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FROM SLAVERY TO FAIR WORK IN HOSPITALITY: HOW NEW TECHNOLOGIES AFFECT?

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Abstract
This critical review examines the role of advanced technologies in reshaping slavery-like working conditions in the hospitality industry. While automation and intelligent systems can improve efficiency and ease workloads, they also raise concerns about worker displacement, wage disparities, and job insecurity. The discussion revolves around whether technological advancements can improve working conditions or deepen existing inequalities by favouring highly skilled workers while marginalising others. The existing literature does not provide a unified framework that guarantees ethical employment practices by combining technology with labour force policies. The study introduces the Tech-Driven Fair and Decent Work Agenda (TDFDWA) as an approach towards implementing the Fair and Decent Work Agenda (FDWA), sustainable development goals (SDG 8) and the International Labour Organisation (ILO), aiming to integrate advanced technologies in implementing ethical labour governance. This agenda harnesses advanced technologies for promoting economic growth and ethical employment to ensure labour force stability in the age of the digital hospitality industry.

1. Introduction

The hospitality industry is characterised by slavery-like conditions that manifest as exploitation, low wages and benefits, long hours, lack of training, seasonality, insecurity, and precarious work (Kensbock *et al.*, 2016; Baum, 2019a; Giousmpasoglou, 2024; Vaughan, 2024). Employers view employees as their assets, allowing them to assign tasks and exchange them like commodities (Robinson, 2013; Baum, 2019a). Consequently, these negative conditions affecting employees have surfaced, including diminished employee satisfaction, increased turnover, and career changes (Han, 2022), anxiety, stress, and fatigue (Knox, 2011), as well as poor work-life balance and health-related concerns, such as sleep disturbances and psychological strain (Bohle *et al.*, 2004). Therefore, employees are unable to ensure secure and stable work in the hospitality sector, irrespective of their employment status (Baum, 2019a).

The technological advancement offers both a solution and challenge for the labour force rights in the hospitality sector. The hospitality industry is experiencing ongoing enhancements and changes, driven by recent advancements in technology and intelligent systems (Wang & Uysal, 2024; Al Khalifah *et al.*, 2025; Marghany *et al.*, 2025), for example, voice control, robotic services (Liu *et al.*, 2024), and artificial intelligence, making the hospitality services

more intelligent (Tian, 2024). These technologies play a vital role in transforming working conditions within the hospitality industry, reshaping the organisation, and monitoring and executing tasks (Giousmpasoglou, 2024). Emerging technologies offer opportunities for enhanced efficiency and productivity; however, they also generate concerns about the future of hospitality workers, presenting a dual face (Zhang *et al.*, 2022; Seyitoğlu *et al.*, 2023; Giousmpasoglou, 2024). On the one hand, technology has the potential to alleviate employee burdens and adverse conditions through the automation of repetitive tasks, enhancement of training, reskilling, reduction of stress and hours of working, and provision of more engaging and fulfilling roles for employees (Ivanov *et al.*, 2020; Ivanov *et al.*, 2023). Technology, on the other hand, has the potential to increase the slavery-like conditions by displacing the low-skilled and privileging highly skilled workers with greater wages and benefits (Tussyadiah *et al.*, 2022). This shift may reduce the wages of unskilled and low-skilled workers and increase wage and benefit inequality (Tian, 2024). In this case, the hospitality workers may compete with machines for the available jobs, further accelerating economic inequality (Giousmpasoglou, 2024).

Existing research in technological advancements and in the hospitality sector focuses on the efficiency and productivity (Belanche *et al.*, 2021), guests' acceptance of technologies in service (Hou *et al.*, 2021; Al Khalifah *et al.*, 2025; Marghany *et al.*, 2025), and employees' resistance to technologies (Kim *et al.*, 2023). Moreover, most of the existing research on working conditions in the hospitality industry focuses on precarious employment, irregular working hours, and low wages (Bullock *et al.*, 2024; Guix & Lotfy, 2025). Few studies have yet examined the hotel industry's response to contemporary slavery (Wang & Cheung, 2024; Guix & Lotfy, 2025). Moreover, limited research focuses on the technological advancements' role in implementing the fair and decent work agenda (FDWA) principles that were announced by the International Labour Organisation (ILO) in 1999. The role of technology in addressing slavery-like working conditions remains a topic of debate. Some argue that new technologies can improve work conditions (Khakurel *et al.*, 2018), while others warn that they may increase work exploitation (Giousmpasoglou, 2024). Given these gaps, this paper critically reviews how recent technologies can be leveraged to enhance working conditions for the labour force. This study seeks to bridge these gaps by addressing this research question: How do technological advancements positively contribute to implementing a fair and decent work agenda (FDWA) in the hospitality sector?

