

Policy brief

Artificial Intelligence in Africa: Economic Development Potential and Challenges to Overcome

1 Introduction

Artificial intelligence (AI) is revolutionizing our societies and economies at dizzying speed. Its dazzling progress opens up perspectives that are as exciting as they are worrying for the future of humanity. At the heart of this technological revolution, Africa intends to take its full place and seize the immense opportunities offered by AI for its development. The potential of AI to catalyze sustainable development in Africa is enormous.

Beyond economic gains, it offers formidable levers to address the continent's major social and environmental challenges, from the fight against poverty to adaptation to climate change, including access to health and education for everyone. On condition that it is put at the service of the common good and not for the benefit of a minority.

But be careful, if Africa misses this shift in AI, it risks remaining permanently on the margins of the global economy. Without local mastery of these technologies, the continent is exposed to a new form of technological colonization by global AI giants. Its talents and data could be captured by these foreign multinationals, reproducing neocolonial patterns of domination. The stakes are therefore high. It is about the digital sovereignty of Africa and its place in the new world order that is emerging.

This policy brief is a summary of the study entitled “Artificial Intelligence in Africa: Economic Development Potential and Challenges to Overcome”, it sheds valuable light on these

crucial questions. May it fuel the debate and inspire action so that Africa becomes a major player, and not a mere spectator, of the irreversible AI revolution underway. It highlights both the immense potential of AI for the sustainable development of Africa, but also the risks of delay and a new form of technological dependence if the continent does not acquire sovereign control of these technologies. . She clearly poses the strategic issues and pleads for a mobilization of all African stakeholders around this decisive issue for the future of the continent.

2 Impacts of AI on employment

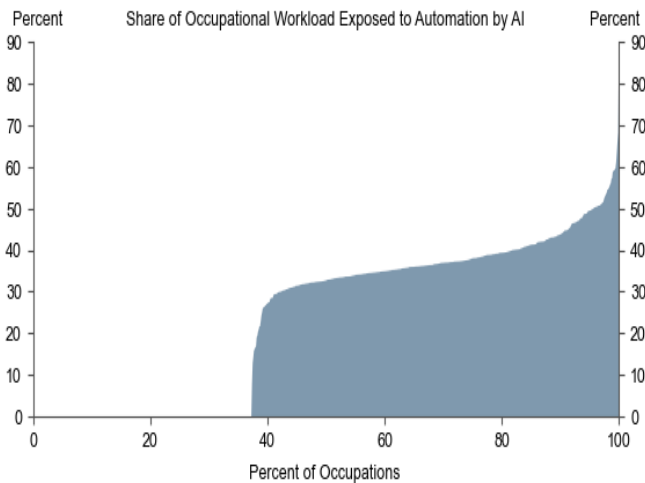
According to studies by Goldman Sachs and McKinsey, artificial intelligence (AI) could automate millions of jobs around the world, mainly in developed countries. Certain sectors such as retail, administration and industry would be particularly affected. However, AI is also expected to create new jobs, particularly in technology and healthcare. Ultimately, its net impact on employment will depend on the capacity of workers and businesses to adapt to this transformation.

At the World level

- Generative AI could automate 300 million full-time jobs, mainly in developed countries (Goldman Sachs report 2023).

- **14% of employees** worldwide will have to change careers by 2030 due to digitalization, robotics and advances in AI (McKinsey report),
- About two-thirds of occupations in the United States are partially automated by AI, with a portion of their workload (25-50%) likely to be replaced (Goldman Sachs report 2023)

Figure1: Two-Thirds of Current Occupations Could be Partially Automated by AI. (Source Gold Sachs 2023)



In Africa

- According to the IMF, around 26% of jobs in low-income countries like those in Africa will be affected by AI, a lower rate than in rich countries (60%) and emerging countries (40%).
- A McKinsey study on South Africa estimates that by 2030, the retail sector could lose 334,000 jobs, government 309,000, manufacturing 231,000, transport 186,000, agriculture 87,000 and real estate 20,000 jobs because of AI.
- McKinsey study forecasts the net creation of 1.2 million jobs in South Africa by 2030, with 4.5 million new jobs created, mainly in technology, health (570,000) and construction (261,000).

3 Economic impacts of AI

According to a PwC study, artificial intelligence (AI) could contribute up to \$15.7 trillion to global GDP by 2030, representing an additional 14% economic growth. The main beneficiaries would be China with +26% of GDP thanks to productivity gains in industry, and North America with +14.5% of GDP. However, AI would also lead to job destruction linked to automation, but new jobs would emerge in data science and AI project management

At the World level

- Potential contribution of \$15.7 trillion to global GDP by 2030, an increase of 14%.

In Africa

- Potential contribution of approximately \$1.5 trillion to African GDP by 2030, an increase of 5.6% of the continent's GDP.
- - Key sectors that can benefit from AI: health, agriculture, education, financial services, etc.

Although the potential economic impact of AI is substantial globally and in Africa, there is a significant gap between well-prepared developed countries and the African continent which faces several challenges

4 Challenges identified in Africa

➤ Lack of digital infrastructure

Only 42% of the African population will have access to the internet in 2024 and there are fewer than 100 data centers on the continent (1.3% of the global total).

