Ilmiy tadqiqotlar va ularning yechimlari jurnali
Aoka guvohnoma № 323759 ISSN: 3060-4818

A MECHANISM FOR REDUCING ENTERPRISE COSTS AND INCREASING PROFIT UNDER DIGITAL TRANSFORMATION

Tohirova Nigora Zokirjon kizi
Lecturer, Department of Economics
Karshi State University
ORCID: 0009-0007-8490-6027
E-mail: nigora.takhirova@gmail.com
https://doi.org/10.5281/zenodo.22628486

Abstract: The article develops a practical mechanism for reducing enterprise costs and increasing profit through digital transformation. Digital cost control, process automation, e-commerce, digital procurement, and data-driven management are considered as interconnected instruments for improving economic performance. The study combines regional indicators of information and communication services, e-commerce, small-business investment, and industrial production to characterize the expanding digital-economic environment in Kashkadarya and Uzbekistan. Based on this context, a six-stage mechanism is proposed: process cost mapping, identification of high-cost operations, investment appraisal, pilot implementation, KPI monitoring, and scaling of successful solutions. The study emphasizes that digital transformation should be evaluated through measurable changes in costs, revenues, productivity, and transaction efficiency rather than by technology adoption alone.
Keywords: cost reduction, profit, digital transformation, automation, digital control, e-commerce, digital procurement, enterprise efficiency.

INTRODUCTION

The economic effect of digital transformation depends on how effectively digital technologies are connected with the main sources of enterprise costs and revenue. Digitalization can reduce operating expenses by automating repetitive processes, lowering error rates, improving inventory control, reducing equipment downtime, and decreasing transaction costs. At the same time, digital sales channels can expand market access and generate additional revenue.

Cost reduction should therefore not be understood simply as a reduction in the number of employees. A sustainable reduction in total cost requires better use of labor, materials, energy, equipment time, information, and financial resources. The economic objective is to reduce unnecessary costs while maintaining or improving output quality and customer value.

This article aims to develop a practical mechanism through which enterprises can identify cost-reduction opportunities, evaluate digital investments, implement pilot solutions, and measure their contribution to profitability. The analysis uses Kashkadarya as a regional context while incorporating Uzbekistan-level e-commerce dynamics.

RESEARCH METHODOLOGY (METHODS)

The study applies descriptive, comparative, and analytical methods to a set of regional and national indicators. Four dimensions are combined: the volume of information and communication services in Kashkadarya, e-commerce trade volume in Uzbekistan, the share of small business in investment, and industrial production in Kashkadarya.

The proposed cost-reduction mechanism is structured around four functional blocks: (1) process automation; (2) digital procurement and inventory control; (3) digital sales and e-commerce; and (4) data-driven management. Each block is linked to identifiable cost or revenue drivers. For example, automation is associated with processing time and error reduction; digital procurement with purchasing

and inventory costs; digital sales with transaction and market-access costs; and data-driven management with forecasting and resource allocation.

For individual projects, economic efficiency should be assessed using measurable financial indicators. A general project-effect formula is defined as: Economic impact = Cost savings + Additional revenue − Digital project cost. Where appropriate, ROI can be calculated as: ROI = (Net economic benefit − Digital investment cost) / Digital investment cost × 100%. Payback period can be estimated as the initial digital investment divided by annual net cash benefit.

The regional statistics provide contextual evidence of the expansion of the digital and production environment. They do not, by themselves, establish a causal relationship between digitalization and enterprise profitability. Causal assessment requires enterprise-level financial and operational data before and after implementation.

RESEARCH RESULTS (RESULTS)

The indicators demonstrate simultaneous expansion in the digital-services, e-commerce, investment, and industrial dimensions of the economy. In Kashkadarya, information and communication services increased from 574.6 billion soums in 2020 to 1,802.7 billion soums in 2025, representing approximately 3.1-fold growth. In Uzbekistan, e-commerce trade volume increased from 1,002.5 billion soums in 2020 to 15,211.5 billion soums in 2024, or approximately 15.2-fold growth.

The share of small business in investment increased from 46.0% in 2020 to 61.4% in 2025, an increase of 15.4 percentage points. Industrial production in Kashkadarya increased from 14,612.3 billion soums in 2020 to 39,116.8 billion soums in 2024, or approximately 2.7-fold growth. Together, these indicators describe a progressively expanding economic environment in which enterprises have greater incentives and opportunities to use digital tools for cost control, procurement, sales, and operational management.

