Chapter 26
Artificial Intelligence Applications in Accounting and Financial Reporting Systems: An International Perspective

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ABSTRACT

In light of globalization and the competitive economy, it became necessary for investors being ready to evaluate the accounting data necessary to make economic decisions that contribute to the development of their businesses. Nevertheless, many consumers of accounting information are still unable to make effective use of the accounting data presented in the financial statements. The chapter will therefore discuss innovative ideas that can allow investors and other stakeholders to understand and use accounting data in the light of best AI applications. It provides an overview of the impact of artificial intelligence on accounting and reporting practices. The chapter also discusses the latest developments in the field of artificial intelligence (AI) technology and their implementation in the context of global accounting practices, including accounting systems, financial reporting systems, and auditing.

INTRODUCTION

Due to the rapid growth of artificial intelligence technology and its widespread implementation in various fields, the trend of human work replaced by robots is growing (Anderson, Rainie, & Luchsinger, 2018). The contribution of artificial intelligence in the field of accounting will inevitably affect the traditional method of development and bring innovation in the field of accounting. Faced with the transformation and development of the accounting field, traditional accounting work is characterized by repetitive and cumbersome characteristics (Almagtome, Shaker, Al-Fatlawi, & Bekheet, 2019). The application of artificial intelligence can solve the points of inefficiency and low added value in the field of accounting, making accountants turn to a more creative business and achieve greater value for the company. In the

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short term, the application of artificial intelligence to the accounting field will enhance the development, innovation and enhancement of the competitiveness of enterprises, which are of great importance (Luo, Meng, & Cai, 2018). However, many of them are still unable to make proper use of the accounting data generated in the financial statements (Khanom, 2017). Although several developments have been made in accounting research on artificial intelligence, the main question posed by Gray et al. (2014) is that AIS researchers have or will abandon artificial intelligence work. Given what is happening in the field of artificial intelligence and the recent positions taken by the accounting profession, it is somewhat disconcerting at this point in time to think about dumping artificial intelligence research into accounting. AIS researchers will miss a great opportunity to provide guidance in emerging technology that the field is still unfit for discussing and using (Sutton, Holt, & Arnold, 2016). This chapter offers an overview of the impact of artificial intelligence on accounting and reporting procedures globally. It also describes the latest developments in artificial intelligence (AI) technologies and their applications in the context of global accounting practices, including financial reporting, auditing and assurance. The debate will cover the primary problems of the AI implementation in the accounting field as well as the present accounting and reporting problems for which current innovations in AI should be used, such as real-time reporting, cloud accounting, etc. Finally, the chapter will discuss some of the potential barriers to the use of artificial intelligence in accounting and reporting systems and discuss the potential consequences for future studies.

ARTIFICIAL INTELLIGENCE AND ACCOUNTING SYSTEMS

Artificial Intelligence is a new field of research with interdisciplinary interest and practical relevance (Dwivedi et al., 2019). People with diverse backgrounds and professional knowledge contribute to new ideas and offer new tools in this discipline. Cognitive psychologists have developed new models of the mind based on basic concepts of artificial intelligence, symbol systems, and information processing (Haugeland, 1997). Linguists are also concerned with these basic concepts while developing various models in computational linguistics. Philosophers, when looking at the progress made, and the problems and potentials of this work towards inhuman intelligence, have sometimes found a solution to the ancient problems of the nature of reason and knowledge (Khaghaany, Kbelah, & Almagtome, 2019). However, we know that artificial intelligence is part of computer science in which smart systems are designed that show the characteristics that we link to intelligence in human behavior, understanding language learning, thinking, problem solving, etc. It is believed that ideas about the nature of the mind can be gained by studying the operation of such systems. Artificial intelligence researchers have created dozens of programming techniques that support some kind of smart behavior. At the end of the twentieth century, human creativity in the field of information technology emerged, which went beyond becoming a necessity of administrative life to accomplish the tasks and functions entrusted to it (Pal, 2008). Organizations have sought to computerize their departments to facilitate and accelerate the services provided, and the overall goal is to make the public knowledge base to facilitate decision-makers to obtain information quickly, on time and with minimal effort. The technology added a new management formula that allowed them to do better than before, leading them to take advantage of those scientific breakthroughs in modern technology that wanted to improve and improve their performance (Huesemann, 2006). This leads to an increase in the speed of completion and accuracy of transactions, the provision of customer service