

## The Rise of The Gig Economy and Its Impact on HRM Research: a Dynamic Bibliometric Analysis

Nayoan Baskautshar<sup>1\*</sup>, and Mimi Kurnia Nengsih<sup>2</sup>

<sup>1,2</sup> Muhammadiyah Bengkulu University, Indonesia

*Journal of Economics and Management Sciences is licensed under a Creative Commons 4.0 International License.*



### ARTICLE HISTORY

Received: 20 December 25

Final Revision: 11 January 26

Accepted: 17 January 26

Online Publication: 31 March 26

### KEYWORDS

Gig Economy, Human Resource Management, Algorithmic Management, Bibliometric Analysis, Research Collaboration

### KATA KUNCI

Gig Ekonomi, Manajemen Sumber Daya Manusia, Kolaborasi Penelitian, Analisis Bibliometrik, Kerja Sama Penelitian

### CORRESPONDING AUTHOR

nayoanbaskautshar@gmail.com

### DOI

10.37034/jems.v8i2.332

### ABSTRACT

This study conducts a dynamic bibliometric analysis of 2,695 articles to map the evolution, structure, and research trends at the intersection of the gig economy and human resource management (HRM) from 2010 to 2024. Using VOSviewer to analyse Scopus-indexed literature, the research identifies the geographic dominance of the United States and the United Kingdom in publication output. At the same time, countries such as the Netherlands and Singapore demonstrate higher impact per article. A keyword co-occurrence analysis reveals the consolidation of the research field around three major, yet poorly integrated, thematic clusters: regulation, worker psychological Well-being, and technology governance. Bibliographic coupling analysis of authors and institutional collaboration confirms fragmentation within the intellectual community, with collaboration patterns centred on universities in the Global North. These findings underscore the need for a future research agenda that is more geographically inclusive, integrative across paradigms, and focused on connecting technology analysis with policy implications and social protection for gig workers. The contribution of this study is an evidence-based intellectual map that can guide the Development of more adaptive HRM theory and practice in the gig economy era.

### ABSTRAK

Penelitian ini melakukan analisis bibliometrik dinamis terhadap 2.695 artikel untuk memetakan evolusi, struktur, dan tren penelitian pada persimpangan ekonomi gig dan manajemen sumber daya manusia (HRM) periode 2010–2024. Dengan menggunakan VOSviewer untuk menganalisis literatur terindeks Scopus, studi ini mengidentifikasi dominasi geografis Amerika Serikat dan Britania Raya dalam produktivitas publikasi, sementara negara seperti Belanda dan Singapura menunjukkan dampak per artikel yang lebih tinggi. Analisis *co-occurrence* kata kunci mengungkap konsolidasi bidang penelitian di sekitar tiga kluster tematik utama yang belum terintegrasi dengan baik: regulasi, kesejahteraan psikologis pekerja, dan tata kelola teknologi. Analisis *bibliographic coupling* antar penulis dan kolaborasi institusi mengonfirmasi fragmentasi komunitas intelektual serta pola kolaborasi yang terpusat pada universitas di *Global North*. Temuan ini menyoroti perlunya agenda penelitian ke depan yang lebih inklusif secara geografis, integratif antar paradigma, serta berfokus pada penghubungan analisis teknologi dengan implikasi kebijakan dan perlindungan sosial pekerja gig. Kontribusi studi ini adalah peta intelektual berbasis data yang dapat memandu pengembangan teori dan praktik HRM yang lebih adaptif di era ekonomi gig.

### 1. Introduction

The last decade has witnessed significant transformations in the global labor landscape, marked by the exponential growth of what is known as the gig economy [1]. The gig economy, defined as a labor market dominated by short-term contracts or freelance work rather than permanent jobs, has revolutionized the way work is organized and transacted. This phenomenon has been driven by advances in digital technology, online platforms, and changing worker and company preferences toward flexibility. This shift has

not only changed individual work practices but also challenged the traditional foundations of employment relationships and established business models.

In the context of Human Resource Management (HRM) as a discipline, the rise of the gig economy poses both paradigmatic challenges and opportunities. Conventional HRM practices, designed to manage permanent employees within stable organisational hierarchies, have become increasingly inadequate for regulating a fragmented, independent, and often digitally connected workforce [2]. Critical issues such

as recruitment, selection, training, compensation, employee engagement, and legal protections for gig workers demand novel approaches and theoretical frameworks, thereby stimulating a surge of research in HRM [3].

Parallel to macro-institutional studies, academic discourse on the gig economy has also evolved at the micro-level by examining the subjective experiences and work dynamics of individual platform workers. Several studies have highlighted how gig work shapes thriving strategies and career sustainability through the lens of work identity theory and positive psychology [4]. However, empirical findings reveal ambivalent outcomes: on one hand, the flexibility and autonomy offered by the gig economy are often perceived as sources of job satisfaction [5]. On the other hand, the lack of job security, income instability, and weak organizational support contribute to heightened precarity, financial anxiety, and emotional exhaustion among workers [6].

The dimension of work control and management in this context has also undergone a fundamental transformation with the emergence of algorithmic management as the primary coordination and supervision mechanism in platform-based work. Algorithmic systems enable platforms to organise task assignments, monitor performance, and continuously discipline workers through data-driven evaluations, which, in turn, can potentially erode worker autonomy [7]. Certain research assert that algorithmic management has reconfigured core HRM functions, with recruitment processes, performance evaluations, incentive allocation, and labour relationship management increasingly governed by automated systems [8]. This configuration establishes new labour relations characterised by information asymmetry, power imbalance, and limited worker voice mechanisms, thereby posing significant challenges to conventional HRM practices and industrial relations [9].

