Human Resource Management in the New World of Work

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DOI: 10.32629/memf.v5i3.2382

Abstract: In this paper, we mainly analyze the impact of the fourth technological revolution on work, and human resource management in general in both positive and negative ways. There are mainly five dimensions of work affected by technology, namely the future of jobs, social protection system, wage and income inequality, job quality, social dialogue and industrial relations. By extension, technology makes a big difference to even the whole Human Resource Management considering increasing efficiency of recruitment, performance appraisal, employee development and decision-making, as well as several drawbacks such as privacy risks and feeling of untrusted, etc.

***Keywords*:** technology; social protection system; non-standard employees; wage and income inequality; human resource management

1. Introduction

Nowadays, our world has become a global village (Jain, 2014). Improvements in means of communication, advances in technology, computers and the Internet have narrowed horizons and changed the operation of the business world to a great extent (Jain, 2014). In January 2016, the fourth technological revolution was coined by Klaus Schwab, founder and executive chairman of the World Economic Forum (Philbeck & Davis, n.d.). Since then, we have officially entered the age of technology. It is acknowledged that technology has a great impact on business, education, transportation, and many aspects. This paper mainly focuses on the impact of technology on five dimensions of work and four aspects of HRM.

2. The impact of technology on work

2.1 The future of jobs

It has been debated whether rapid technological change will affect the number of jobs or not. Some argue that the acceleration of job destruction is possible under the influence of current technological changes, while others assume that technological changes are likely to create new jobs and foster the appearance of new forms of entrepreneurship (Postelnicu & Câlea, 2019). The former argued businesses pursue increased productivity and lower costs by using technology to enhance competitiveness, resulting in job losses. The other party believes that new jobs will be created during this process because the development of new machines, automation and other new technologies will lead to demands for well-trained and highly skilled employees. Actually, technological change has indeed led to massive job losses, especially low and medium-skilled jobs, where machines can do simple, repetitive tasks at low cost. In a Delphi study conducted by the Bertelsmann Foundation, experts anticipate unemployment to continuously rise in both advanced and emerging economies, reaching more than 20 per cent in Europe, and over 25 per cent in Latin and North America by 2050, which can be seen in Figure 1 below.

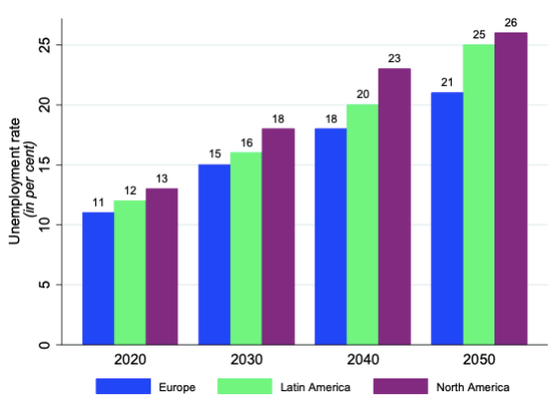

Figure 1. Expected unemployment rates (Balliester & Elsheikhi, 2018)

However, there are also industries that require human interaction, such as elderly care and education. Because people are becoming more health-conscious and education-conscious, their increasing investment has led to the creation of certain jobs (Gandhi & Rami, 1981).

2.2 Social protection system

Technological change has squeezed the demand for routine-based labor, which coincided with an increase in the number of non-standard employees (Doorn & Vliet, 2022), categorized into temporary employment, part-time worker, multi-party employment relationship and dependent self-employment (International Labour Organization, 2016), who have no formal employment contract with employers. However, social protection schemes primarily involve employees with formal labor contracts, leaving non-standard employee's rights unprotected. Furthermore, these workers are required to contribute to social security schemes, which puts them under some financial pressure. From society's perspective, knowledge-based technical changes lead to massive middle-class job-losers, which has weakened the government's ability to pay for social protection schemes because of limited budgets but massive job-losers waiting for doles (Goldsmith et al., 2010).

2.3 Wage and income inequality

Many economists assert that the proliferation of information and communication technologies (ICTs) is to blame for income inequality (Bedi, 1999). For example, it has been concluded from analysis that technological progress results in increased demand for skilled workers and companies are likely to substitute average-skilled workers who can only perform routine tasks, which contributes to widening income gap in Indonesia (Lee & Wie, 2015, pp. 238–250). With the erosion of middle-class jobs gradually, job polarization exacerbates, workers face slow or no wage growth and a deterioration in job quality, further increasing inequality (Balliester & Elsheikhi, 2018). However, it also has a bright side considering the promise of a higher wage is essential to encourage extra effort. By rewarding hard work, there will be a boost to productivity leading to a higher national output.

2.4 Job quality

The rise of non-standard employees raises several concerns for workers, resulting in their poorer job performance and high turnover rate, which finally leads to the decline of corporate profitability due to staff instability and gradual erosion of firm-specific skills in business (Harter et al., 2003). The reason for workers' concerns is less work security and weak bargaining positions due to the disappearance of physical workplace and formal rules. Also, they could face unpaid wages and dismissal at any time due to the lack of relevant regulations. In addition, it is scarcely possible for them to receive training and supervision, which underlies occupation safety and health risks. All these result in their decline of job quality. However, on the positive side, labor flexibility brings benefits to workers as well. It enables employees to achieve work-life balance because they work at any time they want and, more importantly, is friendly to female employees who are pregnant or breastfeeding.

