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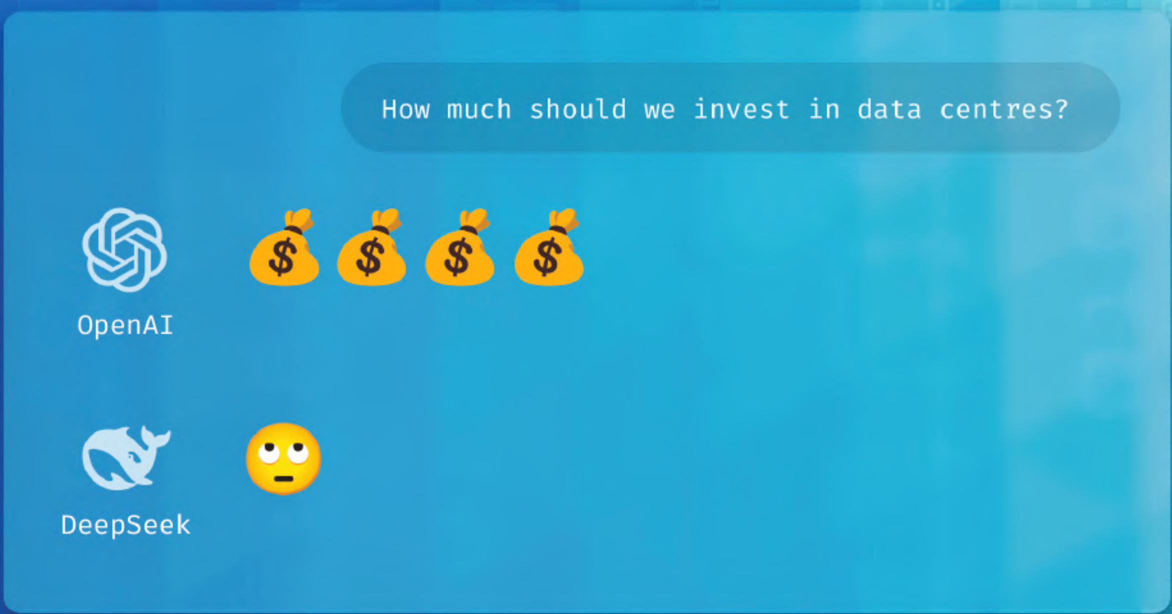

FT LOCATIONS

FDI in the 2020s: where are we at?

NEVER BEFORE HAVE MNEs ANNOUNCED SO MUCH GREENFIELD FDI AS IN THE FIRST HALF OF THE 2020s, WRITES **JACOPO DETTONI**

As I write this column, Donald Trump has just promised to turn Gaza into "the Riviera of the Middle East". Five minutes later, he called for "nuclear peace" with Iran. It's been a wild ride.

Two weeks into his second term, he has wiped out any sense of perspective, triggering a cacophony of reactions along the way.

Luckily, our data team threw me a lifeline. The release of **fDi** Markets' full-2024 data is what I needed to regain some perspective.

Five years have passed since the turn of the decade. We got off to a poor start. One day, Wuhan is one of the dozens of Chinese urban sprawls nobody has ever heard of; the following, it's the epicentre of a global pandemic. Things got better, eventually, but not for everyone. To their dismay, people in Ukraine and Gaza found themselves haunted by hissing artillery. Meanwhile, the world woke up to the power of generative AI. The icing on the cake: the comeback of The Donald.

These are glory days for the doomsayers. But when it comes to greenfield foreign direct investment (FDI), the data defies this narrative. Never before has the world economy mobilised so much greenfield FDI as in the first half of the decade, **fDi** Markets figures show.

A couple of seismic shifts must take credit for it.

Capital intensive sectors have come to dominate the FDI scene: renewable energy, as well as semiconductors and data centres. Industrial policies unleashed opportunistic instincts too, which inflated capital pledges.

Bigger, but fewer, projects have increased the concentration of cross-border investment. Risk theory at hand, that is not ideal – especially considering that big projects go wrong all the time. Besides, higher concentration heightens competition among investment promotion agencies. With a more limited base of projects to contest, my win becomes your loss and vice versa.

Worryingly, this concentration also creates a mismatch between perception and reality. In her brilliant book *Sinews of War and Trade*, Laleh Khalili describes how ports have gone from lively trade hubs at the heart of urban communities to detached, gated infrastructure. Mega projects have similar characteristics: highly-automated, securitised, isolated. Except for the bare minimum who work there, they tend to go unnoticed.

As we enter the second half of the decade, the role of FDI is changing. Gone are the days when we looked at it as the result of a flourishing free-market global economy. In the new reality of geoeconomics, FDI must be viewed through the lens of national and economic security. As such, it becomes a tool in the hands of national governments to pursue their security agenda at home and abroad.

There are major corollaries to this. Nearshoring is approaching the end of the road as full reshoring becomes the safest option to secure productions and technologies. FDI screening (inbound and outbound) will only increase and lend itself to political interference (Nippon Steel anyone?). When FDI does happen, expect it to come with strings attached. China took the flack for years because of its compulsory tech transfer provisions; that is about to go mainstream.

With the West entrenching, multinationals from middle-power countries will play a key role in keeping foreign trade and investment alive. Excess capital will find its way to fast-growing economies, shifting globalisation's centre of gravity towards its edge.

Mr Trump's egocracy wants us to believe he is the divinity around which we all revolve. In the Copernican era of foreign trade and investment, the truth lies elsewhere. Global FDI is alive and kicking. It's evolving, but still flowing – with or without the US. ■

Jacopo Dettoni is the editor of ***fDi****.*

> WITH A MORE LIMITED BASE OF PROJECTS TO CONTEST, MY WIN BECOMES YOUR LOSS AND VICE VERSA

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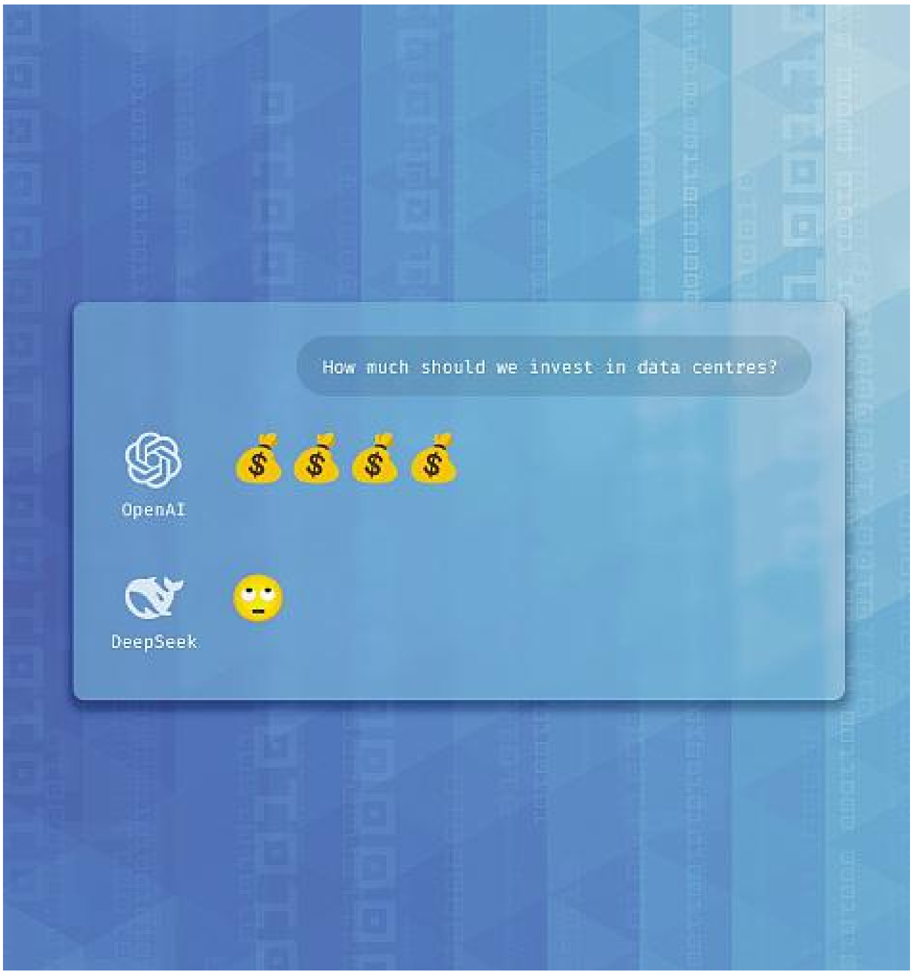


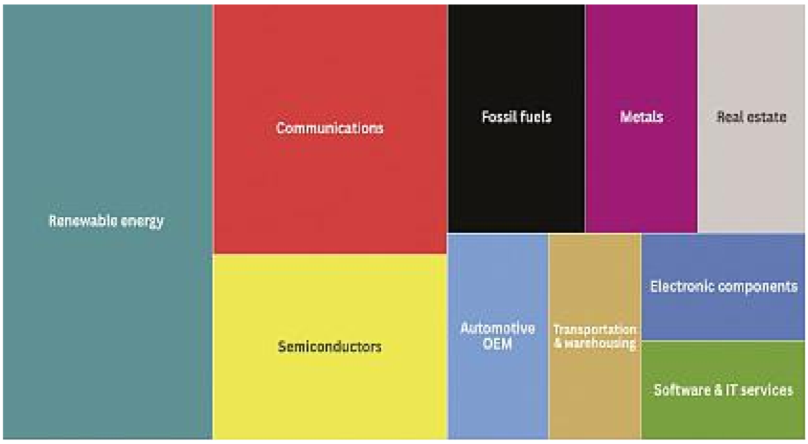
REGULARS

GLOBAL

Encarna Piñero, CEO, Grupo Piñero, p50

DATA CENTRES AND SEMICONDUCTORS CHARGE UP THE FDI RANKS AS BATTERIES SLIP BEHIND

The investment matrix: 2024



Technology, hardware and energy were the standout themes shaping the top 10 recipient sectors of global foreign direct investment (FDI) in 2024, according to preliminary figures from greenfield project tracker fDi Markets, but capital pledges into batteries subsided from the lofty highs of recent years.

Global FDI activity last year was propelled by large, capital intensive projects in critical infrastructure and capacity needed for a more digitalised and lower carbon economy, including renewable energy, semiconductors and data centres.

Preliminary 2024 full-year **fDi** Markets figures indicate foreign companies announced cross-border greenfield investments worth at least $1.23tn, the third-highest ever figure after the previous two years. These figures are set to be revised once finalised at the end of the first quarter of 2025.

Early indications are that mega projects, which have capital expenditure (capex) plans of $1bn or more, remain at historically elevated levels of 121 but are down from an all-time high of 174 set in 2023. This is reflected in the average capex pledged to global greenfield FDI, which stood at $77.3m in 2024, the second-highest figure ever tracked after $81.5m committed in 2023.

Renewable energy remained the largest FDI sector in 2024. But preliminary data indicates global pledges fell year-on-year by about 30% to $258bn. This was largely due to much lower FDI commitments to speculative green hydrogen and other emerging clean tech ($116bn). More moderate global investments in wind power ($40bn) projects contrasted with robust FDI into solar power ($84bn), which has become the cheapest form of new electricity generation in many countries.

Traditional energy investments also experienced a strong year. Capex pledges into natural liquified and compressed gas (LNG/CNG) surged in 2024 to an all-time high of more than $57bn, reflecting a rush to build LNG terminals to serve increased demand. Preliminary **fDi** Markets data show FDI into oil and gas extraction roughly halved year-on-year to $17.5bn.

The standout investment trend of 2024 was undoubtedly in data centres. More than $144bn was pledged to build them globally, **fDi** Markets shows, making communications the second-hottest broadly defined FDI sector. Demand for data centre capacity from cloud computing and artificial intelligence has led developers and tech groups to invest beyond traditional markets into sites with power access.

Semiconductors, which underpin the modern digital economy, were another area with significant investment activity. Almost $120bn worth of FDI was announced globally, which reflects companies gaining approval for major subsidy packages to build new facilities in the US, Singapore, Japan and in several EU countries. ■

ALEX IRWIN-HUNT

$144BN FDI CAPITAL EXPENDITURE ANNOUNCED IN 2024 TO BUILD DATA CENTRES, ACCORDING TO FDI MARKETS PRELIMINARY DATA

AI dominates venture capital funding in 2024

Artificial intelligence has become more than just a buzzword. Widespread conviction that AI is the next technology revolution has caused a frenzy among investors of all stripes from corporates to venture capitalists (VC).

Preliminary data from PitchBook for the fourth quarter of 2024 shows that, in value terms, 50.8% of global VC funding was deployed in AI-focused companies, almost double its share from the same quarter of 2023. By number of deals, VC investment into AI-focused companies fell by 16.6% over the same period, but due to a declining number of total VC investments, AI's share of deals still rose from 21.4% to 25.9%.

Mega deals worth more than $1bn are the main driver behind this trend. But even when they are excluded, AI-focused firms still captured a greater share of VC investment value in 2024 than in previous years. Global VC funding for AI start-ups rose to $131.5bn in 2024 — up by 52% from a year earlier, compared to a decline of about 10% to $237bn for other start-ups, according to preliminary data from PitchBook. ■

ALEX IRWIN-HUNT

Global trade almost hit $33tn in 2024

Worldwide trade in 2024 is expected to have reached a record high, according to an Unctad report on 4 December 2024, at a time of heightened geopolitical tensions and restrictions on the free flow of goods and services across the globe.

Unctad said it expects global trade to have risen year-on-year by 3.3% to reach almost $33tn in 2024, its highest ever level and ahead of the previous record of almost $32tn set in 2022.

Annual 7% growth in services trade was the main driver, but Unctad said this was "partially due to services price inflation". Trade in goods was up by 2% year-on-year, but remained below its 2022 peak. ■

ALEX IRWIN-HUNT

- **Largest region in Poland:** 35,559 km², 11.3% of the country's area
- **Population:** Over 5.511 million, more than 14% of Poland's total population
- **Unemployment rate:** 4%
- **Registered entities:** Over 1.05 million in Mazovia
- **Exports:** Over 22% of Poland's exports come from Mazovia
- **GDP contribution:** 23.7% of Poland's GDP, including 18.3% from the Warsaw Capital Region
- **Startups:** Over 22% of Polish startups are from Mazovia
- **Higher education institutions:** 94, with approximately 23% of students
- **Scientific institutions:** Over 150, accounting for 41% of all scientific institutions in Poland
- **Public roads:** The most in Poland, over 55,616 km
- **Airports:** 3 (Warsaw-Chopin, Warsaw-Modlin, Warsaw-Radom)
- **Regional railways:** 1,453 km of lines, approximately 69 million passengers annually

Mazovia is the largest (35,559 km² and over 5.511 million inhabitants) and wealthiest region in Poland, boasting immense economic and social potential. Its dynamic development, coupled with the highest national expenditure on research & development, attracts investors and entrepreneurs.

Mazovia is also the largest exporter and importer in the country, a community possessing purchasing power above the EU average, a skilled workforce and the lowest unemployment rate in Poland. It is the easiest place to find a desired field of study, secure a good job or start a business under favourable conditions with a justified hope for high profitability. The central location of the voivodeship, developed transport infrastructure and rich hotel & conference centre offerings for many years convinced both small businesses and large international corporations to invest in the region. Mazovia hosts the most foreign investments in Poland. The Mazowieckie Voivodeship also attracts tourists with its vast green areas, cultural sites and entertainment venues.

The heart of Mazovia is Warsaw, the capital of Poland as well as its main commercial hub. It houses central government offices, the largest academic centre in Poland and offers the best conditions in the country for business and high-return investments.

According to the Financial Times' "European Cities and Regions of the Future 2025" report, Mazovia ranked in the Top 10 Large European Regions in following categories: 1) Human Capital & Lifestyle, 2) Cost Efficiency and 3) Business Friendliness.

Find out more: **www.mazovia.pl**

Mazowieckie Voivodeship
European Entrepreneurial Region
2025

SCORECARD

Indian companies' investments abroad hit a new record while global FDI in 2024 dipped from the highs of the past two years. Donald Trump takes steps to establish a sovereign wealth fund, while his tariffs threaten the continent's nearshoring phenomenon. Meanwhile in China, the government takes aim at the EU's anti-subsidies rules.

LOOKING UP

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US
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AMERICAS
US tariffs on Mexico and Canada threaten nearshoring (page 26)

EU
China designates the EU's Foreign Subsidies Regulation a barrier to investment (page 9)

TRENDING DOWN

China's FDI strategy changes track

BEIJING IS ADOPTING NEW STRATEGIES TO COUNTER THE IMPACT OF DONALD TRUMP AND ITS SLOWING ECONOMY

China's approach to foreign direct investment (FDI), both inward and outward, is encountering substantial pressures amid uncertain global conditions. The return of Donald Trump, and the prospect of heightened protectionist measures and additional tariffs on Chinese imports, has pushed the country into a critical moment. To counter these pressures, China is deploying a range of strategies.

Recent outreach to US allies in Europe and Asia represents a calculated effort by China to soften the possible impacts of new tariffs while maintaining economic resilience. To achieve this, China can introduce a series of initiatives — including unilateral tariff reductions, visa waivers and targeted investments — all intended to provide a buffer against US economic pressure. This set of policies signals a departure from China's traditional quid pro quo approach. However, for success, China will have to demonstrate a higher level of transparency in meeting trade commitments, address concerns around fair competition, and work actively to reduce actual or perceived risks to technological security.

To strengthen its appeal as a stable investment destination, China is also turning its attention to domestic fiscal health. Domestically, China faces a complex environment. Analysts underscore the importance of a stronger central government role in fiscal support, noting that financially strained local governments lack the resources for effective growth-oriented policies. Expanding budget deficits at the central level could help sustain pro-growth initiatives, mitigating the limitations faced by local authorities. Moreover, recent measures to address so-called hidden debt within investment companies established and owned by local governments represent a big step in stabilising China's financial system. By unlocking significant liquidity, these efforts aim to catalyse growth without introducing new systemic risks.

The People's Bank of China (PBoC) has also adapted its monetary policy framework to support these reforms. While it has not fully adopted quantitative easing, the PBoC has initiated targeted bond purchases, refined its liquidity management tools, and announced on January 22 new measures to facilitate cross-border capital transfers for foreign investors.