This study builds upon Giousmpasoglou's (2024) research on the implementation of the Fair and Decent Work Agenda (FDWA) in the hospitality sector by proposing the Tech-Driven Fair and Decent Work Agenda (TDFDWA) as a practical approach to integrating technological advancements while enhancing the lives of hospitality workers. While FDWA highlights job security, safe workplaces, fair wages, and freedom from exploitation, the agenda aligns with the International Labour Organisation's (ILO) fair and decent work framework, emphasising job security, dignity, and ethical employment practices (Baum, 2019b; Giousmpasoglou, 2024), it does not reveal the role of advanced technologies in enhancing the exploitative working conditions. TDFDWA prioritises workers' well-being through AI-driven labour force management and automation strategies by highlighting the suitable technological elements that can be harnessed to implement FDWA. It also supports the United Nations Sustainable Development Goal 8 (The United Nations, 2017, p.2), which promotes economic growth, full employment, and fair working conditions for all (Wang & Cheung, 2024; ILO, 2017). By expanding current perspectives on labour challenges, this framework provides a pathway towards more ethical employment practices. From a managerial standpoint, prioritising fair work conditions can improve employee satisfaction, reduce turnover, and strengthen the hospitality sector's long-term sustainability (Han, 2022).

2. Literature Review

2.1. Hospitality labour force working conditions

The hospitality industry's labour conditions are a matter of scrutiny and concern (Kyriazi, 2023), as they are characterised by long working hours (Burrow *et al.*, 2015), low wages, and exploitation (Cole *et al.*, 2024). Historically, the hospitality industry depended on a frequently precarious and transient workforce, including temporary workers (Giousmpasoglou, 2024) and immigrants who are less inclined to defend their rights and unaware of the legal protections (Cole *et al.*, 2024; Janta & Ladkin, 2024). The seasonal characteristics of this industry exacerbate the issue, as the workforce experiences fluctuations between periods of high demand and intervals of underemployment (Laškarin Ažić *et al.*, 2024). Furthermore, the decentralisation of numerous hospitality operations, as observed in hotels and restaurants, complicates the uniform implementation of equitable labour practices. With the global expansion of the hospitality industry, there is a focus on enhancing labour conditions, influenced by unions of advocacy and legislation (Ariza-Montes *et al.*, 2021). Notwithstanding these initiatives and efforts, guaranteeing equitable treatment for all employees remains a challenge (Giousmpasoglou, 2024). The previous work conditions in the hospitality industry necessitated the definition of terms such as "labour conditions," "slavery," and pertinent technologies to better frame the research issue. Slavery denotes deceptive, abusive, or coercive labour practices that deprive workers of freedom through debt bondage, human trafficking (Pinnington & Meehan, 2023), and forced labour (Vaughan, 2024). Working conditions pertain to aspects of employment, including safety, working hours, and the physical and psychological demands imposed on employees (Baum & Hai, 2020; Giousmpasoglou, 2024).

2.2. The fair and decent work agenda

The International Labour Organisation (ILO) unveiled the Fair and Decent Work Agenda, which seeks to enhance worker protections and ensure sustainable employment practices across various industries, including hospitality this agenda emphasises job security, safe workplaces, fair wages, and freedom from exploitation (Giousmpasoglou, 2024). The hospitality sector, marked by long working hours, low wages, and precarious employment (Ariza-Montes *et al.*, 2019), has drawn attention to this agenda. FDWA upholds the principles of labour rights, a safe working environment, social dialogue, and access to quality employment as the foundational elements of fair employment (Di Fabio & Maree, 2016). This promotes a stable employment structure within the hospitality sector (Giousmpasoglou, 2024). FDWA is in harmony with sustainable development goals (SDGs 8), which highlight the importance of decent work, economic growth, ethical employment, and necessary labour reforms (Wang & Cheung, 2024). In the hospitality sector, challenges exist for implementing FDWA, including working hours, wage regulations, and labour policies (Vaughan, 2024). Therefore, it was essential to examine the technological solutions that could assist in the effective implementation of the FDWA and offer insights into how it can be beneficial.