2.5 Social dialogue and industrial relations

As the fourth technological revolution brings about new working patterns, it raises the question of whether workers' rights are protected when machine efficiency outperforms humans. Technological change brings widening disparities in wages and unemployment of low and middle-skilled workers, making it increasingly essential for trade unions to protect legal rights and interests of workers. At the same time, the government needs to negotiate income policy and other structural reforms to rebuild trust with workers and reduce social tensions and conflict (Guardiancich & Molina, 2017). On the upside, workplaces are becoming increasingly fragmented with the emergence of gig and platform workers, spurring the emergence of modern labor unions that mend the benefits aligned with the needs of increasing number of non-standard workers. Moreover, relevant agencies will further update labor regulations to make it fairer and protect workers' legal rights to a great extent (Venn, 2009).

3. The impact of technology on Human Resources Management

3.1 Recruitment and selection

The role of HR management in recruitment is to get the right people in the right place so that employers can benefit from their abilities and employees receive material and psychological rewards for their work in return (Puhovichova & Jankelova, 2020). Nowadays, the development of intelligent applications automates the entire recruitment process to a great extent which leaves more time for HR managers on strategic tasks. Employers post their vacant positions, job descriptions and qualifications on their official websites, recruitment applications or social media sites like Facebook and LinkedIn for

job hunters to apply. Then, AI-based screening process can assess data and make decisions in a faster and fairer way than humans considering it eliminates cognitive bias and stereotypes of race, gender, etc. (Sree, 2018). After the initial screening of resumes, distance conversations via remote real-time video can be used to shorten recruitment cycle and reduce labor costs. Also, AI chat robots can join to help interpret, verify candidates' reactions, and keep record in real time (Puhovichova & Jankelova, 2020). However, AI recruitment presents issues regarding anxieties of data privacy in addition to the loss of human interaction, which is essential for some jobs and should be concerned about for society (Ore & Sposato, 2021).

3.2 Employee development

Recently, human resources have been the most important assets and primary sources of sustainable competitive advantage for a company which are difficult to duplicate by others (Barney & Wright, 1998, pp. 31–46). The requirements for knowledge and skills of employees are increasingly essential in today's competitive environment so that businesses can enhance competitiveness and finally stand out. With the help of e-learning, online courses and virtual training, employees' skills could be upgraded without costing any training fees (Jain, 2014). Also, AI could help employees do their career planning, set individual-based goals and identify knowledge gaps, all of which ease HR's workload. In addition, employee health is an important aspect of a company's productivity (Puhovichova & Jankelova, 2020). Through health-oriented applications, employees are able to monitor their health conditions in real time, thus reducing leave days and keeping energetic during work. However, these courses may not be accurately based on individual needs, and the advice provided by AI is not always reliable. Additionally, several employees are worried about the privacy of their health data.

3.3 Performance evaluation

A well-developed appraisal system provided feedback to employees and assist managers to assess employee performance. Through digital performance tools, HR managers could know the performance of employees in time so that they are able to urge them to improve based on expert opinions provided by AI, such as online courses, training, and further qualifications, etc (Azadeh et al., 2018). Nowadays, to be compatible with Industry 4.0, MBO is becoming increasingly popular as an approach to evaluate performance, which is defined as management by objectives is a way of managing, whose essence is feedback (Reif & Bassford, 1973, pp. 23–30). Through using this method based on technological applications, both managers and employees are allowed to monitor performance and improve efficiency. Nevertheless, excessive usage might make employees feel untrusted, loss of autonomy and may be a threat to psychological safety, making them less dared to take risks, collaborate and set challenging goals out of comfort zone (Edmondson, 2002).

3.4 Employee relations and work environment

The occurrence of internal data sharing platform, intranet and other communication applications tightens relationships between colleagues, employees and employers, and allows information to flow smoothly in the company, contributing to better decision-making and company's flat organizational structure. In this way, self-expression and creativity are encouraged, thus improving employees' job satisfaction and making them more attached to the company (Worthy, 1950). However, the potential problems involve information leakage from employees, vague job responsibilities and disorderliness due to excessive democracy and decentralization.

4. Conclusion

To sum up, technological changes has both positive and negative effects on work and HRM. While technological changes result in structural unemployment in the short term, more jobs requiring humans and high skills will be created and the quality of workforce increases. Secondly, non-standard workers gain a work-life balance and more free time, but take more risks at the same time, spurring fairer and more comprehensive laws to protect their rights. Finally, the erosion of low and middle-skilled workers increases the fiscal burden on government for doles but encourages life-long learning and hard work.

Regarding human resources management, we can conclude using AI in recruitment is fairer and saves time for HR managers to do strategic tasks rather than mundane and repetitive works but involves the privacy of candidate information and loss of human interaction. Secondly, online courses and virtual trainings are not individualized and may not be reliable sometimes. In addition, a technology-based appraisal system makes it easier to monitor employees' performance but might make them feel untrusted and lose psychological safety. Finally, internal communication applications allow information to flow smoothly, contributing to democratic management and better decision-making, which might cause information leakage and hierarchical disorderliness.

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