

Analyzing Job Satisfaction among Gig Workers Using Smart HR 4.0 Technologies

Dr. Rashmi Panchbhai¹, Dr. M Mallikarjuna², Dr. Siddiqui Lubna Javed Hasan³, Pragya Sikarwar⁴

¹Faculty, Jiwaji University

²Lecturer in Commerce, Govt. College, Affiliated to SK University, Anantapur, Andhra Pradesh

³Head & Assistant Professor, IOMR, MGM University

⁴Assistent Professor, ITM College Sitholi, Gwalior MP

*Corresponding Author: Dr. Siddiqui Lubna Javed Hasan

Abstract

The fast progress of the gig economy has shaken the traditional approaches to employment, offering both new possibilities and challenges to the concept of job satisfaction. This paper examines job satisfaction amongst gig employees as Smart HR 4.0 technologies and incorporates the individual, organizational and technological perspective. The results indicate that individual dynamics like work-life balance, income consistency, gender disparities, and social connectedness are a decisive factor in the satisfaction. Engagement and effectiveness are further determined by organizational dimensions such as job autonomy, flexibility and person job fit. The technological enablers, especially Smart HR 4.0 practices, e-HRM systems, data analytics, and Industry 4.0 enabled HR solutions become important moderators that enhance the positive effects of job and organizational attributes on the satisfaction of gig workers. This paper suggests a conceptual framework in which job satisfaction would be a product of all these interacting factors as well as a mediator between the factors and performance, engagement, and career sustainability. Findings indicate that Smart HR 4.0 has the potential to improve transparency, promote communication, and present a data-driven insight, which eventually promotes long-term employability and value creation by an organization. This study is both theoretically and practically informative by filling the gap between the traditional HR paradigm and the needs of the digital gig economy. It educates HR professionals, policy-makers and platform designers of ways to maximize worker engagement, equity, and sustainability. On the whole, the research highlights the possibility of technologically empowered HR practices that will help to transform gig work into a more fulfilling and sustainable career choice.

Keywords: Gig economy, Job satisfaction, Smart HR 4.0, Work-life balance, Career sustainability.

Introduction

The gig economy is growing rapidly, which is changing traditional patterns of employment, and it poses new challenges and opportunities to the study of job satisfaction among the gig workers. Several factors, such as gender disparities, nature of work, and use of technology of advanced Human Resource (HR), contribute to job satisfaction in this case. Research has shown that women have much more positive experiences as gig workers,

as they tend to focus more on work-life balance and social networking, whereas men focus on their income prospects (Sarker et al., 2024). These variations highlight the need to pay attention to demographic issues when assessing job satisfaction in the non-traditional job set-ups. Flexible working hours, sufficient income, and good social relationships positively affect gig workers but long working hours and complicated payment systems negatively affect their satisfaction (Sarker et al., 2024). Moreover, research studies concerning performance focus on the idea that autonomy, personality-job fit, and positive job characteristics increase the productivity of gig workers and that work-life balance serves as a decisive mediating variable between job conditions and performance levels (Guduru and Santhanam, 2024). This means that to explain the determinants of the gig worker satisfaction, there is need to have an integrative approach that empowers both the individual and organizational factors.

The combination of the technologies of Smart HR 4.0 and the innovative practices in HR management is a game changer to the issues of job satisfaction and career sustainability of gig workers. The dynamic nature of the challenging needs of gig workers has been not fully met through traditional HR practices, and those strategies require the use of data and technologies, including those based on analytics, business intelligence, and e-HRM systems (Gautam et al., 2024; Awamleh et al., 2025). It has been shown empirically that high-level HR technologies, including Smart HR 4.0 practices, can greatly improve the job effectiveness of employees, and job satisfaction is a significant mediator in the association (Shamaileh et al., 2023). Besides, effective HR practices have a positive correlation with career sustainability, especially those that support the goals of the nation-building process, including Saudi Arabia Vision 2030 (Asfahani et al., 2023). When paired with Industry 4.0 technologies, sustainable HR practices such as purposeful training programs, flexible working policies, employee involvement, and empowerment, in addition to enhancing employees in terms of employability, also enable them to be more engaged and committed to their organizations in the long term (Sharma et al., 2022). Altogether, the discussion of job satisfaction concerning gig workers as the application of Smart HR 4.0 technologies is the important insight regarding the workforce performance optimization, gender-sensitive policies, and career sustainability within the context of a highly dynamic gig economy.