2.3. Innovative technologies in the hospitality

The hospitality industry has adopted numerous technological innovations that have greatly enhanced operational efficiencies (Chatterjee *et al.*, 2021), customer experiences, and working conditions (Chen *et al.*, 2022; Pericleous *et al.*, 2025). There are many technological advancements in the hospitality sector (Elmohandes & Marghany, 2024; Al Khalifah *et al.*, 2025; Marghany *et al.*, 2025), but the key technologies include artificial intelligence (AI), the Internet of Things (IoT), and blockchain technology (Majid *et al.*, 2024). Artificial Intelligence (AI) has significantly transformed the optimisation of service delivery and management processes. AI-driven solutions, including robots, chatbots and virtual assistants, improve customer interaction and satisfaction by offering round-the-clock service and tailored travel experiences (Al Shehhi & Karathanasopoulos, 2020; Pericleous *et al.*, 2025). In terms of operations, AI aids in the predictive maintenance of facilities, which in turn minimises downtime and labour costs associated with manual inspections and repairs. The IoT provides

a system of connected devices that enhance efficiency and elevate the guest experience (Pillai *et al.*, 2022; Chen *et al.*, 2022). In hospitality environments, IoT technologies automate room settings like lighting and temperature based on guest preferences, enhancing comfort while also lightening the staff's workload (Jabeen, 2022). Furthermore, IoT devices play a crucial role in energy management, enabling properties to lower their energy consumption and operational expenses (Chen *et al.*, 2022). In the hospitality sector, blockchain serves primarily for secure payments, identity verification, and enhanced security measures (Jain *et al.*, 2023). It facilitates seamless booking processes, reducing the intermediary's role and allowing for more efficient management of customer loyalty programmes (Rana *et al.*, 2022; Muharam *et al.*, 2024). Additionally, blockchain technology enables hotels to customise guest experiences by securely storing and accessing customer data. This technology holds significant promise for supply chain management, improving transparency (Muharam *et al.*, 2024). The growing use of blockchain technology is poised to revolutionise various aspects of the hospitality sector, improving operational efficiency and guest satisfaction alike (Rana *et al.*, 2022). Collectively, these concepts and technologies offer a foundation for comprehending how the hospitality sector can advance towards more ethical and sustainable labour practices.

3. Methods

This section delineates the methodologies used during the literature review of contemporary papers. Following the previous comprehensive literature papers' methodology (Law *et al.*, 2014; Sun *et al.*, 2017; Ivanov *et al.*, 2019; Wong *et al.*, 2022; Elmohandes & Csobán, 2022; Elmohandes & Pető, 2023), terms relevant to the study issue were used (e.g., "slavery AND hospitality," "decent work OR FDWA AND hospitality," and "advanced technologies AND labour conditions") in the title, abstract, and keywords of peer-reviewed articles. A multitude of databases were used for the searches, including Google Scholar, Scopus, and ScienceDirect.

Two selection criteria were used. Initially, the study included articles and literature reviews from tourism and hospitality journals. Books, study notes, and editor prefaces were omitted. The referenced papers were reviewed to confirm their relevance and inclusion where appropriate. Secondly, publications published within the previous decade (2015-2025) were analysed to guarantee the recency of the material given and gather pertinent historical viewpoints (see Figure 1). To maintain research quality, journals rated in the ABS list or indexed in Scopus (SJR) were given priority, such as Tourism Management, International Journal of Hospitality Management, International Journal of Contemporary Hospitality Management, and Technological Forecasting and Social Change. This period also sees an increase in emerging advanced technologies and more intense discussions about the implementation of FDWA, which aligns with the expansion of ILO's policies. Relevant articles for this research were collected and meticulously examined to determine their inclusion. The inclusion choice was predicated on its direct relevance to the subjects of technology, decent work, contemporary slavery, and hospitality working conditions. The papers marked by subpar quality were eliminated. The availability of English-language publications limits this research and could hence omit regional viewpoints on FDWA implementation. A thematic analysis approach was employed to organise findings into essential themes based on literature analysis, highlighting the technological influence on FDWA principles implementation.