Although the literature on the gig economy and HRM has grown significantly, a comprehensive understanding of the intellectual evolution, knowledge structure, and future trends in this research field remains fragmented. Most existing literature reviews are narrative and qualitative in nature, which, while valuable, are often limited in scope, susceptible to selection bias, and less capable of systematically and objectively mapping the dynamic relationships among concepts, authors, and institutions [10]. Several early bibliometric studies have attempted to chart related domains, such as scientometric analyses of the platform economy and digitally mediated work research and development [11], as well as large-scale conceptual studies on the dynamics and structural implications of the gig economy [5]. However, a specific focus on the intersection of the gig economy and HRM—which simultaneously explores institutional, behavioural, and technological

dimensions—remains relatively limited. Existing bibliometric studies often focus on a single aspect, such as legal [12] or psychological dimensions [8], thereby failing to fully capture the multidisciplinary nature and the network of interconceptual relationships. Consequently, there is a methodological and substantive gap for a dynamic and comprehensive bibliometric analysis that can integrate these various dimensions into a coherent intellectual map.

Bibliometrics has emerged as a robust methodology to address this gap. As a statistical approach to analysing academic literature, bibliometrics enables researchers to quantify and map the Development of scholarly fields, identify collaborative patterns, uncover intellectual networks, and trace the emergence of research themes over time through an objective and measurable lens [13]. Accordingly, this study aims to fill this void by conducting a dynamic bibliometric analysis of the literature corpus on the gig economy and HRM from 2010 to 2024. This research not only measures productivity and impact but also maps the thematic structure, collaborative networks, and evolution of the research discourse, thereby providing a more integrative and data-driven intellectual map to guide future research agendas at this critical intersection.

Based on the identification of research gaps above, this study aims to address the following questions:

- a. How has the productivity of research (publication volume, annual trends) in the intersection of the gig economy and HRM developed from 2010 to 2024?
- b. Which countries, institutions, authors, and journals are the most dominant in publishing research in this field, and what are their collaboration patterns?
- c. What are the dominant thematic clusters in gig economy and HRM research, and how are these clusters interrelated based on a keyword co-occurrence analysis?
- d. What is the structure of the intellectual community in this field based on an author bibliographic coupling analysis, and does paradigmatic fragmentation exist among them?
- e. What are the patterns of institutional and geographical collaboration in this research, and what is the impact of research from various countries as indicated by citation analysis?

By addressing these questions, this study makes three main contributions. First, it provides a systematic and measurable review of the growth and impact of research at the intersection of the gig economy and HRM. Second, it visualises the intellectual structure and evolutionary trajectory of this field while identifying potential research gaps. Third, it offers a data-driven roadmap for academics, practitioners, and policymakers to navigate the complexities of HRM in the gig era and

to formulate a forward-looking research agenda that is more inclusive, integrative, and globally relevant.

## **2. Research Methods**

This study employs a systematic bibliometric analysis approach to examine the intellectual structure, collaboration patterns, and research trend developments in the field at the intersection of the gig economy and human resource management (HRM). Data were collected exclusively from the Scopus database, selected for its reputation as a leading bibliographic source with broad multidisciplinary coverage and high quality metadata, thereby supporting comprehensive and reliable science analysis [14]. The search strategy was carefully designed using a combination of core keyword reflecting gig economy concepts (such as “gig economy,” “platform work,” “sharing economy”) and HRM-related terms (such as “human resource management,” “HRM,” “employment relationship”) to ensure the breadth and relevance of retrieved documents. The research timeframe was set from 2010 to 2024 to capture the evolution of the literature since the emergence of the gig economy on a large scale following the 2008 financial crisis. Only English language journal articles and literature reviews were included to maintain analytical consistency and acknowledge the hegemony of English in international scientific publications [15]. Following a manual screening process based on title and abstract to ensure thematic suitability, a final corpus 2,695 documents were obtained for analysis

The analysis was conducted in two main stages: performance analysis and science mapping. Performance analysis used Microsoft Excel and Scopus’s internal analytical tools to measure research productivity and impact using basic metrics such as the number of publications per year and the most contributing countries, institutions, authors, and journals [9]. Meanwhile, science mapping was performed using VOSviewer software (version 1.6.20) to reveal deeper structural and intellectual relationships. Several network mapping techniques were applied, namely author co-authorship analysis based on countries and affiliations to visualize global research alliances, co-occurrence analysis of keywords to identify thematic clusters and research topic shifts, and bibliographic coupling analysis among authors to group intellectual communities based on shared cited references [14]. The entire analytical process was conducted iteratively and accompanied by data-cleaning procedures (such as unifying institutional name spellings) to ensure the validity and reliability of the findings. Nevertheless, this study acknowledges certain limitations, including a bias toward literature indexed in Scopus and published in English, which were taken into consideration in the comprehensive interpretation of the results.

## **3. Results and Discussion**

### **3.1. Country Collaboration Analysis**

The bibliometric analysis reveals an uneven geographic distribution of research productivity on the gig economy and HRM between 2010 and 2024. The United States (U.S.) dominates significantly, both in publication volume and collaborative influence. This reflects not only the U.S. position as the birthplace of many global gig economy platforms but also its strong academic capacity in management and employment studies. The United Kingdom (UK) ranks second, indicating a rapid academic and institutional response to the digital transformation of the labor market.

Beyond these two anglophone nations, China and Australia have emerged as major contributors, with publication volume increasing consistently. China’s productivity reflects the rapid adoption of a digital economy and the expansion of domestic platforms, while Australia combines an advanced economy with research focused on regulatory aspects and worker well-being. European nations such as Germany, the Netherlands, Italy, and France also demonstrate steady productivity, supported by a strong tradition of social science research and funding focused on digitalization of work.

