



International Experiences in Addressing the Negative Effects of the Fourth Industrial Revolution on Industrial Relations and Lessons for Viet Nam

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ABSTRACT

In the context of the article, the author not only provides an overview of how certain European countries, such as the UK, France, Germany, and Italy, have adapted to the Fourth Industrial Revolution, but also highlights some negative aspects in their industrial relations resulting from the impact of this Revolution. These negative aspects include changes in the labor market and social structure, limited influence of worker rights organizations, reduced creativity among workers due to automation in production activities, and an increase in the proportion of indirect labor in the production process. The author then summarizes the effective approaches taken by these countries to address these challenges, drawing lessons that can be applied to revitalize and develop industrial relations in Vietnam in order to adapt to the significant changes brought about by the fourth industrial revolution.

Keywords: *experience, industrial relations, negative, the Fourth IR, lessons.*

1. INTRODUCTION

The fourth industrial revolution brings about not only advancements in science, technology, and corporate governance skills, but also elevates humanity to unprecedented heights. Nevertheless, this revolution significantly alters the dynamics between workers and enterprises, reshaping the nature of industrial relations and transforming the economy with novel elements and structures.

During the previous period in Vietnam, there have been significant developments in the industrial relations landscape. These include an increase in the labor force within enterprises, although the number of employees possessing vocational training certificates remains low. Additionally, there is a low proportion of employees participating in social insurance, and a high number of employees who are not trade union members. As of January 1st, 2021, Vietnam had a total of 25.9 million paid employees. Among them, approximately 58% worked in enterprises, with 7.31% in state-owned enterprises, 32.79% in foreign direct investment enterprises, and 59.9% in private enterprises. Furthermore, more than 15 million employees are enrolled in social insurance, while 7.5 million workers are members of trade unions. Trade unions play a crucial role in representing and safeguarding the legitimate rights and interests of workers and employees, as well as advocating for their ownership rights. However, it is important to acknowledge that trade unions still face various limitations. In Vietnam, the majority of enterprises are small and micro-sized, resulting in low competitiveness and labor productivity. Consequently, these enterprises have not prioritized industrial relations. Employers' representative organizations are present at both central and local levels, alongside foreign business associations and domestic industry and trade associations. However, these organizations primarily focus on policy consultation, legislation, and trade promotion support. The organizational model for state management of industrial relations lacks synchronization, and there is a shortage of personnel responsible for labor and industrial relations within the state management system.

It is imperative to thoroughly and systematically investigate and assess the current state of industrial relations in Vietnam, with the aim of effectively adapting to the adverse effects brought about by the Fourth Industrial Revolution.

2. THEORETICAL BASES

2.1. Definition of industrial relations

The International Labour Organization (ILO) defines industrial relations as follows: "Industrial Relations deal with either the relationship between the state and employers and workers organizations or the relation between the occupational organizations themselves. It includes all the legal, economic, social and psychological aspects and include issues such as hiring, training, work arrangements, overtime, promotions, discipline, forced severance, termination, bonuses, profits, education, health, leisure, sanitation, accommodation, working hours, rest hours, leave and welfare matters for the unemployed, sick, accidental, disabled and elderly people" (Thu.2013)

According to the 2019 Labor Code, industrial relations are the social relations that arise between workers, employers, their respective representative organisations and authorised state agencies with respect to hiring, employment and payment of wages.

In terms of the operational process, individuals involved in industrial relations engage in consultation, dialogue, and negotiation mechanisms. These mechanisms are evident in two distinct forms: a two-party mechanism (involving employees, their representatives, and employers; as well as between representatives of employees and representatives of employers) and tripartite mechanisms (comprising the state, employer's representatives, and employees' representatives).

In the tripartite mechanism, the primary modes of interaction encompass: 1. Seeking consultation and gathering perspectives from the involved parties; 2. Engaging in dialogue to address issues and support the parties in adhering to legal provisions while fostering harmonious, stable, and advancing industrial relations.

In the two-party mechanism, the key forms of interaction comprise: 1. Dialogue; 2. Negotiation (either individually or collectively); 3. Resolving labor disputes (either individually or collectively); 4. Resorting to strikes.

Industrial relations have a significant impact on the functioning of the two-party and tripartite mechanisms. Specifically:

The tripartite mechanism enables industrial relations to: 1- Foster the globalization of industrial relations and promote international cooperation; 2- Resolve and mitigate labor conflicts; 3- Strengthen the ability to engage in dialogue; 4- Improve the effectiveness of labor management; 5- Safeguard the rights and well-being of employees; 6- Develop, implement, and adapt labor policies and laws in a meaningful and efficient manner.

