

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON RISK MANAGEMENT IN SUPPLY CHAIN FINANCE

Yusupov U.M.

student of "Finance and finance technologies" department, TSUE,

Rejabbayev. S.

Scientific supervisor: senior lecture of "Finance and finance technologies" department, TSUE

Annotatsiya. Raqamli texnologiyalarning jadal rivojlanishi global ta'minot zanjiri moliyasini o'zgartirmoqda. Blockchain, sun'iy intellekt (AI), bulutli hisoblash va Internet narsalar (IoT) kabi innovatsiyalar samaradorlik, xavfsizlik va shaffoflikni oshirmoqda. Korxonalar ushbu texnologiyalarga tobora ko'proq tayanar ekan, ular moliyaviy operatsiyalarni qayta ko'rib chiqib, ta'minot zanjiridagi asosiy muammolar – operatsion kechikishlar, firibgarlik xavflari va tartibga solish talablariga rioya qilish masalalarini hal qilishga qaratilgan.

Kalit so'zlar: Raqamli transformatsiya, ta'minot zanjiri moliyasi, sun'iy intellekt, blockchain, Internet narsalar, bulutli hisoblash, kiberxavfsizlik, tartibga solish muvofiqligi.

Аннотация. Бурное развитие цифровых технологий трансформирует глобальное финансирование цепочек поставок. Такие инновации, как блокчейн, искусственный интеллект (AI), облачные вычисления и Интернет вещей (IoT), повышают эффективность, безопасность и прозрачность. По мере того как компании все больше внедряют эти технологии, они переосмысливают финансовые операции и решают ключевые проблемы цепочек поставок, включая операционные задержки, риски мошенничества и соблюдение нормативных требований.

Ключевые слова: цифровая трансформация, финансирование цепочек поставок, искусственный интеллект, блокчейн, Интернет вещей, облачные вычисления, кибербезопасность, нормативное соответствие.

Annotation. The rapid development of digital technology is reshaping global supply chain finance. Innovations such as blockchain, artificial intelligence (AI), cloud computing, and the Internet of Things (IoT) are improving efficiency, security, and transparency. As businesses increasingly rely on these technologies, they are reshaping financial operations and addressing key challenges in the supply chain, such as operational delays, fraud risks, and regulatory compliance.

Key words: Digital transformation, supply chain finance, artificial intelligence, blockchain, Internet of Things, cloud computing, cybersecurity, regulatory compliance.

The field in which digital transformation stems from the continuous development of digital technologies, characterized by their availability, scalability, and openness, which enable sustainable improvements in market efficiency and empower both macro and micro contexts. Over time, a considerable

amount of academic research has emerged around the theme of digital transformation, with 134 different definitions of digitization found in high-quality journals. According to the latest research by Wang Hecheng et al., digital transformation, at the organizational level, refers to the process where enterprises require new technological applications, ecological positioning, business models, and business and organizational processes, as well as a favorable corporate culture, leadership, and risk tolerance. It aims to enhance relationships between organizations and employees, customers, suppliers, partners, and stakeholders, enabling more effective competition in the ever-changing digital economy. This definition reflects the focus of digital transformation on building deep integration networks among participants in the industry chain, with the aim of achieving sustainable competitive performance. [1]

The field of supply chain finance is undergoing a fundamental transformation as the digitalization of cross-border transactions and interconnected systems combines with technologies like blockchain to provide increased transparency and security. In connected markets, companies have been using digital technologies to enhance the flow of finance by managing operational delays and risks associated with paper-based processes. [2]

Digitization is primarily the utilization of advanced tools — blockchain, artificial intelligence (AI), cloud computing and Internet of Things (IoT) — to form integrated constructs for automating invoicing, payment processing, and credit assessments. [3] As an example, blockchain technology provides an incorruptible decentralized ledger which meticulously logs every transaction. This is due to its intrinsic transparency, which limits the threat of fraud since all invoices or financial documents have to be verified as they arise, while at the same time, encouraging trust between other supply chain participants due to the fact that transactions can be verified. [4] Such improvements are essential to the financial institutions and large corporates who rely on sound risk management frameworks that underpin international trade. [5]

Apart from improved transparency, digital platforms provide higher operational efficiency. And due to the old systems and manual data entry, traditional supply chain finance processes have been plagued by transaction costs, errors and delays for a long time. Alternatively, digital systems automatically log and analyze current data from multiple sources, allowing stable availability and accuracy of financial information. [6] AI-powered analytics, for instance, enable companies to predict cash flow needs and uncover bottlenecks well before they turn into larger problems. That predictive capability can be used to tailor financial solutions, such as invoice financing or dynamic discounting, in real time and reduced the time from invoicing to payment even further. This allows businesses to tap into liquidity more rapidly and at a lower cost, which is particularly important for small and medium enterprises (SMEs) that would typically face challenges when it comes to traditional financing models. [7]

The enhanced data security is one of the vital yet often not prioritized enablers of digitalization in supply chain finance. Though we offer finance services, financial transactions become more and more digitized, cyber threats threat, intrinsically speak. Yet digital solutions have robust security features built in that help to eliminate these risks. To prevent the misuse of sensitive financial data, tokenization methods and encryption protocols have been introduced so that in the event of a data breach, we will be sure that unauthorized users will not decipher those data. Additionally, machine learning algorithms are being utilized to monitor digital platforms in real time for any abnormal activities, such as unauthorized access attempts or atypical transaction patterns. Such early identification and response to potential cyber vulnerabilities helps strengthen the resilience of the entire supply chain, though this proactive cybersecurity takes a team effort. [8]

