

# ECONOMIC SCIENCES

## INNOVATIVE TECHNOLOGIES IN BUSINESS

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### Abstract

The business environment has undergone significant changes in the past few years, primarily driven by the advancement of digital technologies. From artificial intelligence to online shopping, digital tools have changed the way companies do business. This process is known as digital transformation, and it enables small and medium-sized enterprises (SMEs) to remain competitive.

The rise of Digital Transformation has brought about a significant change in the way businesses evolve and are run. Companies need to adapt and innovate to remain relevant in the market constantly. Automating processes, analyzing data in real-time, and integrating technological solutions have become fundamental to business survival and growth.

Technological innovation plays a crucial role in ensuring business survival and success. The ability to adapt to change and remain competitive in today's markets depends directly on the ability to incorporate technology into your operations. Technological innovations are essential to ensure the long-term relevance and success of the business.

**Keywords:** Business, business model innovation, technological innovation, technologies

### Introduction

Innovative technologies, such as AI, cloud computing, and blockchain, are transforming businesses by enhancing efficiency, creating new markets, and driving innovation across various industries. These technologies provide companies with opportunities to improve their operations, gain a competitive advantage, and adapt to shifting market demands.

Digital technology and its related systems are often seen as one of the main drivers of the long-term economy, whose growth rate has never been as rapid as it is today. Therefore, it is not surprising that the energy of experts is focused on how new digital technologies can simplify economic activities and improve the standard of living.

### Discussion

The fact that digital technologies can improve the standard of living is possible through their implementation in the public and private sectors, which is undoubtedly attractive.

One of the key components of digital technology is blockchain, with the global market for it expected to reach \$3 trillion by the end of 2021, marking an all-time high in annual terms. The adoption of blockchain and the technology and products it supports will continue to impact business operations dramatically. But it is much more than a system for securely transferring cryptocurrencies. Beyond finance, it can be applied in various fields, including healthcare, insurance, voting, welfare

benefits, gambling, and artist royalties. They are already having a profound impact on business and society at many levels.

The main task for achieving economic growth is to improve investment and innovation management. Identify and address the most significant challenges hindering the economy. Critical issues include low competitiveness of the private sector, underdeveloped human capital, and limited access to financial resources. Three main problems are identified, which are divided into the following areas:

1. Improving the investment and business environment;
2. Innovation and technologies; Promoting export growth;
3. Developing infrastructure and maximizing transit potential.

A favorable business and investment environment has a significant impact on productivity, as it directly influences the efficient allocation of resources in the private sector. Due to intense global competition and dynamic economic processes, business requirements are changing rapidly. Accordingly, it is essential to continually improve the business and investment environment. To ensure free trade and competition, legislative and institutional mechanisms must be improved first. Competition legislation must establish effective norms and enforcement mechanisms for eliminating cartel agreements, restrictive business practices, and the

abuse of dominant positions. At the same time, competition legislation mustn't create artificial barriers to the growth and development of companies.

To facilitate the effective functioning of businesses and increase competitiveness, along with the ease of starting a business, the ease of closing a company is also of great importance.

In the field of innovation and technology development, it is essential to promote innovative activities and the transfer and implementation of the latest technologies. Additionally, it is crucial to encourage the adoption of modern technologies that prioritize environmental protection and the advancement of a green economy, particularly for small and medium-sized enterprises, which are key drivers of innovation.

To support innovation, it is necessary to develop infrastructure (technoparks, incubators) and train a workforce with appropriate qualifications. Additionally, the required supporting infrastructure for research and development should be enhanced for educational institutions and research laboratories.

The protection of intellectual property rights is significant for the development of innovations. For this purpose, it is necessary to improve the legislative and institutional framework related to intellectual property rights.

The role of the state in the field of innovations and technologies is manifested in strengthening the transfer and practical implementation of technologies by companies, strengthening ties between scientific circles and business, raising the level of innovations, and, as a result, in the orientation of exports towards more high-tech products.

Meanwhile, the world is changing. No one expects the economy and its 21st-century structure to remain the same as they are today. Many professions, even entire industries, are disappearing. However, new directions, new types of jobs, and new opportunities are emerging.

The leaders of the world's leading countries are thinking and discussing what tomorrow will be like, where their countries will fit into the new reality—the Fourth Industrial Revolution, which has already been dubbed.

For centuries, agriculture has been the leading sector of the economy. From the end of the 18th century onwards, machines were able to replace human labor and increase their productivity. As a result, industry gradually began to gain a dominant place in the economies of many countries and also became a generator of new types of jobs. The Second Industrial Revolution followed this: the foundation for mass production using electricity was laid, and the irreversible process of urbanization began. The Third Industrial Revolution began in the 1970s, when new information technologies made it possible to automate processes. This significantly reduced human involvement in the production process, although it could not eliminate the role.

