

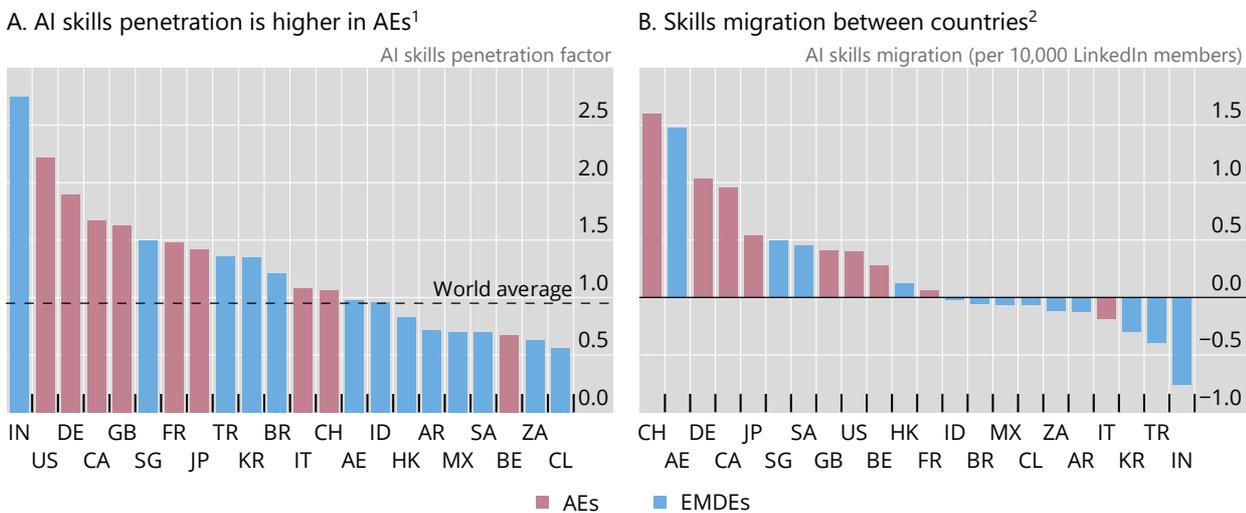
Online annex for BIS Bulletin no 121: “Economic impact of AI in emerging market economies”

This online annex provides additional evidence of cross-country heterogeneity in artificial intelligence (AI) preparedness and its implications for growth and labour markets. It documents differences across advanced economies (AEs) and emerging market economies (EMEs) in AI skills, talent flows and government readiness, and presents complementary estimates of the short- and long-term effects of AI on value added and employment across countries and sectors.

AI-related human capital differs across countries. AEs generally display higher AI skills penetration than EMEs, measured relative to a global benchmark. Some EMEs, such as Brazil, India and Türkiye, exhibit comparatively high levels of AI-related skills (Graph A.1.A). However, as in the case of India, a substantial share of AI-skilled workers are employed abroad, effectively making the country a net exporter of AI talent and reflecting the high international mobility of such workers (Graph A.1.B).

AEs have more AI-skilled workers and a net inflow of AI talent

Graph A.1



¹ Workers with AI skills (self-reported) against a global average benchmark. A country's AI skills penetration of 1.5 means that workers in that country are 1.5 times more likely to report AI skills than workers in the benchmark. ² Net migration flows of LinkedIn members with AI skills in 2023. Bars indicate the magnitude of a country's AI talent gains/losses.

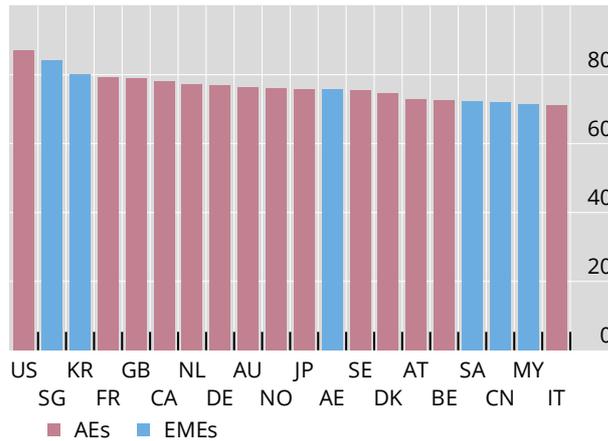
Source: C Franco, J Frost, S Mishra, C Muller and C Velasquez, “Artificial intelligence policy in emerging market and developing economies: growth opportunities in the AI value chain”, mimeo, 2025.

