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Narzullayev Samadullo Xayrullo o‘g‘li

Toshkent amaliy fanlar universiteti iqtisodiyot

sohalari va tarmoqlari fakulteti Iqtisodiyot

yo‘nalishi (IQ21-S-07 D guruhi) 5-bosqich talabasi

narzullayevsamadullo92@gmail.com

THE IMPACT OF THE DEVELOPMENT OF INFORMATION AND COMMUNICATION TECHNOLOGIES ON THE GROWTH OF LABOR PRODUCTIVITY

Annotatsiya. Ushbu maqolada axborot-kommunikatsiya texnologiyalarining jadal rivojlanishi mehnat unumdorligi o‘sishiga qanday ta’sir ko‘rsatishi tahlil qilinadi. Raqamli infratuzilmaning kengayishi, ishlab chiqarish va boshqaruv jarayonlarining avtomatlashtirilishi, masofaviy hamkorlik vositalarining rivoji hamda ma’lumotlarga asoslangan qaror qabul qilish tizimlari korxona va tashkilotlar faoliyatining samaradorligini oshiruvchi asosiy omillar sifatida yoritiladi. Maqolada AKTning vaqt tejalishi, xarajatlarni optimallashtirish, xodimlar malakasini oshirish va innovatsion ish usullarini joriy etish orqali mehnat natijadorligiga ijobiy ta’siri ilmiy manbalar hamda mantiqiy tahlil asosida ochib beriladi. Shuningdek, raqamli transformatsiya jarayonida uchraydigan muammolar, jumladan, kadrlar malakasi, texnologik tengsizlik va axborot xavfsizligi bilan bog‘liq masalalar ham ko‘rib chiqiladi.

Kalit so‘zlar: axborot-kommunikatsiya texnologiyalari, mehnat unumdorligi, raqamli transformatsiya, avtomatlashtirish, innovatsiya, inson kapitali, iqtisodiy samaradorlik.

Abstract. This article analyzes how the rapid development of information and communication technologies affects the growth of labor productivity. It highlights the expansion of digital infrastructure, the automation of production and management processes, the development of remote collaboration tools, and data-driven decision-making systems as key factors that increase the efficiency of enterprises and organizations. Based on scholarly sources and logical analysis, the article explains the positive impact of ICT on labor performance through time savings, cost optimization, employee skill development, and the introduction of innovative work methods. It also examines the challenges encountered in the process of digital transformation, including issues related to workforce qualifications, technological inequality, and information security.

Keywords: information and communication technologies, labor productivity, digital transformation, automation, innovation, human capital, economic efficiency.

INTRODUCTION

In the context of the modern economy, information and communication technologies have deeply penetrated almost all spheres of society and production. As the possibilities for rapid transmission, storage, processing, and analysis of information expand through digital tools, the nature of labor processes is also changing. Tasks that previously required considerable time and resources are now performed much faster and more accurately through software, cloud services, elements of artificial intelligence, and automated management systems.

Labor productivity is one of the key indicators of economic growth and is determined by the volume of goods or services produced within a certain period of time. An increase in productivity raises enterprise profits, strengthens market competitiveness, and contributes to the sustainable development of the national economy. For this reason, studying the impact of ICT on labor productivity is an urgent issue from both scientific and practical perspectives.

The development of ICT is closely connected not only with technical modernization, but also with the renewal of management culture, workforce qualifications, and methods of organizing work processes. In particular, electronic document management, ERP and CRM systems, online communication platforms, remote work tools, and analytical dashboards simplify internal organizational communication and increase the speed of decision-making.

The purpose of this article is to highlight the main mechanisms through which the development of information and communication technologies influences the growth of labor productivity, as well as to analyze the positive outcomes and limitations of this process from a scientific and methodological perspective.

MATERIALS AND METHODS

In this article, scientific literature, economic analyses, and theoretical perspectives related to digital transformation processes were reviewed and synthesized. During the research process, methods such as system analysis, comparative approach, logical generalization, and content analysis were employed. The impact of information and communication technologies on labor productivity was examined through examples from the fields of production, services, education, and management.

In the analysis, the impact of ICT was evaluated in the following areas: first, time savings and the acceleration of processes; second, the reduction of errors caused by the human factor; third, the improvement of information exchange and the quality of teamwork; fourth, the need to update employees' knowledge and skills; and fifth, the costs associated with technological infrastructure and information security.

In addition, when assessing the impact on labor productivity, the short-term and long-term results of ICT implementation were considered separately. In the short term, adaptation costs and the need for training were observed, whereas in the long term, it was substantiated that the positive effects increase due to automation and improved management efficiency.

RESULTS

The analysis results show that the development of ICT affects the growth of labor productivity in several ways. First, digital technologies make it possible to automate repetitive and standard operations. This allows employees to devote their time to more complex, creative, and strategic tasks. For example, electronic accounting systems, automatic data processing tools, and online monitoring platforms help complete workloads more quickly.

Second, ICT significantly improves the quality of internal and external communication. Thanks to email, messengers, video conferencing services, and project management platforms, collaboration among employees becomes faster, task coordination becomes easier, and decisions are made in a shorter period of time. As a result, idle time in work processes decreases and overall efficiency increases.

Third, ICT promotes data-driven management. With the help of analytical software, managers can quickly analyze information on market demand, production indicators, employee performance, and costs. This helps allocate resources more rationally, identify weak points, and make strategic decisions that increase labor productivity.

However, the results depend not only on the availability of technology but also on the culture of its use. In organizations where qualified personnel are not properly trained, internet access and technical tools are insufficient, or management processes remain outdated, ICT may fail to deliver the expected level of effectiveness. Therefore, alongside technological modernization, it is also necessary to improve organizational practices and human resource policies.

DISCUSSION

The impact of ICT on labor productivity is multidimensional, and it is not sufficient to evaluate it solely as a technical factor. Digital tools accelerate work processes, but for them to produce effective results, human capital, management systems, and the innovation environment must also develop accordingly. In particular, the development of digital skills has become one of the most important requirements of today's labor market.

In some cases, the introduction of ICT leads to structural changes in the labor market. Simple and repetitive tasks may decrease, but in their place, new professions requiring higher qualifications emerge. Therefore, to strengthen the positive impact of ICT, retraining programs, continuous education, and measures to improve digital literacy are of great importance.

Another important issue is information security and technological equality. If organizations do not pay sufficient attention to cybersecurity measures, data loss or system failures may negatively affect productivity. In addition, differences in the level of digital infrastructure across regions and sectors limit some enterprises from fully benefiting from the advantages of ICT.

Thus, although ICT is a powerful factor in increasing labor productivity, its effectiveness depends on the harmony of technology, management, workforce capacity, and institutional conditions. Only when a comprehensive approach is applied can digital development become a sustainable source of economic efficiency.

CONCLUSION

In conclusion, the development of information and communication technologies has a significant positive impact on the growth of labor productivity. Through automation, rapid communication, digital management, and analytical tools, time is saved, errors are reduced, the efficiency of resource utilization increases, and the quality of decision-making improves.

At the same time, achieving high results from ICT requires strengthening the technical base, developing employees' digital competencies, ensuring information security, and modernizing management processes. Therefore, the impact of ICT on labor productivity is manifested through the harmony of direct and indirect factors.

In the future, it would be appropriate to expand research in this area on the basis of specific statistical indicators, empirical observations across individual sectors, and models that measure the effectiveness of ICT implementation in enterprises.

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