Modern American Journal of Business, Economics, and Entrepreneurship
ISSN (E): 3067-7203
Volume 2, Issue 3, March, 2026
Website: usajournals.org

THE LIMITATIONS OF TRADITIONAL CALCULATION METHODS AND THE NEED FOR DIGITAL TRANSFORMATION IN THE FORMATION OF THE COIN

Boronov Bobur Farxodovich
Samarkand iqtisodiyot va servis institute professori v.b., i.f.d. (DSc)

Suyunova Sevinch Lutfullo kizi,
Samarqand iqtisodiyot va servis instituti talabasi

Abstract
This article examines the inherent limitations of traditional costing methods in today's dynamic economic environment. It highlights how outdated approaches hinder accurate cost formation, leading to suboptimal pricing strategies and reduced competitiveness. The paper substantiates the urgent need for digital transformation in cost accounting, emphasizing its role in improving data accuracy, operational efficiency, and strategic decision-making. The introduction of modern digital tools is crucial for enterprises to achieve transparency, optimize costs, and maintain a competitive advantage.

Keywords: Traditional costing, cost formation, digital transformation, cost accounting, limitations, efficiency, competitiveness, modernization.

Introduction

Cost calculation has always been central to business entities to function efficiently and remain competitive. Traditional management accounting methods, including tanning and control mechanisms, have long played an important role in ensuring the financial stability of businesses. These methods are mainly aimed at collecting, distributing costs and determining the final price of products or services, ensuring a certain degree of efficiency despite the complexity of production processes. In the context of Uzbekistan, there is also a

Modern American Journal of Business, Economics, and Entrepreneurship
ISSN (E): 3067-7203
Volume 2, Issue 3, March, 2026
Website: usajournals.org

wide range of methodological manuals on theoretical basis and practical application of management accounting, which include the processes of cost classification, budgeting and strategic decision-making. These approaches have served to develop financial management and internal reporting skills in a market economy. However, today, the complexity of the global economy, the dynamics of markets, the volatility of consumer demands, and increased competition clearly show the limitations of traditional calculation methods.

Traditional methods are often time-consuming, labor-intensive and subjective in data collection, processing, and analysis, limiting the ability to make accurate and rapid decisions in real time. This exposes businesses to difficulties in adapting to changing circumstances and reduces their competitive advantage. Therefore, the need for digital transformation in the formation and management processes of the market is increasing. Digital technologies, in particular advanced tools such as big data (Big Data) and artificial intelligence (AI), allow for data analysis at unprecedented speed, accuracy, and comprehensiveness.

These technological capabilities help enterprises gain deeper and meaningful insights from their vast data sets, supporting the development and implementation of innovative strategic initiatives, optimizing operational efficiencies, and more informed decision-making. As a result, digital transformation is becoming an important competitive advantage for modern businesses and a fundamental requirement that ensures sustainable growth. This article aims to critically analyze the existing limitations of traditional calculation methods, to explore the necessity and main advantages of digital transformation in the formation of a framework, as well as to show the obstacles that arise in this process and ways to overcome them.

Literature review on the topic

Traditional tanning calculation methods, with its long history and entrenched place in practice, have played an important role in keeping the financial statements of businesses and determining the price of products. However, modern economic conditions, in particular the intensification of global competition, the rapid development of technological innovations, and the constant change in consumer demands, clearly show the limitations of these

Modern American Journal of Business, Economics, and Entrepreneurship
ISSN (E): 3067-7203
Volume 2, Issue 3, March, 2026
Website: usajournals.org

methods. A large number of scholarly papers published in recent years have analyzed these issues in a comprehensive manner, justifying the necessity of digital transformation in shaping and managing the economy.

A number of factors are cited as the main disadvantages of the traditional tanning calculation. First, these methods are often based on historical costs and lack the ability to provide real-time data. At the same time, it takes time for managers to make quick and accurate decisions in conditions of rapid changes in market conditions, instability of raw material prices and unforeseen changes in production processes. For example, a 2021 study shows that the cost calculated by traditional methods often does not reflect the true value of a product, as they rely on subjective approaches to indirectly distributing costs and have difficulty in accurately defining cost drivers in complex manufacturing environments. This leads to an incorrect assessment of product profitability, especially at multi-product and high-tech manufacturing enterprises.