This approach reflects a pragmatic adaptation of textbook monetary techniques within China's unique economic system. It prioritises stability, recognising the critical importance of preserving systemic integrity while pursuing sustainable growth.

Among China's recent initiatives abroad, the Global South Green Development Plan stands out. This programme aims to harness China's extensive expertise in green technology and its substantial technology surplus to aid the green transitions of developing nations.

Yet challenges will likely arise. Some Belt and Road countries have expressed caution about dependency risks and potential economic dominance. To foster a genuinely reciprocal relationship, this programme must offer developing nations meaningful access to Chinese capital and technology without allowing China to overwhelm its local markets.

China is at a crossroads. Each policy decision could either reinforce or undermine its future as a global economic leader. Through innovation, multilateral ties, and offering developing economies viable alternatives to dependence on the US, China can reconfigure its role. This moment provides an unprecedented opportunity. The question may not be whether China can lead, but rather how confidently it can set the standards for global investment in the coming decades. ■

Julien Chaisse is professor of law at City University of Hong Kong and president of the Asia Pacific FDI Network. X: @jchaisse

COUNTRY-NEUTRAL AND RETROACTIVE, THE GUIDELINE APPLIES TO AI, CHIPS AND QUANTUM COMPUTING

EC urges review of outbound FDI

Maroš Šefčovič, European commissioner for trade and economic security

EU POLITICS

The European Commission approved its guidelines for the screening of outbound investment on economic security grounds and urged member states to review all deals in targeted technologies in any country since January 2021.

"The geopolitics of today means that we must have a deeper understanding of the potential risks [cross-border investment] may entail," Maroš Šefčovič, commissioner for trade and economic security, said in a note on January 15. "The assessment of EU outbound investment in key technology areas will allow us to have a clearer picture of potential threats we face."

The commission is urging member states to screen outbound investment in three main areas: semiconductors, artificial intelligence and quantum computing.

"The risks caused by technology leakage are likely to be particularly acute for a narrow set of technological advances that can enhance military and intelligence capabilities of actors that may use them to undermine international peace and security," reads the set of recommendations published on January 15. "Such leakage should not be fuelled by union capital, expertise and knowledge: including in the context of outbound investment from the union."

Unlike the outbound FDI regulations issued by the US, which focused on the same technologies but targeted exclusively FDI heading to China, reviews by EU members "should be country-neutral and not exclude, a priori, specific destinations", the commission's guidelines read. "Nevertheless, member states may prioritise their review activities based on the risk profiles of individual countries."

Any deal in the targeted technologies, both ongoing or going back to no earlier than January 2021, is to be reviewed by member states, which have 15 months to identify and assess the potential risks posed by these transactions and provide the Commission with a progress report.

So far, European companies are not leaders in any of the targeted sectors, with their US and Asian counterparts having a clear lead along most of the value chain in both semiconductors and artificial intelligence, while it is still early days for quantum computing technologies.

According to **fDi** Markets, European companies announced five cross-border greenfield FDI projects in the aforementioned sectors between January 2021 and November 2024, only three of them outside the bloc itself. ■

JACOPO DETTONI

7% PROPORTION OF PROPERTY PURCHASES IN MARBELLA LINKED TO SPAIN'S GOLDEN VISA PROGRAMME

China slams Europe's FSR

The Chinese government has designated the EU's Foreign Subsidies Regulation (FSR) as a barrier to investment in the bloc. The Ministry of Commerce made the announcement on January 9, after a six-month investigation concluded that enforcement of the FSR selectively targeted Chinese firms, conducted dawn raids which were disproportionate to the allegations, and used overly broad definitions of foreign subsidies.

The FSR was introduced in 2023 as a tool to address distortions within the EU caused by imports and foreign businesses heavily subsidised by their home governments. The regulation does not explicitly target China, but the vast majority of investigations under the FSR have targeted Chinese firms. In a statement, the China Chamber of Commerce to the EU said it believes "FSR investigations have created substantial barriers to the entry of Chinese enterprises' products, services, and investments into the EU". ■

DANIELLE MYLES

Spain ends golden visas

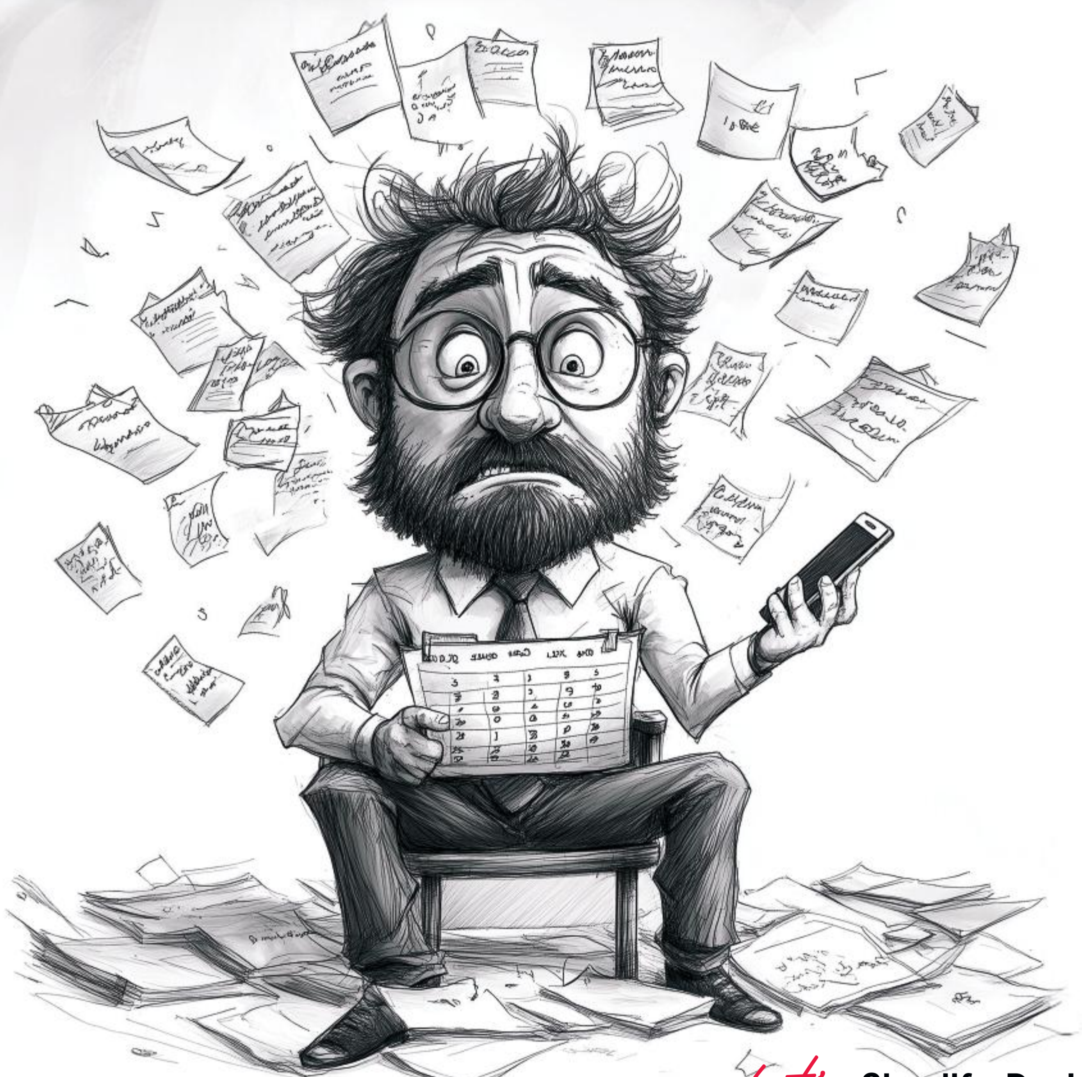
Madrid passed a law on January 3 to abolish the golden visa scheme, which grants residency to foreigners investing at least €500,000 in real estate. The change, which takes effect in April, sees the country follow in the footsteps of Portugal, Ireland and the Netherlands which have also scrapped their golden visa programmes over the past two years.

The European Commission has criticised such programmes for creating security, money-laundering, tax evasion and corruption risks. Governments have also raised concerns about the pressure that they place on already limited housing supplies. Spain's golden visa programme is linked to 7% of property purchases in Marbella and 5% in Barcelona. The main nationalities taking advantage of the soon to be cancelled scheme are China, Russia, UK, US, Ukraine, Iran, Venezuela and Mexico. ■

DANIELLE MYLES

Pomerania Develpment Agency coordinates Invest in Pomerania initiative and helps businesses flourish by giving them a boost through FDI projects.

Location search paralysis?



Let's Simplify. Decide. Act.

European Funds | Republic of Poland | Funded by the European Union | OFFICE OF THE MARSHAL OF THE POMORSKIE VOIVODESHIP

Pomerania Development Agency Co.

Pomorskie Regional Self-government Company

Egypt FTZ's $1.65bn deal

Chinese steel group XinFeng plans to invest $1.65bn in Egypt to develop a manufacturing complex in the Suez Canal Economic Zone. Announcing the news on December 16, Egypt's government said the project will be developed over five years.

XinFeng's complex will cover 3.75 million square meters and will consist of nine factories producing components for, inter alia, the automotive industry, home appliances and construction machinery. The government has promised to expedite the issuance of industrial licences to ensure the project completes on schedule.

Data from **fDi** Markets shows it is the fourth-biggest foreign project announced in Egypt's free zones during 2024. The country's strategic position along the Suez Canal has made its free zones among the industry's biggest recipients of greenfield foreign direct investment in recent years. ■

DANIELLE MYLES

Bangladesh trims FTZ ambitions

Bangladesh has scaled back plans to establish 100 economic zones by 2030, instead choosing to focus on a handful of zones to maximise their attraction of foreign investment and impact on the economy.

On January 9, the Bangladesh Economic Zones Authority's executive chairman, Ashik Chowdhury, announced it will prioritise five economic zones to ensure they reach full operational capacity. These are the National Special Economic Zone, Srihatta Economic Zone, Japanese Economic Zone, Maheshkhali Economic Zone and Jamalpur Economic Zone — all are under development.

"Our commitment is to ensure that these zones are equipped with the necessary infrastructure and utility services, such as water, electricity, gas, and road connectivity, within the next two years," Mr Chowdhury wrote in an op-ed in a local newspaper. ■

DANIELLE MYLES

FREE ZONE FOCUS

How important are tax incentives for SEZs?

Most people consider tax incentives a fundamental competence of a special economic zone (SEZ) programme. Without them, is an SEZ even an SEZ? But research indicates tax incentives may not help SEZs much and can even harm the economy.

Tax incentives come in two types: "income-based", which reward companies' profit, and "cost-based", which reward their activities or investments. SEZs, especially in developing countries, have typically relied heavily on income-based incentives by granting generously reduced corporate tax rates or tax holidays. This aims to lower costs for businesses to attract more investment. More investment will boost economic productivity and incomes, which should result in increased tax revenue.

But let's consider that the most transformative SEZs didn't rely on tax incentives as their primary draw. They instead changed institutions that were in need of reform. For instance, the export processing zones of the 1960s and 1970s replaced protectionism with trade liberalisation, China's SEZs introduced a free-market system, and Dubai's free zones (such as the Dubai International Financial Centre) implemented new commercial laws and courts. At the national level, none of the economic transformation stories of the 20th century — Japan, Singapore, South Korea, Chile, Botswana, Rwanda or Vietnam — can credit lower taxes as a primary reason for increased investment. Why should we expect SEZs to be different?

Research suggests that tax incentives are not the most important factor driving investment decisions. Instead, surveys indicate the quality of the overall business environment, the labour force, infrastructure, and political and regulatory stability matter much more to companies' choice of where to locate. When these factors are not strong, tax incentives may have no impact.

Globally, overreliance on tax incentives spurs tax competition, resulting in each country lowering their taxes more than others. Evidence also indicates that as tax incentives become more generous, corporate tax revenue declines as a share of GDP. This means fewer resources for public investments that promote growth, like education and infrastructure.

There are cases in which tax incentives appear to be effective, of course. Tax holidays remove procedural burdens for companies, which can be particularly meaningful in countries with inefficient, opaque or unfair tax administrations. Incentives also matter more to 'footloose' industries, such as garments and textiles. However, these companies tend to leave once the incentives expire or a better deal appears elsewhere.

SEZs can offer other advantages that are much better for both investors and the nation, such as:

■ Piloting institutional reforms in SEZs, including improved tax administration. Making it easier to comply with procedures can attract companies, avoid public revenue losses, and initiate nationwide reforms.

■ Relying more on cost- and performance-based incentives than income-based incentives. Cost-based incentives include tax deductions and credits to encourage socially beneficial expenditures, like on-site childcare or skills development programmes. Performance-based incentives include subsidies that effectively 'purchase' positive outcomes, such as measurable pollution reduction.

So, before adopting another cookie-cutter tax incentive package for SEZs, policymakers should consider other tools for attracting investment. They may end up transforming the entire nation. ■

Michael Caste-Miller is an SEZ specialist and senior advisor at DGA-Albright Stonebridge Group

Is Trump 2.0 FTZs' day in the sun?

TARIFF THREATS HAVE SPARKED A WAVE OF INTEREST IN FOREIGN TRADE ZONES, AND TAKEN THE PROGRAMME BACK TO ITS ROOTS. **DANIELLE MYLES** REPORTS

US president Donald Trump's early efforts to hike tariffs on everywhere from China to Canada has sparked renewed interest in the country's 90 year-old foreign trade zone (FTZ) programme.

The driving principle behind FTZs — the US version of free trade zones — is mitigating the impact of tariffs. Faced with the prospect of higher costs for inputs from abroad, more companies are assessing FTZs as a potential solution.

Jeff Tafel, president of the National Association of Foreign-Trade Zones (NAFTZ), says zone operators are reporting "up to double the level of interest [from companies] compared to before the election". Industry advisers report a similar uptick. David Trumbull, senior consultant at FTZ Solutions, says queries about using FTZs to mitigate tariffs are two to three times higher than usual.

The US's programme is already extensive. Around 3400 companies operate in FTZs, including some of the country's highest-profile investment projects. Chipmaker TSMC's $65bn campus being developed in Arizona operates in an FTZ. So does BMW's $12bn manufacturing plant in South Carolina. Pfizer's production of Covid-19 vaccines also took place in a Michigan FTZ.

However, the programme's particularities have created lingering confusion — both at home and abroad — about how US FTZs differ from more traditional free trade zones seen abroad. As Mr Trumbull notes: "The initials are the same, but the concept is different."

Same acronym, different concept

US FTZs have two defining characteristics. The first is that they operate outside of the US for customs purposes. This means no import duties are charged on goods when they arrive in the zone from abroad. Tenants — which typically use zones for warehousing, manufacturing or assembly — can benefit from this in various ways.

If the imported goods are subsequently exported without entering the US, no duties become payable. For imported goods that are later sold into the US, duties are payable only when the goods arrive in the domestic market — which helps improve cashflow.

Manufacturers importing inputs to produce final goods before selling them into the US can benefit from the lower of two different duties. Take the example of a laptop manufacturer using an imported electronic component. If the duty for the laptop is lower than that for the electronic component, the company can use a 'tariff inversion' which allows

Work in progress: chipmaker TSMC's $65bn campus being developed in Arizona operates in a foreign trade zone them to pay the laptop's duty rate. On the other hand, if the laptop's duty is higher, the company can request the electronic input be ascribed 'privileged foreign status' which locks its duty to that lower rate.

Taken together, these benefits can significantly improve a company's financial position. Last year, US electric vehicle manufacturer Canoo announced its FTZ benefits would save it $70m in costs and deferred duty payments during 2024 and 2025.

While FTZs offer significant tariff benefits, they lack the broader fiscal perks offered by other free zone programmes. There are no corporate tax breaks, although some state taxes — such as on tangible personal property and inventory — are waived. In short, the programme is underpinned by FTZs being outside the US for customs purposes. If a company isn't importing, there is little point using an FTZ. And the biggest benefits flow to those which are also exporting.

'The zone comes to you'

The US programme's second defining feature is the flexibility to operate within an FTZ across almost every corner of the country, thanks to its two types of zones. General-purpose zones, also known as magnet sites, are akin to the multi-tenant free zones seen overseas and are typically found near ports. But companies also have the option to establish a 'subzone' by having their facility designated as a standalone FTZ. These single-company zones cater to businesses that cannot operate in general-purpose zones because they lack the infrastructure or capabilities to support their activities. "In the US, the zone can come to you, instead of you going to the zone," Mr Tafel surmises.

The one constraint on FTZ locations is they must be within 60 miles or a 90 minute drive from a US port of entry — be it a seaport, inland port or airport. That still means "you can assign FTZ designation pretty much anywhere in the country", says James Grogan, FTI Consulting managing director and NAFTZ's chairman. FTZs are present in all 50 states plus Puerto Rico. "One of the best things about the programme is you're bringing investment, jobs and export promotion to places that aren't typically known for being international trading hubs," he adds.

> IN THE US, THE ZONE CAN COME TO YOU, INSTEAD OF YOU GOING TO THE ZONE

Government data shows that the industries with the largest FTZ operations are pharmaceutical, oil refining, automotive, electronics and electrical machinery. Those first three industries are also among the biggest users of tariff inversions, and represent zones' biggest exporters. In 2023, Mercedes-Benz's plant in Alabama was the country's biggest FTZ-based exporter, followed by ExxonMobil and LNG producer Cheniere Energy Partners, and Eli Lilly.

History repeating?

Today's renewed interest in FTZs has taken the programme back to its roots. It was launched in 1934 to dull the impact of tariffs introduced by the New Deal's protectionist policies, aiming to help US manufacturers obtain foreign inputs while keeping jobs in the US.

Mr Trump's tariffs, plus lingering lessons from the pandemic, has raised the profile of supply chain issues within corporations. "We now have CFOs, CEOs and COOs all talking about tariffs," says Melissa Irmen, NAFTZ's director of advocacy and strategic relations. "This interest in FTZs is driven in part by a broader understanding of what tariffs are."

