

## Artificial Intelligence and Big Data: Exploring the Sectoral Impacts of the Economy

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**Abstract :** Objective: This study aims to explore the impact of Artificial Intelligence (AI) and Big Data on various economic sectors, more specifically on financial services, manufacturing industry and labour market. The purpose is to launch a discussion on how this symbiotic relationship is sculpting the economic development. Methods: This study adopts a documentary and qualitative research methodology by creating a compilation of articles using an advanced keyword search on scientific platforms accessible via the digital resources of Hassan II University in Casablanca. Other sources such as Forbes Magazine and AI Index report published in 2024 were also used and allowed us to access graphs that include data such as AI-related job creation, the growth of industrial robots, corporate investment in AI. Results: The research enabled a comprehensive overview of the fundamentals and concepts related to AI and Big Data, as well as their historical development and various economic applications. It also outlines key trends and insights, highlighting the opportunities, challenges and limitations associated with these technologies. The results show a significant impact of AI and Big Data on the economic growth of studied sectors as well as some specific challenges and concerns to which greater attention and focus needs to be accorded, notably ethical ones. Conclusion: Artificial Intelligence and Big Data work perfectly together for a data-driven economy. As these two technologies develop, their integration on different sectors brings advancements in innovation, efficiency and decision making. Nevertheless, ethical and societal repercussions must be considered. Indeed, to realize the real potential of artificial intelligence and big data for economic development, it is essential to strike a balance between technological development and ethical governance.

**Keywords :** big data, analytics, development, growth, innovation, technology, decision making

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