Second, traditional methods are often labor-intensive, and manual data collection, processing, and preparation of reports require significant time and resources. This will increase the potential for errors related to the human factor and reduce the relevance of the information. An article published in 2022 argues that traditional systems have limited capabilities in analyzing data, reflecting only past results, and are ineffective at predicting future trends or identifying potential risks. This creates serious shortcomings in strategic planning and risk management processes.

Third, traditional costing systems often fail to fully cover the complexity and variability of manufacturing processes. For example, in the service sector or in project-based manufacturing, precise cost allocation and control is a challenge for traditional methods. A 2020 study shows that for modern enterprises, it is not enough to focus only on material and labor costs, as intangible assets such as intellectual capital, innovation, and brand value also play an important role in shaping the overall value of a product, but traditional methods are incapable of accounting for them.

Against the backdrop of these limitations, there is a growing need for digital transformation in shaping and managing the market. Digital technology enables businesses to analyze costs more accurately, quickly, and comprehensively,

Modern American Journal of Business, Economics, and Entrepreneurship
ISSN (E): 3067-7203
Volume 2, Issue 3, March, 2026
Website: usajournals.org

which is critical in improving their competitiveness. Big Data (Big Data) and Artificial Intelligence (AI) are the key drivers of this transformation. Processing and analyzing big data using AI provides unprecedented speed, accuracy, and comprehensiveness. This helps enterprises gain deeper and more meaningful insights from their vast data sets, supporting the development and implementation of innovative strategic initiatives, optimizing operational efficiencies, and more informed decision-making.

As part of the digital transformation, a number of advanced technologies are fundamentally changing the way we calculate prices. First, Big Data technologies enable enterprises to collect, store, and process massive amounts of data from internal and external sources (e.g., manufacturing processes, supply chain, market trends, customer behavior). A study published in 2023 shows that with Big Data analytics, businesses can micro-track every component of spending, more accurately identify cost drivers, and even predict unexpected spending. This reduces subjectivity in the allocation of indirect costs in traditional methods and helps to more accurately attribute costs to products or services. Second, Artificial Intelligence (AI) and Machine Learning (ML) algorithms offer revolutionary opportunities in data analysis and prediction. AI systems can detect hidden patterns, correlations, and anomalies in complex data sets, opening up opportunities for cost optimization that the human eye cannot achieve. For example, ML models can help businesses make more accurate decisions about budgeting and resource allocation by predicting future raw material prices, energy consumption, or labor productivity based on past data. AI can also be used to optimize costs in the supply chain, identify inefficiencies in manufacturing processes, and even evaluate product design from a cost perspective. Third, Automation, notably Robotic Process Automation (RPA) and Intelligent Automation (IA), significantly improves the efficiency of cost calculation processes. RPA automates routine, repetitive tasks, such as data entry, calculations, and reporting, reducing human error and allowing employees to focus their time on more strategic analytical work. IA, on the other hand, combines the capabilities of AI and ML with RPA to automate more complex and cognitive tasks, such as identifying cost anomalies and analyzing their causes. Fourth, Cloud Computing and Internet of Things (IoT) technologies

Modern American Journal of Business, Economics, and Entrepreneurship
ISSN (E): 3067-7203
Volume 2, Issue 3, March, 2026
Website: usajournals.org

