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DIGITAL TRANSFORMATION OF ENTREPRENEURIAL STRUCTURES IN TURBULENT BUSINESS ENVIRONMENT

Yevheniia Zaslavska
[1]Simon Kuznets Kharkiv National University of Economics,
Nauky ave, 9a, Kharkiv, Ukraine
e-mail: yevheniya.zaslavskaya@gmail.com
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Abstract

In the face of economic disruptions, global crises, and unpredictable market shifts, entrepreneurial structures must rapidly adapt to ensure sustainability and growth. Digital transformation is a key strategy in achieving this adaptability. This paper explores how emerging technologies, such as Artificial Intelligence (AI), blockchain, and cloud computing, are reshaping the entrepreneurial landscape and enabling businesses to survive and thrive in an increasingly turbulent business environment. It examines the role of digital tools in enhancing operational efficiency, decision-making, and customer experience, highlighting the critical importance of digital transformation in improving resilience, fostering innovation, and helping businesses navigate the complexities of a volatile world. Key challenges in implementing these technologies, including high costs, organizational resistance, and cybersecurity risks, are also brought into focus, along with actions to overcome them.

Keywords: Digital Transformation, Entrepreneurial Structures, AI, Turbulent Business Environment, Emerging Technologies

1 Introduction

The modern business landscape is characterized by volatility, uncertainty, complexity, and ambiguity (VUCA) [1]. To navigate this environment, entrepreneurial structures are increasingly turning to digital transformation to stay competitive. It involves the integration of advanced technologies to streamline operations, enhance decision-making processes, and provide a better customer experience. Given the rapid pace of technological advancements and the growing pressure to adapt, businesses must embrace these digital tools to remain relevant in a constantly changing world.

2 Digital transformation

Digital transformation refers to the integration of digital technologies into every facet of an organization, fundamentally reshaping how businesses operate and deliver value to their customers [2]. It goes beyond merely adopting new technologies; it involves rethinking business models, processes, and strategies to leverage the opportunities offered by the digital era. At its core, digital transformation signifies a shift from traditional, often manual operations to automated, data-driven systems that foster greater flexibility, efficiency, and innovation. Its main goal is to build a competitive advantage by continuously deploying tech at scale to improve customer experience and lower costs [3].

Key elements of digital transformation include the adoption of advanced technologies, the reengineering of business processes to become more agile and customer-focused, and the integration of digital tools to improve decision-making, collaboration, and overall operational performance. Technologies like artificial intelligence (AI) enable businesses to automate tasks, extract valuable insights from big data, and offer personalized customer interactions. Blockchain strengthens transparency, security, and trust in transactions, while cloud computing provides the scalability, flexibility, and real-time access to data and tools essential for maintaining a competitive advantage.

3 The Role of Emerging Technologies in Digital Transformation

AI and ML allow businesses to analyze large volumes of data, gain insights into customer behavior, optimize operations, and automate routine tasks. These technologies enhance decision-making by providing accurate predictions and improving efficiency. The four key AI levers driving digital model transformation are strategy, governance, architecture, and culture [4]. These elements enable businesses to integrate AI effectively, adapt to changes, ensure responsible deployment, and foster a data-driven, innovative environment for sustained competitive advantage.

Blockchain enhances security and transparency, critical elements for businesses in uncertain environments. Its decentralized nature ensures tamper-proof transactions, reducing fraud and fostering trust among customers and stakeholders. In entrepreneurial contexts, blockchain can streamline supply chain management, improve financial transactions, and boost accountability.

Moreover, the integration of blockchain and AI agents is pivotal in the digital transformation of entrepreneurial structures, driving more efficient and transparent operations [5]. Blockchain provides a solid foundation for AI agents to operate autonomously, ensuring both accountability and traceability. This collaboration enables the development of innovative business models

where AI can automate tasks like managing decentralized organizations, ensuring compliance, and interacting with smart contracts.

According to Gartner [6], by 2028, cloud computing will evolve from a disruptive technology to an essential element for sustaining business competitiveness. Cloud computing allows businesses to store data remotely, scale operations quickly, and collaborate in real-time. With cloud solutions, entrepreneurial structures can achieve flexibility, lower infrastructure costs, and maintain business continuity in the face of disruptions. The cloud provides the agility necessary for businesses to adapt quickly to changing conditions, whether it's a global crisis or market shifts.

4. Challenges in Digital Transformation

4.1 High Initial Costs

The initial investment required to implement digital technologies such as AI and blockchain can be prohibitively high, especially for small and medium-sized enterprises (SMEs). A 2024 survey revealed that 29% of organizations identified the cost of implementation as the most significant barrier to AI adoption, highlighting concerns over high upfront expenses, training, and infrastructure requirements [7]. The survey conducted by Accenture revealed that around 53% of small and medium-sized businesses found the initial costs of AI implementation to be significantly higher than expected [8]. Implementing AI involves not just the software but also the necessary hardware, such as high-performance servers, powerful processors, and enhanced data storage, to support the complexity of AI algorithms.

