Chapter 6
Two Sides of the Medallion in the Global Workforce as the Metaverse Evolves:
New Job Opportunities and Technological Unemployment

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ABSTRACT

The most recent societal phase reached by humanity is the information society. Both the industrial and information societies have witnessed groundbreaking technological developments, which, in turn, have significantly impacted the labor market and employment. This study delves into the transformations within the information society, categorizing them as Web 1.0, Web 2.0, and Web 3.0, based on network technology. The Metaverse, constructed upon Web 3.0 technology, is anticipated to play a crucial role in the future of human life, ultimately affecting the labor market and employment. This study explores these potential impacts and classifies labor groups operating on Metaverse platforms as users, developers, supporters, and security providers. It is evident that the potential for effects resulting in reduced employment and increased unemployment is considerable. Consequently, it is emphasized that governments on a global scale should adopt proactive policies to address workforce training and employment conditions.

INTRODUCTION

When analyzing the history of humanity, it is clear that the social structure is in a constant state of flux. Throughout this process, humanity has progressed through different stages of development from a primi-

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tive society to an agricultural society, from an agricultural society to an industrial society and from an industrial society to a knowledge society. The groundbreaking technological changes that have occured within these social structures have continuously influenced economic variables such as production, consumption and employment. For instance, the transition from steam-powered machines to electric machines in the industrial society significantly altered the prodcution process and its subsequent effects. This is just one example of the profound impact technological advancements can have on societal structures.

The knowledge society, the most recent societal structure that humanity has reached, can also be considered in the context of breakthrough technologies. The technology we're focusing on here is network technology with Web 1.0, Web 2.0, Web 3.0 technologies being the groundbreaking technologies. Web 1.0 offered an internet service with low bandwidth, read-only access to information and no interaction. In contrast, Web 2.0, is a technology that facilitates interaction between content producers and users, with social media platforms allowing users to contribute to the content. Web 3.0 technology is the third generation of internet services, which is developed with artificial intelligence, and evolves with machine learning methods. It is decentralised and safeguards user privacy by using blockchain and edge computing technologies (Treleaven et al. 2022).

The invention of the computer, followed by the internet, and the development of robots and artificial intelligence-based software, including cognitive computing, big data analysis, and the Internet of Things, has greatly accelerated the automation of economic activities. Consequently, the foundation of this economic structure now relies heavily on the extensive automation and robotization of both industrial production and services (Konkolewsky, 2017). However, the concept of robotization has evolved significantly. Previously robotisation was considered as a programmable machine capable of only performing repetitive tasks. Today, it has evolved into tangible or virtual systems that also perform non-routine manual and cognitive tasks (Degryse, 2017). Nahavandi (2019) predicts that in the near future, a new generation of robots, known as 'cobots', will emerge. These cobots possess the ability to understand what to do and learn quickly. Naturally, these transformations in the production process have had a substantial impact on employment.

In the transition to the knowledge society, the use of automation and robot technology, which first emerged in mechanical tasks, replaced by physical labor. Over time, the evolution of information and communication technologies has also replaced mental labour. The use of artificial intelligence has further intensified and expanded this process. While technological advancements and artificial intelligence have indeed displaced numerous traditional professions and reduced employment, they have also given rise to new professions and areas of employment. This dynamic has raised concerns about the potentially greater impact of technological changes on unemployment. It's important to note that, historically, these concerns have largely proven to be unfounded. While the new economic structure, driven by evolving technology, initially creates technological and structural unemployment issues, it has historically led societies to greater prosperity and eventually resolved unemployment problems. However, this may not be the case. During the transition from an agricultural economy to an industrial one, many agricultural workers initially faced unemployment, but over time, they acquired new skills and transformed into factory workers. In other words, blue-collar industrial workers replaced agricultural workers. A similar transition occurred when moving from an industrial society to a knowledge society, with knowledge workers replacing blue-collar industrial workers. Throughout these transitions, individuals who were unable to adapt to the new technological order and failed to upskill themselves experienced unemployment. However, the number and percentage of unemployed individuals decreased over time thanks to government-sponsored training programs.