EDITORIAL

THE RISE OF ARTIFICIAL INTELLIGENCE: STRATEGIC OPPORTUNITIES FOR EMERGING COUNTRIES

Emerging countries with strategic resources, such as critical metals and semiconductor production capacities, have become key players in the rise of artificial intelligence (AI). Those that are well positioned in AI supply chains have both a growth engine and a major geopolitical advantage. Asia's industrialised economies, which account for over 85% of the world's exports of electronic chips, are best placed to benefit from the increasing demand for AI. However, this advantage also exposes them to a potential correction in the technology boom. Latin American countries that extract minerals critical to AI have strategic leverage, but they will need to forge partnerships and attract foreign investment to strengthen their position in supply chains. Regardless of whether they supply minerals or chips, these countries are all exposed to the risks associated with the concentration of the main AI players amid heightened geopolitical tensions. Finally, Central Europe is relying on a skilled workforce and ambitious plans to leverage AI for economic development.

EMERGING COUNTRIES AND AI: VARIED POSITIONS

Emerging countries' positions regarding AI vary greatly, whether in terms of their ability to innovate, finance and adopt technologies; their exposure to AI's impact on productivity and employment; or their position within supply chains. In 2026, as in 2025, these supply chains will serve as the primary channel for transmitting the effects of the AI boom to emerging economies. In fact, in 2025, the sharp increase in technology investments, particularly in AI, fuelled global demand for electronic products and other goods associated with AI development. This has significantly bolstered exports and economic growth in countries that produce critical raw materials and, above all, high value-added manufactured goods. This is an important factor explaining the strong average growth performance of emerging economies in 2025 (estimated at 4.3%, stable compared to 2024).

Currently, the impact of AI expansion on the growth of emerging economies (excluding China) therefore primarily occurs through the spillover effects of investment in physical AI infrastructure. Although AI is expected to be adopted more quickly than previous innovations, its impact on productivity will only become evident after a period of diffusion of the new technology, contingent upon investments in both physical and human capital that facilitate its adoption (equipment upgrades, reorganisation of production processes, training, etc.).

Among emerging economies, the most developed Asian countries, China, the Baltic states and Central European countries are best positioned to deploy and use AI, according to the IMF's AI Preparedness Index (AIPI). Following them are Türkiye and the countries of the Middle East. The average capacity of Latin American countries and, above all, sub-Saharan Africa (SSA) to use AI is much more limited (the average AIPI for SSA is 0.34). *See Chart 1.*

A CLEAR ADVANTAGE IN SUPPLY CHAINS

Overall, while emerging economies are not as well positioned as advanced economies to take advantage of the adoption and diffusion of AI (the average AIPI for G7 countries is 0.72), they are better positioned within AI supply chains. These encompass activities related to the chip industry (design, manufacturing and assembly), equipment and other electronic materials, as well as AI infrastructure (such as supercomputers and data centres). These sectors are extremely capital-intensive and energy-intensive (*see page 6*), as well as demanding in terms of water and minerals. They have also become highly strategic.

As a result, countries that are well positioned within AI supply chains – primarily producers of critical metals, electricity and advanced semiconductors – have both a growth engine and a geopolitical advantage.

This advantage is expected to strengthen in the short term, assuming that the surge in investment in data centres and other AI infrastructure continues. Currently, the four major players in the sector in the United States (Amazon, Microsoft, Meta, Google) are planning to invest USD 620 billion in 2026, four times the amount invested in 2023 and a 60% increase on 2025. These investments will drive global demand for semiconductors, with the market projected to grow by 26% in 2026 (following a 22% increase in 2025), according to forecasts from World Semiconductor Trade Statistics.

