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Digital Transformation and Labour Relations in Vietnam: An SEM Analysis for Evidence-Based Legal Reform

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Abstract

Background: Digital transformation is an inevitable trend within the corporate sector, exerting a substantial impact on both employees and employers. In Vietnam, the digital revolution significantly influences labour relations, presenting a dual landscape of enhanced productivity alongside heightened inequality, workforce fragmentation, and emerging legal complexities.

Objective: This paper examines the effects of digital transformation on labour relations in Vietnam, specifically identifying principal challenges and proposing directions for legal reform. Furthermore, the study offers policy implications to safeguard workers' rights in the current digital context.

Methodology: The research employs quantitative methods, specifically Structural Equation Modelling (SEM), to analyse data from 657 valid responses from employees across 657 small and medium enterprises. It examines the relationship between digital transformation and five dimensions of labour relations: subjects of labour relations, work objects, means and methods of work, content and conditions of work, and legal regulations and management mechanisms.

Results: The findings indicate that digital transformation has a robust, statistically significant impact across all five dimensions. Notably, the majority of workers recognise the need to adapt to digital shifts and have taken proactive measures. The most significant influence observed is the profound alteration in the roles of employers, employees, and digital platforms.

Conclusion: This study confirms that digital transformation is fundamentally altering the frameworks of employment, work organisation, and labour governance. Consequently, the article advocates a multi-tiered policy framework, beginning with the legal recognition of digital workers, followed by skill development, regulation of digital labour, and modernisation of social protection.

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Unique Contribution: The unique contribution of this study lies in its empirical quantification of the legal and social impacts of digital transformation on labour relations, moving beyond a sole focus on infrastructure or firm competitiveness. It provides evidence-based insights to support concrete labour law reform, rather than relying on purely theoretical discussions of the digital divide.

Key Recommendation: Based on the empirical evidence, the study proposes a set of policy recommendations emphasising the need to redefine labour relation subjects, enhance digital skills, regulate algorithmic management and remote work, and develop technology-neutral legal frameworks.

Keywords: Digital transformation, Labour relations, Labour law, Employers, Employees, Vietnam

Introduction

With the development of the Fourth Industrial Revolution in recent years, the trend of digital transformation is firmly underway in most countries, significantly improving organisational efficiency. However, there are also serious concerns that organisations and workers may find it challenging to adapt to reap the benefits of digital transformation (Li et al., 2024). Besides, digital transformation significantly changes the production method, thereby requiring a production force, especially a corresponding labour force, with synchronous qualifications and awareness to deploy, organise, and operate the economy effectively, according to Li et al. (2023). Moreover, jobs will be lost in industries where technology can replace humans. However, new jobs will be created in industries that require modern technology and skilled labour.

As part of digital transformation, automated systems will gradually replace manual jobs. However, the number of new jobs will be limited due to a lack of skills in the local workforce. New jobs take time because learning new skills requires time and resources, but unemployment can happen immediately. This will affect the structure of work and the labour market, leading to significant changes that pose many challenges for the labour market as a whole and for workers in particular. Moreover, most of the private sector and small and medium-sized enterprises have adopted software and solutions for sales management, online sales, multi-channel sales, marketing, customer relationship management, and distribution channel management (Cheng et al., 2023).

Many studies have focused on the technical and economic aspects of digital transformation, such as digital infrastructure, corporate competitiveness, and productivity. Besides, the social and legal ramifications, especially in labour relations and employment governance, are poorly researched. Moreover, the rise of AI-driven management systems and platform-based employment makes it vital to study how digital technologies affect labour relations roles, obligations, and interactions (Warner & Wager, 2019).

The study focused on small and medium firms, as they face the most significant digital transformation challenges, including limited resources for human resource training and digital

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skills development. These limits make SMEs more susceptible to changes in labour relations, making them important for studying legal and institutional adaptability in Vietnam. Although employees are directly involved in planning, implementing, and applying digital technology at work, determining the success of the business in the digital transformation process, many businesses do not know precisely how to prepare their workforce for change. This research will examine how the digital revolution has affected occupations, methods of work, content and conditions of work, legal regulation and management mechanisms, and labour relations, to fill this knowledge gap. Moreover, all of these factors underpin Vietnam's labour market and labour regulations. This paper examines these five aspects to show that the digital revolution is changing labour laws and work practices.

