



USING ARTIFICIAL INTELLIGENCE TECHNIQUES TO ANALYZE BIG DATA IN MANAGEMENT AND ITS IMPACT ON IMPROVING ADMINISTRATIVE PROCESSES AND SERVICE DELIVERY IN THE PRIVATE SECTOR, WITH SABIC AS A MODEL

Fawaz Al-Mutairi¹

College of Business Administration
Majmaah University, AL-Majmaah 11952
Saudi Arabia

Abdullah Ali Alsadoun^{2*}

Department of Management of Information System
College of Business Administration, Majmaah University, AL-Majmaah 11952
Saudi Arabia
a.alsadoun@mu.edu.sa

*Corresponding Author email: a.alsadoun@mu.edu.sa

Submitted: 07 June 2025

Revised: 31 August 2025

Accepted: 10 September 2025

Peer-review under responsibility of 9th ASIA International Multidisciplinary Conference (Songkhla, Thailand) Scientific Committee

<http://connectingasia.org/scientific-committee/>

© 2025 Published by Readers Insight Publisher,

Office # 6, First Floor, A & K Plaza, Near D Watson, F-10 Markaz, Islamabad. Pakistan,

editor@readersinsight.net

This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).



ABSTRACT

The current study aims to reveal the impact of using artificial intelligence techniques to analyze big data in management, and its impact on improving administrative processes and providing services in private sector companies, SABIC as a model, from the point of view of SABIC employees and affiliates, and to measure the statistically significant differences between the responses of the study sample attributed to the gender variable (men and women), using the descriptive survey approach, and the questionnaire as a tool for collecting data from a sample of (50) company employees, divided as follows: (30) men, and (20) women, who were selected using the available sample method. The results of the study concluded that the overall degree of the impact of using artificial intelligence techniques to analyze big data in management, and the impact on improving administrative processes and providing services at SABIC, from the point of view of the respondents (company employees) came to a large degree, and the study showed that there were no statistically significant differences at the level (0.05) for the trends of the study sample towards the impact of using artificial intelligence techniques to analyze big data in management, and its impact on improving administrative processes and providing services in the company, according to the gender variable (men - women), and the presence of significant differences Statistic at level (0.05) for trends in the impact of using artificial intelligence techniques to analyze big data in management, and its impact on improving administrative processes in the company, according to the gender variable (men - women), where the significance level for the t value was less than (0.05), and the differences were in favor of (women), and there were statistically significant differences at level (0.05) for trends in the impact of using artificial intelligence techniques to analyze big data in management, and its impact on improving administrative processes and providing services in the company, according to the gender variable (men - women), where the significance level for the t value was less than (0.05), and the differences were in favor of (women), and the study recommended spreading the culture of artificial intelligence in administrative work, as well as relying on it in attracting administrative competencies at SABIC, encouraging employees in departments to use artificial intelligence techniques by holding training and awareness courses on the necessity of using these techniques, conducting more studies on the use of artificial intelligence techniques and their role in raising the efficiency of administrative work in departments, especially in the private sector.

Keywords: *Artificial Intelligence (AI); Administrative Processes; Human Resources; SABIC*