Several key factors explain this stratification. First, the maturity of a country’s gig economy market directly shapes the need for empirical research and policy development. Second, research capacity—including prominent universities, access to international journals, and established funding systems—serves as a primary determinant of publication productivity. Third, national funding agendas focused on future-of-work issues have also contributed to the surge in publications, as observed in Canada and Spain. Fourth, the dominance of English in academic publishing provides a structural advantage to English-speaking countries and to nations accustomed to publishing in English, such as the Netherlands and the Nordic countries.

The dominance of Western countries in this research landscape suggests that academic discourse on the gig economy remains heavily centered on the Global North. However, China’s emergence as a significant contributor is beginning to shift this dynamic, introducing fresh perspectives from Asia’s digital economy. These findings underscore the need for more geographically inclusive research collaboration and analytical approaches that account for variations in institutional, social, and regulatory contexts across regions. While the analysis of document volume offers a valuable initial overview, future research must complement it by examining citation impact and the depth of collaboration to determine the extent to which research from various countries genuinely influences scholarly advancement in this field.

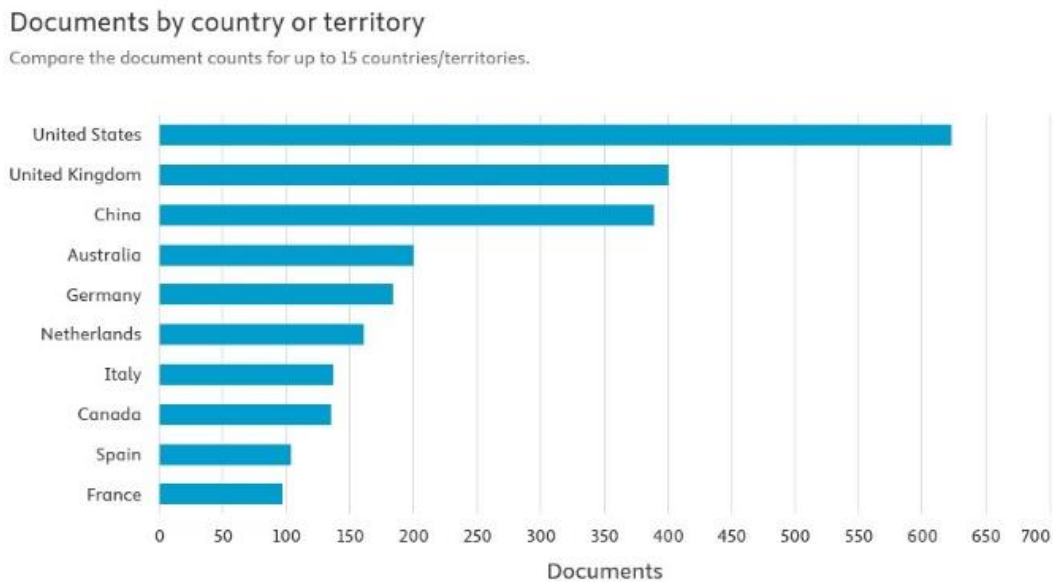


Figure 1. Country Collaboration Analysis

### 3.2. Citation Analysis by Country

Analysis of productivity by document count on Figure 1 reveals an uneven geographic distribution in gig economy and HRM research from 2010–2024, with the United States (U.S.) dominating publication volume and international collaboration networks, accounting for over 600 citations across the entire dataset. This dominance reflects the U.S.'s dual role as both the initial epicenter of the global gig economy and an academic hub with well-established research infrastructure, funding, and access to high-reputation journals. The United Kingdom (U.K.) holds second place with approximately 400 citations, underscoring a strong scholarly tradition in employment studies and progressive policy responses to platform work. Beyond these two Anglophone nations, China and Australia emerge as major contributors with rapid publication growth, each representing dynamics of the Asia-Pacific digital economy and an academic focus on regulatory aspects and worker well-being. Meanwhile, several European countries, including Germany, the Netherlands, Italy, and France, demonstrate stable productivity, supported by mature social science research capacities and funding agendas focused on digital transformation in the world of work.

This geographical stratification can be explained by four interrelated factors. First, contextual factors, including the maturity and scale of a country's gig economy market—such as in the US and the UK—naturally generate more empirical research questions and pressing policy challenges. Second, research capacity and infrastructure, including the presence of top-ranked universities, competitive funding systems, and traditions of international publication, are major determinants of academic output. Third, national funding priorities that explicitly target themes such as the future of work, digitalization, or worker protection—as implemented in

Canada and Spain—can stimulate a surge in research productivity. Fourth, linguistic factors, where the hegemony of English in scientific communication provides a systemic advantage to researchers from English-speaking countries as well as from nations that have internalized English-language international publication, such as the Netherlands and the Nordic countries.

A more in-depth country-level citation analysis deepens our understanding by revealing not only productivity but also each country's research impact. Although the United States leads in document volume, citation analysis shows that the average impact per article from countries such as the Netherlands, Switzerland, and Singapore is often higher, suggesting a concentration of highly specialized, high-quality research despite their smaller output. Meanwhile, publications from China show rapid growth in citation counts, reflecting increasing engagement and recognition within the global scientific network. This pattern confirms that publication quantity does not always correlate linearly with scientific impact. Several mid-level productivity countries, in fact, serve as influential knowledge brokers, producing research that is widely cited across borders. These findings highlight the importance of considering impact metrics—such as citations per paper or the h-index—alongside publication counts to more comprehensively assess a country's contribution. The continued concentration of citations within institutions in the U.S. and Western Europe also suggests that key knowledge flows in this field remain asymmetrical and centered in the Global North. Therefore, future research should integrate citation network analysis and bibliographic coupling to more accurately map how knowledge is produced, disseminated, and received globally, and to identify opportunities to enhance

collaboration and research impact from emerging countries.

