

ESHGIG ECONOMY–DRIVEN WORKFORCE TRANSFORMATION IN SMEs: A BIBLIOMETRIC PERSPECTIVE

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ABSTRACT

The gig economy has become an impact that is transforming the method of small and medium-sized firms (SME) entrepreneurial practices and labour market dynamics. By analysing the relationships between human capital, hybrid labour arrangements, and solo-self-employment, this study offers an in-depth knowledge of the gig economy in the context of SMEs. The study employed a bibliometric technique to map the scientific literature from 2000 to 2025 in a systematic manner, identifying significant journals, co-authorship networks, topic clusters, renowned authors, and emerging research trends. The findings demonstrate that human capital development and hybrid labour models are crucial for sustaining efficiency in SMEs as solo self-employment becomes greater in digital and platform-driven contexts. Research gaps in skill adaptability, unstable employment, and policy frameworks supporting gig workers in SMEs are also highlighted in the bibliometric analysis. By combining conceptual insights with quantitative mapping, this work advances theory and practice and provides academics, policymakers, and SME managers with a foundation of knowledge to help them navigate the evolving gig economy.

Keywords: *Bibliometric analysis, labour markets, gig economy, SMEs, human capital, hybrid labour, and solo self-employment.*

INTRODUCTION

Traditional employment patterns have been significantly altered by the gig economy's rapid expansion, especially in the small and medium-sized business

(SME) sector (De Stefano, V. 2016). The gig economy, which is driven by digital platforms, flexible work schedules, and shifting workforce objectives, allows employees greater control over their labor while allowing businesses to access a range of skills on demand. However, behind the celebrated stories of flexibility and creativity, this shift brings with it complex realities (De Stefano et al., n.d.). Concerns regarding the development of human capital, regulatory instability, uncertain financial security, and broken worker identities continue to dominate academic and policy discussions. SMEs, the foundation of many economies, are increasingly relying on hybrid labor models that combine permanent employees with freelancers, gig workers, and independent contractors due to their contributions to innovation, job creation, and entrepreneurial determination. A. Sundararajan (2016). This shift affects productivity, long-term strategic growth, organizational learning, and knowledge retention (Katz & Krueger, 2019). The gig economy promotes operational agility, but little is understood about how it impacts social protection, worker welfare, and inclusive workforce development—particularly for SMEs operating in rapidly evolving technical markets (Berg, J., 2016). Growing worries over the sustainability of gig-based work arrangements and their effects on labor rights, collective representation, and value creation have been brought to light by recent studies. However, the corpus of existing work is scattered among a number of disciplines, such as industrial relations, entrepreneurship, human resource management, and digital labor studies (Drahokoupil & Fabo, 2016). Therefore, understanding the shifting dynamics of labor structures and human capital in SME ecosystems requires a rigorous integration of several fields of research (Jadon et al., 2025). In order to map the intellectual landscape of research on the realities of the gig economy in SMEs, uncover conceptual trajectories and topic trends, and pinpoint gaps in the literature, this study used a bibliometric technique (Anjali Jadon & Shilpi, 2025). Lehdonvirta, V., Wood, A. J., Graham, M., and Hjorth, I.(2019). The study offers evidence-based insights that could influence legislative frameworks, guide SME practitioners in managing hybrid employees, and further scholarly discussion on the future of work. By doing this, the study addresses the urgent need for balancing workforce development, sustainability, and economic flexibility in the era of digital labour.

The following study objectives have been defined in accordance with the ground literature:

To use bibliometrics to map the conceptual and thematic framework of studies on gig economy activities in SMEs.

- To investigate the conceptual connections in SME contexts between human capital, hybrid systems of labour, and solo self-employment.
- What are the various terms used to describe the gig economy in SMEs?
- How has the gig economy in SMEs been represented by writers?