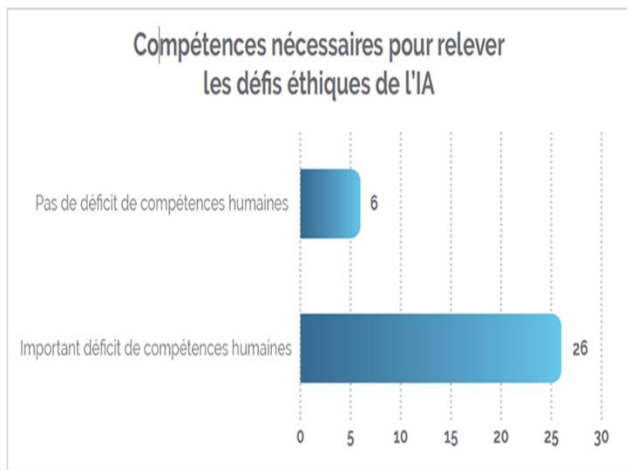
Figure2: Number of global data centers Source; <https://baxtel.com/map>



➤ Specialized skills gap

According to a UNESCO survey, 26 African countries say they do not have the means to address the ethical implications of AI, reflecting a glaring lack of specialized skills.

Figure3: Educational resources (source Unesco 2022)

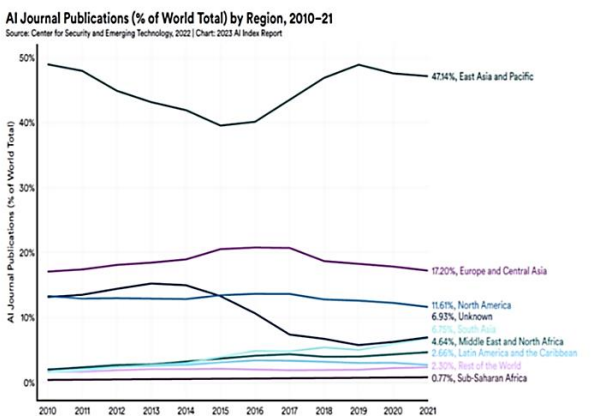


➤ **lack of AI research in Africa, an obstacle to the development of sovereign artificial intelligence**

Artificial intelligence (AI) research capacity in Africa is of particular concern.

According to the AI Index 2023 report, only 0.77% of citations in the scientific journal "The AI Journal" came from sub-Saharan Africa that year. This low percentage highlights a considerable gap in Africa's contribution to global AI research. It highlights the urgent need to invest massively in strengthening African research capacities in this strategic area. A deficit that could hinder the development of a sovereign AI adapted to the realities of the continent.

Figure4: Number of publication AI by region



➤ **Risk of new form of digital colonization**

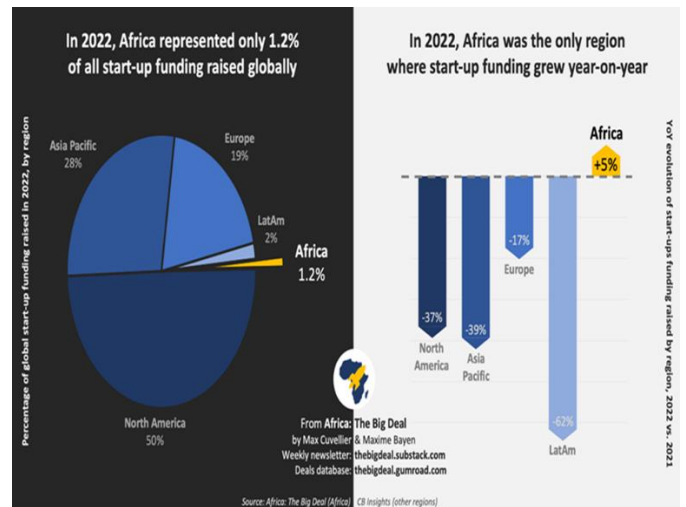
Without local mastery of AI, Africa risks dependence on solutions from foreign multinationals, with a pillage of African talents and data. A UN expert fears that Africa will become a ground for hazardous experiments.

➤ **Limited funding for African AI startups**

Figure 4 vividly illustrates how Africa lags behind in startup financing, with only 3% of funds raised globally in 2022. Despite growth in the African

entrepreneurial ecosystem, investments remain marginal compared to other countries. other regions, This chronic underfinancing hinders the emergence of African technological champions of continental or global scope in strategic areas such as AI.

Figure5: Percentage of funds raised by African startups.



5 Recommendations

1. Develop ambitious national AI strategies, with quantified objectives, dedicated funding and governance at the highest level of government. Draw inspiration from good practices from the most advanced countries.
2. Invest massively in digital infrastructure to democratize access to broadband connectivity and cloud computing. Develop a dense network of data centers.
3. Launch major training programs for AI professions to fill the skills gap. Integrate AI into curricula.
4. Establish regulatory and ethical frameworks for trustworthy AI (laws, regulatory authorities, ethical guidelines).
5. Support the development of African AI technological champions through targeted industrial policies.
6. Promote a pan-African approach to AI by strengthening cooperation between countries.
7. Put AI at the service of the SDGs and priority challenges (health, education, agriculture, climate).

8. Integrate AI into school and university curricula.
9. Stimulate African research in AI with more funding. Create centers of excellence in AI. Encourage regional and diaspora collaborations.

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