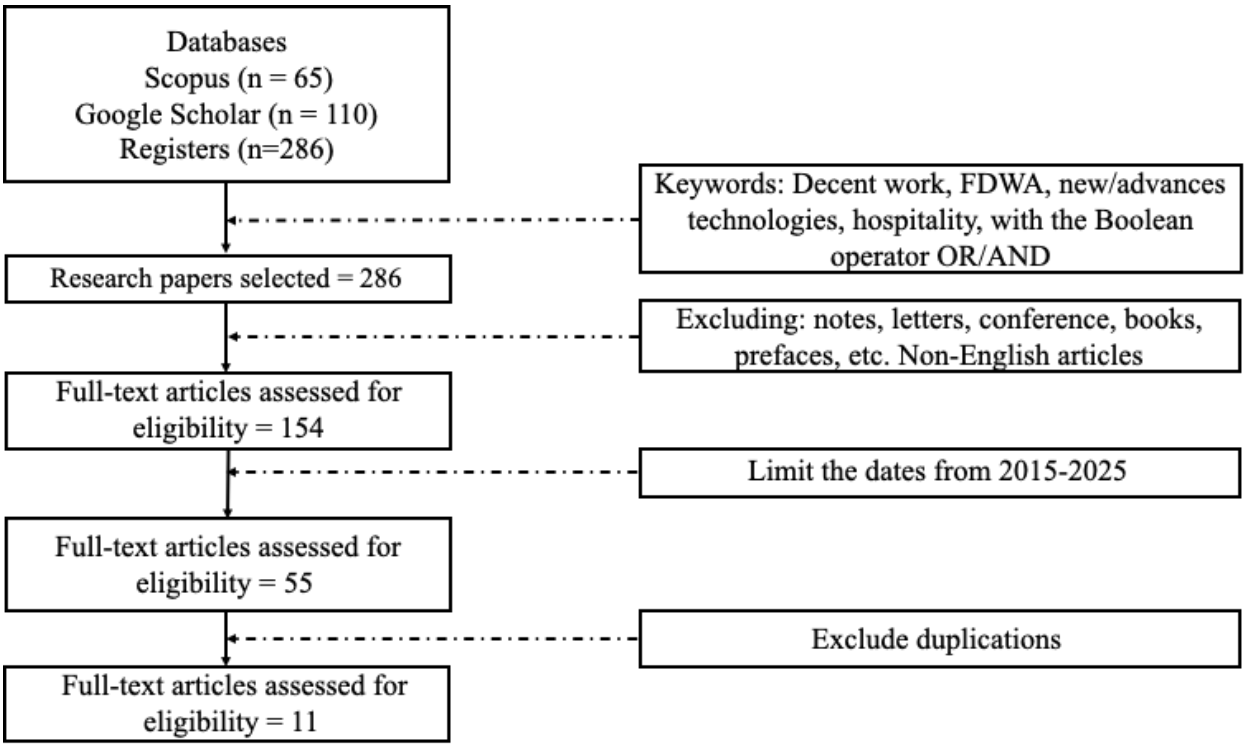

Figure 1: Phases of selection processes

4. Results and Discussion

FDWA execution using advanced technologies elements

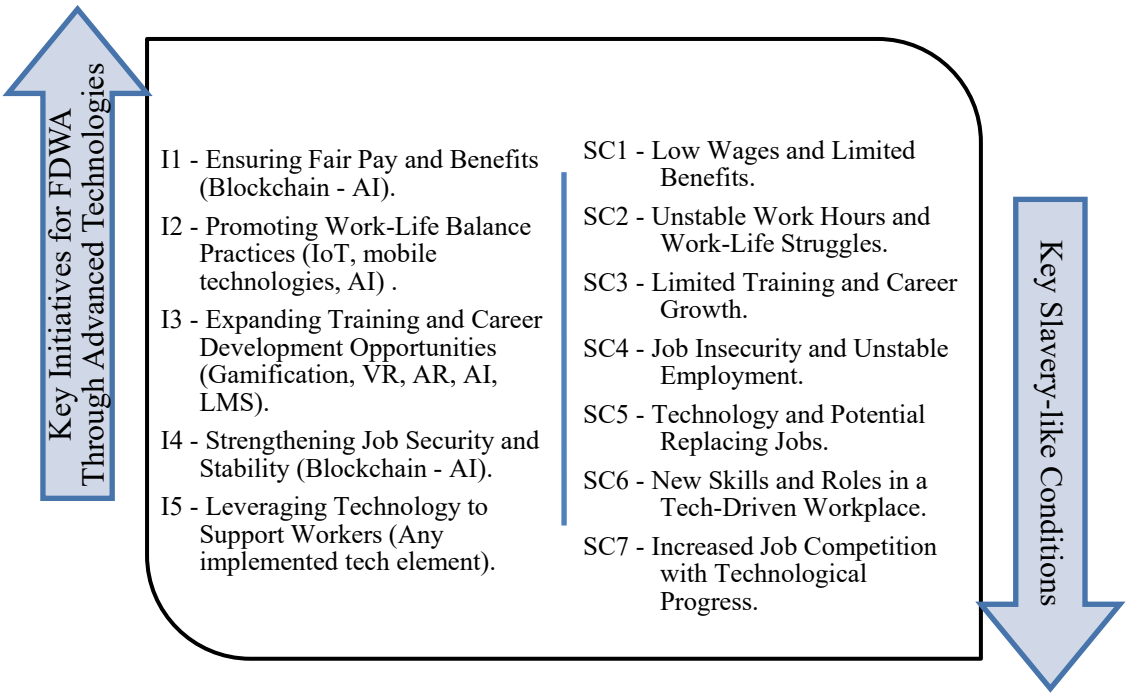

Figure 2: The Tech-Driven Fair and Decent Work Agenda (TDFDWA) (Compiled by author)

As reported by the World Travel and Tourism Council (WTTC) in 2023, the hospitality, tourism, and travel industries made up 9.1% of the world's GDP. These sectors also added nearly 27 million new jobs, bringing the total workforce to around 330 million globally (WTTC, 2024). Despite their economic impact, working conditions in hospitality remain a serious concern (Baum, 2019a). Many employees face unstable hours, low wages, and limited job security. Improving workplace conditions is not just about fairness, it directly affects the stability and reputation of the industry (Giousmpasoglou, 2024). In this paper, our agenda examines the favourable work conditions that matter in the hospitality industry, highlighting the barriers, initiatives to change, and ways technological advancements can enhance these changes (see Figure 2).

Despite the swift progression of technology offering innovative tools to enhance working conditions, it is surprising that research focusing on the role of various technological elements in improving hospitality working environments, particularly in the application of FDWA principles, remains relatively scarce. Improving working conditions in the hospitality sector requires practical steps. This study presents a series of initiatives that should be undertaken to implement FDWA and improve working conditions in the hospitality industry, while emphasising the role of advanced technologies that could be leveraged to address this issue with a detailed interpretation of their impacts.

Technologies and fair pay