THEORETICAL BACKGROUND:

Numerous theoretical frameworks that explain shifting workforce demographics, human capital formation, and employment relations in digital economies may be used to analyse the development of gig-based labour models inside SMEs.

Theory of Human Resources

According to the Human Capital Theory (Becker, 1964), employees' skills, knowledge, and competencies are significant sources of productivity and competitive advantage (Codagnone, C., Abadie, F., & Biagi, F., 2016). Gig workers and independent contractors provide specialized knowledge that promotes creativity and cost-effectiveness in SMEs. However, challenges with knowledge integration, skill continuity, and long-term workforce development occur as gig workers perform outside of official corporate learning frameworks, according to Eurofound. (2018). Consequently, the theory provides a framework for assessing how SMEs invest in—or do not invest in—human capital through hybrid labour arrangements.

Strategic Adaptability & Flexibility in Specialization

The development of digital labour platforms, which reduce fixed labour costs and enhance reaction to market swings, has made it possible for SMEs to adopt flexible employment methods (Pak, M., et al., 2019). These flexible labour arrangements increase productivity, especially in industries that require project-based or seasonal labour, according to the flexible specialization theory (Kässi, O., & Lehdonvirta, V., 2018). However, an excessive amount of freedom can result in labour precarity, a decline in employee loyalty, and challenges in maintaining a stable talent pipeline.

Dual Labour Markets and Hybrid Employment Theory

The Dual Labour Market Theory distinguishes between stable, protected core employees and an unstable, periphery labour. In SMEs, gig workers frequently occupy the latter position, which involves fewer perks and less bargaining leverage (Farrell, D., & Greig, F., 2016). This theoretical framework facilitates the examination of inequality, fragmentation, and the deterioration of traditional employment safeguards resulting from the growth of hybrid labour models.

Views on Independent Work and Entrepreneurship

Solo self-employment, one of the gig economy's fastest-growing divisions, is often portrayed as empowering entrepreneurs (Kalleberg, A. L., 2018). Studies, however, also highlight "false self-employment," in which individuals take on economic risks without the same degree of autonomy or pay, according to the World Bank. (2021). These perspectives enable the investigation of identity, motivation, and socioeconomic risks among gig workers employed by SMEs.

Digital Labour Theory and Platform Economy

The International Labour Organization (ILO) states that the primary subjects of digital labour theories include platform-mediated work, algorithmic control, and

the technological reconfiguration of labour relations. (2020). Companies that utilize gig platforms may be able to access workers anywhere in the world, but they also have to deal with issues like performance monitoring, ethical labour practices, and data governance, which can alter the dynamic between employers and employees.

Table 1 An overview of the connections between theory and practice

Theory	What It Looks at in This Research
Human Capital Theory	Skill development, productivity, and learning challenges
Strategic Flexibility	SME competitiveness through adaptable labour
Dual Labour Market Theory	Segmentation and inequality in hybrid employment
Entrepreneurship Theory	Identity & motivation of solo self-employed
Digital Labour Theory	Platform influence on labour relations and autonomy

Table 2 Earlier Vs Modern Approach

Dimension	Earlier Traditional Approaches (Pre-2000s)	Present Modern Approaches (2024)
Nature of Work	Full-time, permanent, location-bound employment	Flexible, project-based, remote/hybrid gig assignments
Labour Structure	Employer–employee relationship with hierarchical control	Independent/self-employed workers with autonomy and task-based engagements
Skill Requirements	General skills for long-term roles; slow upskilling	High demand for specialised digital skills; rapid skill upgrading through platforms
Technology Involvement	Low digital dependency; physical marketplaces	Digital platforms (Uber, Upwork, Swiggy), AI-driven matching systems
Work Security & Benefits	Job security, fixed wages, social protection (PF, insurance)	Limited job security; absence of formal benefits; benefits through platform policies (optional)
Performance Evaluation	Supervisor-based, periodic review	Real-time ratings & algorithmic performance tracking
Worker Identity	Identified as employees of an organisation	Known as “Gig workers,” freelancers, and platform workers with multiple income streams

