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Unveiling Insights of Gig Economy through a Bibliometric Analysis

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Abstract

This study explores the scholarly landscape surrounding "gig work", focusing on the trends, key themes, and influential research contributions. A total of 3828 articles from the WoS database were analysed using bibliometric analysis. We uncover the evolution of research trajectories, prominent authors, and core concepts within the field. The results illuminate the interdisciplinary nature of gig work research. The paper pinpoints emerging topics and gaps in existing literature, offering valuable insights for future research endeavours. This study contributes to a deeper understanding of the scholarly discourse surrounding gig work, furnishing a blueprint for propelling research in this dynamic domain.

Keywords: gig economy; workforce; labour market; human resource

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1.0 Introduction

The term "gig economy" has become a key descriptor of modern labor practices, especially in relation to digital platforms that facilitate short-term, flexible jobs or "gigs." This economic model is defined by its use of technology to connect workers with consumers, enabling a wide range of tasks to be completed on demand. Initially, "gig" referred to jobs in the music industry, but the term has since broadened to describe a variety of work arrangements that are often unstable and lack traditional employment benefits (Montgomery & Baglioni, 2020; Kaine & Josserand, 2019). The gig economy relies heavily on technology, such as mobile apps and online platforms, which enable organizations to hire independent contractors for specific tasks. This shift away from traditional employment has raised concerns about employment security, workers' rights, and the overall quality of gig work. The gig economy departs from conventional employer-employee relationships, creating a flexible free-market system but also introducing new forms of job insecurity for workers (Batmunkh et al., 2022).

This transformation has significant implications, challenging established norms of employment, compensation, and social protection. Consequently, the gig economy has attracted substantial academic interest, resulting in a growing body of literature examining its impact on workers, businesses, and regulatory frameworks. However, despite the gig economy's increasing prominence and its effects on global labor markets, there is a lack of systematic research synthesizing the various studies on this topic. The current literature is fragmented, with different studies focusing on economic impact, regulatory challenges, and worker experiences (Silva & Moreira, 2022; Batmunkh et al., 2022; Malik et al., 2021). This fragmentation makes it difficult for researchers, policymakers, and practitioners to draw

comprehensive conclusions about the gig economy's overall impact and its future trajectory. While some studies highlight the benefits of gig work, such as flexibility and autonomy, others point to concerns over job insecurity, lack of benefits, and the potential for worker exploitation (Malik et al., 2021; Montgomery & Baglioni, 2020). This contrast in findings underscores the need for a bibliometric analysis to map the existing literature, identify gaps, and clarify the current understanding of the gig economy.

This paper aims to conduct a bibliometric analysis of the gig economy literature to uncover key trends, themes, and research gaps that can inform future research and policymaking. Bibliometric analysis offers a systematic way to explore the scope and depth of research in this area, helping to identify trends and themes that could guide future work. As the gig economy continues to reshape global labor markets, it is crucial for researchers, policymakers, and practitioners to engage with this literature to promote a more equitable and sustainable future for gig workers. This paper seeks to address the following questions: 1) What are the publication trends on gig work topics? 2) What are the most productive journals and research areas? 3) What are the most frequently addressed research topics in this field? 4) What are the recommendations for future research?

2.0 Methodology

This study seeks to investigate trends in gig studies through bibliometric analysis, a method useful for examining and analyzing large volumes of scientific data (Donthu et al., 2021). Bibliometric analysis enables researchers to explore emerging publication trends on specific topics, providing an overview, identifying knowledge gaps, generating new research ideas, and positioning contributions within the field. This approach not only sheds light on the field's development but also highlights the collaborative efforts of researchers from diverse backgrounds. It serves as a valuable tool for mapping the intellectual landscape of gig economy research, revealing connections between various themes and topics. By applying bibliometric methods, this paper aims to identify key areas and future research prospects in gig work studies.

For this analysis, data was extracted from the ISI Web of Science (WoS) database on September 18, 2024. The PRISMA guidelines were followed for data extraction, as illustrated in the figure below. The search term "gig" yielded 3,687 documents containing the term in either the topic or title. To narrow this down, only "article" type documents were considered, excluding 848 non-article documents. Peer-reviewed journal articles were prioritized for their higher quality, as noted by Maier et al. (2020), leading to the exclusion of 88 non-English articles. Additionally, 145 "early access" documents, lacking precise publication dates, were removed. The final dataset comprised 2,606 documents, which were analyzed using the VOSViewer application, a tool that effectively visualizes large bibliometric maps in an easy-to-understand format.