Indicator	Base period	Subsequent period	Analytical conclusion
Information and communication services in Kashkadarya	2020: 574.6 bn soums	2025: 1,802.7 bn soums	Approx. 3.1-fold growth
E-commerce, Uzbekistan	2020: 1,002.5 bn soums	2024: 15,211.5 bn soums	Approx. 15.2-fold growth
Small business share in investment	2020: 46.0%	2025: 61.4%	+15.4 percentage points
Industrial production in Kashkadarya	2020: 14,612.3 bn soums	2024: 39,116.8 bn soums	Approx. 2.7-fold growth

Table 1. Selected indicators characterizing the digital and production environment

DISCUSSION

The results suggest that the cost-reduction potential of digital transformation should be considered across the full enterprise value chain. The first priority is process automation. Repetitive administrative and production operations can be digitized to reduce processing time, manual errors, and unnecessary labor hours. The second priority is digital procurement, where electronic supplier comparison, inventory visibility, and demand forecasting can improve purchasing decisions and reduce excess stocks.

The third block is digital sales. E-commerce and digital customer-management tools can reduce transaction costs, expand market reach, and support more precise demand analysis. The fourth block is data-driven management, which integrates operational and financial information into decision-making. Dashboards and analytical systems can help managers identify cost deviations, forecast demand, and allocate resources more efficiently.

A practical mechanism can be organized into six sequential stages. First, the enterprise maps costs by process and identifies where resources are being consumed. Second, high-cost and loss-prone operations are prioritized. Third, the expected economic effect and ROI of a digital intervention are calculated. Fourth, the solution is implemented as a limited pilot. Fifth, performance is monitored through predefined KPIs. Sixth, solutions that demonstrate measurable economic benefits are scaled to other processes or organizational units.

The KPI system should correspond directly to the intended economic effect. Relevant indicators include cost per unit of output, procurement cost, inventory turnover, error rate, processing time, equipment downtime, labor hours per transaction, digital sales conversion, additional revenue, and net savings. This makes it possible to distinguish genuine economic improvement from digitalization that increases technology expenditure without producing sufficient operational benefits.

An important managerial implication is that digital transformation should be evaluated over the investment life cycle rather than through a single-year expenditure comparison. Initial costs may include software, equipment, integration, employee training, and process redesign, while benefits may accumulate through lower operating costs and additional revenue over several years. Therefore, ROI, payback period, and total cost of ownership should be considered together.

CONCLUSION

Digital transformation can become an effective mechanism for reducing enterprise costs and increasing profit when technology is directly linked to specific economic problems. The growth of information and communication services, e-commerce, small-business investment, and industrial production provides a favorable context for wider adoption of digital management solutions in Kashkadarya and Uzbekistan.

The proposed mechanism combines cost mapping, identification of high-cost operations, digital investment appraisal, pilot implementation, KPI monitoring, and scaling. Its main principle is to measure digitalization through economic results: cost savings, additional revenue, productivity improvements, and reduced transaction losses. For regional enterprises, priority should be given to digital projects with clearly measurable effects and relatively short feedback cycles.

REFERENCES

1. Vial, G. (2019). Understanding digital transformation: A review and a research agenda. The Journal of Strategic Information Systems, 28(2), 118–144.
2. Westerman, G., Bonnet, D., & McAfee, A. (2014). Leading Digital: Turning Technology into Business Transformation. Harvard Business Review Press.
3. OECD. (2020). OECD Digital Economy Outlook 2020. OECD Publishing.
4. World Bank. (2016). World Development Report 2016: Digital Dividends. World Bank.
5. O‘zbekiston Respublikasi Milliy statistika qo‘mitasi. Qashqadaryo viloyatining 2025-yil ijtimoiy-iqtisodiy holati.
6. O‘zbekiston Respublikasi Milliy statistika qo‘mitasi. Elektron tijorat savdo hajmi, SIAT.
7. O‘zbekiston Respublikasi Milliy statistika qo‘mitasi. Axborot va aloqa sohasidagi xizmatlar hajmi, SIAT.