УДК 331.101.6:004.8
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THE IMPACT OF ARTIFICIAL INTELLIGENCE ON LABOR PRODUCTIVITY IN DEVELOPING ECONOMIES

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The current phase of digital transformation is characterized by a shift from simple automation to autonomous AI-driven decision-making systems [1, p. 14]. For developing economies, AI represents both a significant challenge and a historic opportunity [2, p. 240]. While developed nations use AI to optimize existing high-tech industries, developing nations can use it to "leapfrog" traditional stages of industrialization. The focus of this research is on the correlation between AI implementation and labor productivity, specifically within the context of developing economic systems.

In economic terms, labor productivity is the output per unit of labor input. AI enhances this in three main ways:

Automation of Routine Tasks: AI handles repetitive jobs, allowing human workers to focus on complex problem-solving.

Augmentation: AI acts as a "co-pilot", providing workers with data-driven insights and faster processing power.

Innovation: AI helps create entirely new products and services that were previously impossible to produce.

For developing countries, the impact of AI on productivity is visible in several key sectors:

Agriculture: AI-powered sensors and predictive analytics help farmers optimize crop yields and reduce waste. This is crucial for economies where agriculture still represents a large share of GDP.

Services and Outsourcing: Many developing nations are hubs for BPO (Business Process Outsourcing). AI tools allow local workers to handle more complex international tasks, increasing the value of their labor.

Education and Skill Development: AI-driven learning platforms provide personalized training, helping to close the "skills gap" faster than traditional education systems.

Despite the potential, the positive impact of AI is not automatic. Several barriers can slow down productivity growth:

Digital Infrastructure: Access to high-speed internet and reliable energy remains a fundamental requirement for AI adoption. Without these "analog complements," the digital divide between nations will continue to widen, preventing developing economies from receiving expected digital dividends [3, p. 15].

Investment Capital: Small and medium enterprises (SMEs) in developing countries often lack the necessary financial resources to integrate expensive AI-driven solutions and cloud computing [4, p. 54].

Labor Displacement: There is a significant risk that AI could replace low-skilled, routine jobs faster than the local economy can generate new, high-value positions for the displaced workforce.

To maximize the benefits of AI for labor productivity, governments in developing economies should:

Invest in Digital Literacy: Focus on "upskilling" the workforce so that employees can work alongside AI, not compete with it.

Support SMEs: Offer grants or tax incentives to help small businesses adopt digital and AI-driven technologies.

Improve Regulatory Frameworks: Create clear laws regarding data privacy and ethical AI use to attract international investment.

In conclusion, Artificial Intelligence has the potential to significantly boost labor productivity in developing economies. However, technology alone is not enough. The success of this transformation depends on the quality of the digital infrastructure and the workforce's ability to adapt to new tools. If managed correctly, AI can become a powerful engine for sustainable economic growth and global competitiveness.

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