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THE IMPACT OF DIGITAL TECHNOLOGY ON THE DEVELOPMENT OF THE NANCIAL MARKET

The impact of digital technology on the nancial market has been signi cantand farreaching. In recent years, we have seen a rapid adoption of digitaltechnologies such as blockchain, arti cial intelligence, and big data analytics, which have transformed the way nancial services are delivered and consumed. Digital technologies are transforming the nancial sector and improving ef ciency and the quality of life for people. They allow for time-saving and improved labor productivity by intensifying processes and saving time at all stages of transactions, resulting in more transactions per unit of time. An in- crease in labor productivity is shown by a reduction in total labor cost per worker or per unit of product. With the development and implementation of new technologies in the nancial sector, the speed of transactions increases and the variety of nancial products sold on digital platforms becomes more diverse. High-performance equipment is used, increasing the return on assets. Under these conditions, the share of past labor consumed increases and the amount fliving labor decreases, which is characteristic of the stage of production de-velopment where manual labor is actively replaced by machine labor. In other words, from a theoretical point of view, one can speak of the industrialization the nancial sector of the economy [1].

Digital technologies are increasingly becoming the driving force behind the

economy, leading to signi cant changes in economic connections and reducing the need for human involvement. One example of this is the Internet of Things, which is a network of physical objects connected by a computer network and equipped with specialized software and hardware that allows them to commu- nicate with each other and the external world, and is being utilized in various industries. It is estimated that the Internet of Things connects around 26 bil-lion devices and the Internet economy generates around 9 trillion US dollars [2].

One of the most signi cant changes brought about by digital technology is the growth of online trading platforms. These platforms have made it easier for individuals to invest in nancial markets, and have also made it possible forsmall investors to access the same markets and products that were previously only available to large institutional investors. This has increased competitionin the nancial market and has led to more opportunities for small investors tomake a pro t. Another major impact of digital technology on the nancial market has been the establishment of ntech and Digital Banking. Fintech refers to the integration of digital technology in the nancial sector. This encompasses a wide range of areas, including banking, payments, and investments. Advances in technology have led to the development of new products and services, such asblockchain and digital banking, which are changing the way nancial institu- tions operate. Fintech companies are increasingly utilizing digital tools like chatbots and budgeting apps to modernize nancial services, with 52% of busi-nesses utilizing ntech solutions from 2016 to 2018 [3]. Digital banking refers to the use of digital technology to provide nancial services and products to customers. In the past, opening a bank account typically came with physical perks like a checkbook or debit card. However, digital advancements have ledto a shift in the nancial services industry, providing consumers with more than just basic mobile banking and credit card options. The integration of digital technology has expanded beyond online account access, with the emergence of digital-only banks that don't have physical branches. This digital transformation has raised questions about the necessity of traditional brick-and-mortar banks in today's digital age, as digital solutions and increased mobility have changed the way consumers interact with their nancial services. Digital technology has also greatly increased the speed and eciency of nancial transactions. Blockchain, in particular, has revolutionized the way nancial transactions are processed by providing a secure, decentralized, and tamper-proof way to record and verify transactions. This has greatly reduced the need for intermediaries and has made it possible to conduct transactions in realtime. Big data analytics has also had a signi cant impact on the nancial market. Financial institutions are now able to gather and analyze large amounts of data on consumers, allowing them to better understand their needs and tailor their products and services to meet those needs. This has led to the development of new nancial products and services, such as personalized investment portfolios and customized insurance policies. Arti cial intelligence is another digital technology that is having a major impact on the nancial market. Machine learning algorithms are being used to analyze vast amounts of data and make predictions about nancial mar- kets. This is helping nancial institutions to make more informed investment decisions and to identify and mitigate potential risks.

However, with the bene ts of digital technology also comes a number of challenges and risks. Cybersecurity concerns have risen as digital technologies have become more prevalent in the nancial market, as it has become more vulnerable to hacking and data breaches. Additionally, the automation and digitization of nancial services has led to concerns about job loss and the need for retraining in the nancial sector.

