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# RISK ANALYSIS OF SMARTIZATION OF BUSINESS PROCESSES IN THE CONTEXT OF POST-WAR RECOVERY

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**Abstract:** *The article analyzes the risks associated with the smartization of business processes in the context of post-war recovery and suggests strategies for their effective mitigation to ensure sustainable economic transformation.*

**Key words**: business processes, smartization, risk analysis.

Post-war economic recovery requires innovative approaches to restore industrial and business activities efficiently. Smartization, characterized by the integration of digital and AI-driven technologies, presents opportunities for accelerating this process [1; 2]. However, enterprises face significant risks in adopting these technologies in a fragile economic and social environment.

As enterprises navigate the challenges of post-war recovery, integrating smart technologies can accelerate their rebuilding efforts. However, the process of smartization introduces a variety of risks that could hinder sustainable transformation. These risks arise from technological dependencies, financial constraints, organizational readiness, socio-economic factors, and regulatory compliance. Addressing these risks proactively is essential for businesses to achieve long-term stability and efficiency. Let's outline the key risks associated with smartization in post-war recovery and their potential implications:

1. *Technological risks*. The increased dependency on digital systems heightens vulnerability to cyberattacks, making cybersecurity a critical concern. Rapid technological evolution may render early smartization investments obsolete, creating financial inefficiencies. The integration of new smart technologies with legacy systems presents interoperability challenges, potentially disrupting business operations. Additionally, ensuring compliance with data regulations and ethical AI usage remains a significant concern in managing data privacy and protection.

2. *Financial risks*. Smartization requires substantial capital investment in infrastructure, training, and technology adoption, which can be a financial burden for enterprises in post-war economies. The uncertainty surrounding the return on investment makes it difficult for businesses to commit resources confidently. Limited financial support and funding constraints may further hinder smartization efforts, particularly for small and medium-sized enterprises. Additionally, ongoing operational costs associated with system maintenance, updates, and workforce training add to the financial risks.

3. *Organizational risks*. Resistance to change from employees and management can slow down digital transformation efforts. A shortage of professionals proficient in AI, IoT, and automation poses a significant challenge to the successful implementation of smart technologies. The transition from traditional to smart business processes requires extensive planning and expertise, increasing the complexity of implementation. Furthermore, reliance on external technology vendors can introduce vulnerabilities in supply chain management and long-term operational sustainability.

4. *Socio-economic risks*. Automation and digital transformation may result in job displacement, leading to workforce instability and social unrest. Unequal access to smart technologies creates a digital divide, with larger firms having an advantage over SMEs that may struggle to keep pace. Dependency on digital infrastructures may disrupt local supply chains, making businesses vulnerable to technological failures. Additionally, societal skepticism toward AI-driven processes may hinder the acceptance and adoption of smartization initiatives.

5. *Regulatory and legal risks*. Ensuring compliance with national and international data protection laws is a major concern for businesses undergoing smartization. Intellectual property issues, including the risk of infringement or unauthorized use of proprietary technology, pose legal challenges. The absence of standardized regulations for smart business processes creates uncertainty for enterprises attempting to align with industry

norms. Ethical considerations surrounding AI adoption, including responsible decision-making and fair treatment of stakeholders, further complicate regulatory compliance.

Given these challenges, a *proactive risk mitigation strategy* is necessary to ensure the successful integration of smart technologies in post-war economies. Addressing these risks requires a structured approach that combines *technological security, financial sustainability, organizational adaptation, socio-economic inclusivity, and regulatory compliance*. By implementing targeted strategies, businesses can mitigate these risks and create a more resilient foundation for digital transformation. The following section outlines key approaches to risk management in smartization initiatives.

Effective risk mitigation is essential for the successful smartization of business processes, particularly in the context of post-war recovery. *Technological risk management* involves strengthening cybersecurity measures and disaster recovery plans to address technology-related threats. Investing in modular and scalable smart technologies ensures long-term adaptability, while compliance with data protection standards must remain a priority to uphold ethical and legal integrity. *Financial risk management* can be achieved through public-private partnerships, which provide financial support for smartization initiatives. Conducting thorough cost-benefit analyses before technology adoption ensures strategic investment, while phased investment strategies help manage costs effectively and reduce financial exposure.

*Organizational risk management* focuses on fostering adaptability through continuous employee training and upskilling programs. Implementing change management strategies minimizes resistance to new technologies, and establishing strategic partnerships with technology providers ensures smoother integration of smart solutions. *Socio-economic risk management* involves reskilling affected workers through job transition programs to minimize employment disruptions. Small and medium enterprises must be supported through digital transformation grants and incentives to bridge the digital divide. Additionally, public awareness campaigns can enhance trust and acceptance of smart technologies among businesses and consumers.

*Regulatory and legal risk management* requires collaboration with policymakers to establish clear regulatory frameworks for smartization. Strengthening legal agreements for data protection and intellectual property rights is crucial for ensuring legal security. Furthermore, the promotion of ethical AI adoption guidelines helps facilitate responsible and sustainable digital transformation.

Smartization is a key driver for business process transformation in post-war recovery. While it offers substantial benefits in efficiency, cost reduction, and competitiveness, the associated risks require proactive identification and mitigation. A balanced approach, integrating technological preparedness, financial planning, organizational adaptation, socio-economic inclusivity, and regulatory compliance, is essential for ensuring sustainable smartization in post-war economies. Future research should focus on empirical case studies to assess the effectiveness of risk management strategies in real-world scenarios.

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