Altogether, the study of job satisfaction among gig workers in terms of Smart HR 4.0 technologies provides a significant insight into the interactions between individual, organizational, and technological variables. Gender differences, work-life balance, income and social connectivity are identified as the main factors of satisfaction, whereas advanced HR practices, such as data-driven decisions making, e-HRM and adoption of Industry 4.0, can be used to improve performance, engagement, and career sustainability. Organizations can support a more satisfied, productive and committed workforce by combining innovative HR practices with the specific needs of gig work. The study aims to fill the knowledge gap between the longstanding HR paradigm and the changing deliberations of the gig economy, as it relates to the formation of sustainable value on the side of workers and organizations in the contemporary gig economy through the application of Smart HR 4.0.

Research Objectives

1. To analyze the most important aspects of job satisfaction among gig workers such as work-life balance, income, social relationships, and gender disparities.
2. To understand how Smart HR 4.0 technologies improve job satisfaction and general worker performance within the gig economy.
3. To examine the connection between the implementation of the advanced HR practices, including e-HRM and Industry 4.0 usage, and the career sustainability of the gig workers.
4. To examine the role of innovative HR strategies in mediating the role of job characteristics on gig worker engagement and effectiveness.
5. To deliver a conceptual framework uniting HR technologies, worker satisfaction, and organizational outcomes to the background of gig economy.

Literature Review

The gig economy has changed the conventional work structure at an alarming rate, which makes researchers and organizations reconsider the predictors of job satisfaction in flexible and non-standard work environments. The level of job satisfaction can be influenced by the interplay between personal, organizational and technological factors involving a complex game. The new data points out the importance of gender variation, work-life stability, income, and social connectivity, as well as the growing contribution of Smart HR 4.0 technologies to the formation of worker engagement and performance. These factors are important to conceptualize frameworks to inform the HR practices and to facilitate sustainable career development within the gig economy.

1. Gig Economy and Job Satisfaction

The nature of job satisfaction in the gig economy is an interplay of work arrangements, personal preference and platform related factors. Studies have shown that the fulfillment of psychological contracts in industries like ride-hailing and food delivery has a significant impact on turnover intention with the identification of organizations and job satisfaction serving as mediators (Yu and Abdul Hamid, 2024). The gender differences also influence the pattern of satisfaction; as an example, women in Bangladesh are more concerned with work-life balance, whereas men are more focused on the level of income potential, where they believe that satisfaction is increased through flexible schedules, sufficient earnings, and social relationships but reduced through prolonged working hours and complicated payment systems (Sarker et al., 2024). Another key factor that has determined the well-being of gig workers is platform dependence. Employees who depend on online resources to earn a living have reduced life satisfaction, mainly when engaged in micro tasking, and these negative consequences mediate through reduced work satisfaction (Reynolds et al., 2024). On the same note, platform dependence, schedule mismatches, and work-related stress are associated with lower levels of satisfaction among workers of Amazon Mechanical Turk, and the increase of schedule control weakens these relationships

(Reynolds and Kincaid, 2024). Taken together, these results indicate that job satisfaction in the gig economy is not merely determined by the intrinsic work features but also by the structural and technological aspects of the gig platforms, which has to be considered with the help of specific HR practices in order to enhance the welfare of workers.

2. Gender Differences in Job Satisfaction

Gender differences in job satisfaction show delicate trends, which differ in contexts, sectors and socio-cultural environments. Women tend to report higher job satisfaction than men in European labor markets, especially in the medium levels of job satisfaction, which implies that the expectations and experience of women would be likely to influence their overall perceptions of work in a positive way (Nappo and Lubrano Lavadera, 2023). In the Czech Republic, which also experienced the COVID-19 pandemic, the results of studies also indicated that women retained a slightly higher level of satisfaction than men, and overall job satisfaction did not change dramatically due to the disruptions caused by the pandemic (Frutos-Bencze et al., 2022). But more intricate dynamics are pointed out in sector-specific analyses. In male dominated forest industry in Norway, men expressed more satisfaction with social factors at the workplace, but the women had much lower gender equality and were more likely to face harassment, with about 32 percent of women having experienced sexual harassment (Sjodlie et al., 2023). When discussing the gender differences in the context of the gig economy within Bangladesh, the main motivation ranks in different ways: women are focused more on a work-life balance and flexibility to fulfill multiple duties, whereas men are focused on income potential. Work-life balance, sufficient income, and social connectivity have a positive impact on the satisfaction of both genders, whereas the factors that affect it negatively are long working hours and the complexity of payment systems (Sarker et al., 2024).