The two-party mechanism of industrial relations serves several purposes: 1. It facilitates a platform for dialogue and communication. 2. It fosters a strong and harmonious connection between the rights and interests of both parties, achieved through collective bargaining, signing, and implementing the collective labor agreement. 3. It effectively prevents and resolves labor disputes. 4. It plays a crucial role in promoting stability, growth, and development within individual enterprises, business groups, and the entire industry. 5. It strives to enhance the material and spiritual well-being of employees.

2.2. Definition of the Fourth Industrial Revolution

According to ILO, IR 4.0 is characterised by rapid technological advancement through increased use of mobile communication and interconnectivity ('internet of things'), big data, artificial intelligence, robotics, autonomous vehicles, 3D printing, nano and biotechnology, quantum computing, etc. (ILO, 2010).

In a more straightforward manner, IR 4.0 refers to the integration of intelligent technologies to enhance production and business processes.

Consequently, the fourth Industrial Revolution not only revolutionizes production, and management but also presents various opportunities and challenges in employment. It directly and indirectly affects industries and labor groups within the economy. During this period, industrial relations will undergo significant changes, bringing both advantages and disadvantages stemming from the fourth industrial industry.

3. RESEARCH METHODOLOGY

The article employs the technique of synthesis, analysis, and comparison by utilizing secondary documents from various published authors as supporting evidence. These sources are cited to present arguments and evaluations regarding the writer's research problems, specifically focusing on the drawbacks that emerged in industrial relations prior to the Fourth Industrial Revolution. Additionally, the article explores the solutions implemented by certain European countries to address these challenges. Consequently, valuable insights have been gained from these experiences, providing lessons for Vietnam to effectively tackle the negative consequences that arise in industrial relations as a result of the Fourth Industrial Revolution.

4. RESEARCH RESULTS

4.1. Strategies for adaptation to IR 4.0 in some European countries and some negatives arising in industrial relations

****General introduction of strategies for adaptation to the fourth IR in some European countries***

The Fourth Industrial Revolution was initially brought up during the Hannover Technology Fair in Germany in 2011. It gained significant recognition when Germany implemented the "Hi-Tech Strategy 2020" in March 2012, aiming to foster the growth of groundbreaking technologies and ensure the long-term sustainability of its domestic manufacturing sectors.

In addition to Germany, several other European countries, including France, the United Kingdom, and Italy, have also established similar initiatives to maintain their competitive edge. The United Kingdom has outlined a long-term vision to enhance its manufacturing sector by 2050 through the national project called "The Future of Manufacturing." To directly support manufacturing industries, the UK's National Innovation Plan has allocated €164 million for relevant projects. France's "New Industry" strategy, approved in September 2013, encompassed 34 initiatives focused on key areas of industrial policy. Italy, on the other hand, introduced IR 4.0 in 2012, utilizing the concept of "Smart Factory" technology clusters to foster research, innovation, and production system advancements. Italy's Ministry of Economic Development published the "National Plan for Industry 4.0" in 2016, which outlined strategic measures to be implemented until 2020, with an initial investment budget of approximately 45 million euros.

Various nations have devised diverse strategies to foster the growth of industries related to emerging technologies. Consequently, as a result of the Fourth Industrial Revolution, the stages involved in production have become automated. The labor force has gradually been substituted by machines, thanks to technological advancements that have facilitated the widespread implementation of modern technological innovations, thereby enhancing labor productivity. The Fourth Industrial Revolution has ushered in transformative changes for both employees and employers, owing to the adoption of technological breakthroughs. Workers can now enjoy increased leisure time, improved working conditions, and a safer working environment.

****Some negatives arising in industrial relations under the impact of the Fourth Industrial Revolution***

IR 4.0 is also leading to the emergence of certain drawbacks in industrial relations:

Initially, there will be a shift in the labor market and social structure due to the collaboration between humans and robots facilitated by artificial intelligence (AI) technology. Consequently, the income of workers will be influenced and determined by their skill level, whether it is high or low.

The demand for unskilled labor has declined, while the market is driving up the demand for skilled and highly skilled labor, particularly those who are proficient in technology and digital skills. As a result, new professions will emerge to replace those that have become obsolete, creating numerous job opportunities for workers. The advancement of machines and technology has led to a greater emphasis on occupational health and safety. Businesses and employers can now implement more rigorous safety measures to minimize risks. Vocational education will play an increasingly vital role in enhancing the capabilities and overall qualifications of the workforce, strengthening their technological and technical foundations to meet the requirements of the Fourth Industrial Revolution.

Second, the creativity of workers is somewhat reduced because production activities are automated and the proportion of indirect labor in the production process is increasing. While humans have the ability to improvise, create, and handle work flexibly, equipment and machines are set up to operate according to rigid processes. In some sectors, the higher the level of production automation, the higher the unemployment rate due to the application of robotic technology in the production process. In addition, a part of human resources find it difficult to find jobs due to insufficient professional skills and the ability to adapt to changes in the labor market.

