Digital Sovereignty or Digital Serfdom? AI Strategies, Geopolitics, and the Quest for an Equitable Global South

Simon Davies
University of Staffordshire
United Kingdom
simon23572@gmail.com

Vikranth Harthikote Nagaraja
University of Salford
United Kingdom
v.harthikotenagaraja@salford.ac.uk

Innocent Nyalala
Indian Institute of Technology Madras Zanzibar Campus
Tanzania
innocent@iitmz.ac.in

Nirav Bhatt
Indian Institute of Technology Madras
India
niravbhatt@iitmz.ac.in

Soumya Banerjee*
University of Cambridge
United Kingdom
sb2333@cam.ac.uk

Abstract

Artificial intelligence (AI) is reshaping economies and governance, yet its benefits remain unevenly distributed. This paper asks whether countries in the Global South are advancing toward *digital sovereignty* control over data, compute, and governance or drifting into *digital serfdom* dependence on foreign platforms. Using a seven-dimensional framework and four case studies (Singapore, Vietnam, Kenya, and Syria), we reveal key asymmetries in compute, talent, and regulation, and outline multipolar policy options involving the African Union (AU), Association of Southeast Asian Nations (ASEAN), and potential collaborations with India and China to promote equitable participation.

1 Introduction

AI is now treated as a general-purpose technology and strategic asset. High-income states expand compute, regulation, and talent pipelines that consolidate their advantage, while many Global South nations face limited infrastructure, capital, and skills (2; 1). If these disparities persist, they risk deepening a form of *data colonialism*, where Southern nations supply data and labour for AI systems designed elsewhere, with little influence over standards or benefits (11; 14; 12). Four case studies illustrate alternative trajectories and policy levers that could shift outcomes toward sovereignty rather than dependency.

2 Related Work

Since 2017, national AI strategies have proliferated, but the Organisation for Economic Co-operation and Development (OECD) and developing-country plans diverge in capacity and focus (3; 11).

*Corresponding author: sb2333@cam.ac.uk

39th Conference on Neural Information Processing Systems (NeurIPS 2025) Workshop: .

Table 1: **Seven dimensions (7D) used to assess national AI strategies.**

Dimension	Short description
1. Infrastructure & Connectivity	Compute, broadband, cloud access.
2. Data Governance	Access, sovereignty, protection.
3. Human Capital	Education, AI-skilled labour.
4. Regulatory Maturity	Laws, institutions, oversight.
5. Funding & Investment	Public/private/foreign finance.
6. Public Trust	Acceptance and safeguards.
7. Sanctions Overlay	Export controls, restrictions.

Regional frameworks such as the EU AI Act and AU Continental AI Strategy propose contrasting governance models (4; 5). Comparative indices, including the Government AI Readiness Index (6) and Stanford vibrancy rankings, establish readiness baselines. The European Parliament's *Making Europe an AI Continent* (2025) outlines the EU's ambition for human-centric AI and strategic autonomy within the single market (13).

3 Methodology

A seven-dimensional framework (7D) (Table 1) assesses AI strategy implementation using scores from 0–5 across infrastructure, data governance, human capital, regulation, investment, trust, and sanctions. Data were triangulated from national strategies, comparative indices, and policy literature to produce comparable country profiles.

Four countries were purposively selected to capture diverse contexts: **Singapore**, a high-income digital leader with mature governance; **Vietnam**, a fast-emerging ASEAN economy; **Kenya**, an African innovation hub aligned with the AU Strategy; and **Syria**, a sanctioned state with fragile infrastructure. This mix enables comparative analysis across development stages.

4 Case studies & 7D scoring

Singapore [4.5/5]. Advanced infrastructure, coherent governance, and sustained investment make Singapore a model for small-state AI sovereignty (7).

Vietnam [3/5]. A state-led plan to 2030 emphasises human-capital growth but lacks high-performance compute and private investment (8).

Kenya [2.5/5]. A development-oriented strategy (2025–2030) leverages mobile innovation and agriculture, constrained by limited high-performance computing (HPC) but strengthened through AU alignment and entrepreneurship (9; 5).

Syria [1/5]. Conflict and sanctions leave minimal domestic AI capacity; most activity is diaspora-driven or humanitarian (10). Long-term recovery depends on post-conflict reconstruction.

5 Comparative findings

- **Compute divide:** Access to HPC and cloud infrastructure remains the key structural bottleneck, reinforcing vendor lock-in.
- **Governance gap:** Regulatory maturity and finance correlate with sovereignty; Singapore exemplifies institutional coherence.
- **Human-capital asymmetry:** Talent mobility and weak investment pipelines constrain operational capacity and sustainability.

6 Discussion & policy directions

In the short term, pooled regional procurement, shared HPC (AU/ASEAN), and humanitarian exemptions could reduce reliance on external providers while building local capacity. Medium-term actions include deepening South–South cooperation (India, UAE, Japan) for technology transfer and

regulatory mentorship, and creating transparent procurement to avoid platform capture. These findings align with literature on *AI sovereignty* and *data colonialism*, warning that unequal compute and governance reproduce extractive dependencies (12; 11; 14). As reflected in the EU's human-centric AI approach (13), sustainable sovereignty in the Global South depends on regional collaboration, open standards, and collective bargaining power.

7 Conclusion

Digital sovereignty is attainable but requires coordinated investment in compute, people, and governance. Without it, many Global South states risk renewed dependency. Multipolar cooperation, targeted finance, and capacity-building offer pathways toward equitable AI futures. Future work will extend the framework to additional UN-recognised countries.

References

[1] Horwitch, M. (2024) The AI challenge for national technology strategy. *PICMET Proceedings*.

[2] World Bank (2021) *Harnessing Artificial Intelligence for Development*. Washington, DC: World Bank.

[3] Demaidi, M.N. (2025) Artificial intelligence national strategy in a developing country. *AI & Society*.

[4] European Commission (2021) *Proposal for a Regulation on Artificial Intelligence (AI Act)*. Brussels.

[5] African Union (2024) *Continental AI Strategy 2024–2025*. Addis Ababa: African Union Commission.

[6] Oxford Insights (2023) *Government AI Readiness Index 2023*. Oxford: Oxford Insights. Available at: `https://www.oxfordinsights.com/government-ai-readiness-index-2023` (Accessed: 6 October 2025).

[7] Government of Singapore (2023) *National AI Strategy 2.0*. Singapore: Smart Nation and Digital Government Office.

[8] Government of Vietnam (2021) *National Strategy on Research, Development and Application of Artificial Intelligence by 2030*. Hanoi.

[9] Government of Kenya (2025) *Kenya National AI Strategy 2025–2030*. Nairobi: Ministry of ICT and Digital Economy.

[10] Al-Khalil, R. (2024) AI and development in Syria. *AI & Society*.

[11] OECD (2021) *National AI Strategies in the Middle East and North Africa*. Paris: OECD Publishing.

[12] Couldry, N. and Mejias, U. A. (2019) *The Costs of Connection: How Data Is Colonizing Human Life and Appropriating It for Capitalism*. Stanford, CA: Stanford University Press.

[13] European Parliament (2025) *Making Europe an AI Continent*. European Parliamentary Research Service (EPRS), Brussels. Available at: `https://www.europarl.europa.eu/RegData/etudes/BRIE/2025/775923/EPRS_BRI(2025)775923_EN.pdf`.

[14] UNESCO (2023) *AI and Education: Guidance for Policy-Makers*. Paris: UNESCO Publishing.