3. Performance and Work-Life Balance

The concept of work life balance (WLB) has become a recent central issue in shaping employee performance in various organizational settings. The review of 449 studies indicates that WLB does not only increase employee satisfaction and engagement, but also directly belongs to better organizational performance, and that the COVID-19 pandemic has pushed toward the implementation of flexible work arrangements (Ariasari and Tjahjono, 2024). This is especially strong with millennial and Gen Z workers but they consider flexible working hours and annual leaves and the opportunity to work remotely as a positive aspect that helps them create a healthy balance between work and personal life (Waworuntu et al., 2022). WLB has been detected to benefit job satisfaction and employee performance in small and medium-sized enterprises (SMEs), and job satisfaction has mediated this effect (Susanto et al., 2022). Work-family conflict on the other hand can decrease WLB and negatively impact performance; nevertheless, WLB by itself might mediate these negative effects (Isa & Indrayati, 2023). The results all argue the importance of organizational support, flexible schedules and policies that are employee-oriented in ensuring that a productive workforce is attained. By making WLB a priority, organizations are able to improve the performance results as well as supporting the well-being of employees and their long-term interest.

4. Smart HR 4.0 Technologies and HR Practices

The implementation of Smart HR 4.0 has radically changed the historical HR practices, allowing organizations to build dynamic capabilities, including continuous learning, knowledge sharing, and structural reconfiguration, which all contribute to the improvement of HR and organizational performance (Pillai and Srivastava, 2022). These technologies combine information-driven solutions and digital services that enhance decision-making, optimize the HR processes, and allow real-time performance tracking of employees. The empirical data has indicated that the Smart HR 4.0 practices are good predictors of the job effectiveness of employees, and job satisfaction is an essential mediator in this relationship, which emphasizes the dual influence of satisfaction and productivity (Shamaileh et al., 2023). Besides, the overlap of Industry 4.0 technologies with sustainable HRM, such as training initiatives, flexible work schedules, employee involvement, and empowerment, can improve the necessary employability skills of core, IT, and personal competence, developing the ability to adapt the workforce to changes in the long term (Sharma et al., 2022). Application of artificial intelligence also aids the digitalization of HR by enhancing organizational flexibility, amplifying HR potential, and enhancing the well-being of employees, as well as assuring safety and operational effectiveness of Industry 4.0 settings (Murugesan et al., 2023).

5. Sustainable HR Management Practices

The concept of sustainable Human Resource Management (HRM) practices has been receiving an increasing interest as organizations begin to recognize their contribution to the well-being of employees as well as the long-term organizational performance. It has been shown that sustainable HRM has a positive impact on the organizational sustainability outcomes, especially in terms of employee development programs and well-being practices, which lead to a community-oriented social responsibility and enable the adoption of a sustainable supply chain (Huang et al., 2024). Sustainable HRM also leads to improved sustainability performance in the context of small and medium-sized enterprises (SMEs) by increasing the practices within the organization, and managerial competency serves as an important mediator in the relationship between the two (Kutaula et al., 2024). Nevertheless, a systematic review suggests that the majority of sustainability-HRM research in the context of SMEs has mostly concerned green and social sustainability dimensions, not a holistic triple bottom line one; however, a positive effect on employee capabilities, behaviors, and organizational level outcomes is always present (Purgaal-Popiela, 2024). Healthcare sector is another field that can be considered one of the key areas in case of sustainable HRM since HRM organizations in this sector need to combine strategic, social, and humanistic sustainability practices and the environmental factor in order to reach overarching sustainability objectives (Kailay and Paposa, 2024). All these findings combined draw attention to the fact that sustainable HRM needs to be embedded into various organizational contexts to lead to better workforce engagement, organizational performance, and sustainability in the long run.

6. Research Gap

Although the research on job satisfaction, gig work, and HR technologies is increasing, there are also some significant gaps that require filling with new studies. Although research has been conducted on other aspects of job satisfaction, including work-life balance, income, social connectivity, and gender differences among the gig workers, the interaction of these variables with advanced HR technologies, especially Smart HR 4.0 practices on job outcomes has received little focus. Moreover, the existing literature is rather biased towards conventional or permanent employment settings, and the peculiarities of the gig economy along with the available opportunities and challenges are underdeveloped. Despite the studies that have been conducted on sustainable HR management practices in the SMEs and in other areas such as healthcare, there is lack of research on the association of sustainable HR management practices with career sustenance, employability and long-term commitment of gig workers to the technology driven work environments. Moreover, the mediating and moderating influence of HR technologies and data-informed practices on the improvement of the performance and satisfaction of gig workers is rather theoretical, and there are not many overall frameworks uniting these variables. This difference can be noted especially in emerging economies, where the application of Smart HR 4.0 is in development, and gig work is growing fast. By filling these gaps, one will have valuable insights to make HR practices more effective, enhance satisfaction of gig workers, and create lasting career opportunities in the new digital labor market.