Results improve theoretical and practical comprehension. Besides, their work expands the theoretical relationship between technology and labour legislation, especially in developing nations. Their advice is practical for revising Vietnam's labour laws. Therefore, understanding the level of adaptation and employees' readiness to deliver appropriate, timely solutions will help the business's digital transformation goals become more achievable and favourable, especially for small and medium-sized enterprises with many resource constraints. Moreover, this study will identify key areas of effect and make data-driven recommendations to create a more flexible, inclusive, and technology-neutral legal framework. It ensures that digital change promotes fairness, sustainable development, and decent work rather than worker insecurity. Thus, this study examines how digital technology affects labour relations in Vietnam, identifies key challenges, and recommends labour legislation changes for the digital workplace.

Literature Review

Digital transformation (DT)

Digital transformation is the use of technology to radically improve a business's performance or reach (Jia et al., 2023). Moreover, digital transformation is not just about digitising resources; the value created by a business must be based on digital assets. It signals strategy and culture changes. In addition, the digital transformation has enabled gig, teleworking, and platform-based work for workers. Although flexible and autonomous, these models threaten labour standards that protect workers' rights, social security, and job security (Valdez-Juárez et al., 2024). The digital transformation in business involves the use of new digital technologies, such as social media, advanced analytics, and automation, to significantly change business operations, including improving the customer experience, optimising operations, and creating new business models (Cheng et al., 2023). Digital transformation is the change in the structure and organisation of a business from a traditional to a modern model by applying new technologies, such as big data, the Internet of Things, cloud computing, or Marketing automation support solutions. To develop an equitable and sustainable digital economy, we must regard DT as a whole revolution of labor relations and work, not just a technology event.

Theoretical Framework and Hypothesis Development

Labour Relation Subjects (LRS) and Digital Transformation (DT)

Employers, employees, and, increasingly, digital intermediaries such as platforms and algorithms are involved in labour interactions (Kumar et al., 2023). Digital transformation reorganises

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traditional roles by creating new ways to engage, regulate, and depend on technology. Worker status has become unclear due to study-based employment and algorithmic management, creating a "gray zone" between subordination and independent contracting (Praničević et al., 2023). Vietnam does not adequately protect digital labour due to outmoded legal classifications of workers and companies. As data-driven digital platforms handle administrative tasks, employment relations are becoming more complicated. Therefore, DT is expected to dramatically alter LRS by modifying labour relations representation, accountability, and authority. H1 - Digital transformation has a significant positive impact on labour relation subjects (LRS) in Figure 1.

Work Object (WO) and Digital Transformation (DT)

Work object refers to the goods and services workers produce. Digital transformation has changed work from physical labour to data-driven operations. Technologies such as data analytics, artificial intelligence, and automation have transformed "work" from repetitive physical tasks to creative endeavours like problem-solving and digital system interaction (Chege et al., 2020). Software development, digital content creation, and data administration have emerged in the digital economy as traditional labour has dematerialised. This transition requires people to continually update their digital skills to keep their jobs (Rajala & Hautala-Kankaanpää, 2022). This industrial-era job classification change in Vietnam is challenging labour conventions and classifications. We believe DT fosters digitisation, innovation, and skill transformation, which affects the nature and requirements of the work object. H2 - Digital transformation has a significant positive impact on the work object (WO) in Figure 1.

Means and Methods of Work (MMW) and Digital Transformation (DT)

Methods and means of work encompass technologies, techniques, and tools used to complete and manage tasks. The digital revolution has transformed these methods from location-bound, manual processes to automated, digitally mediated ones that enable remote labour (Egala et al., 2024). Cloud computing, the Internet of Things, and AI have transformed manufacturing, communication, and labour management. Digital transformation includes algorithmic management, which uses data-driven systems to evaluate performance, allocate work, and monitor operations (Abudaqa et al., 2022). This boosts productivity and adaptability, but it also raises concerns about privacy, employment independence, and work-life balance. Vietnam's growing adoption of remote work and digital platforms necessitates new legislation to ensure the safety of digital labour supervision, as these developments affect the nature, scope, and location of employment. DT affects MMW significantly. H3 - Digital transformation has a significant positive impact on the means and methods of work in Figure 1.

