik diterapkan untuk mengidentifikasi pola publikasi, kolaborasi antar penulis dan negara, serta kata kunci yang dominan dalam literatur. Hasil analisis menunjukkan adanya peningkatan signifikan dalam jumlah publikasi terkait pekerja gig, dengan Amerika Serikat sebagai negara yang paling produktif. Penelitian ini memberikan gambaran komprehensif tentang penelitian tentang pekerja gig, yang dapat digunakan oleh peneliti untuk mengidentifikasi research gap dan merumuskan pertanyaan penelitian yang relevan. Peneliti masa depan dapat mengeksplorasi kata kunci yang belum saling terhubung. Namun hasil analisis bibliometric pada penelitian ini hanya memberikan gambaran kuantitatif tentang tren penelitian, tetapi tidak memberikan wawasan mendalam tentang isi atau kualitas publikasi.

Kata Kunci: Gig Worker, Gig Economy, Analisis Bibliometrik, Penelitian Masa Depan

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Corresponding_ author: siti.nur.faizah-2022@feb.unair.ac.id

INTRODUCTION

The potential growth of the digital economy in Indonesia shows a positive trend. In 2023, it will grow by 8 to 10 percent or be worth 82 billion US dollars and is targeted to reach 109 billion US dollars in 2025. This was conveyed by the minister of the Ministry of Tourism and Creative Economy at the Indonesia Africa Forum (IAF) event held in September 2024 in Bali (Hendriyani, 2024). Digital growth in Indonesia is supported by two striking factors, namely the increasing number of Internet users, reaching 185 million people, and the number of startups, reaching 2,647 by 2024. Sourced from startup ranking, Indonesia is even ranked 6th globally with the highest number of startups. The top ten startups in Indonesia are in the field of services and e-commerce, three of which are Gojek Tokopedia, Bukalapak, and Traveloka.

The labor market has changed significantly due to digital platforms (Alauddin, 2025). The development of the digital economy, which is closely related to startup companies, opens up new employment opportunities that encourage workers to do their work online or informally, including gig workers who are very likely to take part in the digital economy ecosystem. Gig workers are usually in temporary jobs or short-term projects, such as online motorcycle taxi drivers or freelance affiliators in e-commerce that offer work flexibility. Startups serve as platforms that connect gig workers with consumers, creating new jobs and increasing income for the individuals involved.

The concept of the Gig Worker is not entirely new (Malik, 2021). Historically, Gig workers refer to short-term contracts that are distinct from permanent workers (Malik, 2021). Gig workers can perform their work flexibly (Keith et al., 2019), adjusting wages in real-time based on task demand (Schmidt, 2023), but Gig worker employers are not required to pay legally mandated compensation benefits like permanent employees (Meijerink, 2019). Studies conducted by the Digital Financial Service Innovation (DFS) lab and Research Innovation and Education (Rise) Indonesia state that workers using digital platforms tend to earn better than the minimum wage and feel more comfortable and satisfied working on digital platforms.

The gig economy has grown rapidly globally in recent years. According to Wood et al., (2019) In 2019, there were nearly 70 million workers registered on job application platforms, and the number of users on online platforms continues to grow by about 26% every year. In 2021, the number of worker profiles registered on digital platforms worldwide reached around 163 million (Kassi, 2021).

The growing number of gig workers is interesting to be researched further. This research will examine the topic of gig workers using bibliometric analysis to gain a more systematic understanding of complex data. Bibliometrics itself is a type of quantitative study of scientific publication data that helps reveal research patterns and understand how a topic develops or declines over time while allowing for the search for the development of certain topics, especially related to gig workers (Donthu et al., 2021).

In research (Guduru, 2023) that examines Gig Worker trends in 2023 with the literature review method but is limited to research articles, papers, conferences, and review articles from Scopus. Systematically investigated literature articles can assist researchers in determining current, past, and future research trends (Donthu et al., 2021). In this study, it will be investigated more broadly and thoroughly by taking all source documents on Scopus with the aim of mapping research trends, identifying other relevant topics, and seeing the impact or productivity of research.