### 3.3. Co-occurrence By All Keywords

Keyword co-occurrence analysis on Figure 2 reveals the core thematic structure and discourse development in gig economy and HRM research from 2010 to 2024. Network visualizations show that this research domain is consolidated around several key, interconnected thematic clusters, each with a distinct discursive focus.

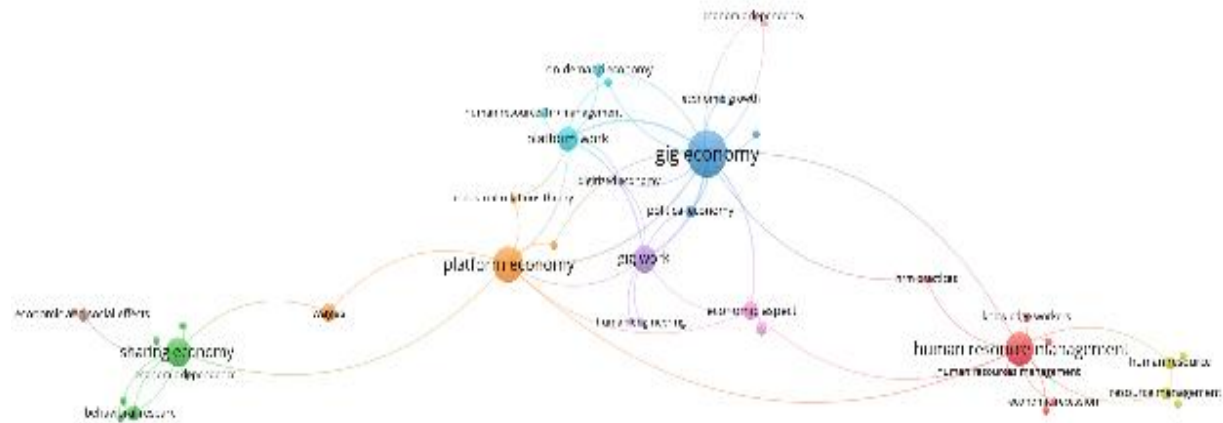


Figure 2. Co-occurrence by All Keywords

A more detailed mapping reveals thematic differentiation into several sub-clusters, reflecting more specific research streams. One prominent cluster concern legal, policy, and regulatory aspects, featuring keywords such as "labor law," "regulation," "precarious work," and "social protection." This cluster represents the academic response to institutional challenges and legal frameworks that have yet to accommodate new forms of work fully. On the other hand, another rapidly growing cluster focuses on psychological dimensions and worker Well-being, with keywords like "well-being," "job satisfaction," "stress," and "burnout." The emergence of this cluster signifies a shift from macro-level discourse (economic, policy) to micro-level discourse (individual, psychological), acknowledging the direct impact of the gig economy on workers' lives. Additionally, the technology and innovation cluster, which includes keywords such as "algorithmic management," "digital platform," and "artificial intelligence," demonstrates an increasingly close integration between HRM studies and information technology literature, highlighting the transdisciplinary nature of this field.

The temporal Development of the keyword network over time reveals the dynamics and evolution of research focus. In the early period (approximately 2010–2015), the discourse was dominated by broader concepts such as "sharing economy" and "flexible work." Over time, specialization and fragmentation occurred: the idea of "gig economy" became more dominant and stable, while newer concepts such as "work engagement," "career sustainability," and "platform

The largest and most central cluster is dominated by fundamental, albeit generic, keywords such as "gig economy," "human resource management," "platform work," and "future of work." The centrality of this cluster indicates that research in this area remains in a phase of identity formation and conceptual consolidation, with efforts to define the boundaries, characteristics, and fundamental implications of the gig economy continuing to be a primary concern.

cooperativism" emerged in the later period (2020–2024). This evolution indicates that the research field has matured from initial definitional discussions toward a deeper exploration of the nuances, consequences, and alternative models of platform work. The analysis also identifies research gaps, such as the weak connection between policy-related clusters and technology-related clusters, and the scarcity of studies explicitly linking "diversity and inclusion" issues to the gig economy context. These findings provide a valuable roadmap for researchers to identify oversaturated areas and areas still open for original contributions, while also fostering a more integrated theoretical foundation across subfields.

### 3.4. Bibliographic Coupling by Authors

Analysis of bibliographic coupling among authors maps the similarities in references used by researchers, thereby grouping experts based on shared theoretical and topical foundations, even if they do not collaborate directly. This visualization reveals the structure of intellectual communities formed around the study of the gig economy and HRM. The results indicate that this field is organized into several fairly distinct intellectual clusters, with each cluster led by several highly productive and influential authors. These key authors—often affiliated with the same institutions or connected through close collaborative networks—function as intellectual gatekeepers, shaping the perspectives, methodologies, and directions of discourse within their respective clusters. This suggests that knowledge Development in this field is clustered and concentrated,

with particular research groups dominating discussions on specific themes.

The identified main clusters reflect specific thematic foci and diverse theoretical frameworks. For example, one cluster may be powerful in political economy approaches to labor and institutional studies, featuring authors who frequently cite literature on precarity, regulation, and industrial relations. Researchers might dominate another cluster focused on organizational behavior and industrial psychology, with a solid foundation in literature concerning motivation, Well-being, and worker engagement. Additionally, a third, rapidly growing cluster may focus on technological and business innovation, in which authors engage extensively with theories of technology management, algorithmic governance, and the platform economy. This grouping illustrates that even when studying the same phenomenon (the gig economy), the academic community within it is fragmented into distinct paradigms, each with its own literary canons, target journals, and discussion forums.