Content and Conditions of Work (CCW) and Digital Transformation (DT)

The rights, duties, and working conditions in an employment contract legally define "work". The digital revolution is creating new jobs, flexible work schedules, and technology-mediated labour management (Imran et al., 2021). Digitisation boosts productivity and autonomy but also raises risks, including insecure employment, uncertain work hours, and less social protection (Cuevas-Vargas et al., 2021). The modern gig economy, characterised by platform-based and remote work, has stripped many workers of fundamental employment rights, including guaranteed minimum

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wages, fixed work schedules, and the right to unionise (Ramdani et al., 2022). Algorithmic evaluation systems may also create worker inequality and reliance. Vietnamese labour laws are still built on traditional employment systems; thus, these changes require flexible legislative and regulatory responses. DT alters employment contracts, benefits, and labour conditions in both the formal and platform economies, thereby affecting CCW. H4 - Digital transformation has a significant positive impact on the content and conditions of work (CCW) in Figure 1.

Legal Regulation and Management Mechanisms (LMM) and Digital Transformation (DT)

Legal regulation and management procedures establish organisations, regulations, and governance that organise, supervise, and protect labour interactions. Digital transformation requires flexible, data-driven, and technology-neutral regulatory frameworks, which pose opportunities and challenges to these mechanisms (Garzoni et al., 2020; Shah et al., 2023). Platform work, remote work, and algorithmic management are complicating workplaces and challenging existing labour regulations based on employer-employee hierarchies (Capello et al., 2022). People are doubting the state's ability to oversee compliance, maintain worker safety, and enforce labour regulations as more work is performed online and abroad (Endres et al., 2022). Big data analytics and AI-assisted inspection technologies could streamline labour administration, but also create privacy and surveillance concerns. Despite the need for new regulations, the study focuses on obsolete industrial occupations. DT changes the procedures, rules, and tools used to safeguard labour relations, which legally impacts LMM. In this study, a “positive impact” of digital transformation on labour relations and legal regulatory mechanisms does not imply that the current frameworks are sufficient. The digital revolution exposes governance gaps and necessitates more adaptive, flexible, and technology-neutral legislative processes, intensifying institutional reform and prompting a rethinking of labour relations governance. H5 - Digital transformation has a significant positive impact on legal regulation and management mechanisms (LMM) in Figure 1.

Based on the above-mentioned analysis, the proposed official research model, see Figure 1, illustrates the influence of digital transformation on five key dimensions of labour relations: (1) Labour relation subjects, (2) Work object, (3) Means and methods of work, (4) Content and conditions of work, (5) Legal regulation and management mechanisms in Figure 1.

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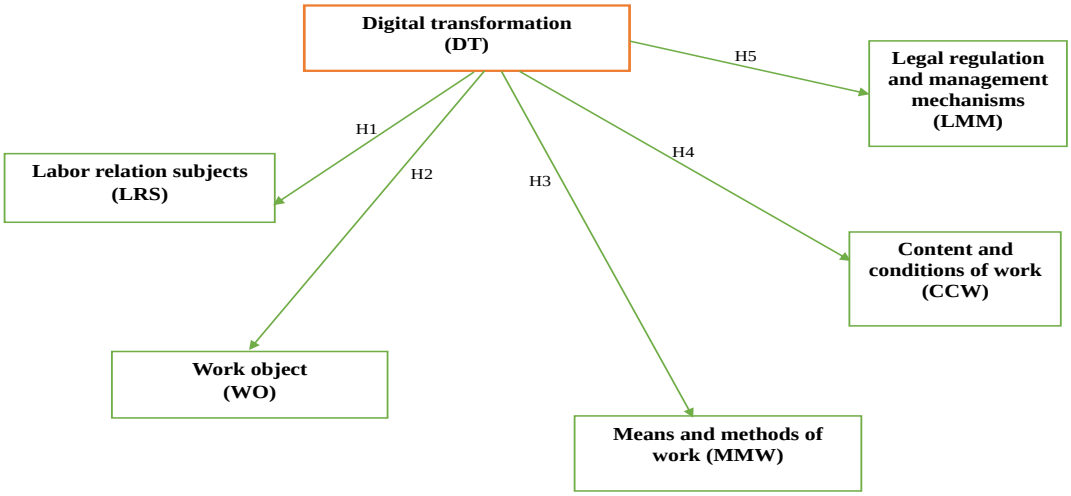

Source: The author proposed the model

Figure 1: ***A research model for impacting digital transformation on labour relations***

Figure 1 depicts the conceptual research model connecting five proposed paths that represent both direct linkages. Digital transformation serves as the independent variable, exerting direct effects on all five dependent constructs of labour relations: LRS, WO, MMW, CCW, and LMM.