This research focuses on conducting bibliometric research by collecting and filtering data on Scopus with all source documents related to "Gig Worker". Researchers chose to take a broader approach without filtration in the Scopus database to get an overview of the overall gig worker trend

from year to year. The Scopus data source is the only data source taken because Scopus data is famous for its diverse and extensive references and journals and has been cited in previous research (Guduru, 2023). Furthermore, the focus of this research is to answer the problem formulation as follows:

1. What is the trend of international scientific publications on the topic of gig workers
2. What is the development map of keywords related to gig worker topics in international scientific publications
3. What is the productivity of international scientific publications on the topic of gig workers?

To achieve the objectives of the focus, the researcher chose to use VOSviewer software, which allows an overview visualized in the form of tables and images. The urgency of this research is the visualization and expansion of a better understanding of the topic of gig workers by taking all Scopus databases without the exception of certain articles, answering from previous research that has been done by teachers in 2023. This research can also be a foundation for future researchers to plan further research activities that can make a greater contribution.

LITERATURE REVIEW

The concept of the Gig Worker is not entirely new (Malik, 2021). Historically, Gig workers refer to short-term contracts that are different from permanent workers (Malik, 2021), allowing workers to perform their work flexibly (Keith et al., 2019). allowing them to adjust wages in real time based on task demand (Schmidt, 2023). The Gig economy refers to an economic system that emphasizes online platforms to connect workers with consumers and clients (Healy et al., 2017). Although gig workers offer flexibility, many workers experience significant psychological risks (Zhidkova, 2022).

According to Izza et al. (2024), gig workers can be divided into local-based (superapp) and remote-based (online) gig workers. Remote-based gig workers can include freelancers, project-based workers, independent contractors, and others (Rouse, 2019). Freelancers can be called on-demand workers, they usually work through freelance platforms that connect service providers and service seekers. Remote-based gig workers in Indonesia can be seen from creative economy sectors such as game development, product design, interior design, film, music, animation, and video. Location-based gig workers (superapps) include services for passenger transportation, food delivery, and courier services where such work can only be completed through direct interactions such as the Grab and Gojek apps (Izza et al., 2024).

According to Kalleberg & Dunn (2016), Gig workers are classified based on the type of work platforms they engage with and the nature of the tasks they perform. Here are the key classifications:

- Categories of Work Platforms:
Gig companies can be categorized into four main types of work platforms:
 - a. Crowdwork Platforms: These platforms allow workers to complete tasks online, often involving micro tasks like data entry or image labeling.
 - b. Transportation Platforms: This includes services like ride-sharing (e.g., Uber, Gojek, Grab), where workers provide transportation services.
 - c. Delivery/Home Task Platforms: Workers in this category perform tasks such as delivering food or completing home repairs (e.g., TaskRabbit).
 - d. Online Freelance Platforms: These platforms cater to skilled workers who take on project-based work, such as writing or graphic design, often requiring higher levels of expertise.
- Nature of Work:

Gig workers are typically engaged for specific tasks with little to no ongoing relationship with their employers. This means they often lack the predictable hours, wages, and benefits associated with traditional employment.

The level of skill required for tasks varies significantly across different platforms. Higher-skilled jobs tend to offer more autonomy and potentially higher wages, while lower-skilled jobs may involve more rigid structures and lower pay.

- **Control and Autonomy:**

Workers' control over their work can vary. Some platforms allow workers to choose their tasks and set their schedules, while others impose stricter guidelines and expectations. This aspect of control is crucial in determining the quality of the gig worker.

RESEARCH METHODS

This research aims to analyze publication trends with literature review with a bibliometric approach with the topic of Gig Worker, for which data was taken from January 10 to February 26, 2025. This research was conducted by collecting and filtering data on Scopus in the 2020-2025 time period related to "Gig Worker". Scopus data sources are the only data sources taken because Scopus data is famous for its diverse and extensive references and journals and has been widely cited in previous research (Guduru, 2023).

This study uses the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flowchart to plan and carry out systematic reviews to ensure that all recommended information is covered (Moher et al. 2021). This diagram shows the process of retrieving, filtering, and finally retrieving data based on the inclusion and exclusion criteria listed in the research screening protocol. Data that has been found according to the qualifications determined by the researcher in the research screening protocol is then recorded in the PRISMA flow, and the results will be processed quantitatively using the Bibliometric method.