Today, we are at the stage of a new, fourth industrial revolution that will fundamentally change our lives in the future. According to experts, it is expected that soon almost all electrical appliances will be connected

through a virtual network and will exchange information with each other intensively. As a result, entirely new possibilities for their management will exist. The so-called "smart manufacturing" based on cyber-physical systems is expected to increase production efficiency further and accelerate technological development. New types of services will emerge for consumers, further simplifying human life. Artificial intelligence is what distinguishes the new industrial era, and this is already a reality.

The United States was a pioneer in creating technology parks, with the legendary Silicon Valley being founded near Stanford University in the 1950s. Today, there are over 400 technology parks worldwide, with the number continuing to grow.

Georgia has already taken some steps towards the development of high-tech enterprises. In 2010, the "Law of Georgia on Information Technology Zones" was adopted, followed the following year by the creation of a small-scale and first ICT business incubator in Georgia, based on the Georgian Technical University. In 2014, the "Innovation and Technology Agency" was established, which opened the first technopark in Georgia in 2016. It provides interested parties with modern industrial laboratories, a shared workspace, and other opportunities for the development of startup companies. However, all this is just the beginning, and a lot of work lies ahead. It is necessary to continue reforms in the education sector and adapt tax legislation to the ICT sector. Foreign investments can play a decisive role, which, unfortunately, is not many today.

Naturally, it isn't easy to prove that information technologies will unconditionally become the locomotive of the Georgian economy. Still, the fact remains that our country has an opportunity in this regard. A competitive education system, liberal tax policy, and a comfortable environment for doing business will be good prerequisites for this.

Types of technology, such as industrial robots, artificial intelligence, blockchain, virtual and augmented reality, and 3D printing, represent significant achievements in technological progress. Through these advancements, it is possible to achieve higher rates of economic growth than ever before.

- Artificial intelligence describes computers that can "think" like humans. They can recognize complex patterns, process information, draw conclusions, and make recommendations. Artificial intelligence is utilized in various ways, from identifying patterns in vast amounts of unstructured data to automatically correcting errors on your phone.

- Blockchain is a secure, decentralized, and transparent way to record and share data, without the intervention of third parties. The digital currency Bitcoin is the most well-known blockchain application. However, the technology can be utilized in other ways, including helping to track supply chains, anonymizing sensitive medical data, and combating voter fraud.

- New computing technologies are making computers smarter. They allow computers to process vast amounts of data faster than ever before, and the advent of the cloud has allowed businesses to securely store and access their information from anywhere over

the internet. Quantum computing technologies, now being developed, will eventually make computers millions of times more powerful. These computers will have the potential to power artificial intelligence, create highly complex models of data in seconds, and accelerate the discovery of new materials.

- Biotechnology uses cellular and biomolecular processes to develop new technologies and products for a variety of uses, including the development of new pharmaceuticals and materials, more efficient industrial production processes, and cleaner, more efficient energy sources;

- Robotics is the design, manufacture, and use of robots for personal and commercial use. While we still don't see robot assistants in every home, technological advances have made robots more complex and sophisticated. They are used in a wide range of fields, including manufacturing, health and safety, and human assistance.

- 3D printing allows manufacturing businesses to make their parts with fewer tools, at a lower cost, and faster than traditional processes. Additionally, designs can be customized to ensure a perfect fit.

Innovation can be described as the creation of a new idea or mechanism. Innovation is considered the process of creating better solutions that arise from market, government, or social requirements, through the creation and implementation of new processes, services, technologies, or products. In scientific terms, innovative technology refers to any mechanism or knowledge, whereas in economics, technological innovation is a business or marketing model that impacts society with original ideas and solutions. During the process of technological innovation, an entrepreneur undertakes activities such as introducing new management methods and applications, adopting new production methods and processes, offering services, exploring new markets, and providing new value propositions. A business that consistently introduces new technologies and innovations will be much more sustainable in an era of rapid change.

### Conclusion

Technological innovation enables the automation of repetitive tasks, eliminates time-consuming manual

processes, reduces operational errors, accelerates processes, and enhances communication between departments and with customers. Through the efficient use of technology, it is possible to simplify operations, make faster and more accurate decisions, and offer an improved customer experience.

With the emergence of innovative new technologies, such as Artificial Intelligence, the Internet of Things (IoT), and Big Data analysis, companies and organizations have the opportunity to optimize their work processes, enhance the customer experience, and drive growth.

The benefits of innovation extend to all business models, enabling companies to stand out with unique offerings. By understanding customer needs and fostering a culture of continuous innovation, companies can attract new customers and deepen relationships with existing ones. Innovation, in turn, drives growth by opening new opportunities and diversifying revenue streams.

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