Research methods

The research process was conducted in two phases: (1) qualitative exploration through expert consultation and (2) a formal quantitative survey for hypothesis testing in Figure 1.

Qualitative phase based on expert interviews: The qualitative phase examined expert opinions on how digital transformation (DT) affects labour relations and legal frameworks in Vietnam. In this step, 30 labour law professors, employment inspectors, and labour lawyers engaged in in-depth semi-structured interviews. Participants were purposively sampled to reflect academic and practical fields. Each 45- to 60-minute interview covered five main topics: how digitisation is changing employment, new legal issues in platform work, the sufficiency of current labour laws, social security policy gaps, and law changes. Interviews were recorded, transcribed, and analysed using NVivo thematic analysis to find insights and patterns. Qualitative findings confirmed the five labour relations characteristics and refined the measurement items, laying the groundwork for quantitative conclusions. Experts say Vietnam's labour law needs to be revised, as digital transformation is changing the law, corporate structures, and regulatory power. This phase verified the content validity and contextual relevance of the survey instrument and the hypothesis-testing constructs (Hair et al., 2022).

The quantitative phase: This method used Vietnamese employee data to evaluate the proposed model of digital transformation (DT) 's impact on labour relations. Ho Chi Minh City (HCMC) and Dong Nai Province are Vietnam's top industrial and service hubs, with a high concentration of SMEs and early digital adoption. Purposive sampling was used to poll 657 employees of SMEs across manufacturing, trade, logistics, and services, ensuring sectoral diversity and generalizability. Besides, workers in HCMC and Dong Nai Province, two of the country's key industrial and service hubs, are undergoing rapid digitalisation and received 700 structured

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questions. After data screening and validation, 657 replies were valid, a 93.9% response rate. Based on qualitative findings and existing literature, the survey instrument included 25 observed variables across six constructs: Digital transformation, labour relation subjects, work object, means and methods of work, content and conditions of work, and legal regulation and management mechanisms. Finally, each item was rated on a five-point Likert scale, where one indicated "strongly disagree" and five indicated "strongly agree."

Data were analysed with SPSS 26 and SmartPLS 4. Descriptive statistics, reliability testing (Cronbach's Alpha and Composite Reliability), EFA/CFA, and SEM were used to examine hypothesised associations. The quantitative findings supported the theoretical model by showing that digital transformation improves all five labour relations parameters. The suggested model fits well, is reliable, and has good explanatory power, as all indices meet or exceed thresholds. The SRMR and NFI show that the empirical data and the theoretical model agree well. High R^2 and Q^2 values show that digital transformation significantly explains labour relations variance across all five variables. Thus, the SmartPLS model is statistically robust and theoretically consistent, validating the expected linkages and proving that digital change shapes current labour relations.

Results

Demographic information of respondents based on the sample

Based on 657 valid responses, the quantitative survey shows a diverse but representative sample of the workforce in Ho Chi Minh City and Dong Nai Province, two rapidly industrialising and digitalising regions. Female respondents make up 59.2% and male respondents 40.8%, showing the rising engagement of women in digitally transformed manufacturing, trade, and service sectors. The majority of respondents are married, with 62.1% indicating stable personal relationships and long-term employment. Human resource training for the digital transformation of SMEs remains limited and fails to meet the requirements. Vietnam still lacks teams of skilled experts, workers, and technicians who can meet the increasingly high demands of industrialisation and digital transformation. One reason is that training has not kept pace with the actual situation. To be successful in the digital transformation process, digital and information technology skills are essential and mandatory for SMEs. However, in reality, it will take employees a long time to learn to use new technology applications.

