KfW Development Research
Development in Brief

Artificial Intelligence Revolution – will developing countries lag behind?

One Pager

No. 3, 13 March 2024

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In the age of digital transformation, the world is at the threshold of a new era, characterised by groundbreaking developments in Artificial Intelligence (AI). On the one hand, the rapid progress of AI threatens to further widen the gap between technologically advanced nations and less developed countries. On the other hand, AI technologies also have the potential to find solutions to some of the most pressing issues of our time. What exactly does AI mean for developing countries and emerging economies, and how can they benefit from it?

Challenges for developing countries and emerging economies

In developing countries and emerging economies, there is often a lack of technological infrastructure, qualified specialists and financial resources. This is one possible reason why these nations are less able to benefit from the advantages of AI. There is also a risk that technological dependence on advanced nations will continue to increase, which may lead to a deepening of global inequalities (digital divide).

Progress in AI technology may also lead to significant job losses, especially in sectors heavily dependent on manual or repetitive activities. These include, for example, the manufacturing industry or simple service sectors, which have so far represented important labour market segments in many developing countries and emerging economies.

In addition, data privacy and ethical standards in the application of AI technologies in developing countries and emerging economies with less stringent regulations are a particular challenge. This can lead to a risk of data misuse or personal rights violations.

Opportunities through artificial intelligence

Despite existing challenges, AI technology also opens up significant opportunities for developing countries and emerging economies. By using AI in a targeted manner, these countries can substantially increase their productivity and the quality of their services in numerous sectors.

In healthcare, for example, AI-based systems such as mobile diagnostics apps can revolutionise medical care by enabling cost-effective, high-quality care in rural and under-supplied areas. In the education sector, AI-based platforms that provide adaptive learning pathways are opening up tailored education opportunities that were previously unachievable. In industry, AI systems can monitor and optimise production operations, increase efficiency and improve companies' competitiveness. And in the financial sector, AI-driven analytics help to make financial services more accessible, reduce cases of fraud and better assess credit risks, contributing to a more stable economy. This means that AI can serve as a catalyst for social and economic development in developing countries and emerging economies if it is used responsibly.

Bridging the digital divide

Bridging the digital divide requires developing countries and emerging economies to make targeted investments in technological infrastructure, education and research. These investments should focus on the development of broadband internet to improve access to digital resources, as well as on the implementation of education programmes that promote digital skills and prepare future generations for an increasingly digitalised economy. Partnerships with technologically advanced nations and international organisations are crucial to facilitate knowledge transfer, which builds local capacity and promotes sustainable development.

The promotion of countries' own innovation capacity by creating incentives for start-ups and setting up technology parks that develop local AI solutions – specifically tailored to the countries' unique social, economic and cultural conditions – is also crucial. Another aspect is the establishment of data protection laws and ethical standards for AI to prevent abuse and strengthen trust in the new technologies.

Summary and outlook

While the rapid progress of AI in developed countries is predominantly a source of innovation and economic growth alongside risks of abuse, less developed countries are at risk of lagging behind. An inclusive and global approach to AI development is therefore crucial. International development cooperation may include helping developing countries leverage the benefits of AI to improve their social and economic conditions by promoting digital public goods, among other things. With deliberate efforts to minimise the digital divide, AI can not only be a tool for the advanced nations, but also a catalyst for global development and gender equality.■

ISSN 2195-1403