

ABSTRACT

This study examines the impact of digital transformation on the development of logistics operations at PT Sindu Wahana Berkah (SWB), a third-party logistics provider in Indonesia. Motivated by the logistics sector's growing significance and the challenges faced by SMEs in adopting advanced digital solutions, the study evaluates how implementation level of transformation, necessary conditions to facilitate digital transformation, organizational needs, emerging trends, and barriers in digital transformation influence logistics operational development. It aims to address research gaps on the digitalization of logistics in smaller companies, as well as within similar organizational contexts.

The theoretical framework integrates operations management principles and digital transformation models, particularly building on Van Ha (2023) structure, which includes five independent variables: digital transformation level (LEVELDT), necessary conditions (NECESSITY), organizational needs (NEEDS), emerging digital trends (TRENDS), and barriers (BARRIERS) toward the dependent variable development of logistics operations (DEVELOPMENT). The framework is designed to test both the enabling and limiting factors in the successful implementation of digital tools and systems in logistics operations. Hypotheses were developed to assess the direct effects of these variables on logistics development.

A quantitative method using Structural Equation Modeling (SEM) via SmartPLS was conducted through survey from 100 PT Sindu Wahana Berkah employees. Data were collected through structured online questionnaires using a 5-point Likert scale. The analysis included validity and reliability testing, descriptive statistics, and inferential analysis to examine relationships between variables influencing logistics operations development.

The results indicate that all five independent variables significantly influence logistics development at PT Sindu Wahana Berkah. Emerging trends in digital transformation ($\beta = 0.275$) have the highest positive effect, followed by necessary conditions ($\beta = 0.274$), the level of digital transformation ($\beta = 0.272$), and

organizational needs ($\beta = 0.255$). Contrarily, barriers in digital transformation ($\beta = -0.148$) show a negative relationship. The structural model explains 77.2% of the variance in logistics operations development, which combined importance of organizational readiness, digital trends, and government support in enabling successful digital transformation.

It can be concluded that to effectively drive logistics development, companies must integrate emerging technologies with a strong digital culture, supported by regulatory clarity and technical investment. Practical recommendations include improving programs for employees, better coordination with government agencies, and outlining digital infrastructure implementation. Future research is encouraged to explore the scalability of these strategies similar to PT Sindu Wahana Berkah with different contexts, such as region, size, and sector.

Keywords: digital transformation, logistics development, necessary conditions, organizational needs, emerging trends, barriers