As the nancial market becomes more interconnected globally, new technolo-gies and innovations are posing a threat to the stability of national nancial institutions and the e ectiveness of domestic regulations. The use of digital currency and the use of AI-generated algorithms in portfolio choices and capi- tal allocation are challenging the traditional relationship between central banks and private nancial institutions, which have traditionally been responsible for creating the majority of assets and monetary liabilities in nancial markets. These innovations are creating uncertainty for nancial institutions and with-out proper regulation, there is an increased risk of instability and recurring nancial crises.

The introduction of new technologies in the nancial industry typically hap-pens in two stages. At rst, these technologies replicate existing activities, such as replacing human tellers with ATM machines. However, their major impactis seen when they disrupt and replace traditional practices with new ones andnew institutional structures. Digital currencies like Bitcoin and tokens based on digital ledger technology were originally marketed as more e cient alternatives to traditional banknotes, deposits or bank transfers. But these innovations have the potential to replace bank liabilities as the primary means of payment, and thus threaten the revenue of traditional banking institutions. Additionally, while the use of distributed ledger technology can improve transaction secu-rity and transparency, the decision to use private or public platforms will also ect monetary policy. For example, if the system of verifying private trans- actions and creating digital currency (e.g. via mining) is changed, it would require a revision of monetary policy tools and objectives. Furthermore, the existence of multiple private digital currencies already in circulation (such asBitcoin, Ethereum, and tokens) poses signi cant challenges for monetary policy designed for a system controlled by interest rates for regulated institutions. Financial expansions in the past have led to real crises with severe social costs, and traditional solutions such as rules and regulations have not solved the issue of nancial instability. Monetary policy has been pulled into an improperdimension and nance has shifted towards unregulated instruments that pose more risks for private savers.

Merely trying to manage nancial markets and limit risks for savers within the current institutional framework will not be e ective. Keeping the current system in the face of current technological innovations will only lead to risks that threaten the stability and survival of companies and national nancial systems. Therefore, proposals for implementing these innovations should not be delayed and should be discussed at an international monetary

conference to consider the possibility of creating a single reference cryptocurrency or an international clearing mechanism linked to exchange ratios between cryptocurrencies [4].

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ЗАБЕЗПЕЧЕННЯ ТРАНСФЕРУ ЗНАНЬ В УМОВАХ ЦИФРОВІЗАЦІЇ ЕКОНОМІКИ

У сучасних умовах розвитку економіки і суспільства країн світу актуалізуються тенденції застосування новітніх інформаційно-комунікативних технологій, цифрових інструментів в усіх сферах. Не виключенням є і сфера вищої освіти, яка виступає одним із ключових продуцентів інноваційних ідей та наукових розробок. Саме тому все більш важливим є забезпечення трансферу знань між освітніми, науковими установами та підприємствами реального сектору економіки, значущість якого ще більш посилюється у зв'язку з прискоренням процесів глобалізації та міжнародної інтеграції, міграції населення та зовнішньоекономічної кооперації.

Цифрову економіку, на думку Котелевця Д.О., варто розуміти «як повністю самостійну економічну категорію, що трактується як новий тип економічної системи, у межах якої процеси виробництва, обміну, розподілу та споживання базуються на сучасних інформаційних технологіях, а основні суб'єкти якої спроможні до генерації, трансферу та ефективного використання інформаційних ресурсів» [3]. Отже, здатність до трансферу знань ϵ однією із основоположних характеристик цифрової економіки, що сприяє її ставленню та розвитку.

Поряд із низкою позитивних наслідків та переваг, становлення цифрової економіки супроводжується також наявністю низки перешкод та проблемних аспектів, пов'язаних із низьким рівнем цифрових навичок громадян, недостатнім та непропорційним розвитком цифрової інфраструктури, недосконалістю стандартів інформаційної безпеки, використанням застарілих техніки і технологій зв'язку, необхідністю постійних фінансових вкладень у розвиток інформаційно-комунікативних технологій тощо [1]. Мінімізувати вплив зазначених негативних чинників частково можливо за рахунок забезпечення ефективного трансферу знань, що дозволить спільно