The first initiative (I1) to address the first slavery condition (SC1) is offering a fair wage that aligns with the cost of living, as are benefits such as tipping, staff discounts, and free meals. Employers who appreciate their employees should go beyond merely meeting expectations; they should actively seek to improve compensation and benefits, just as they aim to elevate customer service. This initiative is consistent with a number of hospitality studies that emphasis fair wages and benefits as key to make the lives of hospitality workers better (Baum, 2019a; Douglas *et al.*, 2020; Giousmpasoglou, 2024). This study reflects that blockchain has the potential to enhance transparency and guarantee adherence to fair wage practices. Wage transactions aligned with the contract's conditions can be documented on an unchangeable and decentralised ledger (Jain *et al.*, 2023). This is establishing a significant challenge for employers in manipulating the wage and benefits information (Chaudhuri *et al.*, 2024). This, in turn, reinforces contracts, builds trust between employees and employers, and guarantees timely wage distribution, which is marked by the absence of disputes (Kizildag *et al.*, 2020; Demirel *et al.*, 2021; Aghaei *et al.*, 2021; Nam *et al.*, 2021). This study demonstrates that the integration of artificial intelligence (AI) within human resources systems improves the management of wages and benefits. Additionally, it can detect any biases or discrepancies in compensation by analysing a vast amount of data. AI can protect workers from being underpaid by ensuring adherence to minimum wage (Aslan, 2024) and overtime payment regulations (Talukder *et al.*, 2025). Another example is its capability to aid in benchmarking compensation packages against industry standards, helping organisations remain competitive in employee benefits and remuneration.

