

Chapter 20

Fourth Industrial Revolution: A Way Forward to Technological Revolution, Disruptive Innovation, and Their Effects on Employees

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ABSTRACT

The Fourth Industrial Revolution is being implemented as technological revolution in every field of life. FIR has not only impacted the employees' behavior, well-being, and future of work but also brought a disruptive innovation everywhere. This chapter is beneficial for the reason that Fourth Industrial Revolution has affected the behavior of employees tremendously. With many opportunities from the fourth industrial revolution, rapid change, and excessive use of technology has stressed the employees. Digital transformation or era of digitalization has changed the future of work by automating the work performed by the human resource manually in the past. Automation of work is decreasing the labor requirement. Pressure of being unemployed and new skills learning after new technological change made employees' toxic. Fear of being unemployed and stress of earning new technologies has decreased the well-being of employees. This Fourth Industrial Revolution also has positive impact on the work and family life satisfaction by providing them the opportunities of remote and gig working.

DOI: 10.4018/978-1-7998-3347-5.ch020

INTRODUCTION

The pace of the advancement is very high, and the world is changing very quickly. It can also be said that the concept of humanity has also changed, after the technological advancement, what it means to be human. This technological advancement or it also called the technological revolution is mostly driven by technological change and by artificial intelligence (Chapra, Khan, & Al Shaikh-Ali, 2008). Artificial intelligence is advancing and making the processes and skills automated in almost every industry today. If we talk about the revolution and artificial intelligence, it is replacing century-old paradigms of all processes. For example, in the field of neurotechnology, the strides are being used to control the brain as the last frontier of human biology (Barroso, Gharachorloo, & Bugnion, 1998). Quality of life also improving, artificial intelligence is performing its role to improve the products' quality and make them purposeful. Similarly, the internet is connecting the people from far off places and it has made the world a global village. Due to changes in technology, there is a huge change is expected in the requirement of human resources. Atomization is decreasing labor work (Buccieri, Javalgi, & Cavusgil, 2020).

The other technologies rather than artificial intelligence such as blockchain (a reorganized, dispersed ledger technology that registers the provenance of the digital asset) and smart materials are redefining and blurring the boundary between the digital and physical worlds. The result of this is a big change in every aspect of life (Gong, Palmer, Gallacher, Marsden, & Fone, 2016). Our way of living, rules, norms, ethics, and economic life have affected. The industrial revolution which is due to automation and artificial intelligence has changed the lifestyle completely. Way of working and relating to others have also been modernized. This revolution is the new contribution to the first, second, and third industrial revolution. This development is considered as the development of the physical, biological, and digital advancement altogether (W. U. Hameed, Nisar, Abbas, Waqas, & Meo, 2019). This revolution is forcing the organizations and countries to think in a new way to develop and to be competitive in the market. This industrial revolution is a journey that has been started from 1760 till now. Below given table shows the main characteristics of the industrial revolution from 1760 to the present.

Table 1. Characteristics of the Industrial Revolution

Period	Transition Period	Energy Sources	Main Achievement	Main Industries	Transport Means
I: 1760-1900 II: 1900-1960 III: 1960-2000 IV: 2000-Continue	1860-1900 1940-1960 1980-2000 2000-2020	Coal Electricity, Oil Nuclear Energy Natural Gas Green and hybrid engines	Steam engine Internal combustion Engine Computers, Robots Internet, 3D printing, Genetic engineering	Textile, Steel Metallurgy, Auto, Machine Building Auto, Chemistry Heavy industries	Train Train, Car Car, Plane Flying cars, Ultra-fast train

This revolution first time implemented the technology in the field of industry. The second industrial revolution was based on the use of science for production. Manufacturing started on a large scale; consumption was increased by increasing the supply. The way of living started improving and the income level of the people also increased. The Fourth Industrial Revolution introduced a series of social, political, cultural, and economic upheavals that will unfold in the 21st century. This change is the result of the third revolu-

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