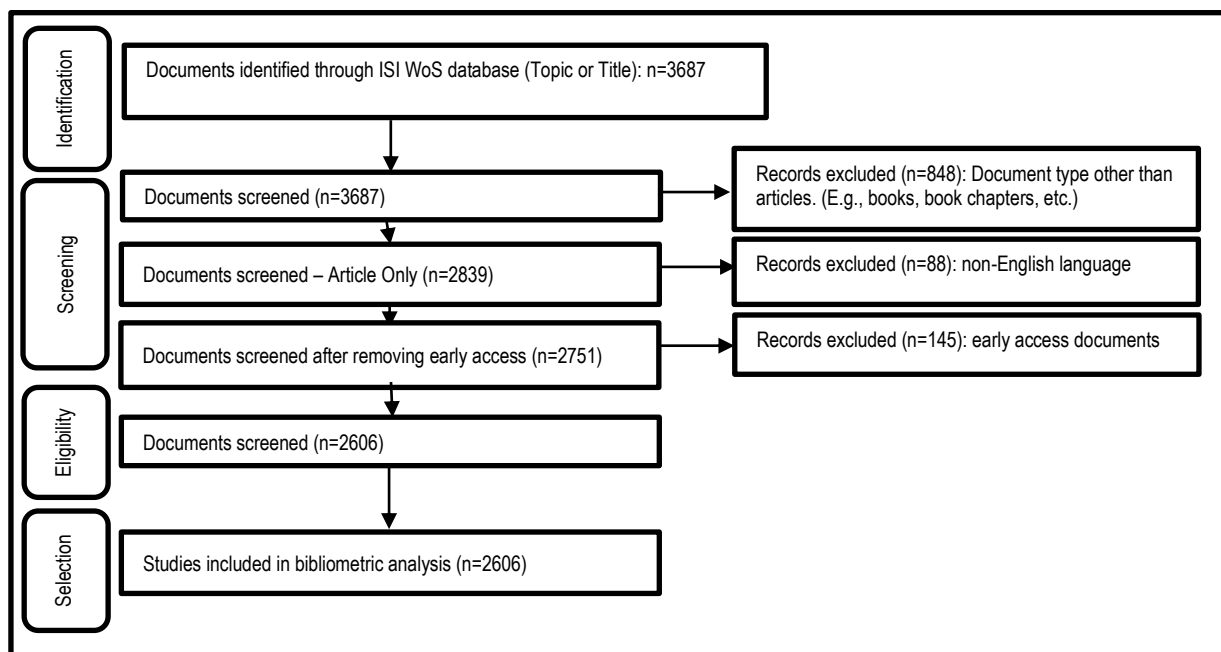


Fig. 1: The PRISMA Approach

3.0 Results

3.1 Publication Trends in Gig Works Studies

This paper examined 2,606 articles from the WoS database. As depicted in Figure 1, the publication trends in 'gig' studies have been increasing annually. Given the current trends, it is anticipated that the number of publications for 2024 will surpass that of the previous year by the end of the year.