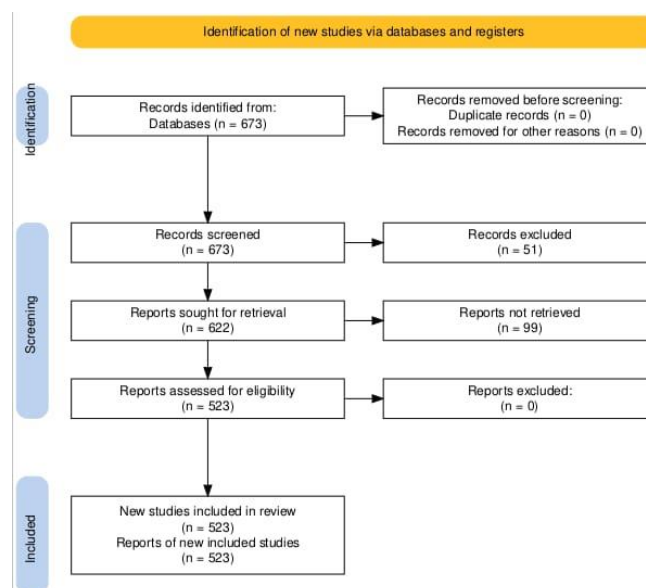
Bibliometric methods are considered important for analyzing publication statistics where this method is widely used to identify trends and patterns in a field of research (Donthu et al., 2021). Researchers collect information including author name, document source, year of publication, publication title, country, journal, field of science, and publication type. Bibliometrics helps identify trends, collaboration between researchers, and the impact of research. The bibliometric tool used in research is VoS Viewer. It is software specifically designed to visualize and analyze bibliometric data to visualize Co-Authorship to see collaboration between researchers, co-occurrence to see research trends, and Citation to see the impact of research.

Table 1. Research screening protocol

Criteria	Description
Databases used in this study	This research uses the database on Scopus
Keywords	Retrieve article title, abstract, and keyword data relevant to "Gig worker".
Time duration	2020-2025
Language used in the article	Take all languages available in scientific publications (English, Spanish, Italian, Portuguese, Croatian, Chinese).
Literature type	Limited to article, conference paper, review.
Inclusion criteria	Study Type: article, conference paper, review. Population: Research that addresses gig workers Year range: 2020-2025
Exclusion criteria	Type of study: book, book chapter, note, letter, erratum, editorial
Search term	January 10-February 26, 2025

Researchers focused on taking inclusion criteria with literature types of articles, conference papers, and reviews only because these three document provide reliable insights. According to Booth, A., Sutton, A., & Papaioannou, D. (2016), systematic reviews with a rigorous peer review process and have a structured research methodology and reliable results. Conference papers as these are considered to provide up-to-date information on ongoing research or preliminary results (Haddaway, N. R., et al., 2015). According to Grant, M. J., & Booth, A. (2009), systematic reviews provide a comprehensive summary of the available evidence.

In the initial stage of searching the database on Scopus, 673 publications were found that were relevant to the topic of gig workers. Entering the screening stage, 51 documents were excluded because they did not meet the inclusion criteria, namely documents in the period 2020 to 2025, resulting in 622 documents. Then, this document was screened by including inclusion criteria in the form of document types that would be further examined only in the form of articles, conference papers, and reviews. 99 documents were excluded, resulting in 523 publications that met all inclusion criteria.

**Figure 1.** PRISMA flow diagram

RESULT AND DISCUSSION

Based on the database obtained from Scopus with the criteria of literature-type articles, conference papers, and reviews, 523 were found from 2020 - 2025 February with the keyword "gig worker". In Figure 2, it can be seen that research on gig workers continues to increase consistently from 2020 to 2025. This shows a positive global trend in this research topic.