Organizational Responsibility	High responsibility for workers' welfare	Reduced employer responsibility; workers considered partners/contractors
Market Dynamics	Localised employment market	Global competition for skills; cross-border gig engagement
Human Capital Perspective	Focus on long-term retention and development	Short-term utilisation of skills; micro-entrepreneurship mindset
Payment Structures	Salary-based, predictable income cycles	On-demand payments, dynamic pricing, surge-based earnings

BIBLIOGRAPHIC ANALYSIS

Bibliometric Network Analysis

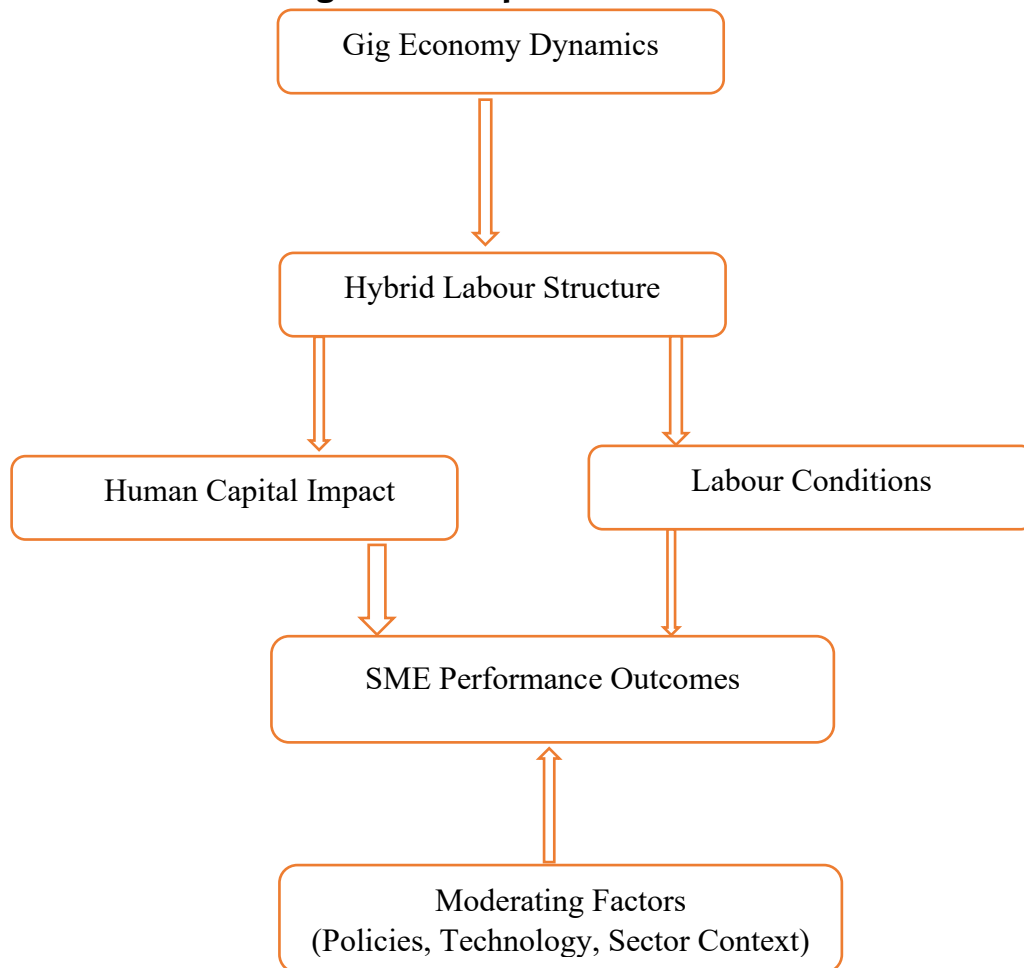
We analyse entities such as authors, institutions, journals, and countries as our units of analysis, visualising bibliometric data using networks. Using the VOS viewer's thesaurus feature, we removed misspellings and root words. To analyse bibliometric data, two methods are available: bibliometric coupling and co-occurrence analysis (Mishra et al., 2020). Using common citations, Bibliometric coupling is beneficial for identifying entities' relationships with one another within research. We used the VOS viewer program, combining both of these networks, which is based on the visualisation of similarity method (Waltman et al., 2010). Multidimensional scaling and VOS mapping are closely connected (Waltman et al., 2010). The output of the software excludes a silhouette value or any other statistics related to the fitting process. The software output includes a node-link diagram and a visual representation of the data, showing the strength of the connection between entities. A table with the entities and corresponding bibliographic coupling scores is also included (Ferreira, 2018; A. N. Mishra et al., 2020). Term co-occurrence is the underlying mechanism. Let us consider co-occurrences as a matrix C with values c_{ij} . After normalising the pattern, the matrix is transformed into a similarity matrix, S .