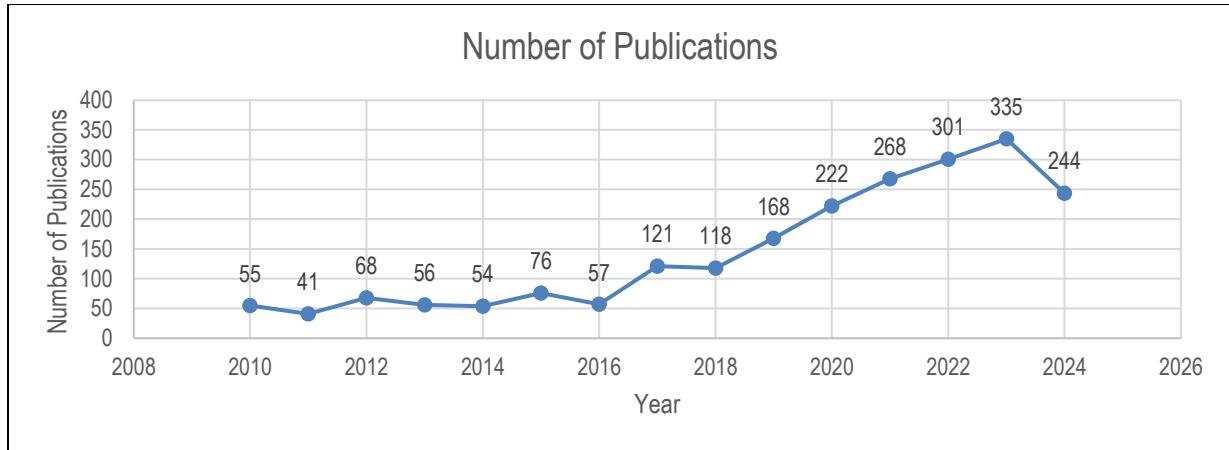


Fig. 2: Trends of "gig" Publications by Year (2010 – 2024)

Additionally, Table 1 indicates that the USA is the leading country or region in producing articles on 'gig' studies, with 624 articles. It is followed by China and England, with 303 and 297 articles, respectively. Other notable contributors include Australia, Germany, Canada, France, India, Japan, and Italy, with 176, 153, 124, 122, 111, 96, and 94 articles, respectively. This data highlights that the topic of gigs is receiving attention across numerous countries and regions, which could be advantageous for these areas.

Rank	Countries/Regions	Record Count
1	USA	624
2	PEOPLES R CHINA	303
3	ENGLAND	297
4	AUSTRALIA	176
5	GERMANY	153
6	CANADA	124
7	FRANCE	122
8	INDIA	111
9	JAPAN	96
10	ITALY	94

3.2 Journal and Research Areas Analysis

Regarding journal publications on 'gig' studies, the journals "Advances in Evaluation and Development," "New Technology Work and Employment," and "Routledge Handbook of the Gig Economy" lead with the highest number of articles, each featuring 29 publications on gig topics, as shown in Table 2. They are followed by "Work Employment and Society," "Journal of Industrial Relations," "Environment and Planning A: Economy and Space," "New Media Society," "European Labour Law Journal," "Sustainability," and "Down Beat," with 25, 19, 17, 17, 16, 16, and 15 articles, respectively.

Rank	Publication Titles	Record Count
1	Advances In Evaluation and Development	29
2	New Technology Work and Employment	29
3	Routledge Handbook of The Gig Economy	29
4	Work Employment and Society	25
5	Journal Of Industrial Relations	19
6	Environment And Planning A Economy And Space	17
7	New Media Society	17
8	European Labour Law Journal	16
9	Sustainability	16
10	Down Beat	15

In terms of research areas, most publications focus on "Business Economics," with the highest number of articles totaling 689, as illustrated in Table 3. This is followed by "Government Law," "Engineering," "Sociology," and "Materials Science," with 177, 175, 143, and 131 articles, respectively.

Table 3. Top 10 Research Areas in "Gig" Publications

Rank	Research Areas	Record Count
1	Business Economics	689
2	Government Law	177
3	Engineering	175
4	Sociology	143
5	Materials Science	131
6	Physics	114
7	Environmental Sciences Ecology	111
8	Chemistry	108
9	Social Sciences Other Topics	108
10	Psychology	94

3.3 Citation Analysis

Using citation analysis, this bibliometric study also evaluated the most cited article on "gig" studies. Citation analysis helps determine a paper's impact within existing literature, with greater influence typically indicated by a higher number of citations (Maier et al., 2020). As shown in Table 3, the most influential article is "Good Gig, Bad Gig: Autonomy and Algorithmic Control in the Global Gig Economy" by Wood et al. (2019), with 752 citations. This is followed by "Genetic Variation in the Gene Encoding Adiponectin is Associated with an Increased Risk of Type 2 Diabetes in the Japanese Population" by Hara et al. (2002), which has 705 citations. Additional notable articles include those by Kellogg et al. (2020), De et al. (2020), Anido et al. (2010), and Vallas & Schor (2020), with 676, 528, 507, and 493 citations, respectively, as detailed in Table 3. This indicates that the term "gig" is widely discussed in both social science and science and technology studies.