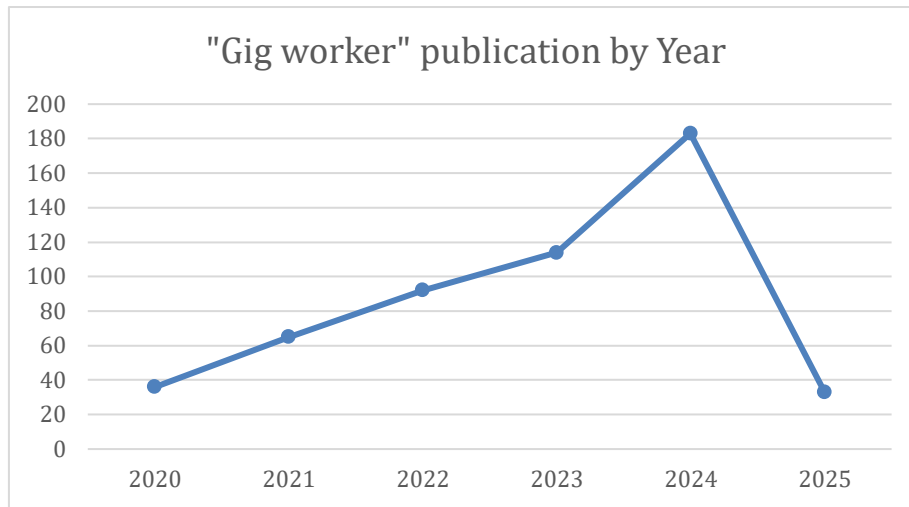


Figure 2. Growth in the number of publications on the topic of gig workers
Source: Scopus 2025

The figure below summarizes the countries with the most research focused on gig workers. The United States plays a very prominent role in research on gig workers with 148 publications, followed by China, but the figure is still half that of the United States.

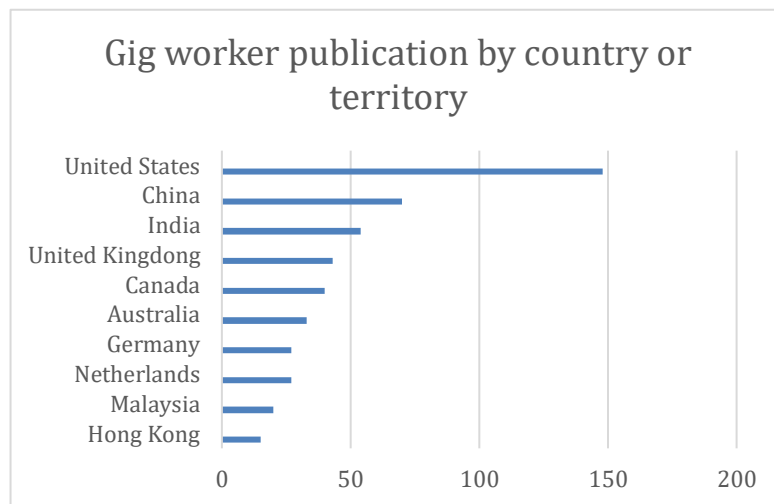


Figure 3. Countries with the most gig worker publications
Source: Scopus 2025

The following is a visualization of the Co-Authorship collaboration network processed through VoS Viewer. With the focus on co-Authorship of countries that publish publications, the size

of the circle represents the number of publications of the country, and the color represents the period of publication year. Judging from the largest circle, which means the largest number, the United States shows that this country has a high level of network collaboration, in line with the information above that its publications are also the most. Followed by China, which is also yellow, which means that a lot of research was conducted around 2023 or can be said to be fairly new. Gig worker research continues to grow with increasingly new publications, especially in several countries such as China, Denmark, and Portugal.