For companies looking at FTZs as a tool to mitigate the risk of higher import duties, they must beware of one caveat. Zones cannot be used to minimise so-called 301 tariffs — duties imposed by the US on China in response to alleged unfair trade practices — when importing into the US. It means FTZs are no silver bullet to get around all Mr Trump's possible tariff plans, but they may be one of the best assurances companies can find. ■

US'S FOREIGN TRADE ZONES BY THE NUMBERS

Programme founded	1934
Number of FTZs	374
Companies operating in FTZs*	Around 3400
Direct jobs	550,000-plus
Annual exports	$148.8bn

* NAFTZ estimate

Source: Foreign-Trade Zones Board Annual Report, 2023

START-UPS

Qatar's grand plan to become a start-up hub

THE GULF COUNTRY IS ROLLING OUT THE RED CARPET FOR TECH INVESTORS AND FOUNDERS. **ALEX IRWIN-HUNT** REPORTS

In 2014, Saif Qazi, then an MBA student based in Germany, was assessing the best place to test a start-up idea. To his surprise, the gas-rich Gulf country Qatar came out on top, owing to its high internet penetration, compact size and generous support for entrepreneurs.

At the time, Qatar had no local venture capital (VC) funds and maintained stringent rules on banking, foreign ownership of businesses and residency for expatriates. Mr Qazi's reservations about the country were proven wrong.

"We realised that Qatar was this ideal test bed, where you have a small, highly connected ecosystem," said Mr Qazi, who is CEO of Urban Point, a Doha-based platform offering discounts on everyday purchases that has partnered with Qatari multinational telecoms group Ooredoo.

The Qatar of today is a very different place. Alongside global attention from its hosting of the 2022 Fifa World Cup, Qatar has taken steps to open itself up to tourists, foreign investment and tech entrepreneurs. A $1bn initiative by its sovereign wealth fund QIA to invest in international and regional VC funds has also made Qatar a serious contender in the battle for tech investment between countries in the fossil-fuel reliant Gulf region.

Qatar's start-up scene is still nascent, but local investors are bullish. "We're starting to have more access to capital and awareness about the ecosystem and its innovation", says Soumaya Ben Beya Dridje, partner at Rasmal Ventures, Qatar's first VC fund in which QIA is an anchor investor.

Other international funds like Singapore's Golden Gate Ventures have already set up their regional base in the country. A source close to UK-based Utopia told **fDi** that the investment management firm also plans to open an office in Qatar as part of their wider Middle East regional expansion.

Investors and entrepreneurs believe Qatar's appeal as a regional hub for start-ups will grow. But the challenges for the small Gulf country of less than 3 million people is how to turn its current start-ups into scale-ups and retain internationally mobile tech founders and talent.

"Unheard of" support

The Qatar Foundation, set up in 1995 by the former emir of Qatar, laid the groundwork for its innovation ecosystem. It established the necessary infrastructure for tech start-ups, research and training. This includes Qatar Business Incubation Center (QBIC), Qatar Science & Technology Park (QSTP) and Education City, which features satellite campuses of Western universities like Carnegie Mellon, Georgetown and HEC Paris.

Support for start-ups in Qatar is "unheard of in many other countries", says Mr Qazi, noting the numerous incubators, accelerators and free international expansion programmes in the country. The state-run Qatar Development Bank (QDB) is also a major investor and provider of financing for local start-ups, but declined to speak to **fDi** for this article.

One benefactor of QDB-funded programmes has been Enable.tech, a customer engagement platform for brands. The company's CEO Omar Ashour says that Qatar's "remarkable" support for founders and start-ups helps offset the country's smaller market and enables start-ups to pivot. "People here are always up for trying new things," he says.

Indica Amarasinghe, director of the Startup Grind community in Qatar, is confident that the country now has all the right elements for start-up growth, but notes "ecosystems don't develop overnight". The Qatari government has launched a five-year Golden Visa scheme aimed at making life easier and more attractive for foreign

Homegrown success: Snoonu at the Qatar Web Summit in 2024 entrepreneurs in the country.

Amin Matni, a former manager at both QSTP and QBIC, says that start-up support in Qatar has evolved from mainly grants to equity-based funds and there is now a greater desire for international cooperation. “There wasn’t much openness until the Web Summit,” he adds.

Web Summit catalyst

Web Summit has been a catalyst and boosted international awareness of Qatar’s tech ecosystem. Adam Connon, Web Summit’s general counsel and head of their Qatar event, says there is “definitely a want and interest in start-ups as a career choice” among Qataris and expats.

One of those in attendance was Cody Zazulak, Canada-based CEO of 4PointAI, a start-up using machine learning to find mineral deposits. In his opinion, there is an advantage to building a start-up in a smaller, focus-oriented ecosystem like Qatar. “There is a fair bit more distraction that happens in Dubai compared to Doha or Riyadh,” says Mr Zazulak.

But Qatar is coming from a low base. Data from Magnitt shows start-ups raised QAR115m ($31.57m) of VC funding in 2024, a record high and double the figure a year earlier. But this is still a drop in the ocean compared to larger regional markets like Saudi Arabia ($750m) and the UAE ($350m).

Scaling and retaining

For a nascent ecosystem, Qatar has some success stories including Urban Point and Snoonu, a start-up that offers personal concierge and delivery services. Urban Point’s growth was enabled by a collaboration with Qatari telecoms group Ooredoo, highlighting opportunities for start-ups with the country’s major multinationals like Qatar Airways and Qatar Energy.

For Ms Dridje of Rasmal Ventures, Qatar offers an attractive base for their regional operations, but still lacks the “deal flow” of later-stage start-ups. Ecosystem insiders note that the majority of start-ups in Qatar are still founded by expats, who make up about 85% of the country’s population.

Qatar’s sharp focus on supporting start-ups and QIA’s fund of funds program has put the Gulf country on the map for prospective tech entrepreneurs. But in an intensely competitive region with long established incentive programmes in the UAE and Saudi Arabia, Qatar must fight hard to attract and retain foreign entrepreneurs. ■

OPINION:
ELI DAVID ROKAH

Can governments buy a tech ecosystem?

Many governments are increasing support for their innovation ecosystems, establishing investment funds, incentives and visa programmes to attract entrepreneurs. But can a government grow its tech ecosystem simply by spending money? Our work at StartupBlink with dozens of governments reveals that no such direct relationship exists. Success depends more on thoughtful, long-term, macro-level strategies than short-term micromanagement.

Not every country is fortunate enough to have the resources to form sovereign wealth funds (SWFs), let alone those that try to micromanage the start-up ecosystem. These efforts are often unsustainable and can do more harm than good. Governments are not venture capitalists. They often lack the skills needed to identify promising businesses or manage early stage companies effectively. This strategy can create an artificial ecosystem that lacks the competition needed for innovation and cannibalises private investment.

Governments and SWFs should prioritise fostering a thriving ecosystem through systemic improvements. Directly funding start-ups can distort market incentives and weaken private sector activity. Instead, governments and SWFs should focus on improving macro conditions, such as creating a better business environment and addressing systemic challenges. Countries like Saudi Arabia, the UAE and Singapore have used their SWFs to push macro projects and significantly improve their business environments.

There are exceptions where micromanagement of the startup ecosystem can be relevant. Governments may find it worthwhile to incentivise start-ups in strategic markets critical to national priorities or geopolitics.

Taiwan plays a key role in the global semiconductor supply chain. The Taiwanese government further supports this industry through tax incentives for investment under its Chips Act enacted in January 2024. However, these efforts should be carefully targeted and limited to avoid micromanaging the ecosystem as a whole.

Policies and reforms focused on making it easier to start and run a business are more helpful than micro-level financial incentives. Smaller economies like Cyprus have achieved success with targeted policy reforms such as a visa scheme for non-EU entrepreneurs. Cyprus shows that you don’t need SWFs to build a successful tech ecosystem.

Three key areas can help support growth in a tech ecosystem. First is strong infrastructure, including reliable high-speed internet, data centres and stable power grids. For instance, ASAN Service in Azerbaijan has enhanced efficiency and simplified company registration through digitisation.

An additional macro-level intervention that SWFs should invest in is marketing to attract tech talent and investors. Governments can also organise large-scale events to highlight the ecosystem’s potential. These efforts should complement, rather than replace, fundamental activities in infrastructure and policy.

Investments in education and training, particularly in STEM fields, and improving English language proficiency yield better long-term results for the tech ecosystem than short-term focuses. Growing a tech ecosystem takes time and persistence. Short-term financial support for individual start-ups rarely leads to lasting results.

Governments can achieve sustainable success by focusing on creating favourable conditions — through better infrastructure, supportive policies, and consistent promotion — allowing innovation to grow naturally.

Eli David Rokah is the CEO of StartupBlink, a global start-up ecosystem map and research centre that tracks and advises on the development of the global innovation economy. Additional research for this column was undertaken by Sengul Enginsoy, a marketing manager at StartupBlink.

TECHNOLOGY

SWFs, AI and the new space race

A SOVEREIGN-BACKED FUND IS THE ONLY EMERGING INVESTOR IN TRUMP'S $500BN STARGATE PROJECT, **JAVIER CAPAPÉ AGUILAR** WRITES

Geopolitical events over the past two decades have shaped a new world order. This was initiated by the global financial crisis of 2007/08; exacerbated by the Covid-19 pandemic in 2020; punctuated by Russia's invasion of Ukraine and the emergence of ChatGPT in 2022; and consolidated by Donald Trump's return to the White House in 2025.

This new world order is characterised by a departure from the Bretton Woods consensus and its institutions. Countries are putting sanctions and controls on trade and investment relations, and leaders are looking inward. Their top priorities are based less on efficiency and more on economic security, value chains and national prosperity. Now that we've entered the Trump 2.0 era, the world is transactional and the position of power is key.

In this context, sovereign wealth funds (SWFs) emerge as useful instruments for governments to project power and influence beyond their borders. SWFs are financial giants, with more than $13tn in assets under management, after having tripled their value in just over a decade. If they were a country, SWFs would have the third-biggest economy in the world, exceeded only by the US and China.

One sector where they are increasingly focusing this capital is artificial intelligence (AI). This transformative technology has become the space race of the 21st century, with states and companies competing for leadership via investment, regulatory efforts and power plays. SWFs will play a crucial role in this race, making strategic investments and supporting national and international AI initiatives.

The region where sovereigns are betting the most on creating AI hubs is the Middle East. Among them, the most active and experienced is the UAE, ahead of Qatar, Kuwait and Saudi Arabia. Abu Dhabi's sovereign investor giant, Mubadala, has been pioneering in supporting G42, an AI-focused investment fund in which it owns a stake and in which Microsoft also invested $1.5bn in April 2024.

Mubadala and G42 are also working to foster their influence abroad, forming investment firm MGX last year to target AI projects abroad. Since then, MGX has invested in OpenAI, xAI and Databricks, and planned major infrastructure developments alongside BlackRock and Microsoft. Most notably, it is the only 'emerging' AI investor in Mr Trump's $500bn Stargate Project, alongside heavyweights SoftBank, OpenAI and Oracle.

Saudi Arabia, supported by its Public Investment Fund (PIF), has also shown strategic interest in developing AI at home. As part of the Vision 2030 agenda, PIF launched a $100bn initiative (Project Transcendence) in November 2024 to create an AI ecosystem in the country through infrastructure, data analytics and advanced technology. The project relies on international partners such as Google for the development of AI models in Arabic. Last year, PIF was also reportedly in talks with US venture capital leader Andreessen Horowitz to create a $40bn AI investment fund.

The recent emergence of DeepSeek, an 18-month-old Chinese AI start-up, has shaken global AI and tech markets. Its capability at a much lower cost than US models represents a classic example of market development, where the follower learns from the leader and advances the industry. Although dangerous for US interests, it makes this transformational technology more accessible and opens up the market for more companies, countries and indeed SWFs. This is just the beginning. ■

Javier Capapé Aguilar is the director of the Sovereign Wealth Research at the IE Center for the Governance of Change and an adjunct professor at IE University.

Tech disruptor: upstart Chinese company DeepSeek has shaken up the AI scene

GROWTHFUND'S NEW VEHICLE WILL USE INITIAL CAPITAL TO ATTRACT UP TO €900M PRIVATE INVESTMENT

Greece readies catalyser SWF for April launch

Growthfund's new catalyser fund will spur investment into the country's green and digital assets

NEW VEHICLE

Greece's sovereign wealth fund (SWF) aims to launch a catalyser fund by April with the objective of de-risking inbound investment. The first potential projects are already being identified and negotiations underway to grow the €303.5m fund to expand its impact.

The development sees Growthfund, Greece's SWF, continue the global trend of SWFs using their capital to bring foreign money into initiatives that support national development priorities. The catalyser fund, known as the New Investment Fund, follows in the footsteps of Spain's Cofides, the UK's National Wealth Fund and the Indonesia Investment Authority.

Upon its official announcement last year, Growthfund stated it would roll out the catalyser fund sometime in 2025. However SWF's CEO, Gregory Dimitriadis, tells **fDi** its activities will start sooner rather than later.

"We aim to launch the fund in April and be fully operational in Q2. The idea is that within the second half of this year we will be able to move forward with our first couple of investments," he says.

The New Investment Fund will focus on green infrastructure and digitisation projects that contribute to the country's economic growth, with the aim that every €1 of its capital will attract up to €3 in private investment. The SWF will take only minority stakes, and its initial contribution will range from €20m to €50m.

Growthfund has started to identify potential projects and conducted "a market sounding with big players that look to invest in the Greek market", says Mr Dimitriadis. These discussions have been with local players and foreign investors already active in the country. Once a project pipeline is identified, the fund will start approaching other international investors.

The New Investment Fund marks a new era for Growthfund, which emerged from the ashes of the Greek debt crisis and now has €5.5bn in assets under management. The SWF was founded in 2016 as a condition of EU rescue funding that required the government to create a sovereign fund — similar to Singapore's Temasek — to improve the operation and governance of state-owned enterprises.

Like other catalyser funds, the New Investment Fund will target foreign SWFs and other long-term investors, including pension funds. Some are already active in the country, including Canada's PSP Investment which is the majority owner of Athens airport.

Instead of encouraging investors to propose their own projects, the New Investment Fund will approach them with specific projects that meet its investment criteria and then invite investors to do their own due diligence. ■

DANIELLE MYLES

$14TN SOVEREIGN WEALTH FUND ASSETS UNDER MANAGEMENT EXPECTED TO REACH $14TN BY YEAR-END

SWFs grow by 6%

The world's sovereign wealth funds collectively expanded their assets under management (AUM) by 6% last year to hold a record $13tn, according to data provider GlobalSWF's annual report released on January 1.

This added firepower to the industry's investment activity, with SWFs executing 358 transactions throughout 2024 worth a total $136bn — up 7% on 2023. The biggest dealmaker was Abu Dhabi's Mubadala, which deployed $29bn worth of capital, followed by Singapore's GIC, Saudi Arabia's PIF and Abu Dhabi Investment Authority. The top investment hotspots for both SWFs and public pensions in 2024 was the US, followed by the UK, India and Australia.

Seven new SWFs were launched last year, stretching from the UK and Ireland to Dubai and Oman. These new entrants foster the industry's growth, with GlobalSWF expecting its collective AUM to reach $14tn by year-end and $19tn by 2030. ■

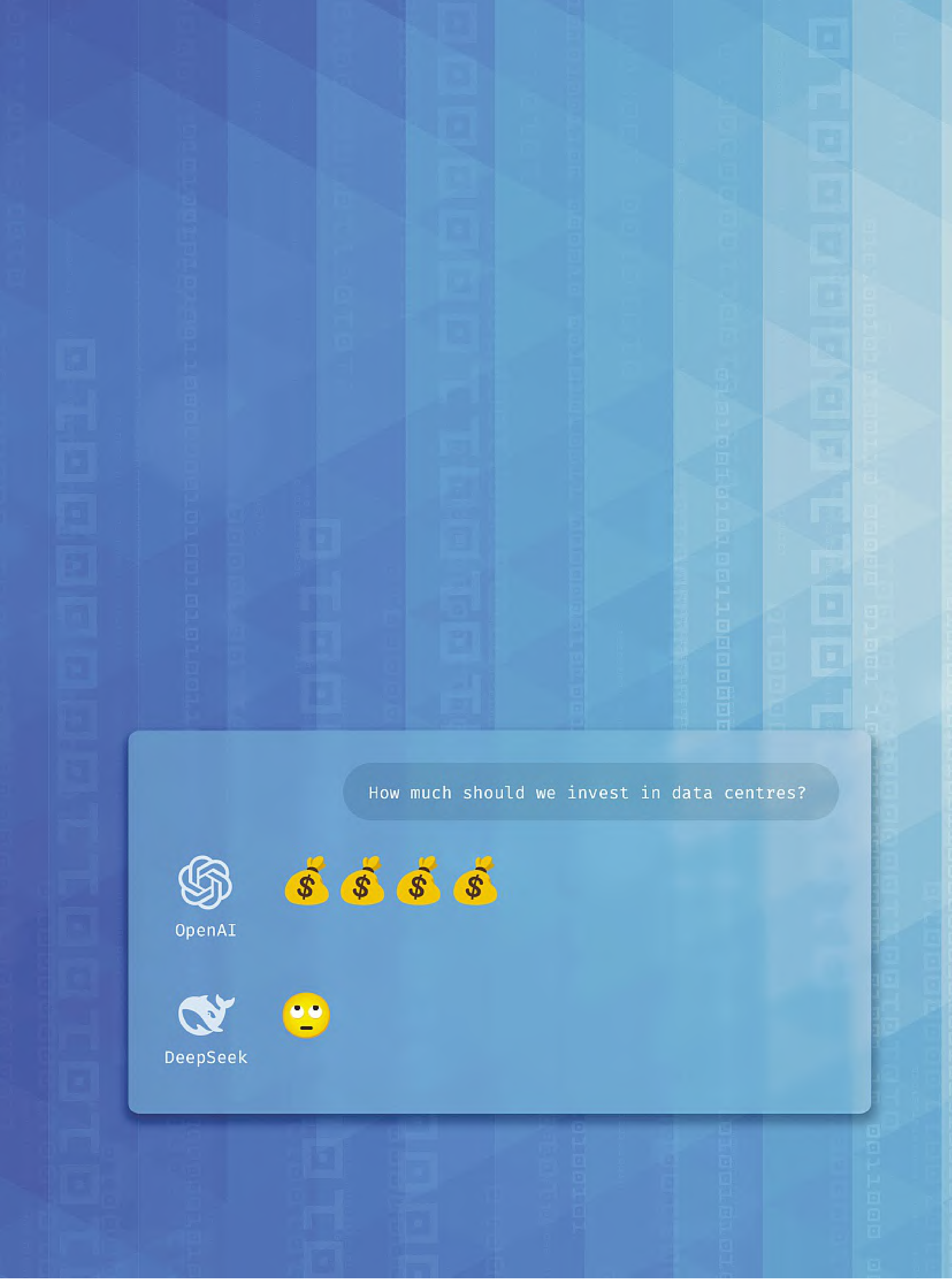
DANIELLE MYLES

Trump orders US SWF

On February 3, Donald Trump instructed the US Treasury and Commerce departments to develop a plan to establish a sovereign wealth fund (SWF). In an executive order, he stated it is the US's policy "to maximise the stewardship of our national wealth for the sole benefit of American citizens" and therefore it is in the best interests of Americans to create a SWF.