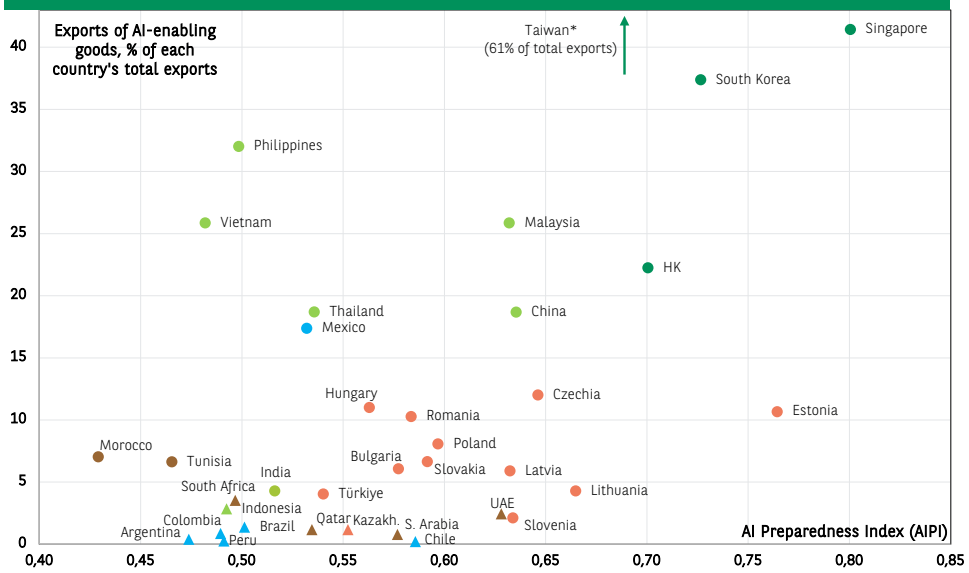
To assess countries' positioning within supply chains, we use export data for "AI-enabling goods" or "AI-related goods", as estimated by Oxford Economics and based on the WTO nomenclature. This results in a broad estimate of exports of AI-related goods. It includes raw materials, chemicals, equipment, semiconductors and other electrical and electronic equipment used in AI, as well as those that are "likely to be used" in AI (and potentially in other applications as well). In 2025, total exports of "AI-related goods" are estimated at USD 3.3 trillion, or around 12% of global merchandise exports. Semiconductors and other electronic components account for around 70% of the total, equipment for 25%, and raw materials and chemicals make up less than 5%. This last figure, which may seem surprising, contrasts with the strategic importance of the critical materials required for AI, but can be explained by the very small quantities that are ultimately used.

CHINA IS HOT ON THE HEELS OF THE UNITED STATES IN THE AI RACE

AI has become a battleground of intense competition between China and the United States. For Beijing, the AI sector is central to its strategy of enhancing China's technological supremacy globally and strengthening its national security. On the domestic front, AI is also a key element of the authorities' economic strategy (*see note on China in this issue of EcoPerspectives, page 11*). Innovation, the development of AI and its widespread deployment in the country are expected to boost productivity gains and support growth at a time when China is adjusting its economic engines (expansion of the export manufacturing sector against reduced reliance on the real estate sector and debt-financed investment) and facing demographic challenges. The country is also relatively well-positioned to adopt AI. The IMF's AI preparedness index confirms this position: it stands at 0.64 for China, compared with 0.46 for emerging economies and 0.68 for advanced economies.

In the race for AI, China has been rapidly closing the gap with the United States in recent years, thanks to huge investment and innovation efforts. The United States maintains its lead in computing power and the design of the most advanced chips (Nvidia) and controls the export of these chips to China. For its part, China is developing increasingly sophisticated models and has become a leader in open-source

AI-RELATED OPPORTUNITIES: ASIAN COUNTRIES ARE THE BEST POSITIONNED



Exported goods: ■ mostly manuf. ▲ mostly commodities
AI preparedness index of the IMF: the AIPI is the sum of 4 dimensions: digital infrastructure, human capital, technological innovation, and legal frameworks.
* There is no AIPI for Taiwan

CHART 1

SOURCES : IMF (ITG AND AIPI DATA), OXFORD ECONOMICS, BNP PARIBAS

models as well as data collection. It is involved in almost the entire AI value chain and, most importantly, controls the supply of critical materials. The rivalry and race for technological supremacy between China and the United States will be determining factors in the evolution and decoupling of AI production chains in the medium term.