Governments' readiness to design and implement AI-related policies vary widely across countries. AEs tend to score higher on the overall Government AI Readiness Index, although several EMEs ranked among the global top 20 in 2024 (Graph A.2.A). Performance among EMEs differs by dimension, with comparatively stronger outcomes in data and infrastructure (Graph A.2.B).

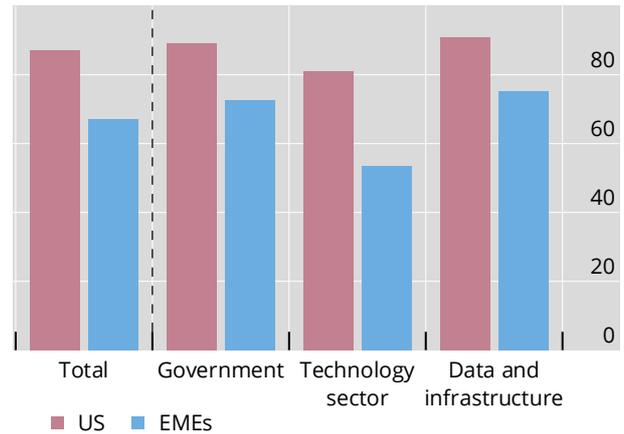
Government AI readiness

Graph A.2

A. Government AI Readiness Index¹



B. Government AI Readiness Index subcomponents²



¹ The Government AI Readiness Index assesses 188 countries using 40 indicators grouped into three pillars (government, technology sector, and data and infrastructure). Each pillar combines quantitative and qualitative measures of digital capacity, institutional effectiveness and data governance. Results are normalised on a 0–100 scale, with higher values indicating greater readiness. ² GDP-PPP weighted averages for 28 EMEs.

Sources: Oxford Insights; BIS.

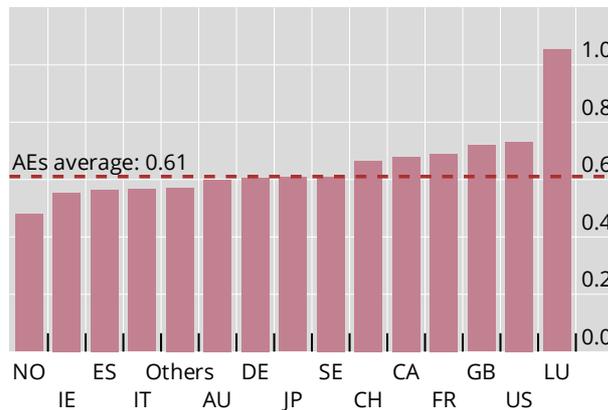
Differences in sectoral composition and AI preparedness shape the magnitude of the short-term growth effects across countries. On average, estimated gains are larger in AEs than in EMEs, with substantial variation across EMEs (Graph A.3.A and A.3.B).

Short-term growth impact of AI varies widely, especially among EMEs¹

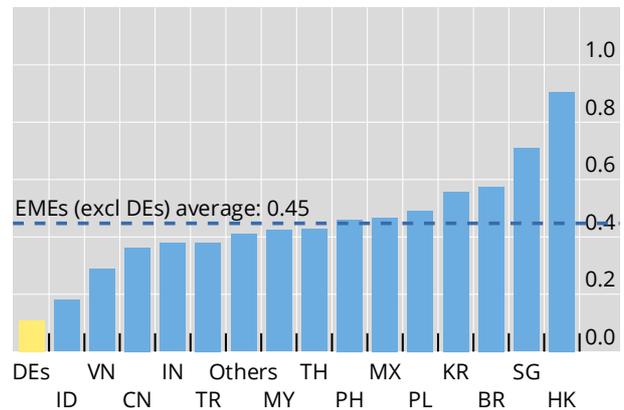
Estimated value added growth with respect to the global minimum, in percentage points