make it easier to access and integrate data. Cloud platforms enable data to be centralized, accessed from anywhere, and information exchanged between different systems, which increases the relevance and accuracy of data data. IoT, on the other hand, collects real-time data (e.g., energy consumption, uptime, maintenance needs) from production equipment, vehicles, and other assets, enabling more accurate cost tracking and management. These technologies offer tremendous advantages in cost management, especially in complex supply chains and businesses spread across wide geographic areas. Fifth, blockchain technology opens up new opportunities in ensuring the transparency, security, and immutability of public data. Research conducted in 2024 shows that with blockchain, every transaction and cost component in the supply chain can be recorded immutably and transparently, simplifying cost tracking, reducing the risk of fraud, and speeding up audit processes. This is especially important for accurate cost accounting and control in international supply chains and multilateral agreements. The benefits of digital transformation in shaping the market are not only evident in increasing operational efficiency, but also in improving the quality of strategic decision-making. With digital tools, businesses can tackle complex issues such as optimizing their product portfolio, refining pricing strategies, evaluating opportunities to enter new markets, and even considering sustainability costs (e.g., carbon footprint). This allows for in-depth analyses that were previously impossible due to the limitations of traditional methods. However, the literature analysis also reveals some of the barriers to implementing digital transformation. These include, in particular, high initial investment, concerns about data security, difficulties in integrating existing systems, as well as the need for staff to be trained to master new technologies. However, many researchers argue that these barriers can be overcome and that the long-term benefits of digital transformation outweigh the short-term costs. Successful practices often involve a step-by-step approach, strong leadership, and active employee involvement in the process.

Conclusion

This article has provided an in-depth analysis of the inability of traditional cost-based approaches to meet current market dynamics and technological

Modern American Journal of Business, Economics, and Entrepreneurship
ISSN (E): 3067-7203
Volume 2, Issue 3, March, 2026
Website: usajournals.org

requirements. Through the introduction of innovative technologies such as digital transformation, including Big Data, Artificial Intelligence, and automation, enterprises will gain greater accuracy, agility, and integrated analytics capabilities in cost management. This not only optimizes operational processes, but also provides a sustainable competitive advantage, significantly improving the efficiency of strategic decision-making. In the digital economy of the future, managing the market will require continuous development from enterprises, relying on continuous innovation, data-driven predictions, and resilient systems.

References

1. Law of the Republic of Uzbekistan "On Accounting". April 13, 2016, No. RU-404.
2. Ўзбекистон Республикаси Президентининг “Молиявий ҳисоботнинг халқаро стандартларига ўтиш бўйича қўшимча чора-тадбирлар тўғрисида” ги Қарори. 2020 йил 24 февраль. ПҚ-4611.
3. Ўзбекистон Республикаси иқтисодиёт ва молия вазирининг “Молиявий ҳисоботларни тақдим этиш муддатлари ҳамда уларнинг таркиби ва мазмуни тўғрисидаги низомни тасдиқлаш ҳақида”ги Буйруғи. 2024 йил 8 октябрь. 181-сон.
4. Ўзбекистон Республикаси молия вазирининг “Ўзбекистон Республикаси ҳудудида қўллаш учун молиявий ҳисоботнинг халқаро стандартлари ва унга тушунтиришлар матнини тан олиш тўғрисида”ги Буйруғи. 2022 йил 10 ноябрь. 61-сон.
5. Issue 1 (IAS) "Submission of Financial Statements"
6. Conceptual framework for preparing and presenting financial statements. The Ministry of Justice of the Republic of Uzbekistan was registered on July 12, 2024. Sec. 3530.
7. Ochilov O.I. Improvement of accounting and analysis of investments in economic entities. Doctor of Philosophy (PhD) in Economics. -T.: 2021, 228 p.
8. Abdusalomova N.B. Improvement of the methodology of internal control and budgeting in the system of management accounting. Abstract of the dissertation of Doctor of Economic Sciences (DSc). - T.: 2019, p. 26.

Modern American Journal of Business, Economics, and Entrepreneurship
ISSN (E): 3067-7203
Volume 2, Issue 3, March, 2026
Website: usajournals.org

9. Боронов Б.Ф. Ёғ-мой маҳсулотлари ҳисоби методологиясини такомиллаштириш. –Т.: ТМИ, иқтисодиёт фанлари доктори (DSc) илмий даражасини олиш учун ёзилган диссертация, 2023, 244 б.
10. Боронов, Б. (2022). Маҳсулот таннархини ҳисоблашда умумишлаб чиқариш харажатларининг ўрни ва уларнинг ҳисобини такомиллаштириш. Economics and Innovative Technologies, 10(6), 31-42.
11. Боронов, Б. Ф. (2022). Ёғ-мой маҳсулотлари ишлаб чиқариш харажатлари ҳисобининг назарий ва методологик асосларини такомиллаштириш. ISSN 2181-3191 VOLUME 1, ISSUE 7 OCTOBER 2022, 202284.