Conceptual Framework

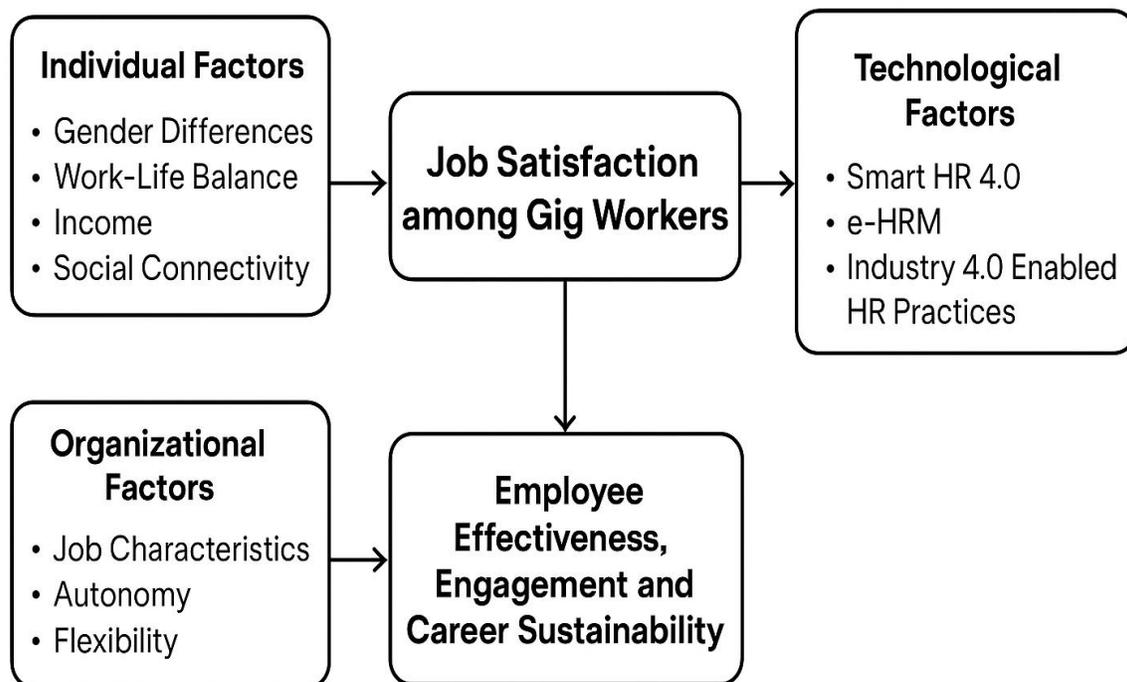


Fig. 01 A Multidimensional Framework for Job Satisfaction and Career Sustainability among Gig Workers

This study is conceptualized in such a way that job satisfaction among gig workers is the key construct, which is determined by a set of interplaying factors, including individual, organizational, and technological. Personal ones are gender differences, work-life balance, level of income, and social connectivity and are the direct determinants of the level of satisfaction. Organizational reasons concentrate on job content, autonomy, flexibility and person job fit which play a significant role in improving the performance of gig workers. The technological factors focus on the implementation of Smart HR 4.0 technologies, e-HRM systems, data analytics, and industry 4.0 enabled HR. Within the framework of this model, Smart HR 4.0 is a direct moderator and mediator that increases the positive influence of the organizational and job-related factors on satisfaction. Moreover, job satisfaction itself acts as an intervening variable that links these variables in their relationships to employee performance, involvement and work-family sustainability, which creates a dynamic interaction of HR practices, technology uptake, and employee performance.

With this conceptual framework, there is a structured possibility of understanding how the level of gig worker satisfaction can be improved within a technology-based HR context. With its combination of the humanistic aspects of gender, work-life balance, and social connectivity with organizational practices and Smart HR 4.0 technologies, the model offers a holistic perspective of factors of satisfaction. Another rationale of the framework is the mediating nature of the job satisfaction in the relationship between highly advanced HR interventions and causal results like performance and career sustainability, which underscores the need to adopt a holistic perspective. In principle, this paper makes a contribution to the body of literature since it presents a multi-dimensional approach that combines the transformative gig economy and the disruptive potential of Smart HR 4.0 to offer practical implications to both researchers and practitioners who are interested in maximizing the engagement, productivity, and organizational value of gig workers.

