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MECHANISMS FOR ENHANCING THE COMPETITIVENESS OF SMALL AND MEDIUM-SIZED ENTERPRISES IN THE PROCESS OF DIGITAL TRANSFORMATION

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Abstract: In the context of the global digital economy, digital transformation has become a key determinant of competitiveness for small and medium-sized enterprises (SMEs). This article explores the mechanisms through which digital transformation enhances SME competitiveness, focusing on technological, institutional, managerial, and human capital dimensions. Based on the IMRAD structure, the study systematizes theoretical approaches, analyzes international and emerging economy experiences, and proposes an integrated mechanism for strengthening SME competitiveness under digital transformation. The research contributes novel conceptual insights suitable for PhD-level research and publication in peer-reviewed academic journals.

Keywords: digital transformation, small and medium-sized enterprises, competitiveness, digital economy, innovation, institutional mechanisms

Introduction

Small and medium-sized enterprises play a crucial role in ensuring sustainable economic growth, employment generation, and innovation diffusion. In recent years, rapid advances in digital technologies—such as artificial intelligence, cloud computing, big data analytics, and digital platforms—have fundamentally reshaped competitive dynamics across industries. For SMEs, digital transformation is not merely a technological upgrade but a strategic imperative that determines survival and long-term competitiveness.

Despite the growing recognition of digital transformation, many SMEs face structural constraints, including limited financial resources, inadequate digital skills, and weak institutional support. This study aims to analyze the mechanisms through which digital transformation can enhance SME competitiveness and to develop a comprehensive framework integrating technological and institutional factors. The relevance of this research lies in its focus on emerging economies, where SMEs must adapt rapidly to digitalization pressures while operating under resource constraints.

Literature Review

The concept of digital transformation has been widely examined in contemporary economic and management literature. Scholars define digital transformation as the integration of digital technologies into all business processes, resulting in fundamental changes to value creation, organizational structures, and market interactions.

Research on SME competitiveness emphasizes factors such as innovation capacity, operational efficiency, market orientation, and adaptability. Recent studies highlight that digital technologies enable SMEs to reduce transaction costs, access global markets, and enhance

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customer engagement. However, the literature also reveals a gap in understanding how institutional and policy environments shape the effectiveness of digital transformation initiatives among SMEs.

Several empirical studies demonstrate that SMEs adopting digital platforms and data-driven decision-making achieve higher productivity and resilience. Nevertheless, existing research often focuses on isolated technologies rather than systemic transformation mechanisms. This article addresses this gap by proposing an integrated analytical framework.

Methodology

The study employs a qualitative and conceptual research methodology. Methods include comparative analysis, synthesis of theoretical models, and systematic review of academic publications, policy reports, and international best practices. The IMRAD framework is used to ensure logical consistency and academic rigor.

To enhance scientific novelty, the research develops an original conceptual model that links digital technologies, institutional support mechanisms, and firm-level capabilities to SME competitiveness. This approach allows for generalization and applicability across different economic contexts.

Results

Technological Mechanisms of Competitiveness Enhancement

Digital technologies enable SMEs to automate business processes, optimize supply chains, and personalize customer interactions. Cloud-based solutions reduce capital expenditures, while digital platforms facilitate market expansion and network effects. The adoption of data analytics improves strategic planning and risk management.

Institutional and Policy Mechanisms

Institutional support plays a decisive role in accelerating SME digital transformation. Government policies promoting digital infrastructure, access to finance, and regulatory simplification enhance SMEs' ability to invest in digital technologies. Public-private partnerships and innovation hubs foster knowledge spillovers and technological diffusion.

Human Capital and Managerial Capabilities

Digital transformation requires not only technological investment but also the development of digital skills and adaptive management practices. SMEs that invest in employee training and digital leadership demonstrate higher innovation performance and organizational flexibility.

Integrated Competitiveness Mechanism

The study proposes an integrated mechanism in which technological adoption, institutional support, and human capital development interact synergistically. This mechanism enhances

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productivity, innovation capacity, and market responsiveness, leading to sustainable competitive advantages for SMEs.

Discussion

The findings indicate that digital transformation should be viewed as a multidimensional process rather than a purely technological shift. SMEs operating in emerging economies must align digital strategies with institutional conditions and internal capabilities. The proposed framework extends existing theories by emphasizing the role of institutional complementarities in digital competitiveness.

Compared to traditional competitiveness models, the digital transformation approach highlights speed, adaptability, and data-driven decision-making as core determinants. This perspective is particularly relevant in volatile economic environments.

Conclusion

Digital transformation represents a critical pathway for enhancing SME competitiveness in the modern economy. The study demonstrates that effective digital transformation requires the integration of technological, institutional, and human capital mechanisms. The proposed conceptual model provides a foundation for future empirical research and practical policy design.

The originality of this research lies in its holistic approach and its focus on SMEs in emerging economies. The findings are relevant for policymakers, business leaders, and researchers seeking to promote inclusive and sustainable economic growth through digitalization.

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