4.2 Resistance to Change

Resistance to change remains one of the most significant obstacles to successful digital transformation. A study by McKinsey & Company found that around 70% of digital transformation initiatives fail to achieve their goals [9]. Resistance to change at different levels within organizations is identified as one of the main factors contributing to this high failure rate. HBR survey revealed that 62% of SaaS companies identified "employee resistance to change" as a major obstacle to successful digital transformation. This resistance is often driven by fear of the unknown, concerns over job security, and reluctance to embrace new processes or technologies.

Without proper training programs and change management strategies, businesses may struggle to successfully deploy digital tools and realize their benefits, leading to a slower transformation process and missed opportunities.

4.3 Cybersecurity and Data Privacy Risks

As businesses undergo digital transformation, the risks of cyber-attacks and data breaches increase. The World Economic Forum's *Global Cybersecurity Outlook 2025* report [10] reveals that 72% of respondents have

observed an increase in organizational cyber risks, including a rise in cyber-enabled fraud, phishing, social engineering attacks, and identity theft. The report underscores the growing complexity of the cyber threat landscape, highlighting how emerging technologies, such as generative AI, are amplifying the sophistication and scale of cyberattacks.

Additionally, compliance with data privacy regulations has become a significant challenge, with regulations like the General Data Protection Regulation (GDPR) imposing heavy fines on organizations that fail to adequately protect customer data. In 2023, GDPR fines reached an all-time high, totaling approximately $1.6 billion globally [11]. This highlights the growing legal and financial consequences of insufficient data protection, especially for businesses handling large volumes of personal information.

5 Conclusions

So, digital transformation represents a pivotal strategy for enhancing organizational resilience and fostering innovation in the face of a volatile business environment. The integration of emerging technologies is fundamentally reshaping the entrepreneurial landscape by optimizing operational efficiency, improving decision-making processes, and enhancing customer experience. Nevertheless, the implementation of digital transformation is accompanied by significant challenges, including high initial costs, organizational resistance to change, and increasing cybersecurity risks. To ensure successful digital transformation, businesses must prioritize investments in change management strategies, employee training, and robust cybersecurity frameworks. Addressing these challenges is crucial for organizations aiming to leverage digital technologies to secure a competitive edge and achieve sustainable growth in an increasingly complex and dynamic market.

References

[1] Salun M, Zaslavska K 2024 *Strategies for Resilience in a Dynamic World: from VUCA to BANI*: University of Lubliana Socratic Lectures 10 p. 185-189. 10.55295/PSL.2024.I23.

[2] The Enterprisers Project 2020 *What is digital transformation? Your top questions answered.* Accessed at: https://enterprisersproject.com/what-is-digital-transformation

[3] Lamarre E, Smaje K & Zemmel R 2023 *Rewired: The McKinsey Guide to Outcompeting in the Age of Digital and AI*. Hoboken, NJ: Wiley.

[4] Gibson K 2024 *The role of artificial intelligence in digital transformation*. Harvard Business School Online. Accessed at: https://online.hbs.edu/blog/post/ai-digital-transformation

[5] Blockchain Council 2025 *How blockchain and AI agents together will reshape the future*. Accessed at: https://www.blockchain-council.org/ai/how-blockchain-and-ai-agents-together-will-reshape-the-future/

[6] Gartner 2023 *Cloud computing: From technology disruptor to essential business component by 2028*. Accessed at: https://www.gartner.com/document/4776331

[7] Swankie H 2024 Implementation cost is the biggest AI adoption barrier, new survey reveals. *Call Centre Helper*. Accessed at: https://www.callcentrehelper.com/costs-biggest-ai-adoption-247900.htm

[8] *The hidden costs of AI implementation in small businesses*. Modern Diplomacy 2024. Accessed at: https://moderndiplomacy.eu/2024/11/12/the-hidden-costs-of-ai-implementation-in-small-businesses/

[9] Garcia J 2022. *Common pitfalls in transformations: A conversation with Jon Garcia*. McKinsey & Company. Accessed at: https://www.mckinsey.com/capabilities/transformation/our-insights/common-pitfalls-in-transformations-a-conversation-with-jon-garcia

[10]World Economic Forum 2025 *Global Cybersecurity Outlook 2025*. Accessed at: https://reports.weforum.org/docs/WEF_Global_Cybersecurity_Outlook_2025.pdf

[11]Armstron M 2024 EU Data Protection Fines Hit Record High in 2023. *Statista*. Accessed at: https://www.statista.com/chart/30053/gdpr-data-protection-fines-timeline/

[12]Han-Chen Huang 2012 Using Artificial Neural Networks to Predict Restaurant Industry Service Recovery *IJACT_CST* **4**(10) 315-21 *(in Chinese)*

Authors

Yevheniia Zaslavska, 23.10.1996, Kharkiv, Ukraine

Current position, grades: PhD student

University studies: Simon Kuznets Kharkiv National University of Economics

Scientific interest: Entrepreneurship, Entrepreneurship Skills, Emerging Technologies, Digital Transformation

Publications (number or main): 1 publication