Vietnam and businesses must create short- and long-term measures to help workers adapt to digital change, including: (1) Develop young digital talent through scholarship programs to prepare students for the digital age; incorporate technology into education from the start; and develop employees' soft skills like critical thinking, problem solving, communication, teamwork, creativity, management, etc. (2) Assist organizations with digital transformation technology solutions, such as automating and improving technology, production, business, and management processes. (3) Enhance commercial collaboration to create digital transformation talent. Meanwhile, teach employees and businesses about digital change.

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Testing for the impact of digital transformation on the five dimensions of labor relations

Table 1: ***Testing of Cronbach's alpha and average variance extracted***

Code	Number of items	Cronbach's alpha	Composite reliability	Composite reliability	Average variance extracted
CCW (CCW1-CCW4)	4	0.986	0.986	0.989	0.958
DT (DT1-DT4)	4	0.962	0.962	0.972	0.898
LMM (LMM1-LMM4)	4	0.966	0.967	0.975	0.908
LRS (LRS1-LRS5)	5	0.973	0.973	0.979	0.903
MMW (MMW1-MMW4)	4	0.970	0.970	0.978	0.918
WO (WO1-WO4)	4	0.966	0.966	0.975	0.907

Source: own calculations in SmartPLS 4.0.

Table 1 illustrates the reliability and convergent validity results for the six study model constructs. Cronbach's Alpha coefficients ranging from 0.962 to 0.986 indicate excellent internal consistency among the assessment items, exceeding the 0.7 threshold. With reliability values ranging from 0.972 to 0.989, the scales consistently measure latent constructs with little to no measurement error. Additionally, the average variance extracted values range from 0.898 to 0.958, exceeding the 0.50 criterion. Finally, the observed variables within each construct exhibit considerable variation, demonstrating excellent convergent validity. Content and conditions of work had the highest AVE (0.958), indicating that their indicators work well together and measure a familiar concept.

Table 2: ***Testing for the impact of digital transformation on the five dimensions of labour relations***

Hypothesis	Factors	Original sample	Sample mean	Standard deviation	T statistics	P values
H1	DT → LRS	0.918	0.918	0.015	59.498	0.000
H2	DT → WO	0.917	0.916	0.016	57.004	0.000
H3	DT → MMW	0.914	0.914	0.016	57.574	0.000
H4	DT → CCW	0.891	0.891	0.018	49.585	0.000
H5	DT → LMM	0.910	0.910	0.016	56.431	0.000

Source: own calculations in SmartPLS 4.0.

Table 2 presents the structural equation modelling results for the five hypotheses on how digital transformation affects labour relations. Additionally, all five hypotheses are statistically significant ($p < 0.001$), indicating that digital transformation positively affects all aspects of labour relations. Moreover, the strong correlations between DT and the dependent constructs are evident in path coefficients ranging from 0.891 to 0.918. Finally, the digital transformation has a substantial impact on power dynamics, responsibilities, and interactions among digital platforms, employers, and employees, with the strongest link between DT and labour relations, $\beta = 0.918$, $t = 59.498$.

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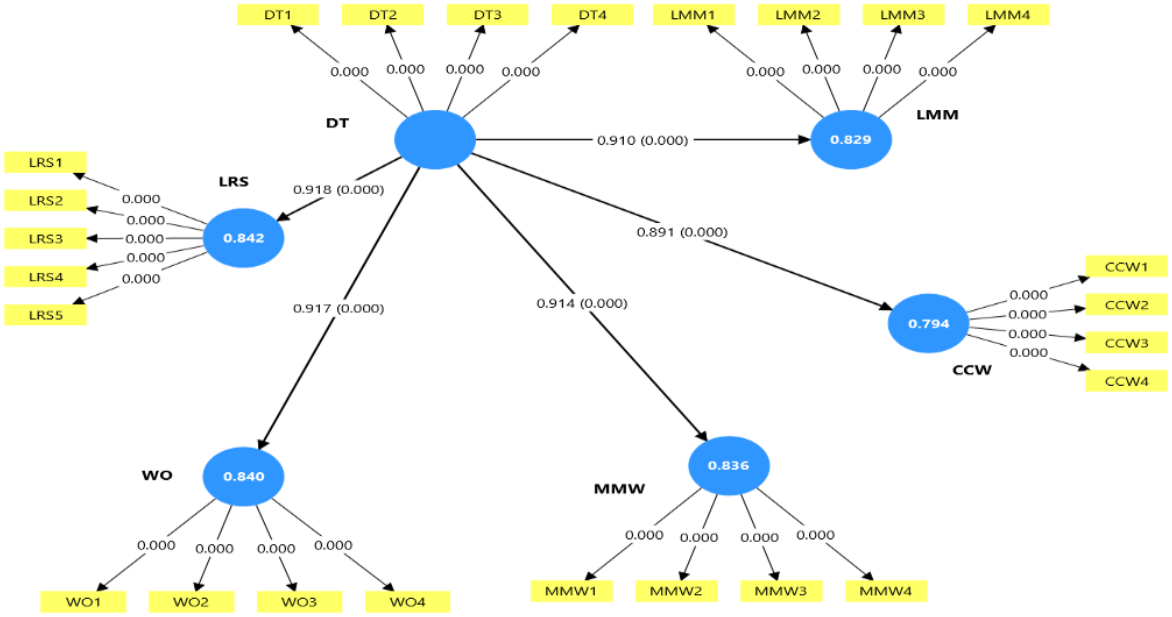

