The Potential of Artificial Intelligence to Boost Business Efficiency and Supply Chain Management

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Abstract:

Artificial Intelligence (AI) is transforming supply chain management and corporate operations by improving decision-making, cutting costs, and increasing efficiency. This study examines how AI can revolutionize supply chain operations by increasing demand and predicting and improving inventory control. Businesses are able to reduce inefficiencies, reduce risks, and increase overall productivity thanks to AI-driven automation, predictive analytics, and real-time data processing. The study highlights key AI technologies, including machine learning, natural language processing, and robotic process automation, which are reshaping logistics, procurement, and distribution networks. AI-powered solutions enable organizations to make data-driven decisions, enhance supplier collaboration, and improve customer satisfaction. Additionally, AI facilitates real-time monitoring of supply chains, providing actionable insights that help businesses proactively address disruptions and optimize resource allocation. This study also looks at how AI may promote sustainability by lowering waste, increasing energy efficiency, and assisting with ethical sourcing methods. Although AI has many advantages, there are drawbacks to its application, including worries about data security high upfront investment costs and the requirement for qualified experts. Strategic integration, ongoing innovation, and devotion to moral principles are necessary to meet these difficulties. This study offers insights into the emerging importance of artificial intelligence (AI) in improving supply chain resilience and business efficiency through a thorough assessment of the body of existing literature and case studies. The results highlight how important it is for businesses to adopt AI-driven tactics to keep a competitive advantage in a market that is becoming more digitalized and dynamic. Future studies should concentrate on removing obstacles to implementation and investigating cutting-edge AI uses that have the potential to completely transform supply chain management.

Keywords:

Supply chain management, automation, digital transformation, machine learning, artificial intelligence, business efficiency, inventory optimization, logistics, predictive analytics, and real-time data processing.