With the authentication measures in place, cloud computing takes this a step further as the data is backed up in several different locations as well as being stored, meaning that it is not only secure, but easily accessible as needed. This redundancy ensures that financial data remains accessible and intact even if a localized cyber-attack or system failure occurs. [9] There are also nascent efforts by some digital trade finance platforms to adopt emerging security standards that can address new classes of cyber risk, including vulnerabilities introduced through quantum computing. [10] With research in post-quantum cryptography making strides, the financial industry is gearing up to modernize its security protocols for future data safety. [11]

Digitalization had another transformative effect — on regulatory compliance. Global financial regulations get ever more elaborate, and companies are often required to provide detailed reporting and transparency across every link in a supply chain. A digital platform can automate data collection and reporting, thus easing an administrative burden for companies, while also satisfying mandatory agreements with international customers. Such compliance is especially useful in cross-border operations where discrepancies in reporting can result in huge financial losses and disrupt the trade cycle. [10]

Additionally, digitalization allows for closer work between partners in the supply chain. Integrated digital platforms enable real-time information sharing seamlessly between buyers, suppliers, and financial institutions. Working in a collaborative environment tends to minimize the clear-cut risks around information asymmetry, predominantly because everyone is working off the same data set and bringing greater insight to the table. When a supplier uploads its invoice to that secure digital platform, its buyer and the financing institution see it immediately — there's no time delay or misunderstanding regarding payment terms. It plays a role in creating a collaborative supply chain ecosystem that is more responsive and resilient.

In conclusion, the advantages of digitalization of supply chain finance are numerous—faster cash flow, lower operating costs, stronger security measures, all reduced operational risk in the process. Through automated routine processes,

improved data integrity, and comprehensive cyber protections, digital platforms are streamlining financial activities while establishing an ecosystem driven by trust and compliance. With the ongoing developments in world markets, these digital tools are most likely to represent a critical aspect of any organization's strategy to capture a place in the ever-changing environment of international commerce.

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O'ZBEKISTONDA FUTBOL KLUBLARINI MOLIYALASHTIRISH MEXANIZMINI TAKOMILLASHTIRISH

Mirzayev Ulug'bek
ulugbek_mirzaev@mail.ru

O'zbekistonda futbol sportning eng ommaviy va mashhur turlaridan biri hisoblanadi. Mamlakatda professional futbol klublari soni ortib bormoqda. Biroq ularni moliyalashtirish tizimini takomillashtirish masalasi so'nggi yillarda dolzarb mavzulardan biriga aylanmoqda. Jahon tajribasi shuni ko'rsatadiki, futbolning barqaror rivojlanishi va xalqaro maydondagi muvaffaqiyati bevosita uning moliyaviy modeliga bog'liq.

Mamlakatimizda professional futbol klublari davlat tomonidan moliyalashtirilayotgan bo'lsa-da, bu tizim samaradorligi pastligi va uzoq muddatli barqarorlikni ta'minlab bera olmasligi bilan ajralib turadi. Shu sababli, xususiy sektorning jalb qilinishi, tijorat imkoniyatlarining kengaytirilishi va markazlashgan moliyalashtirish mexanizmlarining joriy etilishi masalalari o'ta muhimdir.

Bugungi kunda O'zbekistonda futbol klublarining asosiy moliyaviy manbalari davlat budjeti, mahalliy hokimiyat organlari mablag'lari, homiylik shartnomalari va reklama daromadlaridan iborat (statistik ma'lumotlarga asosan, Superliga va Pro-liga klublarining 85% dan ortig'i davlat tomonidan moliyalashtiriladi). Biroq, teletranslyatsiya huquqlaridan keladigan daromadlar, klub mahsulotlari savdosi va stadion infratuzilmasidan tushadigan foyda hali yetarlicha rivojlanmagan.

Misol uchun, "Paxtakor" klubi raisi Jahongir Ortiqxo'jayev ma'lumotiga ko'ra, 2024-yilda "Paxtakor"ning yillik byudjeti 100 milliard so'm (taxminan 7,1 million yevro) bo'ldi va klub foyda keltirmaydi, balki to'liq tashqi mablag'larga bog'liq. Solishtirish uchun O'zbekiston Superligasining ba'zi qatnashchilarining 2024-yildagi byudjetlarini futbol klublari miqyosida qaraydigan bo'lsak, "Nasaf" (Qarshi) — 10,55 mln. yevro, "Navbahor" (Namangan) — 8,18 mln. yevro, AGMK (Olmalik) — 7,10 mln. yevro, "Neftchi" (Farg'ona) — 6,65 mln. yevro va "Bunyodkor" (Toshkent) — 5,90 mln. yevroni tashkil qiladi.

Jahon futbolida moliyalashtirishning muvaffaqiyatli modellari klublarning daromadlarini diversifikatsiya qilishga asoslanadi. Masalan, Angliya Premyer Ligasi, Ispaniya La Ligasi va Germaniya Bundesligasi klublari o'z daromadlarini