Source: processed from SmartPLS 4.0

Figure 2: ***The SEM result for testing the impact of digital transformation on the five dimensions of labour relations***

Figure 2 shows a structural equation model assessing how digital transformation affects the five areas of labour relations. Additionally, the significant correlations between DT and each component are supported by positive, significant path coefficients ($p < 0.001$). The standardised path values align with the statistical findings in Table 2, ranging from 0.891 to 0.918. The dependent constructs' R^2 values of 0.794-0.842 indicate that DT significantly explains labour relations' dimensions. In general, the model supports postulated linkages and provides convincing explanations.

Discussion of findings

Qualitative interviews contextualise quantitative data. Experts noted a legal gap in the regulation of platform-based, algorithm-managed jobs, including ambiguous employer accountability and insufficient protection for digital workers. These findings show that the digital revolution has considerable quantitative implications for labour relations and legal management mechanisms, emphasising the need to update Vietnam's labour law framework.

The statistics reveal that the digital revolution influences Vietnamese labour relations in numerous ways. According to the structural model, DT affects labor relations topics, work objects, methods and means of work, content and circumstances of work, and legal regulation and management mechanisms. Path coefficients for this influence are 0.891-0.918, $p < 0.001$. Digital transformation has changed work processes, highlighting the growing role of algorithmic management in task allocation and performance evaluation (Valdez-Juárez et al., 2024). This supports the policy suggestion that platforms must disclose and explain the performance review algorithms they use to ensure openness, accountability, and worker rights in digitally managed workplaces. Besides,

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the development of digital platforms has not only changed the way labour is organised and managed but also profoundly altered labour relations in society (Praničević et al., 2023). According to much research, the platform economy model has blurred the boundaries between employees and employers, creating a new type of labor relationship that does not fit into traditional legal definitions. This poses a significant challenge for labor law, particularly when these companies cannot be clearly classified under the traditional labor contract model. These findings show that digital transformation is a change agent that requires flexible labor legislation and updated legal tools to ensure equality, inclusion, and longevity in the emerging digital economy.

In addition to positive results, Vietnam's digital transformation faces significant limitations and challenges across institutions, infrastructure, human resources, technology, and social awareness. If these issues are not identified and handled promptly, they will directly affect the quality, speed, and sustainability of the national digital transformation process. Firstly, the institutional system and legal policies governing digital transformation remain incomplete and inconsistent. Second, the gap in digital infrastructure between regions remains large, particularly between urban and rural areas and between lowland and mountainous areas. Third, human resources for digital transformation are lacking in both quantity and quality (Chege et al., 2020). Digital transformation requires not only a team of IT engineers but also a general workforce with basic digital skills to utilise digital tools in production, services, and daily life. Fourth, awareness and thinking about digital transformation in businesses and among the public remain limited. Fifth, disparities in access to technology across population groups increase the risk of a widening digital divide.

To promote digital transformation comprehensively and sustainably, Vietnam needs to deploy multiple solutions in a coordinated manner, with a long-term strategic vision that places people and businesses at the centre, technology as the driving force, and institutions as the foundation. First, perfect the institutional and legal framework for digital transformation (Egala et al., 2024). Second, develop a strong, synchronous, and modern digital infrastructure. Third, develop digital human resources in both quality and quantity. Fourth, promote digital transformation in the business sector, especially small and medium enterprises. Fifth, raise awareness and digital capacity for the entire population. Strengthen international cooperation and promote innovation in digital transformation.