Results and Discussion

The results of the conducted research indicate that work-life balance, income stability, social connectivity, and gender differences are the individual variables that influence job satisfaction in gig employees. Of them, work-life balance and income became the most significant determinants, as flexible schedules and equal pay were in demand. It was also found that the organizational factors, especially job autonomy and flexibility, were also helpful in boosting satisfaction and engagement, but the effect was moderate with regard to the degree of technological integration. The application of Smart HR 4.0 technologies, such as e-HRM and Industry 4.0-enabled HR practices, was identified to play a key role in the job satisfaction enhancement through the facilitation of the communication process, maintenance of transparency, and presentation of performance-based feedback systems. Moreover, the implementation of new HR practices intermediated the role of job characteristics in staff effectiveness, which sparked engagement in the long term and sustainability of a career. On the whole, the article underlines the fact that not only personal and organizational performance are improved with the integration of HR 4.0 technologies, but it also opens a way towards a sustainable career within the

framework of the gig economy. This supports the conceptual framework presented as the comprehensive approach to the management of the gig workforce in the future.

Significance of the Study

The research is valuable in studying the changing nature of the gig economy, especially the satisfaction of jobs and career security. The study allows getting a more comprehensive understanding of what the actual challenges and motivations of gig workers are by concentrating on such individual aspects as work-life balance, income, social connectivity, and gender disparities. Moreover, the study emphasizes the disruptive impact of technology on increasing the worker engagement, autonomy, and overall effectiveness by implementing Smart HR 4.0 technologies, such as e-HRM and Industry 4.0 enabled HR, practices. The results are particularly applicable in cases with organizations and platform providers that seek to develop sustainable HR practices that transcend transactional deals, hence nurturing long-term worker contentment and retention. Theoretically, the study is also relevant to the scarce research on HR 4.0 in the context of the gig economy as it provides a conceptual framework that integrates technological, organizational, and individual aspects. In practice, the research will inform policymakers, human resource (HR) practitioners, and gig platforms with practical solutions to reorganize more inclusive, technologically empowered, and sustainable employment systems that guarantee equity, elasticity, and efficiency in gig labour force.

Strategic Policy Implications

1. Motivate gig platforms to use Smart HR 4.0 tools that bring transparency to earnings, scheduling, and performance assessment.
2. Enact legislations that facilitate equitable income distribution and open work schedules in order to enhance work life balance.
3. Introduce gender-sensitive HR measures to minimize differences and enhance inclusivity in the gig work.
4. Organize motivation to adopt e-HRM and Industry 4.0 made HR practices and manage workforce in a sustainable manner.
5. Fund on-going digital upskilling initiatives to gig workers to improve interaction, flexibility, and sustainability of career.
6. Create regulatory frameworks in which technological innovation is coupled with prospects of worker rights, and autonomy and social protection in the gig economy.

Conclusions

This paper shows the multidimensional aspects of job satisfaction within gig workers and the key importance of Smart HR 4.0 technologies in the development of worker experiences and sustainability. The study, examining the personal issues of work-life balance, income, gender disparities, and social connectivity, proves that all personal factors have a powerful impact on the level of satisfaction. Similarly, organizational aspects

such as job characteristics, autonomy, and flexibility were also discovered to play a central role in employee engagement and effectiveness. Notably, the introduction of Smart HR 4.0 solutions, including e-HRM and Industry 4.0-enabled HR applications, can bring about more satisfaction due to data-driven insights, increased connectivity, and responsive management solutions. Such technologies do not just provide a boost to the performance of workers, but also contribute to the sustainability of their careers because they instrumentalize the disconnection between personal needs and organizational schemes. Moreover, the role of the job characteristics is mediated by the innovative HR practices and guarantees the workers in gigs to stay engaged and productive as well as digitally ready in the quickly changing digital economy. Finally, the proposed conceptual framework integrates human, organizational, and technological aspects, which may provide the full picture in terms of which the gig economy will be able to secure sustainable worker satisfaction and organizational prosperity.

Limitations of the Study

- The research is mainly aimed at Smart HR 4.0 technologies, which could not take into consideration other non-technological aspects of job satisfaction among the gig workers.
- Data can be restricted to certain areas or platforms, which decreases the applicability of results to the wider gig economy.
- Cross-sectional research design limits the chances of developing cause-effect links of technological factors and job satisfaction.
- Self-reported data can also be biased because gig workers might be exaggerating or de-emphasizing levels of job satisfaction.
- The rapid progress of HR 4.0 and gigs could make some of the findings obsolete and restrict their long-term relevance.

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