

Chapter 7

Employing AI in the Sustainability of Smart Commerce and Supply Chain

Esmael Najafi

Islamic Azad University of Science and Research, Tehran, Iran

Iman Atighi

Department of Industrial Engineering, Islamic Azad University, Kish, Iran

ABSTRACT

Artificial intelligence and machine learning are overcoming more businesses and distinctive angles of our lives daily. Of course, the coordination industry isn't absolved from this. Manufactured insights and machine learning within the coordination industry can play a vast and successful part in the field of the supply chain. By utilizing this innovation, forms can be optimized, botches made by people can be maintained a strategic distance from, and future openings and challenges can be anticipated. In this manner, business productivity and success will be given. In this chapter, subtle elements are mentioned about the benefits of utilizing and executing manufactured intelligence technology within the supply chain, and by perusing these things, you may get the significance of how counterfeit intelligence and machine learning calculations can offer assistance in creating your commerce.

DOI: 10.4018/979-8-3693-0159-3.ch007

INTRODUCTION

Artificial intelligence (AI) can potentially convert numerous perspectives of trade operations. This innovation can be utilized in different areas such as information examination and request determining, progressing coordinations and transportation courses, and identifying wasteful focuses within the supply chain. This eventually led to strides in responsiveness to request changes, decreased conveyance times, and lower costs.

Supply chain management is critical as one of the main success factors in businesses that produce goods and services. According to the ever-increasing developments in technology and information, using artificial intelligence as one of the supply chain management solutions is required (Fallah et al., 2021). Artificial intelligence is a concept in which computers and systems are able to perform tasks that are. They usually seem complicated for humans. In the supply chain provision field, using artificial intelligence improves the performance and efficiency of existing processes (Gallo et al., 2023).

Artificial intelligence (AI) can potentially convert numerous viewpoints of business operations. This innovation can be utilized in different areas such as information examination and request determining, making strides in coordination and transportation courses, and identifying wasteful focuses within the supply chain. It eventually leads to moving forward responsiveness to request changes, diminished conveyance times, and lower costs (Kamran et al., 2023).

The use of artificial intelligence in supply chain management can help reduce costs related to returns and after-sales services. By using intelligent algorithms in producing goods and products, it is possible to obtain detailed information about the quality and characteristics of the products and to take measures to increase the quality and reduce the failure rate of the products. Also, by using artificial intelligence, it is possible to analyze customers' buying patterns and demand better and identify the problems that may cause the return of goods (Kazancoglu et al., 2023). By improving quality control and inspection processes, shipments that have caused product returns can be avoided. Also, by improving the methods of after-sales service and communication with customers, it is possible to manage customer needs better and avoid sending inappropriate goods. Therefore, using artificial intelligence in supply chain management can help reduce the costs related to the payment of returns and after-sales services, improve the quality of goods and products, increase customer satisfaction, and improve their shopping experience (Liu, 2023).

Using customer data makes it possible to achieve a more accurate prediction of customer needs and improve sales accordingly. For example, by analyzing customer purchase data, it is possible to achieve a more accurate prediction of their needs and individual tastes and offer them related products. Also, by using purchase data, it

9 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/employing-ai-in-the-sustainability-of-smart-commerce-and-supply-chain/334825

Related Content

Pricing and Hedging of Weather and Freight Derivatives: Analysis of the Post-Pandemic Situation

Satya Venkata Sekhar (2022). *Handbook of Research on Supply Chain Resiliency, Efficiency, and Visibility in the Post-Pandemic Era* (pp. 488-504).

www.irma-international.org/chapter/pricing-and-hedging-of-weather-and-freight-derivatives/302704

Sustainable Supply Chain Approach for Farm Produce through Hub Chain Model

Noor Fzlinda Fabeil, Khairul Hanim Pazim, Juliana Langgat, Roslinah Mahmud and Nusrah Samat (2023). *Handbook of Research on Designing Sustainable Supply Chains to Achieve a Circular Economy* (pp. 332-349).

www.irma-international.org/chapter/sustainable-supply-chain-approach-for-farm-produce-through-hub-chain-model/322251

Pricing Decisions and Provider Choice on Extended Warranty Service in Supply Chain

Rong Zhang, Mengjiao Li and Bin Liu (2019). *International Journal of Information Systems and Supply Chain Management* (pp. 55-71).

www.irma-international.org/article/pricing-decisions-and-provider-choice-on-extended-warranty-service-in-supply-chain/234463

Towards a Sustainable Supply Chain Management: Strategies and Challenges in the Era of Industry 4.0

Roxana Jiménez-Sánchez, María E. Raygoza-L, J. Heriberto Orduño-Osuna, Guillermo M. Limón-Molina and Fabian N. Murrieta-Rico (2024). *Strategies for Environmentally Responsible Supply Chain and Production Management* (pp. 57-73).

www.irma-international.org/chapter/towards-a-sustainable-supply-chain-management/341516

Implementing E-Procurement in Public Healthcare: The Knowledge Management Issue

Andrea Resca and Tommaso Federici (2013). *Supply Chain Management: Concepts, Methodologies, Tools, and Applications* (pp. 984-1001).

www.irma-international.org/chapter/implementing-procurement-public-healthcare/73381