Table 3. Top 20 Most Influential Articles in "Gig" Studies

R	Article Title	Authors, Year	Journal	Citations
1	Good Gig, Bad Gig: Autonomy and Algorithmic Control in the Global Gig Economy	Wood et al. (2019)	Work Employment and Society	752
2	Genetic variation in the gene encoding adiponectin is associated with an increased risk of type 2 diabetes in the Japanese population.	Hara et al. (2002)	Diabetes	705
3	ALGORITHMS AT WORK: THE NEW CONTESTED TERRAIN OF CONTROL	Kellogg et al. (2020)	Academy Of Management Annals	676
4	Impact of digital surge during Covid-19 pandemic: A viewpoint on research and practice	De et al. (2020)	International Journal of Information Management	528
5	TGF- β Receptor Inhibitors Target the CD44high/Id1high Glioma-Initiating Cell Population in Human Glioblastoma	Anido et al. (2010)	Cancer Cell	507
6	What Do Platforms Do? Understanding the Gig Economy	Vallas & Schor, 2020	Annual Review of Sociology, Vol 46	493
7	Digital labour and development: impacts of global digital labour platforms and the gig economy on worker livelihoods	Graham et al. (2017)	Transfer-European Review of Labour and Research	466
8	Biofilm formation and dispersal under the influence of the global regulator CsrA of Escherichia coli	Jackson et al. (2002)	Journal Of Bacteriology	440
9	Labour process theory and the gig economy	Gandini (2019)	Human Relations	411
10	Alternative Work Arrangements: Two Images of the New World of Work	Spreitzer et al. (2017)	Annual Review of Organizational Psychology and Organizational Behavior	400
11	Agony and Ecstasy in the Gig Economy: Cultivating Holding Environments for Precarious and Personalized Work Identities	Petriglieri et al. (2019)	Administrative Science Quarterly	388
12	Workers without employers: shadow corporations and the rise of the gig economy	Friedman (2014)	Review Of Keynesian Economics	371
13	Anaerobic xylose fermentation by recombinant Saccharomyces cerevisiae carrying XYL1, XYL2, and XKS1 in mineral medium chemostat cultures	Eliasson et al. (2000)	Applied And Environmental Microbiology	368
14	Enteral nutrition-related gastrointestinal complications in critically ill patients: A multicenter study	Montejo (1999)	Critical Care Medicine	341
15	Characterization of root colonization profiles by a microcosm community of arbuscular mycorrhizal fungi using 25S rDNA-targeted nested PCR	Van Tuinen et al. (1998)	Molecular Ecology	333
16	Riders on the Storm: Workplace Solidarity among Gig Economy Couriers in Italy and the UK	Tassinari & Maccarrone (2020)	Work Employment and Society	329
17	Platform-Capital's 'App-etite' for Control: A Labour Process Analysis of Food-Delivery Work in Australia	Veen et al. (2020)	Work Employment and Society	293
18	The effect of Ga-grading in CIGS thin film solar cells	Lundberg et al. (2005)	Thin Solid Films	292
19	Plant growth-promoting bacteria Bacillus amyloliquefaciens NBRISN13 modulates gene expression profile of leaf and rhizosphere community in rice during salt stress	Nautiyal et al. (2013)	Plant Physiology and Biochemistry	277
20	From surviving to thriving in the gig economy: A research agenda for individuals in the new world of work	Ashford et al. (2018)	Research In Organizational Behavior: An Annual Series of Analytical Essays And Critical Reviews, Vol 38	275

3.4 Keyword Analysis

The study also performed a co-occurrence analysis using VOSViewer software. This type of analysis, as suggested by Maier et al. (2020), helps identify frequently combined keywords used by authors, revealing trends and patterns in the study of 'gig' and highlighting relationships between keywords. Keywords are considered closely related when they frequently appear together in documents (Zupic & Cater, 2015). Figure 3 illustrates several clusters of keywords generated from the analysis. Out of 2,060 articles examined, 264 keywords with at least 10 occurrences were identified. The most common keyword was "gig economy," appearing 646 times. This was followed by "labour," "work," "gig," "employment," and "economy," with 275, 216, 130, 107, and 105 occurrences, respectively, as detailed in Table 4.