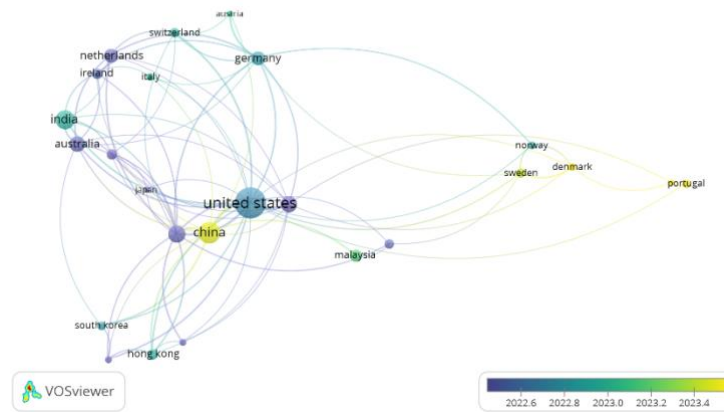


Figure 4. Visualization of Country Co-Authorship Overlay with the topic "gig worker"
 Source: VOSviewer output, 2025

Indonesia has not been seen in the Co-Authorship visualization image (Figure 4). The summary of the data obtained shows that Indonesia is included in a country where productivity and network collaboration are still low, as shown in the table below. This is certainly a great opportunity for Indonesian researchers in the future to research the topic of gig workers in Indonesia.

Table 2. Development of the number of publications on the topic of gig workers

No.	By Document		By Citations		By Total Link Strength	
	Country	Documents	Country	Citations	Country	Total Link Strength
1	Japan	5	Denmark	12	Malaysia	3
2	Brazil	5	Austria	15	Portugal	4
3	Austria	5	Portugal	19	Japan	4
4	South Africa	7	Brazil	20	Italy	4
5	Singapore	7	Indonesia	46	Brazil	5
6	Italy	8	Malaysia	48	Indonesia	5
7	Norway	8	South Korea	54	Austria	6
8	Denmark	8	Singapore	56	South Africa	6
9	Portugal	9	Japan	69	Norway	7
10	South Korea	10	Switzerland	92	Denmark	8

VOSviewer Software is used to find out the subtopics and co-occurrence in a study that presents a keyword network diagram where the color, node size, font size, and thickness of connecting lines illustrate the relationship with other keywords (Sweileh et al., 2017). Figure 5 is a visualization of Co-Occurrence, which is the co-occurrence of keywords. The larger the circle, the more often the keyword appears in the literature. The connecting lines show how often the keywords appear together.

There are 51 keywords with 7 different color clusters: red, green, blue, yellow, purple, and tosca (in Table 3). Clusters represent different themes or research areas. Keywords within a cluster tend to appear together in publications, indicating that they address the same or related aspects of the topic. The red cluster, for example, which has the keywords employment, engagement, and flexibility, refers to the characteristics of gig workers.

Table 3. Clusters on Co-Occurrence with the topic "gig worker"

Cluster	Item
Cluster 1 (Red)	employment, engagement, flexibility, gamification, gig workers, independent contractor, job autonomy, mental health, motivation, technology
Cluster 2 (Green)	China, digital labor, gender, global south, labor, migration, platform, uber
Cluster 3 (Blue)	food delivery, gig work, human resource management, job satisfaction, occupational health, online labor platform, self-determination theory, well being
Cluster 4 (Yellow)	Algorithm control, algorithm management, covid 19 pandemic, future of work, platform labor, precarious work, risk
Cluster 5 (Purple)	agency, digita platform, labor market, platform work, platform, precarity, regulation
Cluster 6 (Tosca)	Collective action, gig economy, gig workers, Malaysia, resistance, platform capitalism, platform economy
Cluster 7 (Orange)	Covid, pandemic, resilience, sharing economy

Source: VOSviewer output, 2025

In this visualization, we can observe the network of connected and unconnected networks, also related to the clusters in the table above in one cluster tend to appear together in publications, indicating that they discuss the same aspects and are most likely connected. The keyword regulation does not appear to be directly connected to well-being and human resource management. This indicates that there is limited research linking how gig work regulation directly affects worker well-being. This could be an opportunity for how regulation affects the way gig worker platforms manage, train, and support gig workers by taking into account the mental health of their workers.

Table 4 presents the keywords with the highest and lowest frequency in Co-Occurrence found in the publication of Gig Worker research topics. Reflected by the visual presented by VOSviewer in Figure 5 Keywords with the highest frequency mean keywords that have been widely researched. Keywords with the lowest frequency mean that they are still rarely researched and this is an opportunity for future researchers to connect gig worker topics with these keywords. The discussion of gig workers associated with mental health seems interesting to be researched further considering that many workers experience significant psychological risks (Zhidkova, 2022).