These findings carry significant implications for scholarly advancement. On one hand, specialization within clusters fosters analytical depth and rapid knowledge accumulation within specific intellectual currents. Conversely, weak coupling across clusters risks creating "intellectual silos" that constrain dialogue among political economy, psychology, and technology perspectives. Such fragmentation could impede the Development of a more holistic and integrated theory of the gig economy. Therefore, this analysis highlights a strategic opportunity for integrative and cross-paradigmatic research that could bridge existing clusters. Emerging researchers can utilize this map to position their work within the current intellectual landscape, identify potential partners for cross-disciplinary collaboration, or address gaps by forging conceptual links between currently disconnected clusters. Ultimately, understanding the structure of this scholarly community not only elucidates the current state of knowledge but can also inform strategies for cultivating a more cohesive and comprehensive discourse in the future.

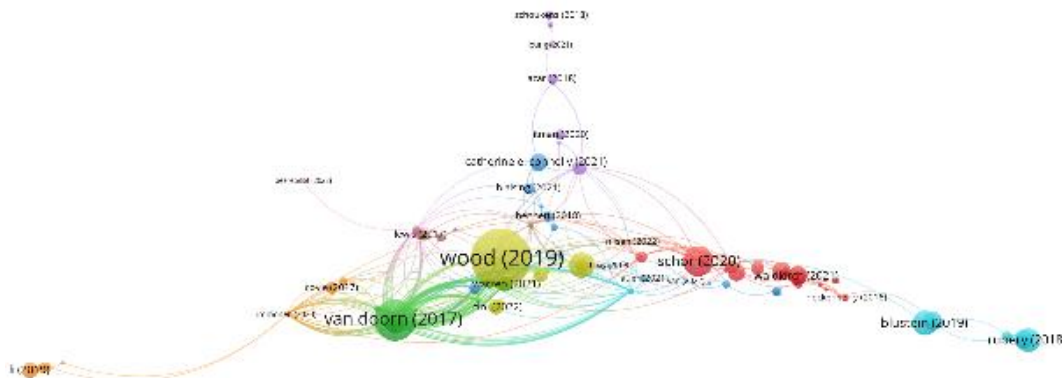


Figure 3. Bibliographic Coupling by Authors

### 3.5. University Collaboration Analysis

Analysis of institutional collaboration reveals that research on the gig economy and HRM is dominated by a small number of research-intensive universities, which serve as primary hubs within the global network. The densest clusters are centered around institutions such as the University of California System, Harvard University, and the London School of Economics. These institutions are not only individually productive but also function as strategic connectors, facilitating cross-national and cross-disciplinary collaboration. The network structure is hierarchical and polarized, with the majority of institutions from Asia, Africa, and Latin America positioned on the periphery. This reflects patterns of knowledge dependence and the concentration of scientific resources in the Global North.

Several key factors drive the formation of these collaborative clusters. First, the presence of specialized research centers and laboratories focused on future-of-

work issues attracts international collaboration. Second, large-scale funding schemes from entities such as the European Union or global foundations that require cross-institutional partnerships further strengthen strategic alliances among leading universities. Third, academic mobility through visiting scholar and postdoctoral fellowship programs fosters sustainable personal networks. However, notable exceptions exist, such as the National University of Singapore and the University of Melbourne, which have successfully served as bridges between Western clusters and the Asia-Pacific region. This demonstrates the potential for expanding collaborative frameworks toward greater Equity.

The implications of this pattern are paradoxical: on one hand, centralized collaboration enhances the efficiency of idea and resource exchange; yet on the other, it risks deepening disparities in research capacity and producing geographically biased literature. To mitigate such bias, inclusive science policies from funders and universities are needed—policies that actively promote partnerships

with institutions from underrepresented regions. Further research should more thoroughly examine the relationship between an institution's centrality within a

network and the scientific impact (citation impact) of its collaborative outputs.

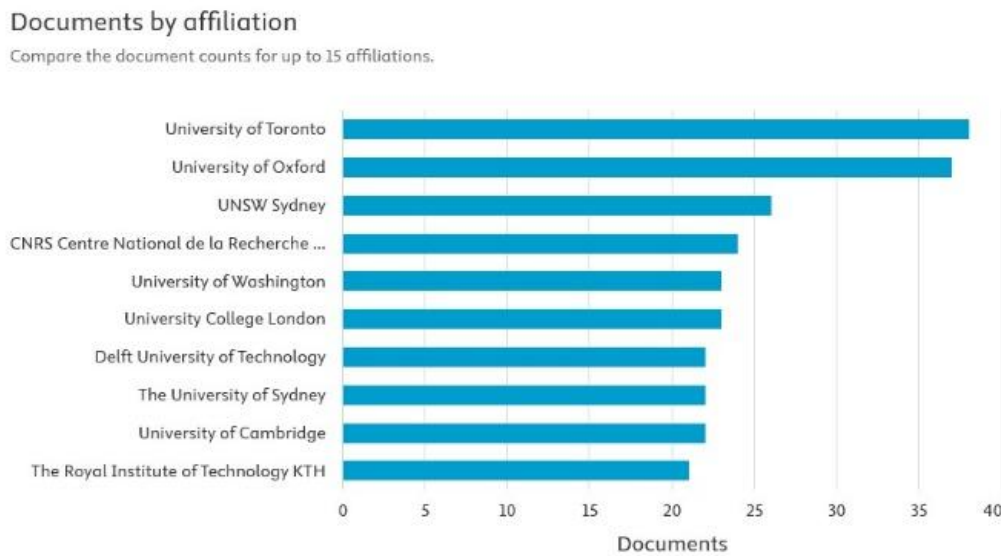


Figure 4. University Collaboration Analysis

### 3.6. Summary of Empirical Findings and Implication

This study reveals the structure and dynamics of academic discourse at the intersection of the gig economy and human resource management (HRM). Empirical findings indicate a significant geographical dominance of the United States and the United Kingdom in publication productivity and collaborative networks, reflecting their established research capacity, mature gig-economy markets, and linguistic advantages in international publishing. However, citation impact analysis reveals a vital nuance: countries such as the Netherlands and Singapore often exert greater influence per article, suggesting their strategic role as knowledge brokers despite their lower output volume. Meanwhile, China's emergence as a major contributor signals a dynamic shift in the research landscape, though overall collaboration patterns remain centered in the Global North. This centralization risks introducing contextual bias and overlooking the socioeconomic complexities in the Global South.