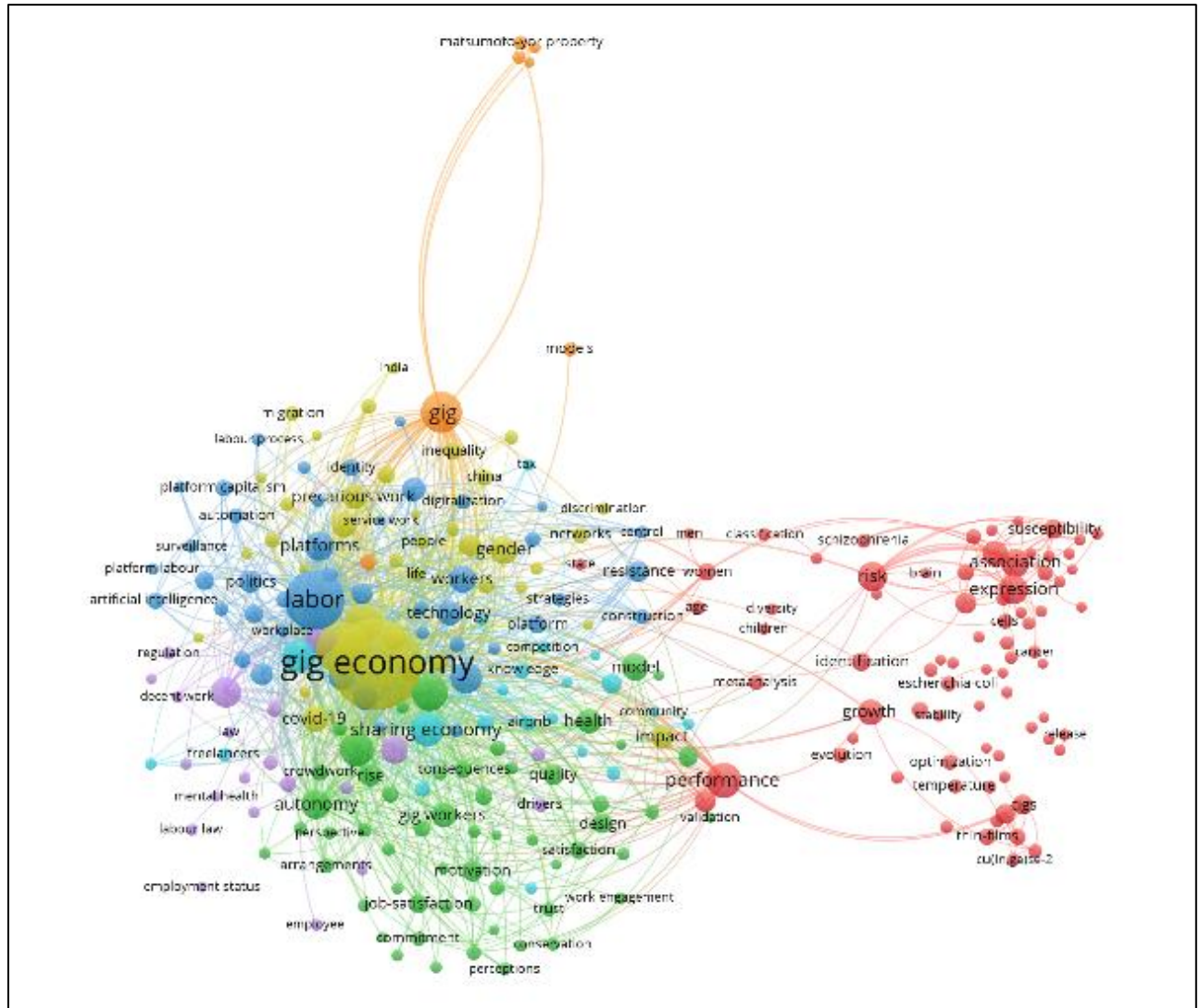


Fig. 3: Keyword Co-Occurrence Analysis

Table 4. Top 10 Most Used Keywords in “Gig” Publications

Rank	Keyword	Occurrences
1	Gig economy	646
2	Labor	275
3	Work	216
4	Gig	130
5	Employment	107
6	Gig Work	105
7	Uber	91
8	Sharing Economy	90
9	Management	77
10	Autonomy	68

