

Driving Global Competitiveness Through Digital Transformation: Insights from Sustainability-Focused IT Startups and SMEs in Tamil Nadu

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ABSTRACT

Digital transformation has emerged as a critical enabler of global competitiveness, particularly in the IT industry, where innovation and sustainability serve as key differentiators. This study investigates how IT startups and SMEs in Tamil Nadu are leveraging digital transformation tools such as AI, cloud computing, and blockchain to enhance their international market presence while adopting sustainability practices. The research draws on data collected from 40 IT startups and SMEs through a structured questionnaire designed to capture insights into digital maturity, sustainability initiatives, and their combined influence on global competitiveness. Statistical techniques were utilized to uncover patterns and relationships between these variables. The findings highlight that IT companies adopting advanced digital transformation technologies in tandem with sustainability practices achieve significant advantages in operational efficiency, cost optimization, and brand differentiation. Such firms demonstrate enhanced scalability, resilience, and market expansion capabilities, underscoring the importance of integrating sustainability into their digital transformation strategies. The research also identifies challenges such as the high cost of technology adoption, a lack of skilled talent, and gaps in policy support that hinder the widespread integration of sustainability and digital transformation. This study offers actionable insights for IT startups and SMEs aspiring to scale internationally while contributing to global sustainability goals. By aligning with UN SDGs, particularly SDG 9 and 17, the findings emphasize the dual role of digital transformation and sustainability in fostering long-term global competitiveness. These insights are expected to benefit both practitioners and policymakers, offering a pathway to sustainable growth in a rapidly evolving technological landscape.

Keywords: Digital Transformation, Sustainability Initiatives, Global Competitiveness, Start-ups, SDGs

