

ABSTRACT

This study aims to explore the role of digital connectivity in enhancing the supply chain cluster capability at PT XYZ, a multinational company newly operating in Indonesia. Using a case study approach and in-depth interviews with four key informants, the research analyzes how digital connectivity supports operational efficiency, inter-partner collaboration, and strategic decision-making. The findings are reinforced through triangulation with recent academic literature to provide a comprehensive analysis.

The key findings reveal that digital connectivity serves as a critical foundation for real-time data integration, accelerating decision-making processes, reducing lead time, and supporting operational cost efficiency. Enterprise Resource Program (ERP) systems, such as JD Edwards, are utilized as the primary technology, with supporting platforms like Microsoft Teams and SharePoint facilitating additional communication. However, the study finds that the current system remains semi-automated, highlighting the urgent need for full integration across clusters.

The study further identifies that inter-partner collaboration can be significantly improved through cloud data sharing, enabling real-time information exchange and preventing production redundancies among clusters. Nevertheless, implementation challenges, such as differences in systems, inadequate IT infrastructure, and cultural resistance to digitalization, remain major obstacles. These challenges underline the necessity of system standardization and infrastructure investment to support more effective digital connectivity.

As a future strategy, the study recommends adopting advanced technologies such as AI, IoT, and Big Data to support comprehensive digitalization and enhance supply chain cluster capabilities. Additionally, developing human resources through regular training is a critical priority to ensure the success of digital transformation. Full support from top management is also essential to drive collective commitment across all clusters.

This study contributes both practically and theoretically to the development of supply chain cluster capabilities through the implementation of digital connectivity. The findings are relevant not only to PT XYZ but also to other multinational companies seeking to optimize supply chain operations amid global challenges. Future research is suggested to further explore the impact of advanced technologies on the sustainability aspects of supply chain operations.

Keywords: Digital Connectivity, Cluster Supply Chain, Operational Efficiency.