Digital transformation is not simply the digitisation of data but also the comprehensive transformation of the operating model, production organisation, administration, and service provision, based on digital technology platforms (Capello et al., 2022). In Vietnam, digital transformation has been identified as a key driver of socio-economic development. Finally, digital transformation raises issues such as inequality and skill shortages. However, its benefits across all five labour relations dimensions indicate prospects for higher productivity, greater worker autonomy, and greater organisational efficiency. Thus, legal change should reduce risks and promote sustainable prosperity by leveraging these transformative effects. The recommendation for international cooperation is justified by the cross-border nature of digital platforms, which complicates labour regulation and enforcement within national boundaries. Harmonising Vietnam’s labour laws with regional and global standards, particularly within ASEAN, would enhance regulatory consistency, facilitate policy learning, and improve governance of transnational digital work.

Conclusions and Policy Recommendations

Conclusions

Based on testing the SEM result for the impact of digital transformation on the five dimensions of

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labour relations. The empirical results show that DT has a strong and statistically significant influence on all five dimensions of labour relations: labour relations subjects, work object, means and methods of work, content and conditions of work, and legal regulation and management mechanisms. In this study, 657 employees from Ho Chi Minh City and Dong Nai Province were utilised. Equally revolutionary to the decline of traditional labour relations is the nature of the relationship between employees and digital platforms. Another way digital platforms avoid their legal responsibilities to employees is by portraying themselves as intermediaries rather than employers. Traditional labour relations have been profoundly affected by the rise of digital platforms, particularly concerning the management and organisation of work. The digital revolution is changing the structure, regulation, and nature of labour relations in Vietnam, according to the results. The digital transition also affects labour relations, bringing both opportunities and challenges for management, working conditions, and social security. Automation-related job losses, the rise of informal and freelance workers, and legal difficulties related to data protection, privacy, and labour surveillance are significant issues in the digital revolution and worker relations. Digital transformation creates new industries and employment, requiring workers to have digital, soft, and lifelong learning skills. Flexible work models, including remote work, freelance work (gig jobs), and work-from-home, are changing labour management, communication, and collaboration. Businesses can streamline labour processes, increase productivity, and improve operational efficiency by leveraging digital technologies. Existing legislation must be updated to cover new forms of labour, strengthen worker protections in the digital era, and establish a flexible legal framework to respond to constant change.

Policy Recommendations

Policy recommendations should be ranked by empirical impact. The most essential change is redefining labour relation issues, reflecting the digital transformation's most significant impact on work roles. Digitalisation rapidly transforms SMEs' capabilities, tasks, and labour structure; thus, the subsequent priority should be to address work objects and processes.

(1) The legal position of workers and employers in the context of platform and digital work should be redefined in Vietnam, considering the most significant impact of digital transformation on labour relations subjects based on $\beta = 0.918$. An expansion of the idea of labour relations subjects should accompany this. Traditional employment relationships, characterised by subordination and direct control, are the intended target of the current labour code. However, these lines are becoming increasingly blurry in platform-based employment, e.g., ride-hailing, delivery, and online freelancing. The government should introduce legal recognition of “platform workers” and “digital intermediaries” as distinct categories under labour law. Create a framework for hybrid employment that enables social protection and collective rights to coexist with contractual flexibility. Advocate for the formation of online trade groups or unions to safeguard the rights of platform employees. The poor progress and lack of coordination in the legal system regarding digital technology are among the major obstacles we face today. Hence, important legal documents such as the Law on Personal Data Protection, the amended Law on Electronic Transactions, decrees on electronic identification and authentication, standards for open data sharing, and measures to secure network information must be promulgated as soon as possible. To further ensure interoperability and compatibility across the country's digital ecosystem, it is recommended

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that a set of technical standards be developed for digital platforms.