4.0 Discussion

The bibliometric analysis of the gig economy has shed light on the various aspects of this rapidly evolving labor market, revealing both its complexities and the diverse nature of gig work. The review of existing literature has highlighted key trends, themes, and research gaps, offering a thorough overview of current knowledge about gig work. This paper analyzed 2,606 articles from the WoS database and noted a significant increase in research on the gig economy, especially over the past decade. This growing scholarly interest underscores the expanding recognition of the gig economy's impact on labor markets, employment patterns, and global economic structures (Batmunkh et al., 2022). Among the most productive countries or regions in publishing gig-related articles, the USA leads, followed by China and England. The substantial number of articles from various countries indicates a rising academic interest in gig work across different regions. The journal with the highest output of gig-related articles is "Advances in Evaluation and Development," followed by "New Technology Work and Employment." Most of these journals are related to human resources and technology.

In terms of research areas, "Business Economics" has the highest number of articles discussing gig-related topics. The most cited article on the gig economy is "Good Gig, Bad Gig: Autonomy and Algorithmic Control in the Global Gig Economy" by Wood et al. (2019), which has received the most citations. This paper evaluates job quality in the remote gig economy, highlighting both the advantages and disadvantages of gig work. The themes discussed emphasize the need for a nuanced understanding of gig work, which varies widely across different contexts. While platform-based algorithms offer flexibility, autonomy, and task variety, they also lead to issues such as low pay, social isolation, irregular hours, overwork, and exhaustion. The most frequently used keyword in gig research is "gig economy," appearing 646 times, indicating ongoing interest and numerous opportunities for further study.

One promising area for future research is the intersection of the gig economy with entrepreneurship and innovation. Studies are increasingly exploring how gig platforms can act as catalysts for entrepreneurial activity, enabling individuals to use gig work as a stepping stone toward starting their own businesses (Barrios et al., 2020; Mouazen & Hernández-Lara, 2023). This perspective supports the idea that the gig economy can promote entrepreneurship, particularly among marginalized groups who face barriers to traditional employment (Mouazen & Hernández-Lara, 2023). However, it is also important to recognize that while gig work can offer opportunities, it may also perpetuate inequalities and exploitative practices, especially in regions with weaker labor protections (Ayentimi et al., 2022; Au & Tsang, 2022). As gig work continues to grow, there is an urgent need for policymakers to address the legal and social implications of this labor model. The analysis revealed a research gap in effective regulatory approaches that balance the flexibility of gig work with the protection of workers' rights (Au & Tsang, 2022; Joo & Shawl, 2021). Recent legislative efforts, such as California's Assembly Bill 5, which aims to reclassify gig workers as employees to extend labor protections, highlight the need for further exploration of such regulatory changes and their potential impact on the gig economy.

5.0 Conclusion and Recommendations

This paper uses the bibliometric analysis approach to explore previous literature trends on gig works studies. A total of 2606 articles from the ISI WoS database were analysed, and it was found that there are increasing trends in the publications on gig topics. The study reveals a growing interest in gig work as a dynamic employment model shaped by technological advancements, labour market shifts, and changing work preferences. Key themes emerging from the analysis include the gig economy's impact on workers' welfare, legal frameworks, platform management, and the future of work. The research also highlights that countries with more developed digital economies and regulatory frameworks dominate the gig work discourse. However, emerging economies are gradually entering the conversation, especially in the context of addressing socioeconomic disparities. Despite the increasing volume of research, there remains a need for deeper exploration into areas such as the long-term sustainability of gig work, its environmental impact, and the role of governments in regulating the industry. As the gig economy continues to evolve, ongoing research will be essential to inform policy decisions and develop strategies that promote fair and equitable working conditions for all gig workers. Future studies should aim to address the gaps identified in the current literature, particularly concerning the intersectionality of gig work, the role of technology, and the need for comprehensive regulatory frameworks.

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