At the thematic level, keyword co-occurrence analysis identifies a consolidation of research areas around three primaries, yet insufficiently integrated, clusters: labor regulation and law, workers' psychological Well-being, and technology governance and algorithmic management. This fragmentation suggests the presence of "intellectual silos," in which policy discussions operate independently of technical analyses of platforms, and individual psychological discourse remains disconnected from macro-institutional analysis. Furthermore, a bibliographic coupling analysis among authors confirms that this fragmentation has crystallized within the intellectual community's very structure. This is evident in the formation of expertise groups grounded

in distinct theoretical paradigms and literary canons—such as labor political economy, industrial psychology, and technology studies—thereby impeding cross-disciplinary dialogue and holistic knowledge synthesis.

The hierarchical and hub-centered institutional collaboration patterns, which concentrate around a small number of Global North universities such as the University of California System and the London School of Economics, continue to reinforce disparities in knowledge production. Institutions from Asia, Africa, and Latin America tend to occupy peripheral positions within these networks, often serving as minor partners rather than as agenda-setters in research. Nevertheless, the bridging role demonstrated by institutions like the National University of Singapore offers insights into the potential for more equitable and inclusive partnerships. The implications of these findings underscore the necessity for a forward-looking research agenda that consciously seeks to build integrative bridges across thematic clusters and paradigms, promotes geographically more inclusive research collaboration, and develops theoretical frameworks responsive to the contextual variations of the gig economy across different regions. Furthermore, a multi-layered methodological approach—integrating performance analysis, impact assessment, and science mapping—has proven essential for generating a diagnostic and nuanced understanding, while also identifying critical research gaps and the power structures that shape academic discourse in this field.

### 3.7. Discussion

This bibliometric analysis reveals that the academic discourse at the intersection of the gig economy and HRM has evolved into a dynamic field of research.

However, it is marked by significant structural fragmentation at the geographic, thematic, and intellectual levels. The dominance of the United States and the United Kingdom in productivity replicates a typical pattern in the social sciences, where countries with well-established research capacity, access to competitive funding, and the use of English as the academic lingua franca tend to dominate knowledge production [15]. However, this geographic concentration risks creating serious contextual bias, wherein the experiences and institutional norms of the Global North predominantly shape theories and policy recommendations. Consequently, they may not be entirely relevant or may even overlook the socioeconomic complexities of other regions, such as Southeast Asia, Africa, or Latin America [15]. The finding that countries like the Netherlands and Singapore often exhibit higher per-article citation impact than their publication volume aligns with the scientometric literature, which affirms that quantity does not always correlate linearly with intellectual influence [16]. This points to the presence of strategic knowledge brokers—countries or institutions that, despite having limited publication output, are capable of producing highly specialized, high-quality research widely cited across borders.

On a thematic level, the consolidation of research areas around three primary clusters—labor regulation and law, workers' psychological Well-being, and algorithmic technology governance and management—reflects the multidimensional nature of the gig economy itself. However, the weak network linkage between the "regulation" and "algorithmic management" clusters constitutes a critical research gap. This confirms the critique that technical analyses of platforms and algorithms often proceed along a separate path from discussions concerning governance, accountability, and regulatory frameworks [13]. Consequently, "intellectual silos" emerge, where policy discourse is insufficiently informed by a deep technical understanding of how platforms operate. In contrast, platform engineers and designers may overlook the social and legal implications of their designs. This fragmentation underscores the urgent need for interdisciplinary research that actively bridges law, Science and Technology Studies (STS), and management, as advocated by [11].

Furthermore, bibliographic coupling analysis reveals that fragmentation is not limited to the topical level but has crystallized within the structure of the intellectual community itself. The clustering of authors based on shared reference foundations reveals several "academic tribes," each with distinct theoretical canons, target journals, and research paradigms [17]. One cluster may be firmly rooted in the political economy of labor and institutional theory, while another focuses on industrial psychology or digital business innovation. While such specialization encourages analytical depth within specific intellectual streams, it can restrict dialogue and

knowledge synthesis across paradigms [4]. Consequently, a holistic understanding of the gig worker—who is simultaneously a legal subject, a psychological actor, and a technology user—becomes constrained. Integrative research that combines perspectives on precarity from employment studies with Well-being theory from positive psychology and design analysis from platform studies is essential to bridge this divide [16].

The hierarchical and centralized patterns of institutional collaboration centered on hub universities in the Global North continue to reinforce the dynamics of inequality already identified. While such collaborative networks may efficiently mobilize resources and facilitate the exchange of ideas among academic elites, they risk reproducing and deepening dependency and geographical biases in knowledge production [17]. Institutions from the Global South often remain at the periphery of these networks, serving as data collectors or junior partners rather than as agenda-setters in research. However, the bridging role demonstrated by institutions such as the National University of Singapore (NUS) offers a glimmer of hope. NUS has successfully positioned itself as a credible intermediary between Western research clusters and Asian academic dynamics, demonstrating that epistemologically equitable, mutually respectful strategic partnerships are indeed possible. These findings underscore the importance of inclusive science funding policies that actively promote and finance research, Leadership from institutions in developing countries, moving beyond mere participation.