Advanced technologies and work-life balance

Alongside pay and benefits, work-life balance is the second important initiative (I2) (Horan *et al.*, 2021) to address the unstable working hours and work-life struggles (SC2). It encompasses more than just days off or annual leave; it also involves equitable scheduling (Chen *et al.*, 2022). Employers ought to provide fixed shifts, consider staff preferences when scheduling days off, refrain from implementing late and early shifts, compensate for overtime, and remove systems that necessitate extra hours to be "banked" for future leave. Technology has the potential to enhance smart scheduling, track overtime, and manage repetitive and routine tasks that require time. As a result, hospitality workers would have more opportunities to engage in higher-level tasks (Ivanov *et al.*, 2023) and eliminate monotony. These practices contribute to preventing burnout and fostering a better work environment, enabling employees to excel in their performance.

This study emphasises how the Internet of Things (IoT) contributes to decreasing the labour workload and optimising operations, ultimately providing advantages for employees.

The IoT has the potential to enhance working hours scheduling (Kansakar *et al.*, 2019; Mercan *et al.*, 2021; Pitakaso *et al.*, 2024), and streamline routine tasks, including customer service interactions, temperature control, inventory management, and check-in/check-out processes, thereby alleviating the mental and physical burdens on workers (Chung & Tan, 2025). This allows employees to concentrate on the more fulfilling and engaging elements of their work, which could result in an improved work-life balance. Employees have the ability to manage their working hours effectively, allowing them to harmonise their professional and personal commitments through the use of mobile technologies. This tool facilitates the viewing of the timetable, enables shift swapping, and allows for leave and time-off requests. Additionally, mobile technologies enable remote management with real-time feedback to enhance the working environment (Kansakar *et al.*, 2019). Artificial intelligence can effectively manage and support the reduction of stress and burnout among workers by optimising scheduling and labour force management. It achieves this by predicting peak times for efficient scheduling and preventing overstaffing during off-peak periods and insufficient staffing during peak times (Ercik & Kardaş, 2024).

Advanced technologies and career development

Third initiative (I3) focusses on prioritising training and career development to tackle the issue of limited training opportunities and career growth (SC3). Hospitality workers require a transparent trajectory for advancement and should not perceive themselves as merely interchangeable personnel. Technology has emerged as an essential component of contemporary training like online, virtual, and augmented training, enabling employees to remain informed and simulated while simultaneously lowering expenses for organisations. Employers also have the opportunity to collaborate with hospitality schools and universities, providing tuition-free courses or reduced fees for employees seeking to advance their education. This approach not only improves employees' skills but also strengthens the organisation by creating a more knowledgeable and capable workforce. Investing in staff education enhances job performance (Ibrahim *et al.*, 2016) and creates opportunities for employees to advance into higher positions within the organisation.

Gamification refers to the process of incorporating game elements into non-game settings to enhance the learning experience by making it more competitive and engaging (Bravo *et al.*, 2021; Pasca *et al.*, 2021). The leaderboards, badges, and points offered upon completing the modules enhance employee performance, particularly among younger employees who appreciate dynamic and interactive learning experiences (Lee, 2019; Wünderlich *et al.*, 2020). This results in improved employee retention and enhanced performance among staff (Benitez *et al.*, 2022; Khan *et al.*, 2024). Simulated real-world environments (Elmohandes *et al.*, 2018) through virtual reality (VR) enable the creation of training scenarios. This technology provides staff members with a training experience that alleviates the need for physical presence or travel to the training site. Employees can obtain a guide to execute tasks and access real-time information, known as on-the-job training by augmented reality (AR) (Martins *et al.*, 2023). AI possesses the capability to analyse individuals' learning styles and customise training to meet their specific needs. It can identify the skills gaps they possess and suggest the appropriate module for improving the necessary skills. The employee can receive support for their career planning, considering their training progress and performance (Zahidi *et al.*, 2024). Learning platforms such as learning management systems (LMS) offer centralised management for training and development, spanning from orientation to continuous career education, and they are flexible enough to accommodate a diverse workforce. Learning platforms are efficient at developing and overseeing educational and training programmes, monitoring progress, and issuing competency certificates (Binder, 2019).

Advanced technology and job security

Further, strengthening job security and stability (I4) (Pericleous *et al.*, 2025) to address job insecurity and unstable employment (SC4) involves transitioning from zero-hour and casual contracts to permanent contracts that guarantee a minimum number of weekly hours. Employers ought to improve worker protections, including paid leave, sick leave, maternity

and paternity leave, healthcare, and pension contributions. A mentoring programme, whether tech-based (e.g., working hours tracker) or face-to-face, could be established to alleviate relevant stress and foster values like a friendly and supportive environment. Promotions can offer a sense of security and stability in the workplace. This also could be achieved through harnessing blockchain technology (Jain *et al.*, 2023; Chaudhuri *et al.*, 2024) and AI as indicated in the first initiative (I1) (Pericleous *et al.*, 2025).

