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EMERGING TECHNOLOGIES IN LAST-MILE LOGISTICS: BRIDGING THEORY AND PRACTICE IN DEVELOPING ECONOMIES

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Introdução

E-commerce growth has intensified last-mile delivery challenges in emerging markets, where inefficiencies and sustainability concerns persist despite technological advances. Emerging technologies promise operational optimization and customer experience enhancement, yet adoption remains fragmented. This study investigates how firms in emerging markets adopt these technologies within last-mile delivery, bridging theoretical perspectives with practical realities.

Problema de Pesquisa e Objetivo

Despite the potential of emerging technologies to enhance last-mile delivery, adoption in emerging markets remains slow and fragmented due to operational, financial, and cultural barriers. This study seeks to understand how perceptions, drivers, and challenges in adopting these technologies align with or diverge from academic perspectives, aiming to bridge theoretical insights with practical realities in last-mile delivery digitalization.

Fundamentação Teórica

This study employs the Dynamic Capabilities View to analyze technology adoption in last-mile delivery within emerging markets. The framework highlights how firms sense technological opportunities, seize them through resource mobilization, and reconfigure assets to address rapid market changes. It enables understanding of incremental digitalization and barriers faced by firms aiming to enhance efficiency and competitiveness through emerging technologies.

Metodologia

This study adopts a qualitative, exploratory approach using semi-structured interviews with mid- and senior-level executives in last-mile delivery across emerging markets. A purposive sampling strategy ensures participants possess relevant experience in technology adoption and operations. This method enables capturing practical insights and aligning them with the Dynamic Capabilities View to understand incremental digitalization within last-mile delivery.

Análise dos Resultados

Results reveal incremental adoption of emerging technologies in last-mile delivery, driven by cost reduction and efficiency, but limited by data integration, cultural barriers, and infrastructure gaps. Firms use dashboards and basic analytics, with limited advanced AI use. ESG efforts exist but face feasibility challenges. These findings align with the Dynamic Capabilities View, showing partial sensing, seizing, and reconfiguring in digitalization efforts within emerging markets.

Conclusão

This study concludes that while digitalization drives efficiency in last-mile delivery within emerging markets, adoption of emerging technologies remains partial due to financial, cultural, and infrastructural barriers. Firms prioritize operational gains, with limited strategic and ESG integration. By bridging theory and practice, the findings highlight the need for tailored strategies to advance scalable, technology-enabled competitiveness in last-mile delivery.

Contribuição / Impacto

This study provides empirical insights on how firms in emerging markets incrementally adopt emerging technologies in last-mile delivery, bridging theoretical perspectives with operational realities. It offers managers actionable benchmarks for digitalization and technology deployment to enhance efficiency and competitiveness. Societal contributions include potential CO_2 reduction and improved urban mobility, positioning digitalization as a lever for sustainable growth.

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