Secondly, the implementation of automation in production processes leads to a decrease in the creativity of workers and an increase in the proportion of indirect labor. While humans possess the capability to think creatively, improvise, and adapt to various work situations, machines and equipment are designed to follow strict. Moreover, the level of unemployment tends to rise in sectors with higher levels of production automation. This is primarily due to the integration of robotic technology in the production process. Additionally, a significant portion of the workforce faces challenges in finding employment opportunities. This is attributed to their inadequate professional skills and their inability to adapt to the dynamic changes in the labor market.

Thirdly, the digitization of work results in the fragmentation and categorization of jobs with diverse responsibilities. Apart from the benefits of enhancing individual efficiency and expertise, this phenomenon also contributes to a growing disparity among workers, a lack of organizational structure in job allocation, and the emergence of distinct labor markets characterized by "low skill/low wage" and "high skill/high salary" positions. Consequently, this trend exacerbates social stratification.

Fourthly, the new job model relies on digital platforms to facilitate the sharing economy, encompassing online work and technology-driven transportation models. However, it raises questions regarding their legal classification: are the individuals using them considered employees or employers? Moreover, who bears the responsibility of covering their welfare costs? Additionally, it remains uncertain whether they are entitled to the protection of labor laws and social security measures, such as minimum wage, working hours, occupational safety and health, and social insurance, similar to traditional industrial relations.

Furthermore, the Fourth Industrial Revolution has had a detrimental effect on the influence of organizations advocating for workers' rights, thereby imposing limitations on their effectiveness.

Due to the Fourth Industrial Revolution, the dynamics between employers and employees have undergone a significant transformation. This shift can be attributed to the heightened expectations of employers towards their workforce in terms of skills, qualifications, work methodologies, and attitudes. The intense competition posed by machines, which possess the potential to replace workers with advanced qualifications or the utilization of modern technology in production will substitute and progressively diminish the workforce employed by businesses. Consequently, numerous challenges have arisen for organizations dedicated to safeguarding workers' rights in harmoniously addressing industrial relations issues prior to the advent of the fourth industrial revolution.

4.2. Experience of some European countries in tackling emerging challenges due to the Fourth Industrial Revolution

In response to the new circumstances, nations have put forward several strategies to address the challenges arising from industrial relations in light of the Industrial Revolution. More precisely:

The UK government expanded expenditure in research and dissemination of research findings to assist companies in stabilizing the number of employment.

In the pursuit of implementing the strategy to embrace the Fourth Industrial Revolution, various obstacles arise. These challenges include skill gaps and the necessity for retraining, as well as the growing prevalence of automation, which demands workers to acquire new skills, particularly in the realm of information technology, to ensure optimal performance. Moreover, small and micro enterprises face the peril of falling further behind, as numerous

businesses fail to harness the potential of long-standing technologies. Additionally, some argue that the adoption of new technology may lead to diminished wages and productivity.

The growing utilization of machines and robots in the manufacturing process will increasingly diminish the bargaining power of workers during wage negotiations. As a result, the UK government has implemented a strategy to foster the fourth Industrial Revolution. This strategy aims to tackle the challenge of rising labor productivity, specifically in sectors like automotive, electronics, aerospace, chemicals, pharmaceuticals, and nuclear. Simultaneously, it seeks to stimulate business endeavors and enhance investments in research institutions.

Germany's experience is to improve the legal system related to industrial relations

Germany's industrial relations system relies primarily on a "dual" foundation to effectively address labor market challenges and employment issues. This approach ensures that workers' interests are taken into account through business councils at the workplace, allowing them to actively participate in shaping relevant policies. Additionally, at the sectoral level, collective bargaining agreements are closely regulated by law and skillfully managed to safeguard workers' rights.

Decentralized collective bargaining is a goal that is being pursued, but the specific process and procedures for achieving it vary depending on the practical context of industrial relations system development. Over the years, unions have experienced a decline in membership, with participation rates dropping as low as 20 percent in the early 2000s. The majority of union members are highly skilled, male, full-time workers in the manufacturing and public sectors. In the past, trade unions in Germany were established based on the principles of industrialism and unitarian trade unionism. Collective bargaining is primarily carried out by sectoral labor federations, while top-level federations (DGBs) focus on political activities. The organizational structure of unions remained stable until the mid-1990s, when a decrease in membership, financial constraints, and structural changes necessitated a series of mergers.

France's experience is to harmoniously address the relationship of interests between trade unions and businesses

The French government has implemented changes to the decentralization of collective bargaining and made various adjustments to workplace representation regulations. Additionally, they have simplified the procedures for workforce reduction, established limits on compensation in case of legal disputes, and have plans to introduce reforms on unemployment insurance and vocational training in 2017. These reforms and amendments received support from employers' organizations, while unions expressed opposition. The impact of globalization and the Fourth Industrial Revolution has significantly influenced industrial relations practices in France. Although the French government has adopted a relatively balanced approach in addressing these changes. It is worth noting that trade union participation in France remains consistently low, with only approximately 10% of workers being union members. This is due to the fact that collective agreements negotiated by trade unions apply to all workers, regardless of their union membership status.