Lastly, the (I5) is to address (SC5, SC6, and SC7). hospitality organisations should promote technology, as it is not designed to eliminate jobs but rather to enhance them (Sadangharn, 2021; Kim & Cha, 2024). Examples previously indicated in (I1), AI-driven scheduling systems promote equitable shift distribution, minimising unpredictable work hours. Digital payroll platforms safeguard against wage theft and guarantee prompt payments. Another given example in (I4) is harnessing E-learning tools to assist employees in acquiring new skills, enhancing their opportunities for promotions. Automation, such as self-service kiosks, and robots in hotels, alleviates workload while preserving jobs, enabling staff to concentrate on enhancing the guest experience (Yoon, 2023; Jung *et al.*, 2023). Employee engagement applications, like Workday, enhance communication between employees and management. Workers may resist adoption if they perceive automation as a risk to employment. Hospitality businesses must balance between embracing innovation while ensuring that technological progress does not undermine job stability, fair treatment, or workers' rights. Ethical implementation of technology should prioritise employee well-being.

5. Conclusion and Implications

Fair work is essential for a sustainable hospitality industry. Addressing issues like low wages, job insecurity, and limited career growth is not just a moral obligation, it also strengthens the economy and benefits society. New technologies should be introduced as tools to improve work conditions, not to replace jobs. When used correctly, technology can help reduce exploitation and create better opportunities for workers. Theoretically, this paper is among the first to examine how modern technologies might contribute positively to the implementation of the FDWA, emphasising the role of AI, IoT, blockchain, mobile technologies, gamification, VR, AR, and LMS. Furthermore, it is an expansion of the existing study on technology and worker rights. As previously stated, most studies in the technology and hospitality sectors focus on technological adoption service (Hou *et al.*, 2021), resistance (Kim *et al.*, 2023), benefits, and drawbacks (Belanche *et al.*, 2021). This research addressed knowledge gaps and emphasised the significance of these technological components in promoting fair wages, work-life balance, training and career advancement, as well as job security and stability. This study introduced TDFDWA, a structured approach that facilitates the safeguarding of workers' rights while concurrently promoting technological innovation.

Practically, this study directs HR and stakeholders of the hospitality establishments in creating technology-driven labour force management strategies and systems. This system emphasises the importance of prioritising job security for the labour force by utilising advanced technologies as outlined in TDFDWA in the findings, rather than solely concentrating on leveraging these technologies to cut labour costs and displacing human workers. Tech-driven labour force management helps in reducing worker exploitation through optimising scheduling by AI, mobile technologies and IoT. Blockchain and AI- based smart contracts strengthen agreements, foster trust among employees and employers, and ensure prompt wage distribution, characterised by the lack of conflicts. This study guides hospitality employers with the opportunity to leverage gamification, VR, AR, and LMS in designing digital literacy programmes. It directs them to enhance employee training, collaborate with hospitality schools and universities, and offer tuition-free courses or reduced fees for employees aiming to advance their education.

6. Limitations and Future Research

The study's limitations stem from its reliance on a literature-based review, which does not incorporate direct insights from industry professionals, policymakers, or hospitality

workers. Future research should adopt empirical methods, such as interviews, surveys, or case studies, to provide a deeper understanding of how technology influences labour conditions in practice. As slavery-like conditions vary across countries and industries due to differences in labour laws, economic structures, and cultural factors, future studies could focus on specific contexts, like the hotel sector in the UK or the restaurant industry in the USA, to explore regional variations. Comparative research between developed and developing economies would also offer valuable insights into the global impact of technology on labour rights. Furthermore, while this study examines technological advancements, future research could assess the effects of specific technologies, such as artificial intelligence, robotics, or blockchain, to determine their direct implications for job security, fair wages, and employment protections. Finally, as this study focuses only on the hospitality sector, further research could extend the discussion to related industries, like tourism, travel, or sports, where technology adoption and labour challenges present similar concerns. This allows for a broader and more comprehensive understanding of ethical and sustainable employment practices.

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