(2) Changing policies for the development of skills and work objects - Digitalisation has changed the nature of work, increasing oversight of labour law enforcement in the online platform economy. To ensure that online markets comply with labour laws, a state labour-management agency should be established. The agency investigates and punishes violations, including compelling platforms to update labour regulations. For platforms and employees, legal constraints must be explicit. Platforms that span borders make law enforcement challenging. Vietnam should join other governments in tracking and penalising platforms that violate workers' rights. Enterprises, the state, banks, training groups, and employees must work together to preserve workers' rights during digital transformation. The government should strengthen regulations on digital workers' rights, including telecommuting, fair breaks, and AI in HR. Employers need rules to support employee retraining and skill transfer.

(3) Regulating digital work methods and ensuring decent work conditions - The powerful impact of $\beta = 0.914$ suggests that work settings are rapidly digitising and managed by algorithms. Legislation should regulate management algorithms, employee data privacy, and remote work. Demand that platforms and firms disclose and explain their employee performance review algorithms. To maintain work-life balance, protect employees' autonomy and mental health from digital surveillance and performance metrics. Human resources rules digital transformation. From high school through college, a comprehensive policy is needed to teach students basic and advanced digital skills. Blockchain, network information security, AI, and big data demand specialised expertise. To build a digital human resource ecosystem that adapts to the digital economy and society, the state, businesses, and educational institutions must collaborate more closely.

(4) Modernising labour standards and social protection systems - The results for content and conditions of work based on $\beta = 0.891$ suggest that traditional labour protections are insufficient. Extend social insurance, occupational safety, and minimum wage protections to gig and freelance workers. Develop portable benefit systems that follow workers across jobs and platforms. Encourage enterprises to adopt inclusive HR policies promoting equal access to digital tools and fair compensation structures. Organize large-scale communication campaigns to raise awareness of the benefits of digital transformation, thereby helping people, especially those in rural areas and ethnic minorities, gain easier access to digital platforms that serve their lives, such as online learning, digital healthcare, and online administrative procedures. It is necessary to develop models of "digital villages" and "digital communes" to shorten the digital gap between regions.

(5) Building adaptive and technology-neutral legal frameworks - Digital transformation also strongly affects legal regulation and management mechanisms based on $\beta = 0.910$. Develop a Digital Labor Code or a set of amendments to integrate technology-neutral legal principles into Vietnam’s labor system. Strengthen the digital governance capacity of labor authorities through AI-based inspection, real-time data collection, and e-governance platforms. Encourage regional and international cooperation to harmonize Vietnam’s labor laws with global standards of digital work regulation. Perfecting the system of state management agencies on labor relations from the central to the grassroots level to both perform the state management function on labor relations and perform the function of supporting the development of labor relations. Coordinate with organisations representing employees and employers to disseminate labour laws to raise

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awareness, a sense of discipline, and order in compliance with labour laws. Enhance the capacity of labour inspection agencies to ensure effective enforcement of labour laws. Promote and effectively implement workplace dialogue mechanisms to raise employees' awareness and sense of responsibility towards enterprises, and to demonstrate enterprises' commitment to addressing employees' recommendations.

Limitations and future research: This study is limited by its geographical scope, focusing only on workers in Ho Chi Minh City and Dong Nai Province, which may not fully represent Vietnam's diverse labour market. The research also relies on cross-sectional data, preventing causal inferences over time. In order to better understand the relationship between digital skills, job satisfaction, and legal knowledge, as well as other mediating factors. Moreover, future research should employ longitudinal or mixed-methods designs, broaden the sample to include more locations and sectors, and consider other relevant factors. The researchers might learn a great deal about how digital transformation has affected labour relations across different regions of the world by comparing Vietnam with other ASEAN countries. The survey also relies on self-reported employee perceptions, which may not reflect the opinions of employers or digital platforms. Future studies should include multi-stakeholder perspectives to better understand labour relations in digitally altered work contexts.

Declarations

AI Use Statement: The author confirms that no Artificial Intelligence tools were used in the writing or production of this manuscript.)

Data Availability Statement: The datasets generated and analysed during the current study are not publicly available due to privacy/confidentiality agreements with the participating SMEs but are available from the corresponding author on reasonable request.

Funding Statement: This study did not receive funding.

Conflict of Interest: The author declares that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Ethical Approval: The study was conducted in accordance with the Declaration of Helsinki. Informed consent was obtained from all participants, and data was anonymised to ensure confidentiality.

Authors' Contributions: The author confirms sole responsibility for the following: study conception and design, data collection, analysis and interpretation of results, and manuscript preparation.

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