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# PROBLEMS AND SOLUTIONS IN THE INSTITUTIONAL TRANSFORMATION OF ACCOUNTING AND AUDITING SYSTEMS IN THE DIGITAL ECONOMY



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**Abstract:** This article examines the institutional transformation of accounting and auditing systems in the digital economy. It highlights the role of Artificial Intelligence, Big Data, and cloud technologies, and provides a comparative analysis of global and local software solutions. The study identifies key challenges such as regulatory gaps, skills shortages, and cybersecurity risks. Scientific and practical recommendations are proposed to improve the system.

**Key words:** accounting, auditing, artificial intelligence, digital transformation, cybersecurity, IFRS.

## INTRODUCTION

In the contemporary global economic landscape, the digital economy has become an integral foundation of the financial system. The rapid evolution of Information and Communication Technologies (ICT), Artificial Intelligence (AI), Big Data analytics, and cloud computing is fundamentally altering how enterprises operate. These processes have a direct and profound impact on accounting and auditing systems, necessitating their urgent institutional transformation. Institutional transformation implies not merely the adoption of new software, but a comprehensive redesign of regulatory frameworks, educational standards, and operational mentalities.

Global market statistics clearly illustrate the scale of this technological shift. According to Fortune Business Insights, the global accounting software market was valued at \$20.9 billion in 2025 and is projected to reach \$42.17 billion by 2032, exhibiting a Compound Annual Growth Rate (CAGR) of 10.5%. This exponential growth confirms the aggressive transition from traditional bookkeeping to intelligent, cloud-based ecosystems. Similarly, the Republic of Uzbekistan has gained substantial practical and theoretical experience in this domain. Significant efforts have been made to adapt 1C software to national legislation and to develop domestic solutions such as 1UZ, BEM, and UzASBO to digitalize accounting processes across both private and public sectors.

## REVIEW OF LITERATURE ON THE SUBJECT

The digital transformation of accounting and auditing has been widely explored by international and domestic scholars. Adeyelu (2024) and Barri (2025) highlight the profound impact of Artificial Intelligence (AI) and automation in minimizing human errors and shifting traditional financial workflows. Furthermore, Musgrove (2025) and Davidson (2024) evaluate the practical benefits of leading global accounting software platforms.

Regarding local implementation, Qudbiyev (2021) and Kunduzova (2020) emphasize the critical need to transition to International Financial Reporting Standards (IFRS) to attract foreign investments. The practical integration of IT into Uzbekistan's accounting landscape and the CIS region is specifically analyzed by Teshaboyev (2023), Oralbaeva (2023), and Shamina & Filimonov (2018). The macroeconomic importance of ICT in Central Asia is confirmed by Shodiev et al. (2021). However, digitalization introduces severe institutional risks, such as data breaches, which are highlighted as a major financial threat in the IBM Security Report (2024).

## RESEARCH METHODOLOGY

The research methodology is based on a systematic approach, utilizing logical and comparative analysis, induction, and deduction. A comparative functional analysis was conducted between internationally recognized accounting software (Xero, QuickBooks) and domestic platforms (UzASBO, 1UZ). Furthermore, statistical data from authoritative global research centers (IBM, Gartner, ACCA) and academic literature were synthesized to critically evaluate the institutional challenges hindering the digital transformation of the accounting and auditing sectors (Table 1).

Table 1. Comparative Analysis of Global and Local Accounting Software Systems

Criteria	Xero / QuickBooks (Global)	UzASBO / 1UZ / BEM (Local)
Accessibility	Cloud-based with global access	Primarily local or hybrid cloud solutions
Compliance	IFRS and international standards	National tax legislation (Uzbekistan)
Functionality	Advanced analytics and AI-driven features	Basic automation and tax reporting
Integration	Bank synchronization and third-party integrations	Limited integration capabilities
Cost	Subscription-based (relatively high)	Affordable, often state-supported
Target Users	SMEs and international companies	Local businesses and government-related entities
AI Capabilities	Predictive analytics and automation	Limited implementation of AI
Real-time Reporting	Fully available	Partially available

## ANALYSIS AND RESULTS

The automation of accounting systems dramatically enhances the speed and accuracy of financial reporting, facilitating a smoother transition to International Financial Reporting Standards (IFRS). In the global market, cloud-based platforms such as "Xero," "QuickBooks Online," "FreshBooks," and "Sage Intacct" have established dominance. These platforms go beyond basic automated reporting by offering real-time bank synchronization and predictive cash-flow analysis. In Uzbekistan, "UzASBO" has shown high efficiency for budget organizations, while "1UZ" and "BEM" are heavily utilized in the private sector due to their strict compliance with the national tax code.