Finally, from a methodological perspective, this study reinforces the argument put forth regarding the necessity of a multi-layer analytical approach in bibliometrics [3], [4]. Integrating performance analysis, citation-based impact analysis, and science mapping yields a significantly richer, more nuanced understanding than relying on a single metric, such as publication count. This multi-faceted approach allows for the identification not only of who produces knowledge and where, but also of how that knowledge is structured, interconnected, and evolves. Consequently, the resulting intellectual map is not merely descriptive but also diagnostic, revealing points of fragmentation, missing connective links, and the power structures that shape academic discourse within the fields of gig economy and HRM. The implication is that future research agendas must not only broaden the geographical and thematic scope but also consciously build theoretical and collaborative bridges to create a more coherent, inclusive, and globally relevant knowledge landscape.

### 3.8. Limitations of the study

While this study provides a comprehensive bibliometric analysis of the intersection between the gig economy and HRM research, several limitations must be acknowledged and present avenues for future

investigation. First, the study relies solely on the Scopus database for data retrieval. Although Scopus is a leading multidisciplinary bibliographic database with extensive coverage and high-quality metadata, it does not encompass all relevant publications [18]. Key journals indexed in other databases, such as Web of Science, Google Scholar, or regional databases (e.g., CNKI for Chinese literature), may not have been included. This database selection bias may affect the corpus's comprehensiveness, particularly regarding publications from non-English-speaking regions or emerging research channels.

Second, this research is inherently constrained by the limitations of the bibliometric methodology itself. While bibliometrics excels at mapping large-scale patterns and structural relationships, it is unable to capture the theoretical nuances, methodological rigor, or qualitative depth of individual studies [3]. For instance, although co-occurrence analysis reveals thematic clusters, it does not elucidate the causal arguments or contextual subtleties within those clusters. Consequently, our findings should be interpreted as a macro-level landscape map rather than a substitute for in-depth content analysis.

Third, the search strategy, while carefully designed, may have limitations in capturing terminology. The gig economy is a rapidly evolving field with overlapping and often interchangeable terms (e.g., "platform work," "crowdwork," "sharing economy"). Although we employed a broad set of keywords, some relevant studies that use non-standard terminology or differing conceptual understandings may have been omitted. Furthermore, the exclusive focus on English-language journal articles and literature reviews introduces linguistic and publication bias, which potentially marginalizes important research published in other languages or in formats such as books, conference proceedings, or gray literature [19].

Fourth, the analysis of collaboration and impact is based on metadata, which carries inherent limitations. For instance, the institutional affiliations listed in publications may not fully capture the actual locations where the research was conducted or the sources of its funding. Similarly, citation count is a standard yet imperfect measure of research impact, as it can be influenced by factors such as journal prestige, disciplinary citation norms, and the Matthew effect (the tendency to cite already widely-cited works).

Finally, the temporal endpoint of this study suggests that the most recent publications may not yet have accumulated significant citations, potentially underrepresenting their impact in citation-based analyses. The dynamic nature of the gig economy also suggests that emerging themes and disruptions may have arisen very recently, which might not yet be fully reflected in the indexed academic literature up to 2024.

Despite these limitations, this study provides a valuable, evidence-based overview of the Development in this field. The identified limitations do not invalidate the core findings; instead, they frame them within a realistic scope. Future research may address these gaps by employing multi-database searches, integrating qualitative content analysis with bibliometric mapping, and developing more inclusive search strategies to capture the full spectrum of scholarly discourse on the gig economy and HRM.

### 3.9. Future research directions

Based on the analysis's findings, at least six strategic directions for future research at the intersection of the gig economy and HRM can be identified. First, a geographical and contextual expansion of studies is required, with greater emphasis on in-depth empirical research in the Global South, including Southeast Asia, Sub-Saharan Africa, and Latin America. This research should critically examine how local institutional structures, high levels of informal employment, and diverse social protection systems shape the unique realities of gig workers, while also testing the validity of theories predominantly shaped by Western perspectives [20].

Second, given the weak link between technology clusters and policy, future research should adopt an interdisciplinary approach to investigate algorithmic governance and its implications for labor regulation. Studies should develop frameworks that link platform technical design to principles of procedural justice, transparency, and accountability, and design adaptive policy models that protect workers without stifling innovation [8].

Third, to address intellectual fragmentation, integrative research that actively bridges political economy paradigms, industrial psychology, and technology studies is essential. For example, synthesizing the concept of precarity from labor studies with well-being and self-determination theories could lead to holistic models of career sustainability for platform workers [4].

Fourth, concerning asymmetrical collaboration patterns, future research agendas should include action studies that promote collaborative parity—such as investigating the effectiveness of inclusive international funding schemes, mentor-protégé co-publication programs, and equitable university-industry-government partnership models aimed at expanding participation from institutions in developing countries [21].

Fifth, from a methodological perspective, opportunities exist to develop and triangulate methods. This can be achieved, for instance, by integrating large-scale bibliometric analysis with qualitative approaches such as netnography or in-depth interviews to uncover the meanings behind identified networking patterns. The use of altmetrics and social media analysis can also

complement our understanding of the societal impact of research beyond purely academic circles [9].

