

Editorial

Impact of Artificial Intelligence on Production, Productivity, and Increasing Inequality in Latin America

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The impact of artificial intelligence (AI) in Latin America is a highly relevant topic, especially because of its implications for economic growth, increased productivity, and economic inequality. As the fourth industrial revolution progresses, AI is being integrated into various sectors of the public and private economies, presenting both opportunities and challenges that will shape the region's economic future.

AI has the potential to radically transform productivity in Latin America. According to a study by the Inter-American Development Bank (IDB), estimates of job loss risk due to automation range from 10 % to 65 %, depending on the country (Bachelet et al., 2018). This transformation not only aims to improve companies' economic efficiency, but also to contribute to more sustained economic growth. A report by the International Labour Organization (ILO) suggests that between 26 % and 38 % of jobs in Latin America will be influenced by generative AI (GenAI), potentially improving the productivity of up to 17 million jobs (ILO, 2024). However, this technology is more likely to augment and transform jobs rather than completely automating them. Specifically, between 8 % and 14 % of jobs will experience productivity improvements due to GenAI, whereas only 2 % to 5 % are at risk of full automation. Nevertheless, unequal access to digital technologies and infrastructure limits these benefits, especially for the most vulnerable workers.

On the other hand, the Latin American Artificial Intelligence Index (ILIA) 2024 provides a regional perspective on key aspects of developing innovation ecosystems and growth based on AI, management of this technology, disparities among countries, and best practices.¹ This index highlights that countries such as Chile, Brazil, and Uruguay have made significant progress in adopting AI-based technologies, but still face challenges related

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1 The index is structured in several layers to organize the 76 variables measuring AI progress across each country in the region. The first layer consists of three dimensions: Enabling Factors; Research, Development and Adoption; and Governance. These dimensions branch into sub-dimensions, indicators and sub-indicators.

to infrastructure and human talent (Cenia, 2024). Furthermore, the IDB report on the future of work emphasizes that automation and robotics pose a high risk of replacing up to 70 % of jobs in Latin America. The introduction of robots has negatively impacted employment and wages in countries such as Colombia and Brazil, while Mexico has experienced job growth due to its connection to the US economy (Ripani *et al.*, 2020).

Despite the potential benefits for the region, the adoption of AI also poses significant risks regarding inequality. The ILO warns that women, young people and educated workers face the greatest risks of job automation. This will exacerbate existing economic inequalities, as those with limited access to digital technology and training might be behind. In Brazil, for instance, only 40 % of the most disadvantaged workers will benefit from AI due to their limited ability to use digital technologies (ILO, 2024). The digital divide is a central concern, as many countries in the region lack the adequate infrastructure to fully leverage the opportunities offered by AI. This means that while some sectors could reap substantial benefits, others will be excluded from technological progress. The Economic Commission for Latin America and the Caribbean (ECLAC) also warns that without adequate investments in technological infrastructure and education, pre-existing socioeconomic gaps will be exacerbated. (ECLAC, 2024).

All these challenges must be addressed by governments and the private sector in the different countries of Latin America. The strategic implementation of AI-based technologies will serve as a catalyst for inclusive growth. AI has the potential not only to enhance processes in sectors such as defense, health, and education, but also to optimize public administration and improve the delivery of local, national, and global public goods. To achieve this, fostering an inclusive social dialogue between governments, businesses, and labor unions is essential to address these issues collaboratively. A proactive approach could include investments in training and the development of digital skills to prepare workers for the future of work. As William Maloney, the World Bank's Chief Economist for Latin America and the Caribbean, emphasizes, “improving productivity and job quality is critical” through the sustainable implementation of digital technologies (ILO, 2024).

AI represents both an opportunity and a challenge for Latin America. While it can drive productivity and foster economic growth, AI also has the potential to deepen existing inequalities if digital divides are not adequately addressed and inclusive policies and significant investments are not implemented by the public and private sectors. The key for Latin American countries to benefit from the Fourth Industrial Revolution lies in managing this technological transition: by designing forward-thinking policies and reversing the trend

ILIA 2024 groups the 19 countries into three categories based on the maturity of their AI ecosystems; pioneers, adopters and explorers.

of underinvestment by both public and private sectors in digital infrastructure, science, technology, innovation and development, education, and social dialogue. This would ensure that all sectors of society, the economy, and the environment benefit from technological advancements, which, in this case, are embodied in an intangible asset like AI.

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