The move follows Mr Trump's campaign pledges to create a SWF to invest in "great national endeavours". It is not yet clear how the US would fund a SWF, however treasury secretary Scott Bessent told local reporters that it would be established within the next 12 months. While signing the executive order, Mr Trump reportedly said the fund could acquire Tiktok — the Chinese-owned social media platform which the US government wants in American hands to continue operating in the country. ■

DANIELLE MYLES


How much should we invest in data centres?
OpenAI
DeepSeek

AI spending review

OPEN-SOURCE CHINESE MODELS HAVE SHONE A SPOTLIGHT ON RECORD INVESTMENTS IN COMPUTING CAPACITY. **ALEX IRWIN-HUNT** REPORTS

Donald Trump has wasted no time in touting his return to office. No proclamation by the US president has arguably made more of a splash than Stargate. The new joint venture, backed by OpenAI, SoftBank and Oracle, will "immediately" deploy $100bn of capital expenditure (capex) into artificial intelligence (AI) data centres across the US. The total capex could rise as high as $500bn over the next four years. Trump declared it "by far" the largest AI investment in history.

Barely a day after the January 21 announcement, news out of China sent shockwaves through Stargate's plans, the current apogee of a frenzy to invest in digital infrastructure underpinning the AI revolution. Researchers at Chinese start-up DeepSeek released a paper claiming it had created an AI chatbot with similar performance to its Western rivals for a fraction of the price.

DeepSeek claims its R1 "reasoning" model cost less than $6m to train, compared to a reported training cost as high as $100m for OpenAI's GPT-4 model. DeepSeek also claimed that their model requires a tenth of the computational power of Meta's Llama 3.1 model. A week later, Chinese tech giant Alibaba said its new Gwen 2.5 model outperforms DeepSeek-V3 and several rival Western-made large language models (LLMs).

Their performance, described by the DeepSeek team as an "aha moment", has led to questions of US leadership over China in AI and debates over open-source versus proprietary LLMs. Trump himself called it a "wake-up call". DeepSeek is "AI's Sputnik moment", according to venture capitalist Marc Andreessen, a nod to when, in 1957, the Soviet Union beat the US to become the first country to launch an artificial satellite into orbit.

"DeepSeek's and Alibaba's success shows that AI can be done much cheaper than Silicon Valley tech companies predicted, and that the investment into expensive data centres has become irrationally exuberant," says Shaun Rein, Shanghai-based managing director of China Market Research. Although DeepSeek's claim have been disputed by many parties, some onlookers argue innovation by these Chinese companies calls for a rethink of the billions of dollars being deployed in AI microchips and the data centres that house them.

But other veteran technology analysts believe DeepSeek's innovation is a natural evolutionary step for an industry where the cost of building and running AI models far outweighs the revenues generated by them.

"AI is going from cool to value," says John-David Lovelock, chief forecaster at consultancy Gartner. "All of a sudden, it's now possible to get an LLM ▶

running less expensively, drawing less electricity. That's the type of thing that can be a boom to adoption," he adds.

Data centres have been a silver lining in an otherwise subdued investment environment in 2024. Their characteristics as a fairly predictable asset class have pulled in investment from outside the technology industry itself, with private equity firms leading the charge of institutional capital. Facing dwindling investment in legacy industries, authorities across geographies have celebrated data centres wins. Many of these projects came with a ticket size in the order of billions of dollars; but also a multi-year development timeline based on extremely bullish expectations. DeepSeek has hit the pause button on many of these plans, forcing a review of their assumptions in light of the new LLMs coming out of China.

How much?

DeepSeek's claims, which many analysts say are unsubstantiated, have shone a spotlight on how staggering spending in the global AI arms race doesn't add up. At face value, the current market seems too small to enable all these investments to make a return. Global LLM revenue estimates in 2024 range from almost $4bn (ResearchandMarkets) to $6.4bn (MarketsandMarkets), before reaching $36bn in 2030 — roughly a third of what Stargate alone has pledged to spend immediately.

By any estimate, 2024 was an unprecedented year for data centre investment. Global spending jumped 40% year-on-year to hit $329bn, a figure set to rise to $405bn in 2025, Gartner says. Foreign direct investment (FDI) into data centres surpassed $144bn in 2024, according to **fDi** Markets, a tracker of greenfield projects announcements. This represented 9% of total global FDI in an otherwise subdued landscape. Dell'Oro Group estimates worldwide data centre capex was as high as $434bn in 2024 and will hit $1.1tn by 2029.

Baron Fung, Dell'Oro's research director, cautions that "it's still a bit early" to assess DeepSeek's impact on the data centre industry. "Their claims of achieving superior efficiency and true costs to train their model have yet to be independently verified," he says, adding that this is unlike US hyperscalers where their AI investments are reflected in their public financial disclosures.

"The attractiveness of data centre investment extends over two decades and we don't foresee a significant impact on demand based on the latest technical advancements announced by DeepSeek," says Jonathan Kinsey, global chair of data centre solutions at real estate advisory JLL. Just 25% of current data centre demand is made up by AI, he adds, while the majority is made up by "traditional lower-intensity workloads" such as data storage and cloud applications.

Aside from DeepSeek disruption, the data centre boom has huge ripple effects. It is driving higher earnings, industrial production and capex at companies selling components and equipment from semiconductors to servers, cooling and power management systems. Utilities and energy firms are investing heavily in new electricity grids and generation capacity to meet their huge electricity demand, including in nuclear and coal-fired power plants.

Data centres are the backbone of the digital economy, making them essential to cutting-edge research, tech start-ups and actors across innovation ecosystems. Advocates argue they are indispensable in helping drive economic growth, including in the UK (see page 23), where they have been designated as critical national infrastructure to streamline the process for further developments.

Where does this money go?

Large US tech groups do not typically provide a breakdown of their data centre spending, but industry estimates give some insight. More than half of capex to build a typical large data centre building goes towards the electrical (40%) and mechanical, heating, ventilation and cooling (15%) systems, according to Synergy Research Group (SRG) estimates. The remainder is spent on constructing the building shell (25%), its fit-out and site work (20%). Spending on IT hardware and software in hyperscaler data centres can be three to six times more than the cost of the physical data centre itself, SRG says.

"IT hardware is the big-ticket item in the data centre equation," says John Dinsdale, SRG's research director. By other estimates, half of $210bn in global AI data centre capex in 2024 was spent on graphical processing units (GPUs) and other microchips, according to New Street Research.

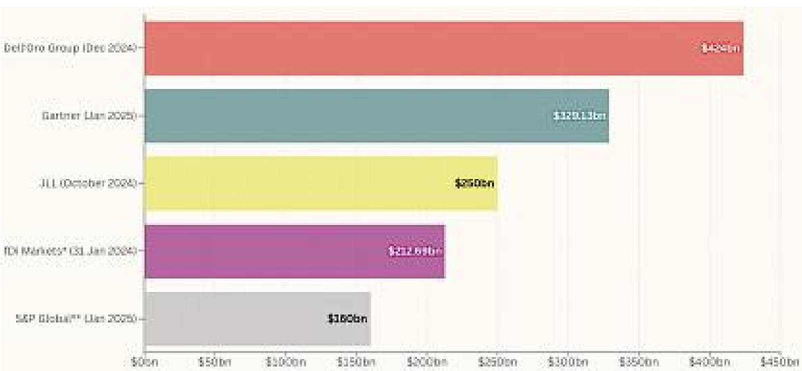
Mr Fung of Dell'Oro says the server and equipment makers will "benefit from a multi-year data centre spending cycle" after record high growth rates in 2023 and 2024. But the massive capex promises of data centres mainly offer huge benefits for a few dominant firms, such as AI chip design firm Nvidia and original design manufacturers like Foxconn, which produces hardware sold to large-scale clients like hyperscale cloud service providers.

Jensen Huang, the CEO of chipmaker Nvidia, has said that data centres are really AI factories. "Just like we generate electricity, we're now going to be generating AI … today, many AI services are running 24/7, just like an AI factory," he told investors in November 2024. Previously, Mr Huang had predicted that $1tn worth of AI data centres would be built over the next few years.

However, once a facility is up and running, operating expenditure becomes a fifth of investment costs, JPMorgan Asset Management estimates, with more than 70% of it allocated for training and research and development. Digging deeper into the numbers shows that despite huge claims of investment (see page 22), most data centre money

GLOBAL DATA CENTRE SPENDING HIT NEW RECORDS IN 2024

CAPITAL EXPENDITURE ESTIMATES BY DIFFERENT SOURCES AND DATES



*fDi Markets data refers only to global greenfield FDI and US interstate project announcements from Jan-Nov.
**S&P Global figures only refer to Microsoft, Alphabet and Meta Platforms

does not flow into the communities where they are built.

Power play

Central governments from the UK to Germany and Malaysia are rolling out the red carpet for data centres to enable digitalisation and secure their position in the AI race. Everywhere from the African island of Cape Verde's tech park to Colombian free zones are using data centres as magnets for cutting-edge businesses and industries that need computing capacity.

But opposition to data centres has grown due to their environmental impact, including in the US state of Virginia, the world's largest hub by number. Data centre usage of large amounts of water for cooling their servers has also raised concerns in developing countries prone to droughts. Protests have erupted in countries like Mexico, Chile and Uruguay over their construction in water-stressed areas.

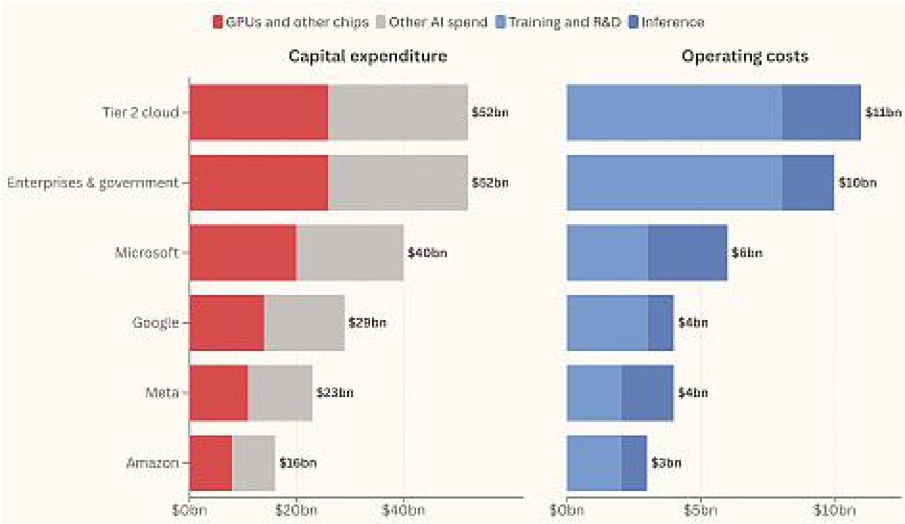
Today data centres account for about 1% of global electricity consumption, according to the International Energy Agency, but their tendency to cluster together means their local impact can be far greater.

In Ireland, data centres used 21% of the country's electricity in 2023. Gartner estimates that operations at 40% of existing data centres will be constrained by power availability by 2027. Power required to run AI servers in data centres that same year will reach 500 terawatt-hours — 2.6 times the level in 2023.

Moratoriums on new data centres in Ireland's capital Dublin until 2028, and now lifted bans in Amsterdam and Singapore, exemplify these capacity constraints. Energy executives are well aware of the tensions. There is "both a reason for debate, risk and reward, of carrying out this much data centre growth in Asia. I think all our demand curves are now wrong," said Muhammad Taufik, CEO of Malaysia's national oil and gas company Petronas, at the 2025 World Economic Forum in Davos.

Already uncertain projections of future energy needs of data centres have been complicated further by DeepSeek. Carlos Torres Diaz, head of Rystad Energy's power research, says it's "hard to find any concrete facts" about DeepSeek's power usage. "The electricity consumption of a data centre is proportional to its computational power, meaning that if what they claim

ROUGHLY HALF OF AI DATA CENTRE CAPEX IN 2024 WAS SPENT ON SEMICONDUCTORS



Source: New Street Research via JPMorgan Asset Management

is true, total energy consumption could be significantly lower," he explains.

Prior to DeepSeek, tech groups aiming to serve their data centre power needs have struck deals to secure nuclear energy. In September 2024, Microsoft entered a 20-year agreement with Constellation Energy to purchase power from Three Mile Island, a nuclear facility in Pennsylvania previously shut down in 2019. Bill Gates-backed nuclear start-up Terrapower (see page 41) also signed a memorandum of understanding in January 2025 with Sabey Data Centers to explore new nuclear plants to meet growing power needs in Sabey's US portfolio.

Jeff Navin, director of external affairs at Terrapower, says that while data centres alone do not create thousands of jobs, there can be long-term employment in the energy facilities that supply them: "You can get some high-paying, good-quality jobs by co-locating your energy source near the data centre."

Few foundational models

The current rush to build data centres is an attempt by several companies — from US giants like OpenAI and Anthropic to Europe's Mistral and China's DeepSeek — to build the foundational models that will dominate the market of the future. Mr Lovelock of Gartner says that the market for foundational models "will collapse into oligopoly" in the same way that cloud service provision did.

"Companies that are developing these models do recognise that they're in a race to be the last man standing. The market will collapse down. If they're not one of the three [dominant models], they're not going to exist," he explains.

Bill Spruill, a serial entrepreneur and tech investor, believes we are not yet at the end of the data centre hype cycle. There is "way too much money looking for places to land currently, so the big bets won't stop", he says. DeepSeek has raised the prospect of China overtaking the US in the AI race, which may well lead to a democratisation of access to tools that are set to transform the economy.

Despite Wall Street's knee-jerk reaction, "this is positive in the long-term for AI development and data centre demand as the emergence of new competitors fosters innovation and provides more — and possibly better — options for consumers, ultimately benefiting the industry as a whole", says JLL's Mr Kinsey.

While Trump strikes a bullish tone on huge AI investments, the eye-watering sums of money being deployed to build data centres are under review. Generative AI pioneers like OpenAI were thought to have set the blueprint for the development and functioning of LLMs, and the resulting investment needs. DeepSeek has challenged those assumptions, claiming to have achieved similar results with a fraction of OpenAI's resources. Many questions have yet to be answered. And yet, Chinese LLMs have sowed the seed of doubt in the otherwise defiant US big tech firms. It may sprout into better LLMs; it may well sprout into leaner investment campaigns too. ■

Data centres: rising sun or false dawn?

WORRIES ABOUT ENVIRONMENTAL IMPACT AND A LACK OF DIRECT LOCAL JOBS OVERSHADOW THE DIGITAL INFRASTRUCTURE BOOM POWERING THE AI REVOLUTION. **ALEX IRWIN-HUNT** REPORTS

When battery start-up Britishvolt went into administration in early 2023, the community around its proposed gigafactory were left disappointed. A new owner was needed for its large electricity grid-connected site in Cambois, a village in south-east Northumberland, UK. Local hopes for another gigafactory to fill the void left by Britishvolt ultimately never materialised.

Instead, the site that once stored coal for two now-closed power stations is set to host infrastructure critical to the modern digital economy. QTS, a subsidiary of US private equity firm Blackstone, plans to invest up to £10bn to build one of Europe's largest artificial intelligence (AI) data centre campuses. The significance of QTS's project, expected to receive planning permission by the end of spring 2025, extends far beyond this post-industrial area of the UK.

A global race is underway to build bigger and better warehouses for storing and processing data (see page 18). Global data centre capacity demand, which consultancy McKinsey expects to rise by an annual average of at least 19% between 2023 and 2030, is spreading investment beyond traditional data centre hubs near to major cities. Europe alone will need more than $250bn of investment into data centre infrastructure to meet this new IT load demand, McKinsey estimates.

Beyond the hype of larger-than-life investment pledges, environmental campaigners and local communities hosting data centres are asking serious questions. They consume huge amounts of power, along with water to stop servers overheating, but create relatively few direct jobs once constructed.

The Cambois site, which had promised to deliver up to 3000 direct jobs at Britishvolt's gigafactory, will now support an estimated 400 direct jobs — but only if the data centre is fully built and operational. As with any such mega project, there is a risk QTS does not reach its full scale of 10 buildings or employ as many people. At the heart of this global trend, the economic sugar rush caused by data centres is not enough to convince local residents of their long-term benefits.

Regeneration quandary

A walk along the southern flank of QTS's vast site in mid-January 2025 shows plans for an AI data centre hub are far from fruition. Signs for the £10bn 'Project Wind' mark a fenced-off overgrown site. In juxtaposition across the road, JDR Group's new £130m factory for cables used in offshore wind is set to open in spring 2025, when construction work finishes to expand Cambois's deepwater port.

Local residents broadly welcome the promise of QTS's data centre, but are jaded by several failed proposals such as Britishvolt and an earlier wind turbine factory. "I am all in favour of any improvements to Cambois as the area has been neglected for far too long," Thomas Thompson, who owns a house in the nearby town of Blyth, wrote in response to QTS's planning

Watch this space: QTS has big plans for the site of the former Cambois power station application filed in November 2024.

"We aren't getting our hopes up," says Michelle Charlton, the owner of Nancy's at Cafe One in Cambois, reflecting the scepticism of other local residents who spoke to **fDi**. Workers from nearby construction sites, clad in high-vis jackets, have kept her business alive in recent years. But Ms Charlton, like many local people, questions the local jobs that will be created in the proposed data centre, which is likely to hire technical staff from elsewhere, given that such skills are in short supply locally.