Sixth, emerging themes that remain underexplored—such as the circular gig economy, green HRM practices on platforms, disability inclusion in digital work, and the viability of platform cooperativism as a just alternative—require further empirical investigation. Focusing on these alternative solutions and models is expected to shift academic discourse from merely documenting problems toward designing a future of work that is more inclusive

#### 4. Conclusion

This bibliometric analysis reveals that the research field at the intersection of the gig economy and human resource management has evolved into a dynamic yet hierarchically structured and fragmented academic domain, both geographically, thematically, and intellectually. The dominance of productivity and collaborative networks by the United States and the United Kingdom reflects structural inequalities in knowledge production, driven by established research capacities, mature gig-economy markets, and the hegemony of English in scientific publishing. However, citation analysis indicates that intellectual influence does not always correlate linearly with quantity, as several countries, such as the Netherlands and Singapore, serve as influential knowledge brokers despite their smaller publication volumes. Thematically, the field has consolidated around three discourse clusters that are not yet optimally integrated—labour regulation and law, worker psychological Well-being, and technology governance/algorithmic management—indicating the presence of intellectual silos that hinder cross-disciplinary dialogue. At the community and institutional levels, fragmentation is further reinforced by collaboration patterns centered on a small number of hub universities in the Global North, thereby risking the deepening of geographical bias and limiting the diversity of perspectives. Therefore, the future advancement of this field depends on deliberate efforts to foster integrative research that bridges isolated thematic clusters, promotes more geographically inclusive and equitable collaboration, and develops theoretical frameworks responsive to the contextual complexities of the gig economy across various regions, including developing countries such as Indonesia.

#### References

[1] Spreitzer, G. M., Cameron, L., & Garrett, L. (2017). Alternative Work Arrangements: Two Images of the New World of Work. *Organizational Psychology and Organizational Behavior*, 4(1), 473–499. <https://doi.org/10.1146/annurev-orgpsych-032516-113332>

[2] Cappelli, P., & Keller, J. R. (2013). Classifying work in the new economy. *Academy of Management Review*, 38(4), 575–596. <https://doi.org/10.5465/amr.2011.0302>

[3] Župič, I., & Čater, T. (2015). Bibliometric Methods in Management and Organization. *Organizational Research*

*Methods*, 18(3), 429–472. <https://doi.org/10.1177/1094428114562629>

[4] Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285–296. <https://doi.org/10.1016/j.jbusres.2021.04.070>

[5] van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538. <https://doi.org/10.1007/s11192-009-0146-3>

[6] De Stefano, V. (2015). The rise of the just-in-time workforce: On-demand work, crowdwork, and labor protection in the gig-economy. *Comp. Lab. L. & Pol'y J*, 37, 471. <https://dx.doi.org/10.2139/ssrn.2682602>

[7] Katz, L. F., & Krueger, A. B. (2019). The Rise and Nature of Alternative Work Arrangements in the United States, 1995–2015. *ILR Review*, 72(2), 382–416. <https://doi.org/10.1177/0019793918820008>

[8] Duggan, J., Sherman, U., Carbery, R., & McDonnell, A. (2020). Algorithmic management and app-work in the gig economy: A research agenda for employment relations and HRM. In *Human Resource Management Journal* (Vol. 30, Issue 1, pp. 114–132). Blackwell Publishing Ltd. <https://doi.org/10.1111/1748-8583.12258>

[9] Ashford, S. J., Caza, B. B., & Reid, E. M. (2018). From surviving to thriving in the gig economy: A research agenda for individuals in the new world of work. In *Research in Organizational Behavior* (Vol. 38, pp. 23–41). JAI Press. <https://doi.org/10.1016/j.riob.2018.11.001>

[10] Vallas, S., & Schor, J. B. (2020). What do platforms do? Understanding the gig economy? *Annual Review of Sociology*, 46(1), 273–294.

[11] Kuhn, K. M., & Maleki, A. (2017). Micro-entrepreneurs, Dependent Contractors, and Instaserts: Understanding Online Labor Platform Workforces. *Academy of Management Perspectives*, 31(3), 183–200. <https://doi.org/10.5465/amp.2015.0111>

[12] 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*, 33(1), 56–75. <https://doi.org/10.1177/0950017018785616>

[13] Kellogg, K. C., Valentine, M. A., & Christin, A. (2020). Algorithms at work: The new contested terrain of control. *Academy of Management Annals*, 14(1), 366–410. <https://doi.org/10.5465/annals.2018.0174>

[14] Baas, J., Schotten, M., Plume, A. M., Cote, G., & Karimi, R. (2020). Scopus as a curated, high-quality bibliometric data source for academic research in quantitative science studies. *The MIT Press Journals*, 1(1), 377–386. [https://doi.org/10.1162/qss\\_a\\_00019](https://doi.org/10.1162/qss_a_00019)

[15] Mongeon, P., & Paul-Hus, A. (2016). The journal coverage of Web of Science and Scopus: a comparative analysis. *Scientometrics*, 106(1), 213–228. <https://doi.org/10.1007/s11192-015-1765-5>

[16] Howcroft, D., & Bergvall-Kåreborn, B. (2019). A Typology of Crowdwork Platforms. *Work, Employment and Society*, 33(1), 21–38. <https://doi.org/10.1177/0950017018760136>

[17] Ramos-Rodríguez, A.R., & Ruíz-Navarro, J. (2004). Changes in the intellectual structure of strategic management research: a bibliometric study of the Strategic Management Journal, 1980–2000. *Strategic Management Journal*, 25(10), 981–1004. <https://doi.org/10.1002/smj.397>

[18] Sutherland, W., & Jarrahi, M. H. (2018). The sharing economy and digital platforms: A review and research agenda.

- International Journal of Information Management*, 43, 328–341. [20] Chavarro, D., Tang, P., & Ràfols, I. (2017). Why researchers publish in non-mainstream journals: Training, knowledge bridging, and gap filling. *Research Policy*, 46(9), 1666–1680. <https://doi.org/10.1016/j.ijinfomgt.2018.07.004>
- [19] Stewart, A., & Stanford, J. (2017). Regulating work in the gig economy: What are the options?. *The Economic and Labour Relations Review*, 28(3), 420–437. <https://doi.org/10.1177/1035304617722461>
- [21] Graham, M., & Anwar, M. A. (2019). The global gig economy: Towards a planetary labour market?. *First Monday*, 24(4). <https://doi.org/10.5210/fm.v24i4.9913>