INDUSTRIALISED ASIAN COUNTRIES: PRIMARY BENEFICIARIES

Industrialised Asian countries occupy a prominent place in the AI supply chain, owing to the specialisation of their export base in semiconductors and other high-tech goods. Over 85% of global exports in the semiconductor sector[1] and 65% of global exports of "AI-related" goods[2] come from Asian countries. *See Charts 2 and 3.*

This specialisation has provided them with considerable advantages in recent months. While global trade experienced robust growth in 2025 (with total exports estimated to have risen by 5% in volume), Asia registered even greater export growth (+14.8% in volume for the most advanced countries[3], +8.5% for China and +6.4% for other countries in the region). The technology sector has accounted for over 80% of the growth in exports from Asia, excluding China, since April 2025, and nearly 60% of the growth in Chinese exports (IMF estimate, WEO Update, January 2026).

China accounts for 21% of all AI-related goods exported worldwide. Taiwan's position is also highly strategic as it lies at the core of the semiconductor supply chain, which is vital to the AI sector. This strategic importance is based on the high degree of openness and specialisation of its economy (61% of its exports are AI-related goods, the highest percentage worldwide) and its significant technological advantage.

Taiwan supplies 11% of the goods needed for AI and 15% of the semiconductors exported worldwide, and it manufactures almost all of the most advanced chips specialised for AI, (these chips are notably designed by Nvidia in the United States and manufactured by TSMC in Taiwan). In 2025, Taiwan's total exports jumped by 35% in value and 34% in volume, including a 79% increase to the United States. This leadership role also provides security for the island[4] and is a strategic asset that Taiwan emphasises in its negotiations with the United States and its other trading partners.

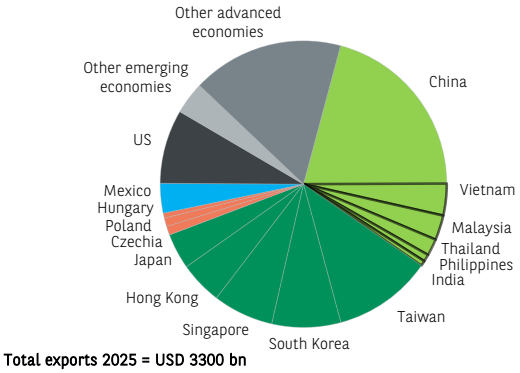
After China, Taiwan (and the United States), the countries that are best positioned within AI supply chains include South Korea, Singapore, Vietnam and Malaysia, which are ahead of Germany, the Netherlands and Mexico (*see note on Mexico, page 29*). These countries account for between 3% and 8% of global exports of AI-related goods in 2025, again according to the WTO nomenclature.

In the semiconductor sector, the value chain is characterised by significant fragmentation[5], which is reflected in the organisation of production in Asia. China is involved in various stages of production. Taiwan, South Korea and Japan specialise in the manufacture of silicon wafers, which are essential for etching integrated circuits. Together with China, these three countries accounted for 80% of wafer production capacity in 2025. Further along the supply chain, Malaysia, Vietnam and the Philippines specialise in the assembly, testing and packaging (OSAT) of chips to make electronic components. Although the contribution to GDP is relatively modest, the dynamism of the sector in 2025 has significantly driven the economic growth of these countries (*see note on Malaysia, page 15*).

1 BNP Paribas calculations for 2024–2025, ITC/COMTRADE data.
2 Estimate for 2025 based on Oxford Economics data.
3 South Korea, Taiwan, Hong Kong (99% of whose exports are re-exports of goods originating mainly from China and other Asian countries), Singapore (75% of whose exports are re-exports or exports of petroleum products).
4 In 2025, Taiwan announced substantial investments in the US as part of the trade agreement negotiated with Washington. Since October 2025, TSMC and Nvidia have commenced joint production of their first chips (silicon wafers) on US soil, in a factory in Phoenix. However, Taiwan continues to hold a monopoly on product finalisation for the time being, as the last stage of manufacturing (encapsulation) is carried out on the island, enabling it to maintain its "silicon shield".
5 See OECD, "Vulnerabilities in the semiconductor supply chain", No. 2023/05, https://doi.org/10.1787/6bed616f-en.