The integration of AI is transforming the role of the accountant. According to Gartner, AI-driven automation allows finance and accounting professionals to save an average of 5.4 hours per week by eliminating routine manual data entry. Furthermore, the "Big Four" auditing firms (Deloitte, PwC, EY, and KPMG) are investing billions into AI auditing platforms (e.g., EY Helix, KPMG Clara) to conduct real-time anomaly detection across 100% of transaction datasets, rather than relying on traditional random sampling.

Despite the clear advantages of digital technologies, the institutional transformation of accounting and auditing faces several critical hurdles:

1. Shortage of Qualified Personnel (The Skills Gap): The digital economy demands that modern accountants possess hybrid skills encompassing finance, IT, data analytics, and AI management. According to the Association of Chartered Certified Accountants (ACCA), while over 80% of finance leaders acknowledge the necessity of AI, less than 40% of organizations actively invest in upskilling their accounting staff. This creates a severe technological skills gap in the labor market.

2. **Cybersecurity and Data Privacy Threats:** Digital systems store massive volumes of highly sensitive financial data, making them prime targets for cyberattacks. According to IBM's Cost of a Data Breach Report, the average cost of a data breach in the financial sector has reached \$6.08 million, which is significantly higher than the global average.

3. **Undeveloped Technological Infrastructure for SMEs:** Small and Medium-sized Enterprises (SMEs) often lack the financial capital to invest in advanced Enterprise Resource Planning (ERP) systems, licensed AI audit tools, and necessary cybersecurity protocols, leaving them marginalized in the digital transformation process (Figure 1).



Figure 1. Key Challenges and Risks in the Digital Transformation of Accounting and Auditing

To systematically resolve these problems, a multi-faceted approach is required:

- **Modernization of Legislation:** Governments must adopt specialized normative acts on “Digital Accounting and Auditing” based on international standards. This includes legalizing digital evidence for audits, regulating crypto-asset accounting, and establishing clear guidelines for the use of AI in financial decision-making.
- **Educational Reform:** Higher education institutions must integrate courses such as “ERP Systems,” “AI in Accounting,” and “Financial Data Analytics” into the core curriculum of Accounting and Audit degree programs.
- **Enhancing Cybersecurity Standards:** It should be mandatory for financial data processors to comply with international security protocols (e.g., ISO/IEC 27001). The implementation of Blockchain technology can also be introduced to ensure the immutability and transparency of audit trails.
- **State Support for SMEs:** Providing tax incentives or technology grants to small businesses that implement licensed cloud accounting systems will bridge the digital divide.

## CONCLUSIONS AND SUGGESTION

The automation of accounting systems and the integration of artificial intelligence serve as catalysts for unprecedented efficiency in financial management.

As demonstrated by the research, modern technological solutions accelerate transaction processing, perform deep predictive analytics, and minimize human error. However, true progress in this field requires more than just the adoption of software; it necessitates a profound institutional transformation.

Firstly, the role of the accountant is shifting from a traditional “number cruncher” to a strategic financial advisor. To support this evolution, educational systems must urgently pivot towards STEM-integrated financial training.

Secondly, regulatory bodies face the critical task of rewriting the rules of the financial ecosystem. Without a robust legal framework that recognizes smart contracts, digital assets, and AI-generated audit reports, technological advancement will outpace legal compliance, leading to market instability.

Thirdly, as cyber threats grow in sophistication and financial impact, embedding advanced cybersecurity measures into accounting infrastructure is no longer optional but a fundamental requirement for business survival.

Ultimately, addressing these institutional bottlenecks through collaborative efforts between the state, educational institutions, and the private sector will ensure a secure, transparent, and globally competitive accounting and auditing system in the era of the digital economy.

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