

Chapter 7


Effect of Artificial Intelligence Awareness on Job Performance with Employee Experience as a Mediating Variable

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ABSTRACT

Organizations are not exempt from the fast change that artificial intelligence is bringing about in the workplace. Artificial intelligence is being utilized to streamline procedures, enhance decision-making, and automate operations. However, there is a lack of research on the effect of artificial intelligence on job performance. To address this gap, this chapter investigates the impact of artificial intelligence on job performance with experience as a mediating variable on Tunisian employees. One hundred twenty-one online questionnaires were distributed to Tunisian service sector employees in order to answer the main question. Explanatory factor analysis, confirmatory factor analysis, and path analysis were carried out using IBMSPSS.26 and IBMSPSS AMOS.24, respectively. The findings showed that experience influences positively job performance. Nevertheless, the authors found the absence of the link between the experience and the artificial intelligence. Furthermore, there is no relationship between job performance and artificial intelligence awareness.

1. INTRODUCTION

“The development of full artificial intelligence could spell the end of the human race”. Stephen Hawking (Cellan-Jones, 2014)

The term “*artificial intelligence*” (AI) was first introduced by a group of scientists (i.e., John McCarthy, Marvin Minsky, Herbert Simon, Allen Newell, and Claude E. Shannon) who conducted a summer research project on AI at Dartmouth College in 1956 (Crevier, 1993; Pan, 2016). Artificial intelligence is the capacity of a system to interpret and learn from data in order to fulfill specific tasks and goals

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(Kaplan and Haenlein, 2019; Zouari et al., 2018). In fact, the central idea of AI is to build computers that can think and react like humans (Malik et al., 2020b, Marr, 2018). In fact, AI has the ability to automate jobs now performed by people or reduce cognitive effort in a variety of sectors worldwide (Sofia et al., 2023; Zouari et al., 2018). Among these sectors, we cite healthcare (Buhalis & Leung, 2018), banking (Abusalma, 2021), tourism (García-Madurga & Grilló-Méndez, 2023), education (Li & Gu, 2023), transportation (Lee, 2023), etc. The effects of AI on a range of issues, including job performance, employment, economic growth, and social progress, have been and continue to be the subject of various studies (Zouari et al., 2018). For instance, robotics will replace one-third of today's bachelor's degree-requiring occupations by 2030 (Stone et al., 2022). However, these effects will differ depending on the sector, employees' types, race, education level, gender, occupation, and skill level (Nazareno & Schiff 2021).

Artificial intelligence is upending how we think about employment, employees, and the workplace (Malik et al., 2020a, 2022b; Reinhard et al., 2016; Zel & Kongar, 2020). For instance, Zehir et al. (2020) concluded that employees work in a complicated, risky, and uncertain environment due to the widespread implementation of organizational AI. The impact of AI on job performance is a hotly contested issue, as it is quickly transforming the workplace. On the one hand, AI may lead to significant job loss (i.e., it replaces human capital in adaptive tasks, contextual performance, and organizational performance) (Abusalma, 2021; Agrawal et al., 2019; Edwards et al., 2000; Larivière et al., 2017). In this context, Huang and Rust (2018) claimed that while AI is a significant source of innovation, it also allegedly puts human jobs at risk. In fact, the impact of AI on employment is all-encompassing and severe, and some industries might even change, leading to a significant unemployment problem (Chen & Xu, 2018). Indeed, AI could increase the wage gap between both high- and low-skilled workers while reducing the demand for low-skilled workers (Huang, 2021; Shuqin et al., 2021; Xie et al., 2020). On the other hand, other papers (Abusalma, 2021; Jia et al., 2023; Larivière et al., 2017; Prentice et al., 2023; Wilson & Daugherty, 2018; Wijayati et al., 2022) concluded that AI could dramatically improve job performance. More specifically, AI has the potential to offer many opportunities for managers and organizations to improve organizational effectiveness (Colbert et al., 2016). The development and deployment of numerous AI systems across IBM's global operations has reduced human resource spending alone by \$107 million (Guenole & Feinzig, 2018). In the same vein, Wilson and Daugherty (2018) confirmed that all facets of the economy are being changed by AI, but there is no cause for concern that humans will be completely replaced by machines. Their study, which involved 1,500 businesses across a variety of industries, demonstrated that collaboration between intelligent technology and people results in the greatest performance gains. Jia et al. (2023) ascertained that AI helps essentially higher-skilled human workers become more creative.

However, despite considerable interest in the general concept of AI and its potential, whether positive or negative, the impact of AI on job performance is still difficult to find in the body of existing research. More precisely, vast research endeavors have been carried out to study the effects of AI in a wide range of areas (decision-making, job performance, productivity, innovations, customer services, education, etc.); nevertheless, to our knowledge, this is the first research dealing with the study of the impact of AI on job performance with job experience as a mediating variable of the AI-Job performance relationship in the Tunisian context.

The rest of our chapter is structured as follows: Section 2 provides an overview of the literature on the topics of employee experience, artificial intelligence, and job performance. Section 3 describes the research methodology. Section 4 presents and discusses our results. Section 5 brings the paper to a conclusion.

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