"There is a feeling of being left behind in this community," she adds. Around 1200 construction jobs are expected from QTS in building the data centre, but the full-time direct employment will struggle to make up for a generation of job losses in the coal mines and industries they powered in the area.

In 1986, after protracted strikes by miners, the Bates Colliery closed in Blyth, a town over the estuary from Cambois, leading to the loss of 1400 direct jobs. Many more were lost after the two power stations were demolished between 2001 and 2003 and the 2012 closure of Alcan's aluminium plant in nearby Lynemouth.

Northumberland County Council (NCC), who brokered a deal with QTS requiring them to pay £110m in instalments into a ring-fenced fund for local business and job schemes, argue the data centre will be a catalyst for other investment and diversification. The data centre is also located in an investment zone, meaning that 100% of the business rates will be retained in the local north-east England region over 25 years.

"It moves us all forward to the new economy," says Sarah McMillan, NCC's director of economic development and growth, adding they hope it will drive productivity in other sectors of the local economy and attract high-tech businesses.

A QTS spokesperson said: "QTS has the expertise and track record required to deliver on this cutting-edge data centre campus in Cambois. We look forward to continuing to work closely with the council, the local community and local stakeholders to progress this exciting project."

Employment bonus: around 1200 construction jobs are expected from QTS in building the data centre

Richard Wearmouth, deputy leader of NCC, says given the Cambois site had several "false dawns in terms of future uses", it was paramount to find a financially-sound investor to redevelop the site.

"We didn't take this decision lightly … there's definitely a whole load of opportunity for us as a county across multiple tiers of jobs," he says, ranging from construction to ancillary services and operations.

'£10bn equals what?'

The question of where QTS's planned £10bn will be spent is a valid one.

"The big industries closed one after the other, which has caused massive problems," says Ian Lavery, the member of parliament for Blyth and Ashington and former president of the National Union of Mineworkers. He welcomes the data centre plan, but asks: "£10bn equals what? [The answer is] not: 'AI is the future'. I want to know what the future is for people who live in my constituency."

The high investment figure reflects the acquisition and development of the data centre campus and the equipment associated with the facility operations.

But for a European country such as the UK, most of the technology and equipment going into a cutting-edge data centre is imported. Such trade risks having little economic development impact on local communities. Once the facility is up and running, operating expenditure is a fifth of investment costs, JPMorgan Asset Management estimates, with more than 70% of it allocated for training and research and development.

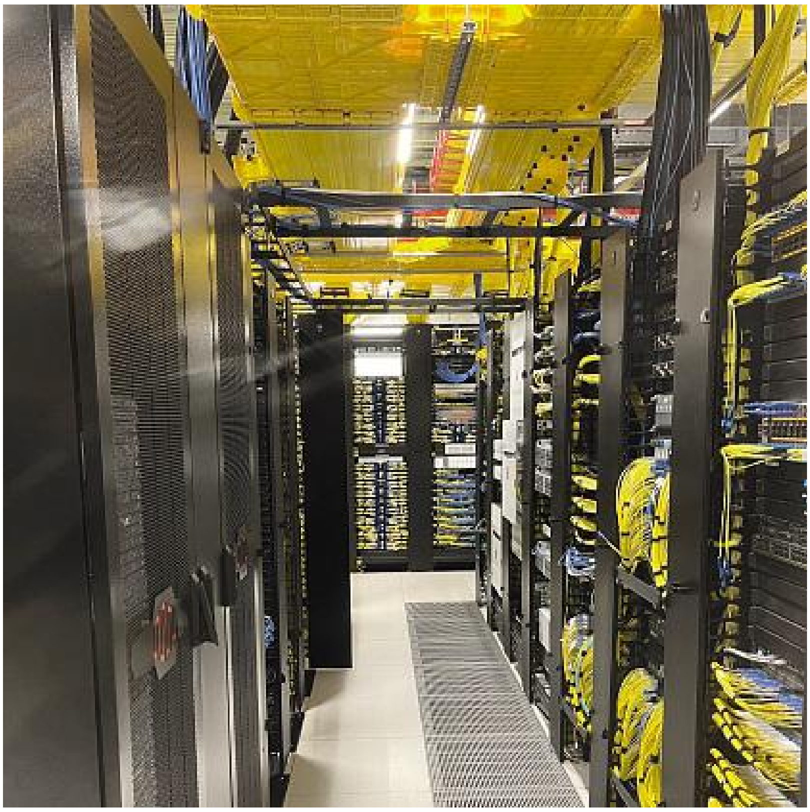
Besides, large cloud computing and AI-focused data centres require huge plots of land and consume considerable power and water — which are expensive and in short supply near major cities. This has caused backlash among communities the world over, that are already facing constrained land availability, as well as tight water and energy supplies, which has prompted data centre developers to look further afield to places with plentiful land and access to energy — places like Blyth.

Detached projects

An established hub for data centres gives a glimpse of what may transpire with QTS's plans in Northumberland. The Slough Trading Estate to the west of London has grown to become Europe's largest cluster of data centres by number, according to its owner, Segro.

Slough has faced decades of transition and bad press, from a 1937 John Betjeman poem calling to "mess up the mess they call a town" to the satirical British sitcom *The Office*. But the Berkshire town's recent rise as a data centre cluster shows how digital infrastructure can help fuel local economies.

"Everybody seems to think the internet runs by magic and it doesn't," says Emma Fryer, director public policy Europe at CyrusOne, a Texas-based developer with more than 50 data ▶



Interior view: data centres like Equinix's (pictured) have been a lifeline for Slough

centres worldwide — including several in and around Slough. "It needs industrial-scale infrastructure. The more we rely on the internet, the more robust the infrastructure needs to be."

Slough was given a lifeline in 2005, when its first data centre opened, and again as the UK economy shifted further from manufacturing to services, and as post-pandemic working trends lead to less demand for offices. "Data centres have grown and filled that space, and they like to cluster together," says Pat Hayes, executive director of regeneration, housing and environment at Slough Borough Council. "Yes, they're quite big structures with relatively low numbers of people working, but the clustering is starting to bring other people in … increasingly offices are being located at data centres."

The town is now a microcosm of evolution across the modern UK economy. Slough has recorded the biggest adjustment of any UK urban area in manufacturing's share of local jobs in its export base, which dropped from 86% in 1981 to 15% today, according to analysis by the Centre for Cities, a think tank.

"The transformation to the new digital economy would have happened and continued to roll out through Slough, but not at the rate we've seen with the data centres," says Dexter Smith, leader of Slough Borough Council, adding that taxes generated from data centres help pay for public services in the town.

Proximity to Heathrow Airport, good transport links and its position on the main highway of cables sending data from the US to London has made Slough a preferred hub for data centre developers. In 2022, Slough was also the most productive urban area across the UK, with a gross value added per hour of £70.90 — almost double the £36 for the country as a whole, according to the Centre for Cities.

But in a town that still faces deprivation levels above England's average, according to the ONS, questions are being asked about how much this digital infrastructure translates into benefits for local communities. There is a "mismatch between what Slough firms pay and what Slough residents earn", says Mr Smith. Many residents commute out of the town to work in lower skilled, lower paid jobs in Heathrow Airport, rather than taking the high-value jobs in Slough, including in its data centres.

Several sites in Slough are owned by Equinix, the world's largest provider of co-location data centres, where businesses can rent space to house their own servers without the need to build their own. Equinix employs about 1500 people across the UK, and has local apprenticeships and schemes with schools to provide a route into the industry for those without a computer science background.

For an industry that has recently been catapulted into public awareness and attention, there needs to be a mindset shift to integrate data centres into the fabric of city planning and communicate their economic benefits more clearly. "There's more we can and should do as a sector," says Bruce Owen, Equinix's president of Europe, Middle East and Africa.

A rising sun or false dawn?

Back in Northumberland, local hopes are high for a whole new economy to be enabled by QTS's AI data centre campus. Global data centre demand projections are very high, but pinning down where that will come from is set to be a challenge — one that could mean projects like QTS's in Northumberland take a lot longer than planned to deliver for investors and the communities that host them.

QTS expects as many as 2700 indirect jobs to be created in local industries and has committed to recruit from a 25-mile radius of the site. But the feeling of detachment between local people and the data centre development is plain to see. Many locals who spoke to **fDi** had either no knowledge of the data centre plans or what exactly happens in this critical digital national infrastructure.

"People will not know there's a data centre coming when it's there. They will not know what ramifications that has," says David Dunn, a Blyth local and CEO of Dynamo, a membership organisation for the tech sector across the north-east of England. "The biggest fear for me is that you end up with just a data centre there with no additional benefit, no additional businesses and no jobs."

The site's former life as a coal power station, with chimneys billowing out smoke, was a much clearer sign of the infrastructure powering the industries of old. The booming data centre industry is much more subtle. It underpins a digital realm that knows no boundaries, but struggles to relate to physical communities in its vicinity. As such, it has yet to win over the hearts and minds of the locals wondering whether these investments are the game-changers they are promised to be — in Blyth and beyond. ■

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(Emerging Europe Report, 2024)

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in Europe for high-speed internet access (Eurostat, 2024)

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DUTIES ON MEXICO AND CANADA THREATEN NEARSHORING, BUT JURY OUT ON US INVESTMENT BOOST

Trump tariffs to upend FDI game?

Long road ahead: Trump's tariffs will have a lasting effect on businesses and consumers across America

PROTECTIONISM

Donald Trump's 25% tariff hike on Mexican and Canadian imports in February threatens the nearshoring phenomenon that has boosted their foreign direct investment (FDI) flows, however opinion is divided over the extent they will spur more US FDI to sidestep the new levies.

On February 1, the US president followed through on campaign promises to lift import duties on Mexico and Canada, and slap an extra 10% tariff on all Chinese imports. The changes quickly sparked a tit-for-tat response from Canada which announced its own 25% tariff against the US, before it and Mexico agreed to reinforce their borders to curb drug trafficking in exchange for a one month pause on the levies which will now take effect in early March.

Tariffs on the US's southern and northern neighbours risk closing a loophole that has helped them attract investment in supply chains that serve the world's biggest economy, and contributed towards their announced FDI volumes hitting record highs in recent years, **fDi** Markets data shows.

Instead of nearshoring projects to Canada and Mexico — which can offer cost, labour, regulatory and other benefits over the US, and have historically benefited from preferential market access under the US-Mexico-Canada Agreement (USMCA) and its predecessor Nafta — more companies are now expected to start looking to invest directly into the US.

"During his first term, Trump was focused on ripping supply chains from China. There was a certain acceptance with supply chains coming back to the West, but not necessarily America," says Abishur Prakash, founder of Toronto-based advisory firm The Geopolitical Business. "This outlook no longer exists."

In 2018, Mr Trump's administration imposed up to 25% tariffs on steel and aluminium imports from Canada and Mexico, however these were dropped one year later as part of the USMCA negotiations. His tariff moves this time around capture all imports — although at a lower 10% rate for Canadian energy — and comes one year before USMCA is due to be renegotiated

Mr Prakash now expects a "rapid reshoring of manufacturing back to the US" with supply chains moving away from Canada and Mexico.

A recent study of the new administration's FDI impacts by Henry Loewendahl, head of lead generation company Wavteq, similarly predicts a greater focus on tariff-jumping directly into the US rather than its neighbours. "During the first Trump presidency, foreign and US firms largely relied on friend-shoring, shifting production to allied countries to sidestep tariffs. However under a second Trump presidency, friendshoring is likely to be less viable," it states. ■

DANIELLE MYLES

25% PROPORTION BY WHICH THE US ADMINISTRATION HAS HIKED TARIFFS ON ITS NEIGHBOURS

Trump transition slowing the cleantech boom

US cleantech projects are being delayed and restructured since climate critic Donald Trump's election in November. But advisors warn that examples of foreign-owned cleantech projects being halted in recent months do not foreshadow an end to the sector's momentum under the new government.

On January 22, two days after the president signed executive orders targeting cleantech funding and permitting, Australia's Woodside announced it would not construct its Capella solar project in California and was delaying the final investment decision on its H2OK hydrogen project in Oklahoma. The week prior, Italy's Prysmian Group told authorities in Massachusetts it was abandoning plans for a $300m undersea cable manufacturing plant to serve the state's offshore wind industry.

The fate of roughly half a trillion dollars' worth of private investment announced under Joe Biden's climate plan hangs in the balance. ■

DANIELLE MYLES

Saudi eyes up Brazil's mines

Saudi mining firm Ma'aden is investing 8bn reias ($1.4bn) in Brazil to establish a local office and undertake geological mapping, research and mineral exploitation. The investment by the Public Investment Fund-owned company is the ninth Saudi greenfield investment in Latin America since records began, according to fDi Markets.

It comes at a time when Saudi Arabia is sharpening its focus on minerals as part of its Vision 2030 plan, and follows high-level ministerial meetings throughout 2024 between its mining ministry and government officials in mineral-rich Brazil and Chile. "Brazilian extractive industries and their downstream sectors offer many opportunities for value-chain integration and innovation to the Saudi economy," says Helena Brandão, investment division manager at investment promotion agency Apex-Brasil. ■

DANIELLE MYLES

LATEST INVESTMENTS

AEROSPACE

NEW REGIONAL HQ

US-based GA Telesis, a provider of integrated solutions to the aviation and aerospace industries, has opened a new regional headquarters in San Salvador, El Salvador. The site will serve its airline, maintenance, repair and overhaul customers in Latin America and the Caribbean.

COMMUNICATIONS

NETWORK EXPANSION

Canada-based mobile infrastructure provider Tower One Wireless has expanded its cellular network tower infrastructure with the addition of 20 new towers in the Cauca, Valle del Cauca, Antioquia, Nariño, Tolima, Cundinamarca, Bolívar, Santander and Córdoba regions of Colombia.

FOOD & BEVERAGES

CHILE DISTRIBUTION

US-based retail firm Walmart has announced plans to open a new distribution centre in Chile. The expansion is part of a broader $1.3bn investment in Chile which will continue up to 2029, with plans to open 70 new stores across all formats in areas such as Vallenar, Los Vilos, Pozo Almonte and more.

METALS

GALLIUM PRODUCTION

UK-based mining company Rio Tinto has announced plans to build a demonstration plant for extracting and valorising gallium at its existing site in Saguenay, Canada. The facility will extract gallium already present in the bauxite processed in its alumina refinery in Saguenay to produce up to 3.5 tonnes of gallium per year. Eventually, the extraction potential of a commercial-scale plant could reach 40 tonnes annually.

PAPER, PRINTING & PAPERBOARD

BRAZILIAN PULP MILL

Chile-based CMPC, a producer and distributor of pulp, paper and tissue products, has announced plans to invest $4.6bn to establish a new pulp mill in Rio Grande do Sul, Brazil. The Natureza project will have an annual production capacity of 2.5 million tonnes of eucalyptus pulp. As of December 2024, the company is working on an environmental impact study, with the final approval for the investment expected by mid-2026.

SEMICONDUCTORS

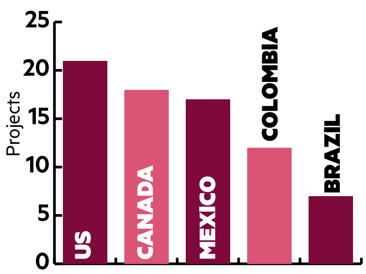
CALIFORNIAN PRODUCTION

Germany-based Bosch, an engineering and technology company, is investing $1.9bn to expand its operations with the opening of a silicon carbide production site in Roseville, California, US. The project, which follows an acquisition in August 2023, will create 700 manufacturing, engineering and R&D roles, with operations expected to commence in 2026. The project has secured $225m in CHIPS and Science Act funding.

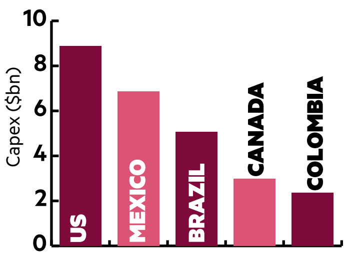
*This investment news and data has been provided by **fDi** Markets, a crossborder investment tracking service that is part of The Financial Times Ltd's FT Locations division (www.ftlocations.com)*

STATS

TOP 5 AMERICAS DESTINATIONS FOR FDI IN ICT & INTERNET INFRASTRUCTURE IN 2024



Source: **fDi** Markets



Source: **fDi** Markets

View from the

Americas

According to fDi Markets, in the first 11 months of 2024, 145 data centre projects were announced across the US and Canada, representing $87bn in investment. While these centres bring significant investment, their appetite for land and energy is reshaping local investment priorities.

The driving force? Artificial intelligence (AI). AI-powered computations require enormous energy for processing and cooling, with a single AI-driven search consuming nearly 10 times the energy of a standard one.

This surge is straining two critical resources: energy and land. Utility companies are struggling to expand power capacity fast enough, while regulatory hurdles and rising energy prices exacerbate delays. In the latest electricity auction by PJM, a grid operator for the District of Columbia, capacity prices jumped 800% from $29 in 2023 to $270 per megawatt/day. Governors from the surrounding states warned in a letter that the resulting $14.7bn bill, to be paid by residents and local businesses, could deter future economic development in affected areas.

Sites with features like rail access, essential for manufacturing, are being consumed by data centres which do not require such infrastructure.

Proactive solutions are needed to balance these competing demands. Land with unique features, such as rail access, should be preserved for industries that depend on them. Regulatory frameworks must evolve to enable flexible energy solutions, and while the data centre industry's nuclear-power partnerships and off-grid natural gas solutions have potential, implementation takes time.

While AI can help optimise energy use, reliance on power creates a paradox. Addressing these challenges thoughtfully can help AI fulfil its promise of transforming industries, empowering individuals and boosting productivity, while leaving adequate resources for North America's re-emerging manufacturing sector. ■

Didi Caldwell is the president and founding principal of Global Location Strategies, a global site selection consultancy, and also a member of the Site Selectors Guild. E-mail: didicaldwell@glsconsults.com

Your predictions for Trump 2.0

MORE INBOUND INVESTMENT, TARGETED TARIFFS AND A MUSK BROMANCE THAT WILL BE OVER BY SUMMER. **DANIELLE MYLES** REPORTS

Donald Trump's return to the White House marks the beginning of four potentially unpredictable years for American – if not global – investment and trade. This was made clear by the flurry of executive orders during his first 24 hours in the White House which impacted incentives, migration, corporate taxes and much more.