$$S_{ij} = \frac{C_{ij}}{\sqrt{w_i w_j}}$$

To prevent term overlap, normalisation is used to make terms easier to read. Normalising network clusters, we employed normalisation by correlated output among other techniques. Compared to alternate approaches such as the Jaccard index, association strength helps in comparing low and high-frequency occurrences of items (Waltman et al., 2010).

ANALYSIS

Figure 1 Conceptual framework



According to the presented conceptual model, the dynamics of the gig economy are changing the labour structures of SMEs, causing them to move toward hybrid employment systems that blend permanent employees with independent contractors and self-employed individuals. Organisational agility and access to a wide range of talents are improved by this shift, but it also poses serious problems for worker stability and human capital development. Gig workers frequently continue to be on the outside of social protection and organisational learning, which might hinder long-term capability development and knowledge retention. SME performance results are therefore heavily reliant on how well businesses strike a balance between flexibility, fair labour practices, and skill-development initiatives. The model also highlights the moderating effects of sector characteristics, technological acceptance, and regulatory frameworks in deciding whether hybrid labour methods result in greater precarity or sustainable growth. Overall, the interpretation emphasises how important it is to have HR strategies

3306, which are the keywords found, of which 169 are the only keywords that are already used by the specific authors for the SMEs and how the gig economy growth.

DISCUSSION

The study's findings indicate that while the gig economy offers SMEs greater flexibility, cost effectiveness, and access to specialized skills, it also carries with it problems, including unequal human capital development, worker precarity, and a lack of organizational learning. The Geneva Association. (2022). Bibliometric patterns indicate that the early zeal for independent contractor autonomy has given way to more critical perspectives regarding sustainability, regulation, and equity in hybrid labour arrangements. Statistics Canada. (2024). These findings complement the conceptual model by demonstrating that for SMEs to operate effectively, flexible employment practices must be linked with inclusive labour laws and workforce-supporting strategies. Lehdonvirta, V., Kässi, O., and others. (2021). To better understand how gig-based employment might help sustainable SME growth abroad, more extensive, context-specific research is required, given that the majority of present research is focused on affluent nations.

CONCLUSION

The study's conclusion states that the growing integration of gig workers and hybrid labor structures is altering the operational and human capital strategies of SMEs. If this offers chances for flexibility and creativity, it also raises significant issues with worker stability and fair working conditions. Bibliometric data indicate that research has moved from focusing on economic gains to addressing concerns, including precarity, skill continuity, and regulatory gaps. To fully benefit from gig-based employment models, SMEs must adopt broad approaches that support worker welfare and organizational performance, and regulators have to provide frameworks that ensure equitable and sustainable labour standards. More research in a range of regional and sector settings is required to have a better understanding of how gig economy realities could be transformed into long-term growth potential for SMEs.

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