Italy's experience is to implement diversified industrial relations to ensure the interests of the parties involved

Italy's reform process, which can be described as "adaptive," has proven to be highly effective in directly addressing emerging challenges and difficulties while safeguarding the interests of all stakeholders involved. The country places great emphasis on establishing flexible labor contracts that govern the common interests pertaining to industrial relations. This approach aims to achieve several objectives, including enhancing labor productivity, developing professional skills, and ensuring fair wages. Additionally, it seeks to establish minimum wage standards for work. Through collective bargaining, trade unions and representative organizations are empowered to exercise their freedom of organization and representation in the workplace. This not only promotes the active participation of workers but also strengthens communication channels with their representatives. As a result, employees are more actively engaged in corporate life, utilizing various avenues to pursue specific and practical goals.

5. OBSERVATIONS AND KEY TAKEAWAYS

The examination of encounters in tackling these drawbacks that emerge in industrial relations will serve as valuable insights to assist Vietnam in effectively pursuing two significant objectives: furthering national industrialization and modernization, successfully constructing socialism, and guaranteeing robust and progressive industrial relations within the framework of a socialist-oriented market economy. Several particular takeaways have been acquired from this process:

Firstly, it is crucial to emphasize the State's responsibility in shaping policies and legislation concerning industrial relations. Additionally, the State plays a vital role in facilitating research and the dissemination of innovative technologies to businesses and organizations. These efforts are aimed at fostering stability and promoting the growth of the labor market.

In order to safeguard the lawful rights and interests of the key participants in industrial relations, namely employees or employees' representative organisations and employers representative organizations or employers, (Hieu & Manh, 2023), the Government must persist in constructing and refining the legal framework. It is imperative for Vietnam's labor laws to be further specified, encompassing provisions on minimum wage, wage scale system, payrolls, and output quota. Notably, the regulations pertaining to equality, non-discrimination, freedom of association, and collective bargaining should align with Vietnam's commitments on labor and trade unions in the new context.

The implementation of numerous policies and national science and technology schemes and programs by the State is crucial in supporting scientific endeavors in accordance with market mechanisms. It is imperative to foster technology supply and demand, as well as encourage consultancy, application, innovation, and technology transfer activities. These efforts will undoubtedly enhance the technological capabilities of both the country and its enterprises.

Secondly, there is a need to enhance the efficiency and operational framework of trade unions by embracing the concept of Trade Union 4.0, which entails the establishment of Digital Trade Unions. These unions should not only continue to safeguard the rights of workers but also cater to the diverse and flexible needs and aspirations of the workforce, surpassing the limitations of traditional unions. It is crucial to effectively execute the renovating the organizational structure and operational model Project of the Vietnam General Confederation of Labor. Additionally, it is imperative to pilot various models and organizations of grassroots trade unions that are affiliated with the Vietnam General Confederation of Labor. These models should be implemented across production, business, and service establishments in all sectors and industries, with a particular focus on private economic groups, state corporations undergoing divestment, and other enterprises with the same employer. Moreover, a grassroots trade union model that amalgamates multiple enterprises and agencies based on industry and profession within a specific region should be explored, along with a model that facilitates the gathering of foreign workers employed in Vietnam.

Thirdly, it is crucial to enhance research and forecasting efforts in Vietnam to proactively identify the industries and fields where robots will replace human labor in the upcoming years. Simultaneously, it is essential to determine the sectors that will still require human involvement and recognize the limitations of robots in the future. This should be accompanied by addressing the gaps in education and skills within the labor market. Currently, a survey reveals that approximately one-third of employers worldwide believe it is challenging to find workers with the necessary skills for job positions. Hence, it becomes imperative to strengthen the connection between educational and training institutions and employers to bridge the gap between supply and demand. This will enable workers to acquire the essential skills aligned with market requirements.

Moreover, it is vital to effectively implement information regarding the labor market, promote decent work, and safeguard disadvantaged and vulnerable workers from economic and social disruptions. Additionally, employers and trade unions should engage in dialogue with education and policy makers. This collaboration will ensure that workers' qualifications are enhanced, and they are well-informed, enabling them to adequately and reasonably prepare for future changes.

Hence, the field of industrial relations undergoes constant transformation in tandem with the advancements in science, technology, and the fourth industrial revolution. Consequently, it is imperative for Vietnam to proactively examine global practices to effectively address the adverse effects of modern technology on industrial relations. This is crucial for establishing a harmonious, suitable, and contemporary industrial relations framework that aligns with the nation's ambitious development objectives in the foreseeable future.

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