Knowing that **fDi**'s worldwide readership has diverse takeaways from Mr Trump's first term and 2024 campaign promises, we spent the month before his inauguration gathering your predictions for what lies ahead for the coming four years.

The responses, which came from six continents, are telling. According to readers, an uptick in US foreign direct investment (FDI) and Elon Musk's influence on more than just cost-cutting are on the cards, while the president's tariff threats will be part of his broader strategy as a "super negotiator".

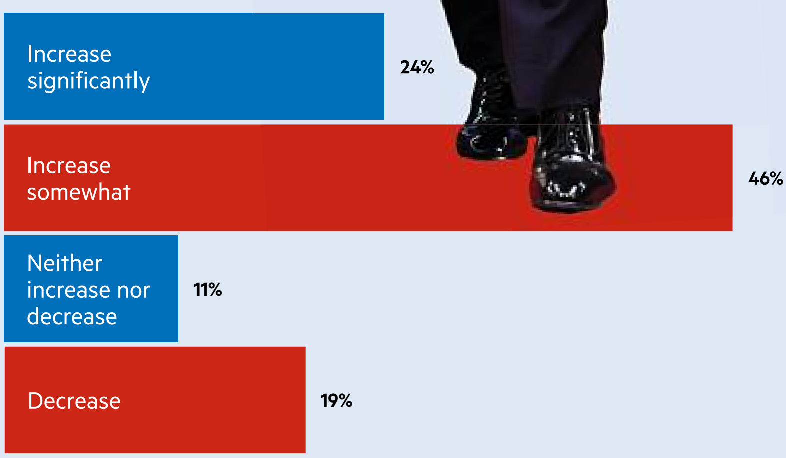
Meanwhile some big winners from his presidency abroad are tipped to be India and Vietnam, while manufacturing industries and fossil fuels will be among the sectors to benefit most at home. Below is a full breakdown of responses for the 10-question survey.

More inbound investment, with headwinds

The majority (70%) of respondents expect Mr Trump's policies to increase inbound FDI, but the majority within that camp expect only a moderate uptick. Lower taxes, higher tariffs – which can make local production more cost-effective than exporting to the US – and the promise of deregulation are the most commonly cited drivers.

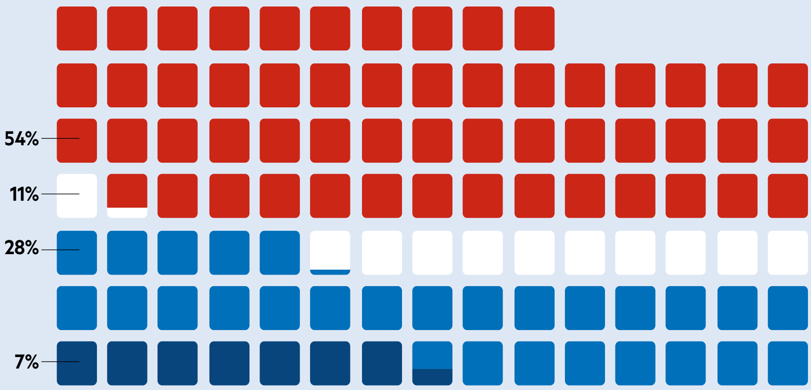
But this will be tempered by Trump's "volatility", as one respondent notes. Investors' desire for predictability is one reason why 19% of respondents expect inbound investment to decrease, as "the incoming administration is anything but predictable", says Andreas Waldkirch in the US. Another sceptic notes that Mr Trump's "hostility to foreign business interests (other than his own) is significant".

HOW WILL TRUMP'S POLICIES CHANGE US INBOUND FDI FLOWS DURING HIS PRESIDENCY?



WILL TRUMP FOLLOW THROUGH ON HIS PROMISE TO IMPOSE BLANKET TARIFFS ON ALL IMPORTS?

- YES, AT MORE THAN 20%
- YES, FROM 10% TO 20%
- YES, AT LESS THAN 10%
- NO, HE'LL IMPOSE TARIFFS ON JUST A HANDFUL OF COUNTRIES



Tariff threats are a Trumponian tactic

The president promised throughout the campaign trail to start hiking tariffs – his trademark policy – on his first day in office, with China threatened with a 60% duty and all other countries at least 20%. Two weeks after his inauguration, the president did announce tariffs against China, Mexico and Canada, but readers remain skeptical over his tariff talk.

Just 7% of respondents expect him to follow through on his threat of blanket tariffs. Most (54%) of them expect tariffs on just a handful of countries, with the president using them as a bargaining tool – the 30-day delay agreed with Canada and Mexico over their new import duties being a good example. "With his quintessential business-like thinking, there would most likely be negotiations before tariffs are imposed," says Adrian Tan in Singapore. Others note his "tariff war will focus on selected products and services".

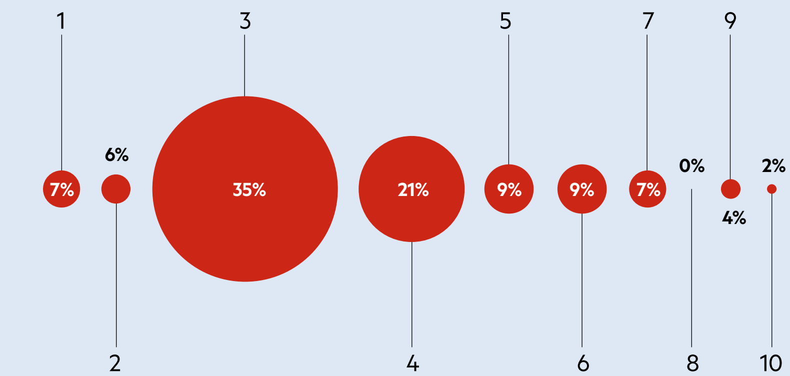
China rapport to worsen, but not drastically

Tariffs will continue to be a major determinant of Mr Trump's relations with Beijing. After overseeing the start of the US-China trade war in his first presidential term, relations failed to improve under Joe Biden amid his China policymaking blitz.

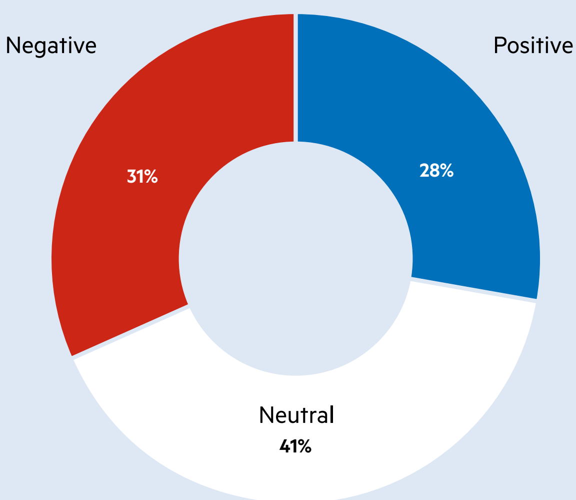
More than three-quarters of you expect the situation to worsen again, with just 22% of respondents expecting US-Sino relations to improve over the next four years. However, on the scale of 1 (terribly worsen) to 10 (drastically improve), the most common choice was 3 or 4, suggesting only a mild deterioration. The popularity of these scores is summed up by one respondent who notes the US's anti-China policy stance "is now a consensus issue" in the country, adding: "Trump is not a game-changer".

HOW WILL US RELATIONS WITH CHINA CHANGE UNDER TRUMP'S PRESIDENCY COMPARED TO THE SITUATION TODAY?

SCALE (1–10):
1 = RELATIONS WILL TERRIBLY WORSEN
10 = RELATIONS WILL EXCEPTIONALLY IMPROVE



WHAT IMPACT WILL TRUMP 2.0 HAVE ON THE US DOLLAR AS THE GLOBAL RESERVE CURRENCY?

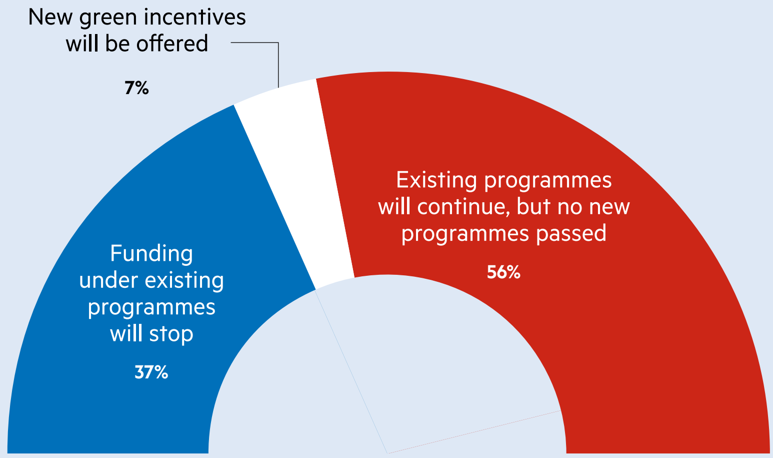


Dollar impact an open question

Broad-based tariffs could hit the greenback's already declining lead as the world's reserve currency of choice. If trading with the US becomes more expensive, exporters abroad would be forgiven for targeting other countries. This is a key reason given by the 31% of respondents who expect the president to harm the dollar's reserve currency dominance.

However, it is a topic on which opinion is clearly divided, with 28% expecting Mr Trump to have a positive impact on the greenback's standing and 41% no impact at all. Those in the latter camp note "the door to de-dollarisation has [already] been swung open". Several respondents say sanctions introduced by the Biden administration, especially its freezing of Russia's central bank reserves, had already accelerated this trend and that "Trump is unlikely to be as vigorous on foreign policy sanctions as the Biden administration".

HOW WILL CLEAN ENERGY INVESTMENT INCENTIVES UNDER THE INFLATION REDUCTION ACT OR OTHERWISE CHANGE UNDER TRUMP'S PRESIDENCY?



The IRA executive order surprised you

The president targeted the Inflation Reduction Act (IRA) as part of his flurry of executive orders in the hours following his inauguration, immediately pausing the disbursement of grants and loans. This took many readers by surprise. The majority of survey respondents (56%) expected IRA incentives would continue to run their course, particularly given red states have been among the programme's biggest beneficiaries.

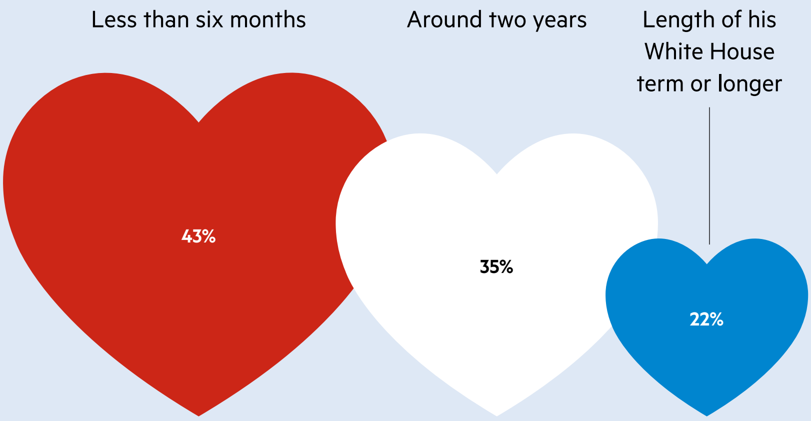
Of the 37% of you who forecast that Mr Trump would at least attempt to roll back the IRA, a few highlighted that the president is "captive to conventional energy interests". Jerry Harris in the US also noted the "deeply held" climate scepticisms among Republicans, arguing many "have never accepted fundamental scientific facts" about global warming.

Musk bromance over by summer

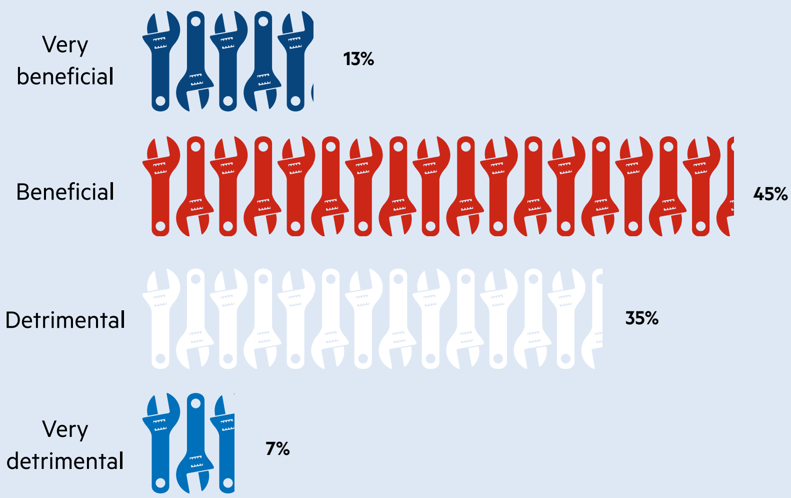
Some respondents who expected a sturdier future for IRA incentives had linked this to the expected — or hoped for — influence of government advisor Elon Musk. However, just as the IRA seems to be on rocky ground, most of you expect the Trump-Musk bromance to see a similar fate.

Some 43% of you predict it to be over by mid-year. "Elon has served his purpose by getting Trump elected," notes one reader. Only 22% predict it will last the length of this White House term. A clash of egos is tipped to cause the biggest rupture, but also Mr Musk being "uncompromising on a lot of issues [meaning] he will eventually fall out with Trump", notes one respondent.

HOW LONG WILL TRUMP'S 'BROMANCE' WITH ELON MUSK LAST?



WHAT WILL THE LOCAL ECONOMIC IMPACT OF TRUMP'S PRESIDENCY BE IN COMMUNITIES LIKE THE RUST BELT FACING DEINDUTRIALISATION?

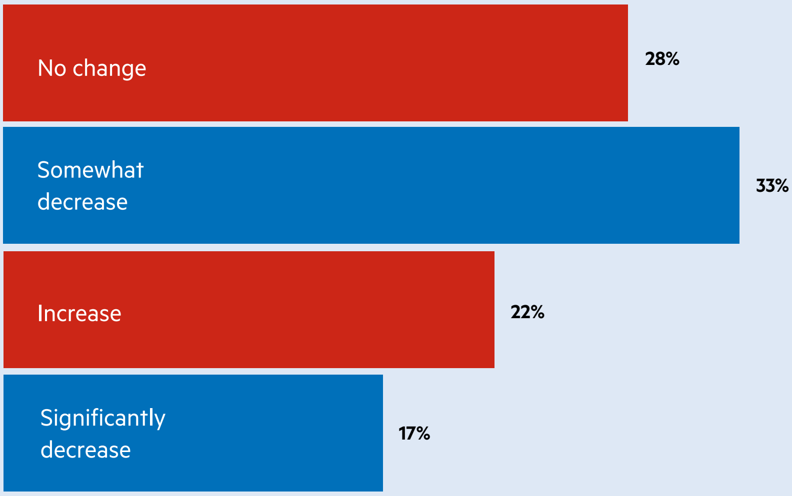


Little security for rust belt swing states

Opinion is divided over the on-the-ground impact of Mr Trump's policies in those parts of the country suffering from de-industrialisation. Reshoring and other Maga promises would (at least on paper) lead to more jobs and commercial activity in these states — some of them being key battlegrounds in last year's election. This has sparked hope in 58% of respondents that these areas' plight will improve. However, as one respondent notes, Mr Trump "cannot restore the past" for these former manufacturing powerhouses.

The remaining 42% expect deindustrialised regions to continue their downward trajectory. One notes that the president has made "little emphasis on regional or community-specific improvement plans". This means "site selection will prioritise risk avoidance, profit optimisation and value chain efficiency", which will sideline these regions and "reinforce the strength of well-functioning communities".

HOW WILL US OUTBOUND FDI EVOLVE DURING TRUMP'S PRESIDENCY?



Little consensus on outbound FDI

Another area to watch closely is the evolution of outbound FDI. One-third of respondents expect a slight decrease, while 28% predict no impact at all. This reflects the broad alignment between Mr Trump and his predecessor Joe Biden on reshoring and revitalising US industry, with less emphasis on spreading influence abroad. It also suggests a continuation of the US's declining dominance as a source country of global FDI flows.

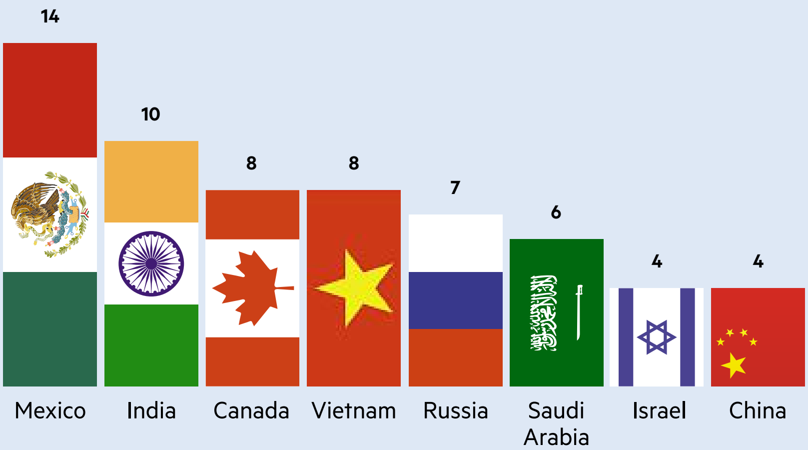
For the 22% expecting outbound FDI to increase, preservation of foreign market access in case of retaliation against Mr Trump's trade policies is a big factor. "US companies will have to invest more abroad to avoid the reciprocal tariffs on their exports that Trump will trigger," says Charlie Robertson in the UK.

Neighbours and strongman leaders to benefit

A handful of foreign countries stand out as potential winners under Mr Trump. Mexico and India lead the pack. The former — along with Canada which is tied in third place — are supported by the US-Mexico-Canada trade agreement, although this is tempered by its renegotiation which is scheduled for 2026 and the president's early imposition of tariffs on the two countries. Mexico is also expected to continue benefitting from tariff-jumping by Chinese firms.