Based on the Scopus database of research fields in the diagram (Figure 6), the most research is related to Social Science by 25.9%, followed by Business management 23.7%, this illustrates that research on the topic of gig workers is dominated by studies on social impact and also business management. Many other fields related to the topic of gig workers illustrate that this topic is multidisciplinary. There is also the field of psychology with a percentage of 7.1%, which means that psychological research is indeed relevant and is developing on the topic of gig workers such as mental health, job satisfaction, employee well-being and so on.

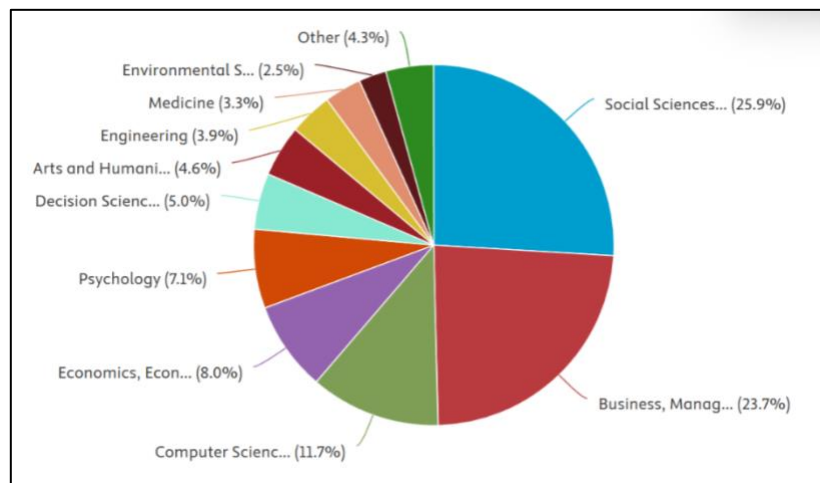


Figure 6. Research fields in "gig worker" publications

Table 5. Authors With the Most Citations

No.	Author	Documents	Citations
1	Van Doorn, Niels	5	378
2	Graham, Mark	4	267
3	Cameron, Lindsey D.	4	152
4	Frenken, Koen	3	143
5	Fieseler, Christian	3	140
6	Behl, Abhishek	4	136
7	McDonnell, Anthony	4	132
8	Carbery, Ronan	3	128
9	Sherman, Ultan	3	128
10	Maffie, Michael David	3	113

Source: Scopus 2025

Table 5 reflects the most productive author with the highest number of documents and citations of 378 citations with researchers named van doorn, niels, This means that these researchers have a major influence in research on the topic of Gig Worker. This shows that the work is the main subject of discussion and can be used to determine the next research topic.

CONCLUSION

This study aims to determine research trends, identify relevant keywords, and see the productivity of research on the topic of gig workers. Based on the results of the research and discussion above, the trend of publications on the topic of gig workers continues to grow, as evidenced by publications that continue to increase every year. However, Indonesia is one of the countries with few publications on this topic. Gig Economy, gig worker and gig work are the keywords that dominate the co-occurrence visualization. Meanwhile, keywords related to regulation, platforms, and mental health are still rarely discussed. Research on the topic of gig workers is a multidisciplinary research, but research documents are still dominated by the fields of social, business and management.

The results of this research can help policymakers, gig platforms, and worker organizations to understand the key issues faced by gig workers and develop more effective policies and practices. This study provides a comprehensive overview of research on gig workers, which can be used by researchers to identify research gaps and formulate relevant research questions.

However, this research has limitations using only the Scopus database, which may not include all publications on gig workers. The software used is only VOS viewer, so it is recommended for future research to explore other tools. The results of the bibliometric analysis only provide a quantitative overview of research trends but do not provide deep insight into the content or quality of publications.

Future research could expand the scope of data sources to include other databases such as Web of Science, Google Scholar, and regional databases. Qualitative research can be used to gain deeper insights into the experiences and perspectives of gig workers. Based on the results above, future researchers can explore unconnected keywords, such as how regulations affect the way gig worker platforms manage, train, and support their workers in relation to their employees' psychological health factors.

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