ASIA'S DOMINANCE IN SUPPLY CHAINS

Total world exports of AI-enabling goods, market shares (% of total)

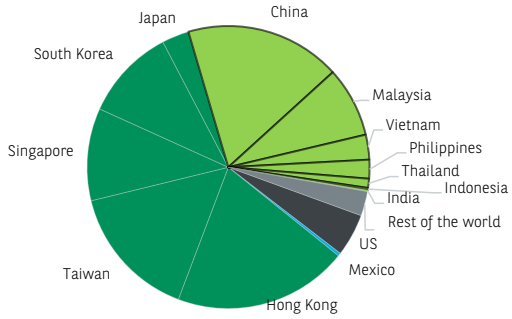


Total exports 2025 = USD 3300 bn

CHART 2

SOURCE: OXFORD ECONOMICS, WTO, BNP PARIBAS

Total world exports of semiconductors, market shares (% of total)



Total exports 2025 = USD 1500 bn

CHART 3

SOURCE: ITC, UN COMTRADE, BNP PARIBAS

PRODUCERS OF CRITICAL MATERIALS: A STRATEGIC POSITION

Raw materials account for only 2% of global exports of AI-related goods (again according to the WTO nomenclature). However, they hold strategic significance. The leading suppliers are located in the Middle East (particularly the United Arab Emirates), Asia (particularly Indonesia) and Latin America.

Global demand for raw materials essential for AI (specifically for chips and data centres) is projected to rise considerably in the coming years. The International Energy Agency (IEA) estimates, for example, that the demand for copper from data centres could more than double by 2030. This would represent around 2% of current global copper consumption. All these materials (including copper, aluminium, gold, silicon, palladium, germanium, gallium, etc.) are considered "critical" due to their low substitutability, their importance in generating value for global industry, and the geographical concentration of supplier countries (for raw or refined products).

The processes of exploring, extracting and processing minerals are difficult, time-consuming and expensive, but the quantities required for their end use are small. Consequently, significant supply challenges directly related to production issues or bottlenecks do not pose the greatest risk in the short term. On the other hand, the critical nature of these materials and the challenges posed by AI confer upon them a strategic role as tools in international relations and trade negotiations. The number of export restrictions on these metals has increased in recent years, and ongoing geopolitical tensions are amplifying the vulnerability of AI supply chains to the risk of supply disruptions.

China has the most powerful means of exerting pressure, thanks to its largely dominant role in the production of critical materials. Advanced countries are taking steps to reduce this vulnerability[6], but it will take them years to meet domestic demand, while China is implementing a development plan that was drawn up several years ago. Consequently, the growth of AI could potentially heighten, at least in the short term, the world's dependence on China, alongside Sino-American rivalry and geopolitical tensions.

In this context, the boom in the AI sector is creating opportunities for emerging countries with reserves of critical minerals. Although the export of these materials currently has a modest impact on their economic growth, these countries have a strategic advantage in forging partnerships, attracting foreign investment, developing new mining projects and capitalising on the expansion of AI. The environmental challenge will also pose a significant hurdle for these countries (*see notes on Argentina, Brazil and Chile, pages 23, 25, 27*).

CENTRAL EUROPE AND THE GULF COUNTRIES: AMBITIOUS PLANS

At first glance, Central European countries may not seem to have any comparative advantages in AI supply chains. However, they do have a well-educated workforce and infrastructure that will facilitate the integration of AI throughout the economy and its adoption by the populace. Furthermore, the governments of Central European countries are not shying away from launching ambitious plans aimed at using AI as a catalyst for development (*see notes on Poland and Hungary, pages 17 & 19*). These plans are based on several components: defining a strategy and ambitious medium-term objectives; providing public support for businesses to innovate, invest and adopt AI; constructing data centres (essential for the local development of AI); incorporating relevant training into education programmes; and adjusting regulations accordingly.

The Gulf countries have also drawn up highly ambitious plans. Saudi Arabia, for example, aims to develop the entire AI value chain and become a global leader in this sector within a few years (*see page 31*). The Gulf countries enjoy major comparative advantages: abundant, cheap energy and vast desert areas, which allow for the establishment of large data centres at relatively low cost. Energy is mainly carbon-based, but the number of solar projects is increasing. In addition, governments are able to mobilise large sums of money from sovereign wealth funds to finance technology partnerships and infrastructure, as well as to invest in education. Political will, natural resources and available capital are factors that favour the development of AI hubs in the region.

Article completed on 27 February 2026

Christine PELTIER

christine.peltier@bnpparibas.com

with the help of Clara Ngo Ba Do (intern)

6 See BNP Paribas, EcoInsight, European Union: low-carbon transition and energy sovereignty, a path fraught with pitfalls, February 2026.