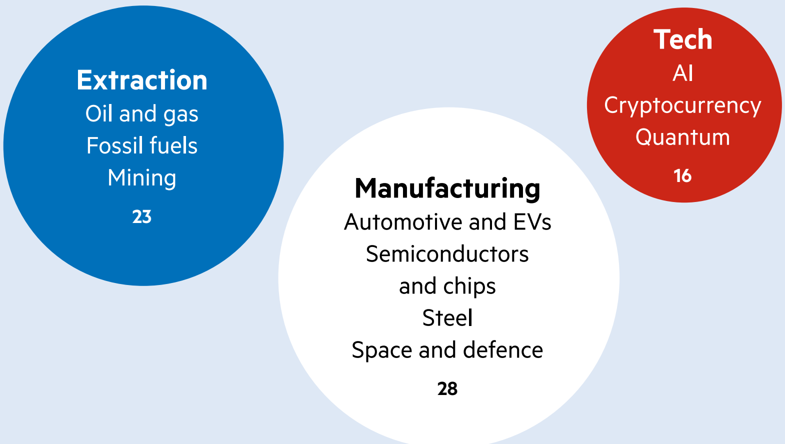
India meanwhile will be buoyed by the "fraternal spirit" between Mr Trump and Narendra Modi, surmises one respondent. And Vietnam, the other country in third place, is tipped to benefit from firms diversifying production away from China to avoid US tariffs. Rounding out the top five is Russia, whose economy would benefit if Mr Trump succeeds in pressuring Moscow to end its war in Ukraine.

NAME THREE COUNTRIES THAT WILL REAP THE BENEFITS OF TRUMP'S PRESIDENCY IN TERMS OF TRADE AND INVESTMENT, AND THE REASONS WHY*



*Data refers to the number of survey participants naming the country

NAME THREE SECTORS THAT WILL REAP THE BENEFITS OF TRUMP'S PRESIDENCY IN TERMS OF TRADE AND INVESTMENT, AND THE REASONS WHY*



*Data refers to the number of survey participants naming the sector

Manufacture, baby, manufacture...?

In line with the president's "drill, baby, drill" campaign promises, 43% of respondents expect traditional energy and mining to be among the biggest industry winners under the Trump administration. Readers pinpoint the oil and gas value chain as a key recipient of more investment, the chances of which were quickly boosted by the president lifting Biden-era restrictions on LNG exports.

However it is trumped by manufacturing, which is expected to benefit from a deregulation drive and is cited by 52% of respondents. The industries highlighted include aerospace and defence — given the president's desire "to strengthen US power", one reader explains, plus automotive and semiconductors. In third place is tech, with respondents noting that Mr Trump wants the US to be a strong player in the artificial intelligence race and his support for the crypto industry. ■

THE TRADITIONAL ENERGY SECTOR WILL BE A BIG BENEFICIARY OF THE NEW TRUMP ADMINISTRATION

Trump 2.0: seven FDI takeaways from Inauguration Day

FROM 'DRILL BABY DRILL' TO THE ASSIMILATION OF TECH LEADERS, THE RITUAL DIDN'T DISAPPOINT. **JACOPO DETTONI** REPORTS

It started with a bang. The first day of Donald Trump's second term lived up to the hype. Surrounded by his inner circle, the elite of US tech and Maga pretorians, the 47th US president not only turned the page on Joe Biden's administration, he shredded it altogether, taking no prisoners along the way.

"Our recent election is a mandate to completely and totally reverse a horrible betrayal, and all of these many betrayals that have taken place, and to give the people back their faith, their wealth, their democracy and indeed their freedom," he said. "From this moment on, America's decline is over."

In one of those twists and turns of history, freezing temperatures forced the whole ritual inside the walls of the Capitol rotunda that was vandalised by rioters during the Capitol Hill protests of four years ago. A few hours later, Mr Trump pardoned 1500 of them in one of his first executive decrees.

The day marked a turning point in recent US history, with many facets that could have a direct repercussion on FDI in and out of the country.

Here are my main takeaways from the day.

"Drill baby drill"

Mr Trump reiterated his unequivocal support for the country's oil and gas industry. "We will be a rich nation again. And it is that liquid gold under our feet that will help to do it," he roared as he declared a national energy emergency to streamline investment into the production, transportation and distribution of energy sources.

As our readers also expect (see Trump Survey on page 28), the traditional energy sector will be a big beneficiary of the policies of the new Trump administration. With the president's backing, domestic and (friendly) foreign investment will pour into the US oil and gas industry.

EVs and Mars

If combustion engines have new presidential favours, clean technology will have to pay the price. "We will end the Green New Deal and we will revoke the electric vehicle mandate," Mr Trump said.

Listening from a couple of metres behind him, Elon Musk didn't flinch: on his face, elation throughout. If inside he felt a twinge of apprehension for Tesla's domestic sales prospects, Mr Trump's renewed space ambitions wiped that out right away.

"We will pursue our manifest destiny into the stars, launching American astronauts to plant the Stars and Stripes on the planet Mars," he said. The space industry is experiencing tremendous growth, and the likes of Musk's SpaceX, as well as Blue Origin, the rocket company owned by Jeff Bezos, also in attendance, are poised to benefit.

From creative disruption to diligent assimilation

The crew-neck days are over. Silicon Valley's top tech titans all conformed to Washington's dress code as they paid homage to the new president, wearing starched collars and ironed sleeves.

Mr Musk and Mr Bezos were in good company. Meta's Mark Zuckerberg, apparently a Trumpian at the last moment, was there too, as well as Apple's and Alphabet's CEOs, Tim Cook and Sundar Pichai, respectively. Less visible but still present was Google's co-founder, Sergey Brin. The wind has shifted in Silicon Valley.

On paper, it remains a bastion of creativity, libertarianism and non-government interference; in practice, it finds itself playing by Mr Trump's allegiance-for-support rules at home as foreign

Donald Trump: "Our recent election is a mandate to completely and totally reverse a horrible betrayal"

markets become stormy waters for US tech. It's business common sense, but also the end of the cultivated aura of its top executives as Steve Jobs-like spiritual leaders for users and communities.

One notable exception

One holdout was Nvidia CEO, Jensen Huang. He didn't swap his characteristic leather jacket for an overpriced tailored suit. A calendar clash took him elsewhere.

As Mr Trump swore on the US Constitution as the country's 47th president, Mr Huang was spotted at a company's Lunar New Year party in Beijing. "We have many partners here, several thousand employees, and we have a lot of projects to do," he told local journalists on his way to the event.

With AI at the heart of the US-China battle for global supremacy, Mr Huang's errands suggest he still has the knife by the handle. Nvidia's AI chips may well hold the keys for the US technological, military and economic supremacy for the years to come, notwithstanding DeepSeek's arrival on the AI scene (see page 18). As such, Washington needs Mr Huang more than he needs Washington.

No blanket tariffs, for now

Those that expected Mr Trump to take the world of global trade by storm by introducing blanket tariffs from day one were left disappointed. He mentioned an "overhaul of our trade system to protect American workers and families", but his threats were no different than his campaign trail rhetoric.

Investors took notice, with currencies from countries facing the risk of immediate tariffs gaining ground against the dollar. After the ceremony, he did suggest a 25% tariff on Canada and Mexico however, which affected the forex market immediately.

Panama Canal delusion

He didn't mention Greenland, nor invading Canada, but reiterated his ambition of "taking back" the Panama Canal. "China is operating the Panama Canal. And we didn't give it to China," he added.

Mr Trump's statements are a bit self-deluding on this. China doesn't operate the Panama Canal. Certainly, port operators linked to Beijing have been investing on both sides of the canal in recent years. They did so also because the US military and US companies left little behind when the US gave up control of the canal.

Broadly speaking, US investors have widely disregarded Latin America over the years. In this respect, Chinese investors have simply filled an investment gap shared by many countries in the region. Today China "operates" key infrastructure from Mexico and the Caribbean all the way down to Argentina. The cat is out of the bag and Mr Trump won't turn back the hands of time.

Happy Lunar New Year!

For the first time in history, foreign leaders attended the inauguration ceremony. Argentina's Javier Milei attended, as well as Italy's Giorgia Meloni. Notably, also China's vice-president Han Zheng attended. It was a big deal, but for Chinese media. With the world's eyes on Capitol Hill, state news agency Xinhua led with a message for the country by president Xi Jinping offering non-Communist party organisations greetings for the Lunar Year next week, as the FT reported. A relatively cryptic foreign policy message, if any. ■

Could Trump strike a bargain with China?

HIS LOVE FOR TRANSACTIONAL DIPLOMACY MEANS WE CAN'T RULE OUT AN UNEXPECTED DEAL WITH XI. **DAVID BACH** WRITES

Conventional wisdom surrounding Donald Trump's return to the White House suggests a grim outlook for US-China relations. The trade war during his first term marked a turning point with Beijing, and his new cabinet is filling up with China hawks. Add the Biden administration's intensified measures against China, and the picture appears bleak. Renowned investor Ray Dalio recently predicted that the new administration's America First foreign policy will include active preparations for war with China.

Yet this narrative overlooks a more intriguing possibility: the emergence of a US-China grand bargain, spurred by Mr Trump's transactional instincts and desire to secure a legacy as a great US statesman. While a further deterioration in relations is possible — and perhaps the most likely outcome — Mr Trump's unique approach to global governance suggests an alternative path that few are considering.

Ideological to transactional

Joe Biden's approach to China was ideological while still being rooted in realpolitik, framing the rivalry as a struggle between democracy and authoritarianism. Initiatives like semiconductor export controls and strengthening alliances aimed to counter Beijing's global influence are reminiscent of US diplomat George Kennan's cold war containment strategy, given they sought to safeguard US technological, economic and military supremacy.

Mr Trump, in contrast, operates with a transactional mindset. His tariffs against China in 2018 were less about systemic rivalry and more about mercantilist instinct and a desire for leverage. His government secured a deal in which it lowered tariffs in return for China committing to purchase $200bn in US goods, including soybeans — a move designed to appeal to Mr Trump's rural voter base. His rhetoric, which switches between praising Chinese president Xi Jinping as "brilliant" and "smart" and berating him, reveals a leader more interested in transactional outcomes than strategic positioning.

The case for a grand bargain

Mr Trump's admiration for strongman leaders like Mr Xi is in stark contrast to democratic leaders in Japan, South Korea, and Taiwan whom he criticises for not paying enough for US military protection. This disdain could incentivise him to prioritise a bilateral deal with China. Tellingly, Mr Trump invited Mr Xi to his inauguration, even though no foreign head of state had attended the event since the State Department started keeping records in 1874.

How might such a deal come to pass? While Mr Trump has called 'tariff' the most beautiful word in the dictionary, economists estimate his proposals would cost the average American household $2600 per year.

We know that Trump prizes his popularity over anything else. Therefore a winning strategy could see him impose, early in his administration, punitive tariffs on Chinese imports, as well as imports by Chinese firms from neighbouring countries like Mexico, and then quickly start negotiations with Beijing before US consumers feel the impact. An ensuing grand bargain, in which China makes a mix of meaningful and symbolic concessions, would earn Trump the adulation of his supporters, cementing — at least in his and their eyes — his status as a great statesman. Think of it as soybeans on steroids.

For Beijing, a US deal offers strategic advantages. China's economy faces mounting challenges, including a real estate crisis and declining foreign investment. US tariffs and Mr Biden's export controls have compounded these pressures. A grand bargain could ease economic strains while allowing Mr Xi to claim a diplomatic victory, particularly if the new arrangement is better than the current status quo.

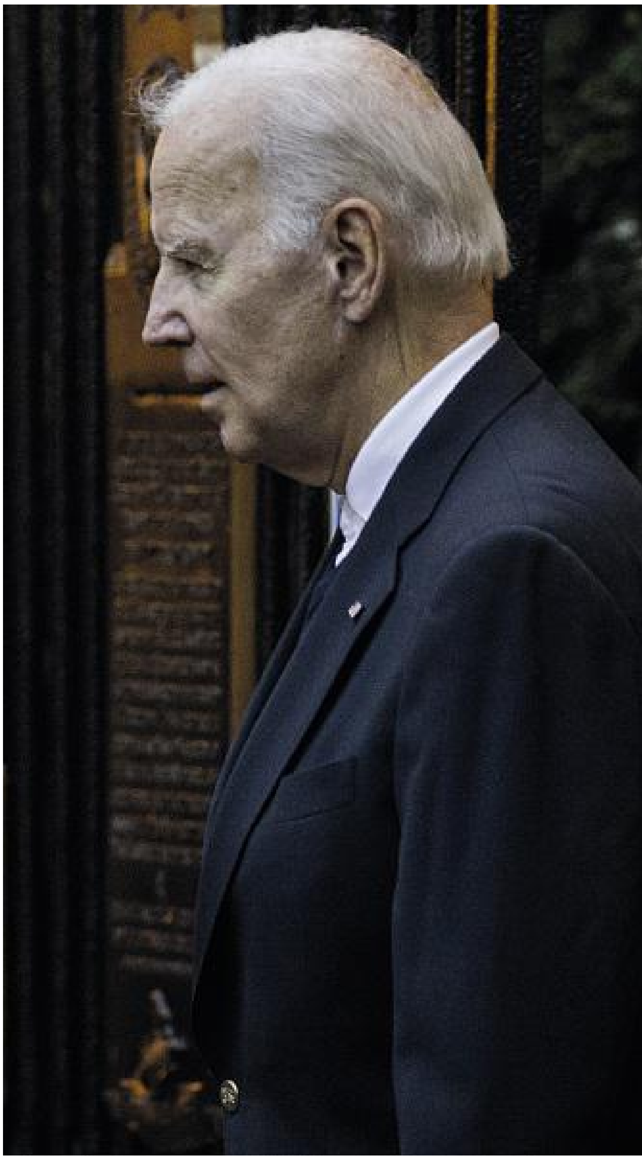
Of course, every deal has losers. And should this one materialise, they will likely be America's traditional allies in the region, such as Japan, the Philippines, South Korea and Taiwan. The logic of America First foreign policy dictates that, having secured what Mr Trump and his team would undoubtedly present as an American triumph, the transactional statesman-in-chief could turn his back on Asia and focus elsewhere.

The art of the deal

If Mr Trump's political career has taught us anything, it is to expect the unexpected. His transactional diplomacy and willingness to defy conventional wisdom make a US-China bargain plausible. This would serve his personal ambitions and China's strategic interests, but raise serious questions about its long-term impact on global stability.

As the world braces for the next chapter in US-China relations, one thing is clear: if there is a grand deal to be had, Mr Trump would take it, regardless of its impact on America's allies or the global order. And it's easy to see the Make America Great Again movement and much of America's isolationist public praising statesman Mr Trump. If I were China's foreign ministry, I'd already be hard at work. ■

The writer is president of IMD Business School.



Track record: Biden-era programmes have already sparked investment and jobs

A mixed scorecard for Biden's local FDI legacy

THE PRESIDENT LAID THE GROUNDWORK FOR MORE DIVERSE INVESTMENT, BUT RISING PROTECTIONISM. **DANIELLE MYLES** REPORTS

Local economic leaders across the US are optimistic that the impact of President Joe Biden's investment policies will outlast his time in office. However, his FDI legacy is tainted by his protectionist policy-making.

As his time in the White House drew to an end, attention turned to the fact that record US greenfield FDI pledges during his tenure — spurred by his subsidies-driven approach to attracting investment — have only partially translated into an equal uptick in real capital inflows.

But those on the ground argue nationwide figures shouldn't overshadow individual success stories across the country, where Biden-era programmes have already sparked investment and jobs, and laid the groundwork for future FDI.

"I can understand how the macro level FDI picture might look ... But when there's discussion about projects not coming to fruition, I'd argue come to Arizona and see the mass amounts of construction," says Chris Camacho, president and CEO of the Greater Phoenix Economic Council.

Phoenix is a poster child of the CHIPS and Science Act (CSA), having attracted $65bn-worth of investment pledges by TSMC to build three fabs, supported by $6.6bn in CSA funding. The first fab is due to start operating in the second quarter of this year.

TSMC's projects have anchored investments from around 40 companies — the majority from Asia and western Europe — to address gaps in the local semiconductor supply chain, says Mr Camacho. One example is a $600m gas facility by the UK's Linde to supply TSMC's fabs.

TSMC-style megaprojects have been a staple during the Biden years, although not all of them have progressed at the same pace. Beyond the headlines of such multi-billion dollar endeavours, smaller investment projects have also proliferated. Overall, the White House claims private investors announced about one trillion dollars in projects over the past four years.

Economic development leaders beyond Arizona have felt their impact.

"South-western Pennsylvania has benefited significantly from federal investments that have capitalised on our greatest strengths, thereby attracting companies in clean energy and manufacturing," says Stefani Pashman, CEO of the Allegheny Conference on Community Development. She points to the $63m in funding for Pittsburgh's robotics cluster, which has helped attract the likes of European software firm Spyrosoft which in 2023 chose the city as ▶

its US headquarters.

Meanwhile the CSA's Tech Hubs programme is helping put overlooked innovation centres on the investment map. Missy Hughes, secretary and CEO of the Wisconsin Economic Development Corporation, says the Wisconsin Biohealth Tech Hub's designation and funding as a Tech Hub has helped draw investment and "sharpen its global competitive edge".

Hype and reality

If investment pledges have fuelled the hype around the Biden administration's industrial policies, at times the execution of these projects has struggled to live up to expectations.

Projects during the Biden era that have gone awry include Swiss group Meyer Burger's scrapped expansion of a solar cell manufacturing facility in Colorado, and Ford halving headcount and cutting production by 40% at its electric vehicle battery facility under construction in Michigan. Enel's $1bn solar panel project in Oklahoma is also on hold, according to *Financial Times* investigations.

Early figures confirm the widening gulf between hype and reality. The level of planned capital expenditure by foreign investors in manufacturing fell to its weakest level in a decade in 2023, according to figures from the US Bureau of Economic Analysis.

Site selectors are divided over the gravity of the issue. Tracey Hyatt Bosman, managing director of BLS & Co, has observed first-hand the time lag between the huge number of project announcements and operations commencing. But she notes that "even if everything goes to plan, it's still too early" for all of these projects to have come online.

Didi Caldwell, CEO of Global Location Strategies, believes that the gap could be smaller if green subsidies were focused less on novel technologies and more on "green[ing] up existing legacy manufacturing" where there is a clearer path to a return on investment. "That was a missed opportunity," she says.