Graph A.3

A. AEs



B. EMEs



¹ DEs = developing economies, simple average of BD, KG, KH and NP. “Others” in EMEs: BG, CZ, FJ, HU, KZ, LK, MN, RO and RU. “Others” in AEs: AT, BE, CY, DK, EE, FI, GR, HR, LT, LV, MT, NL, PT, SI and SK.

Source: L Gambacorta, E Kharroubi, A Mehrotra and T Oliviero, “Artificial intelligence and growth in advanced and emerging economies: short-run impact”, *BIS Working Papers*, no 1321, December 2025.

In the long run, AI-driven productivity gains are expected to raise value added across all sectors, consistent with AI operating as a general purpose technology (Graph A.4.A). Under the assumption of unchanged aggregate employment, labour reallocates across sectors, with employment gains in construction and healthcare and declines in agriculture and mining (Graph A.4.B).

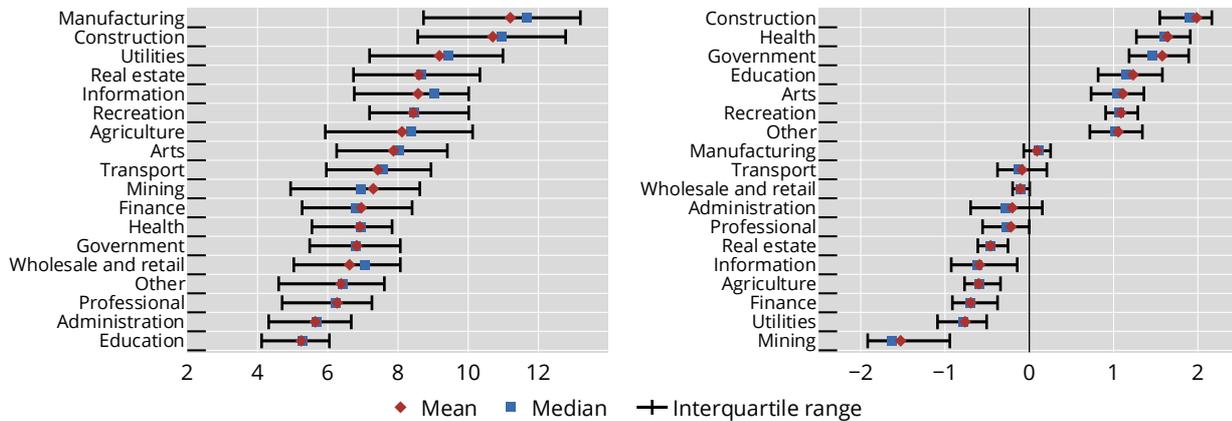
Long-run effects of an increase in productivity due to AI on value added and employment¹

In per cent, estimated change in the steady state across sectors

Graph A.4

A. Effects on value added

B. Effects on employment



¹ The graph shows the effects in the steady state of a perfectly anticipated positive supply shock to TFP arising from generative AI. The simulation covers 70 countries – 23 AEs and 47 EMDEs – and uses the AI industry exposure measure developed by Felten et al (2021) to assess the order of the impact of AI adoption across industries. The calibration is set so that the aggregate impact on TFP growth amounts to 0.5% per year for the United States, as a benchmark, over a decade.

Sources: G Cornelli, L Gambacorta, D Rees and F Smets, "Gen AI and productivity: differences in the effects across countries", mimeo, 2026; E Felten, M Raj, and R Seamans "Occupational, industry, and geographic exposure to artificial intelligence: a novel dataset and its potential uses", Strategic Management Journal, 2021.