

# Supply Chain Management

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## Automation in Inventory Management and Its Impact on Supply chain risk management in Manufacturing firms



By

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# **Automation in Inventory Management and Its Impact on supply chain risk Management in manufacturing firms**

## **Abstract**

Inventory management is the important task of manufacturing firms. This research investigates the effect of automation in inventory management systems on supply chain risk management in manufacturing firms. Supply chain risks are considered to be major hurdle in successful accomplishment of today's supply chain management processes. This study examines how automated inventory management systems contributes towards the successful accomplishment of supply chain management processes through reduction of negative effects of external and internal supply chain risks. Companies are focusing on emerging technologies for gaining competitive advantage in their supply chain management. The study consider different technology based inventory management systems which includes Radiofrequency Identification (RFID), Material Requirements Planning (MRP), Electronic Data Interchange (EDI), Enterprise Resource Planning (ERP) and Vendor Managed Inventory (VMI) along with moderating role of Employee training and development for reducing supply chain risks. Two processes which includes Strategic Employee Training and Development process and Risk management process are applied for supply chain risk management. Research methodology includes research onion process and research design. Questionnaire technique is used for data collection from a sample size of 400 respondents from different manufacturing firms who adopted automated inventory management systems for inventory management. Different statistical tests are applied such as descriptive statistics, correlation, Exploratory factor Analysis(EFA), Confirmatory Factor Analysis (CFA) for determination of factors contributing towards measurement model, Cronbach's alpha for reliability analysis, regression analysis, multicollinearity test and Preacher and Hayes PROCESS model 1(2007). Results revealed that automated inventory management systems play a significant role in supply chain risk management in manufacturing firms.

## **Key words**

Automated inventory management systems, Inventory management, supply chain risks, Strategic Employee Training and Development and Risk Management Process.

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## **DEDICATION**

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