Man at work: Arizona's semiconductor hub is a poster child of the local success of Joe Biden's investment programmes

Flyover country no more?

Mr Biden's two key incentive programmes — the $369bn Inflation Reduction Act (IRA) and $53bn CSA — face an uncertain future under Donald Trump's incoming administration. But there are hopes that funding allocated to-date will help lay the foundation for more FDI going forward.

Mr Camacho expects it to take five to 10 years "to feel the benefits of R&D investments" backed by the CSA and IRA.

The country's 18 Tech Hubs — plus the Regional Hydrogen Hubs under the 2021 Bipartisan Infrastructure Law — are helping forge relationships between diverse stakeholders that improve investment prospects. "Money aside, there's a benefit to convening these pieces and resources of the economic development puzzle — from R&D to education to utilities," says Ms Hyatt Bosman.

Federal programmes are helping lift the international profile of inland areas once deemed 'flyover country'.

Regulatory zeal

The administration's efforts to stir investment have been stymied, however, by the use of federal regulations during Mr Biden's term. In December, more than 100 US manufacturer associations wrote an open letter criticising the "regulatory onslaught [which] reached a fever pitch during the Biden administration", claiming it costs the industry $350bn a year.

The president's decision to block Nippon Steel's $14.9bn acquisition of US Steel in January on questionable national security grounds reveals that some "policies pursued by the Biden administration have worked to the detriment of foreign investors", says the Council on Foreign Relations' Matthew Goodman.

Heightened scrutiny of inbound and outbound Chinese projects has also helped fuel the anti-China sentiment plaguing some projects. A "sad legacy" for the outgoing president is "turning our back on Chinese investment", says Ms Caldwell. "I represent a lot of Chinese companies that want to produce in the US ... we've definitely kind of given them the cold shoulder."

Mr Goodman agrees that "a more restrictive approach to foreign investment is ... part of [Biden's] legacy". ■

Grey skies: Nippon Steel and US Steel announced on January 6 they are suing the US government for blocking its tie-up on national security grounds

US FDI community slams $14.9bn Nippon Steel block

LAWSUIT AGAINST WHITE HOUSE FOR SINKING DEAL ON NATIONAL SECURITY GROUNDS GARNERS SUPPORT. **DANIELLE MYLES** REPORTS

The US's foreign direct investment (FDI) community has hit back at then-president Joe Biden's decision to block Nippon Steel's $14.9bn acquisition of US Steel on national security grounds, describing it as "undermining trust" in the country and a "flagrant abuse" of presidential authority.

The White House's January 3 decision to halt the Japanese firm's acquisition of the 123 year-old industrial group followed one year of bipartisan pushback to the deal in Washington DC, amid a tussle to win blue-collar votes ahead of the November election.

Responsibility for screening the country's inbound investments lies with the Committee on Foreign Investment in the United States (Cfius). However, in accordance with Cfius rules, it referred the decision to the White House in late December after failing to agree that the deal posed no national security risks.

On January 6, three days after Mr Biden's decision, Nippon Steel and US Steel sued the government alleging the president unlawfully interfered in Cfius's decision-making process "to advance his political agenda" which prevented a good-faith review. The Nippon-US Steel case is only the second Cfius lawsuit in history, and one which local FDI experts see grounds for.

"If ever there were a [Cfius] case that warrants action against the president, this is it," said national security lawyer John Kabealo, founder of Kabealo Law in Washington DC. Mr Biden and Democratic presidential nominee Kamala Harris publicly opposed the transaction before and during the review by Cfius — intended to be an apolitical body — which "effectively directed [Cfius] not to approve the transaction", he added.

These actions are a "clear and flagrant abuse of a president's national security authorities to achieve unrelated — [or] political — objectives," according to Mr Kabealo.

Reflecting on Mr Biden's early public opposition to the deal, Jonathan Samford, CEO of Global Business Alliance, stated that "to subvert national security laws to advance campaign pledges undermines the trust and economic cooperation that are central to our nation's prosperity".

These early public pronouncements conflated the president's national security concerns with his political stance, said former Cfius member Harry Broadman, creating "obfuscation that flies in the face of Cfius's raison d'etre". Now at the Rand Corporate think tank, he believes the president has signalled that US FDI policy "is neither clear nor stable", a point which is likely to become one of the "centrepieces of the litigation".

The companies' lawsuit requests a new Cfius ▶

IF EVER THERE WERE A [CFIUS] CASE THAT WARRANTS ACTION AGAINST THE PRESIDENT, THIS IS IT

review, the fate of which could be in the hands of president Donald Trump who has also opposed the deal.

The only other time an investor has sued the government for blocking a deal via Cfius was in 2012 when Chinese-owned Ralls Corporation brought a lawsuit against the Obama administration over its forced divestiture of windfarms. The case settled in 2015, with Ralls allowed to sell on better terms than the White House ordered.

‘Powerful and negative’

While Nippon and US Steel are fighting to salvage their deal, attention has turned to the block’s broader ramifications for FDI into the country. Mr Samford of GBA, which represents foreign firms in the US, said the decision “sends a powerful and negative signal” that the country “may no longer honour its longstanding open investment policy”.

Sarah Bauerle Danzman, a professor of international studies at Indiana University, agreed the US has sent “a powerful signal that it is willing to stretch the definition of national security beyond generally understood limits … by labelling a company headquartered in a major ally a national security threat”.

Beyond politicising the Cfius process, observers have criticised Mr Biden and other opponents to the deal for not articulating the national security risk it presents. The Council on Foreign Relations’s Matthew Goodman is among those to argue that blocking Nippon’s acquisition is “counterproductive” to Mr Biden’s objectives of protecting national security by strengthening supply chains. “Nippon Steel’s bid was the most realistic chance to salvage US Steel’s production and jobs,” he said.

The Japanese firm pledged to invest $2.7bn across its would-be US operations, a commitment that US Steel — whose headcount has halved over the past two decades as it struggles to compete with cheaper production in Asia — is not in a position to make.

The blocked deal has pit local government leaders in US Steel communities against lawmakers in DC, with the former “imploring” Mr Biden to approve the deal via an open letter in December. “We are hard-pressed to understand how elected officials in Washington can abandon this region [by opposing] the Nippon/US Steel deal,” Stefani Pashman, CEO of Pittsburgh region’s Allegheny Conference, said in a statement. The area is home to US Steel’s flagship Mon Valley operations.

The company’s other major operations are in Gary, Indiana, whose mayor Eddie Melton, said in a statement he is “deeply disappointed” by the decision and the city now faces job losses and “an uncertain future”. ■

Voices heard: US Steel Corporation workers rallying outside the company’s headquarters in Pittsburgh to spport the takeover by Nippon Steel

US Steel deal veto: history comes full circle

JAPANESE INVESTORS HAVE BEEN FRONT AND CENTRE OF FDI RESTRICTIONS IN THE COUNTRY FROM THE OUTSET. **JACOPO DETTONI** WRITES

There has been a lot of commotion following former US president Joe Biden's decision to block the $14.9bn acquisition of US Steel by Nippon Steel. Why would a company from Japan, an ally country, pose a national security threat significant enough to prompt a presidential veto?

A retrospective on the country's FDI screening framework dispels much of that commotion. Japanese investors have been front and centre of FDI restrictions in the US from the early days of FDI screening regulations in the 1980s.

It was with Japanese investors in mind that US legislators first gave the government the power to veto foreign investment deals based on a loose idea of national security.

Japan experienced fast-growing current account surpluses during the 1980s. Japanese companies reinvested much of those surpluses in the form of FDI, with the US being a prime destination for their investments. That growing wave of Japanese investment created apprehension in Washington.

The US economy had limited recent experience as an FDI destination. Up until that point in post-second world war history, outbound US investment had typically been more prominent than inbound FDI. In fact, the Reagan administration spent more time formalising the country's open investment policy than restricting it.

The resulting legal void came to light when the White House found itself lacking legal avenues to kill a proposed deal by Fujitsu to acquire 80% of loss-making microchip firm Fairchild Semiconductor, a subsidiary of then France-based Schlumberger. Eventually, the Japanese company called off the deal, although the only way US agencies seemed able to contest it was through an anti-trust case via the Department of Justice.

It was against that backdrop that the Exon-Florio amendment was added to the 1988 Trade Act. The amendment granted the president the authority to investigate FDI deals from a national security perspective and block proposed or pending foreign "mergers, acquisitions, or takeovers" that "threatens to impair the national security".

Although the White House upheld its open investment policy, it faced increasing headwinds from legislators keen to tighten up further the country's fledgling FDI screening mechanism.

"An increasingly vocal group of politicians on both sides of the aisle believes that a crackdown on foreign-owned firms is justified on the grounds of competitiveness and national security," wrote an FDI review authored by economist DeAnne Julius and published in 1991 by the Washington-based think tank Group of 30.

"Their rationale is a straightforward extension of protectionism thinking from the trade field."

The track record

Following its establishment in 1975 and the Exon-Florio amendment in 1988, the Committee on Foreign Investment in the United States's (Cfius) powers were gradually expanded over the years, giving the body and the president more agency to scrutinise and eventually veto FDI deals.

Up until 2016, the US president blocked only two deals, both by Chinese companies, one in aerospace and the other one in renewables. But FDI has come under growing scrutiny in recent years, which led to another six presidential vetoes since 2016, once again, all involving Chinese companies except for the proposed acquisition of Qualcomm by then Singapore-based Broadcom.

According to official data, Cfius investigated 1150 FDI deals between 2014 and 2023. Some 448 of them were withdrawn before closing, or 39% of the total. Between 2021 and 2023, investors from Japan, mostly in the manufacturing sector, featured among the most scrutinised, behind peers from China, Singapore and Canada.

With the first presidential veto of an FDI deal proposed by a Japanese company, history has now come full circle. US Steel has been bleeding assets and workers for years. However, with the winds of protectionism sweeping across the country, the company's ownership has become a matter of national economic pride.

"US Steel will remain a proud American company — one that's American-owned, American-operated, by American union steelworkers — the best in the world," read the statement by then-president Joe Biden that sealed the fate of the acquisition on January 3.

The fact that Japan is still perceived as a country chasing a lopsided FDI policy — encouraging outbound investment over inbound investment — didn't help either. Despite recent efforts by the government to open up the national economy to FDI, the country has among the lowest levels of FDI to GDP among all OECD countries, and has the largest gap between outbound and inbound FDI stocks among major economies.

Much as the US's expanding web of FDI screening regulations has to do with geopolitics, its original rationale is to be found in economic nationalism and protectionism. As such, it's meant to take no prisoners, whether they be allies or not. ■

UNCHARTED FDI: WYOMING

Wyoming: a lesson in 'all-of-the-above' energy policy

THE FOSSIL FUEL-RICH US STATE HAS EMBRACED CARBON CAPTURE STORAGE, NUCLEAR AND RENEWABLES. **ALEX IRWIN-HUNT** REPORTS

In late January, a legislative meeting in the US state of Wyoming cut to the core of energy debates. One bill in discussion, entitled 'Make carbon dioxide great again — no net zero', demonstrates general hostility to the energy transition in a predominantly Republican state that has produced coal, oil and gas for generations. But another bill on the meeting agenda, about advanced nuclear energy manufacturing, envisions a lower carbon future for Wyoming: one that has garnered significant interest from local and foreign companies.

"Wyoming is developing an environment that is very interesting to the nuclear industry, and we're very excited to consider setting up our manufacturing operation in Wyoming," Matt Wilson, operations director at California-based nuclear start-up Radiant Industries, said in a video call to Wyoming's minerals, business and economic development committee. The company has chosen Wyoming as one of five states it is considering for a factory to build small modular reactors (SMER).

STATE STATS

WYOMING

Population (2024):	**586,485**
Area:	**97,088 sq miles**
Average fossil fuel share in government revenue, 2015-2019:	**59%**
Share in 2023 of renewables in electricity:	**23%**
Coal production in 2023 (US share):	**41%**

Source: World Population Review, US Census Bureau, EIA

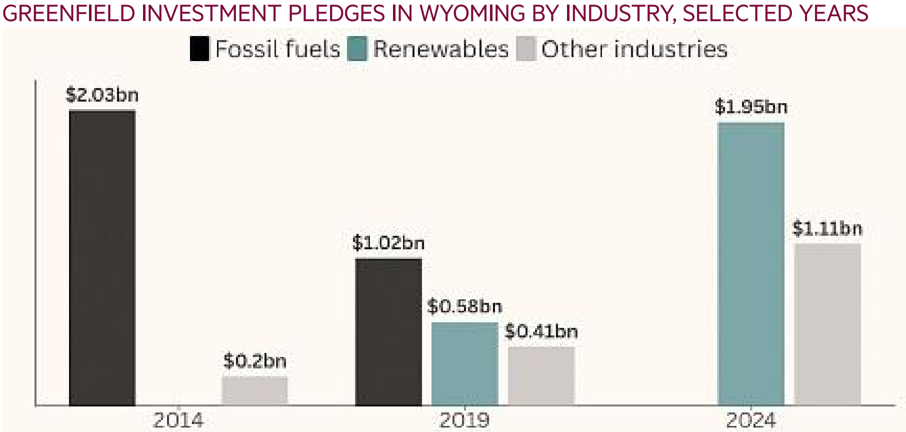
The industry's buoyant sentiment is reflected by TerraPower — a Bill Gates-backed start-up that is aiming to build a new 345 megawatt (MW) sodium-cooled nuclear reactor at a retiring coal power plant set in Kemmerer, west Wyoming.

"There are lots of places around the world that claim to be energy superpowers … but Wyoming really has everything," says Jeff Navin, TerraPower's director of external affairs (see opposite), adding that the state's large uranium reserves and energy heritage position it well for the next generation of nuclear technologies.

As the US enters the 'golden age' promised by president Donald Trump — a climate change sceptic who has vowed to "drill, baby, drill" — Wyoming gives a glimpse into how historic fossil fuel-based economies will balance their legacy industries with opportunities presented by newer lower carbon technologies.

WYOMING'S SWITCH FROM FOSSIL FUELS TO RENEWABLES

GREENFIELD INVESTMENT PLEDGES IN WYOMING BY INDUSTRY, SELECTED YEARS



Source: **fDI** Markets • Data includes both greenfield foreign direct investment and US interstate announcements

Low-carbon growth?

The landlocked western state is home to fewer than 600,000 people. It has plentiful land, low-carbon projects from carbon capture storage (CCS) to wind farms, and mining of critical minerals like lithium, rare earths and the uranium needed for nuclear reactors. But as the largest coal producing US state by far — an industry that has declined from its local peak in 2008 — Wyoming's embrace of alternative energy sources and projects has a dual purpose.

Mark Gordon, a Republican who has served as Wyoming's governor since 2019, tells **fDi** that his administration has taken a "balanced, responsible approach" to developing its energy resources: "Wyoming's 'all-of-the-above' energy policies include a belief that carbon capture technology offers the opportunity to address current federal regulations and concerns of consumers over climate issues and provide a path for continued fossil fuel production in the state."

This year, oil and gas major ExxonMobil will start up the expansion of its CCS facility in La Barge, reducing the site's emissions by 1.2 million tonnes of CO_2 per year. "All this progress can help position the US as a global leader in low-carbon energy," Dominic Genetti, Exxon's senior vice-president of CCS, wrote in a blog post about 2024 — the company's best year ever for CCS.

The state's policies have coincided

with growing appetite to invest in Wyoming, from both interstate and overseas companies. Data from **fDi** Markets shows a record seven foreign direct investment (FDI) projects were announced in Wyoming in 2024 — up from an annual average of two projects in the previous five years. Combined with its 11 US interstate projects, Wyoming recorded capital investment pledges in 2024 worth more than $3bn, its second-highest ever annual total (after 2008).

Wyoming's inward investment has also shifted from predominantly fossil fuels to renewable energy, which **fDi** Markets shows made up more than half of total capital committed in 2024. Most prominent among these was Canada-based Enbridge Energy's plans to invest $1.2bn into a 771MW solar plant, which will supply electricity to new data centres south of Wyoming's capital, Cheyenne. The state also has some of the best wind potential anywhere in the US.

Coal alternatives

While a few notable projects are underway, there is still local opposition to renewables in Wyoming, which has the highest share of government revenue (59%) from fossil fuel production and marketing among all US states. But a declining local coal industry has brought job losses and the recognition that alternative uses are needed for the state's recoverable coal, which the Wyoming Geological Survey estimates is in excess of 165 billion tonnes.

The most abundant reserves are found in Wyoming's northern Powder River Basin (PRB) region. Multiple research projects are underway to look at "coal more as a crude feedstock for chemicals and materials-related processes" rather than just a thermal fuel for combustion, says Jim Ford, a fossil fuel industry veteran and commissioner for Campbell County in the PRB region.

Change of administration

Under the Joe Biden administration, the Bureau of Land Management brought an end to all new coal leasing on federal lands in the PRB by 2041 with an aim to cease coal production there after 2041. The coal industry is optimistic that Mr Trump will roll back these regulations. "There's no doubt going to be a much broader push for energy development under the Trump administration in general, and that'll trickle down to states like Wyoming," says Randall Atkins, CEO of Ramaco Resources, a producer of metallurgical coal used in steelmaking.

At its Brook Mine project near Sheridan in Wyoming, Ramaco has another prospect: a potentially huge deposit of rare-earths metals — a market where China dominates. A preliminary, independent study by Fluor Corporation published in December 2024 found the development is feasible, but work continues to plan for potential future commercial production.

Wyoming "is a strong hub for not only energy, but the energy transition as well," Mr Atkins says.

Despite tensions between Wyomingites' views on the pace of the state's green transition, Mr Gordon is confident it is poised to fulfil US energy needs under the new administration. "President Trump's pro-energy, pro-states' rights mindset will only further Wyoming's already strong position," he says. ■

Q&A

JEFF NAVIN

TerraPower is a Washington-based nuclear power start-up founded in 2006 by Bill Gates. In June 2024, the company broke ground on its first Natrium nuclear SMR demonstration project, which it has aimed to start commercial operations by 2030. Jeff Navin, TerraPower's director of external affairs, tells **fDi** about the benefits of Wyoming as a place to invest and local feeling about their Natrium project.

Q Why was Wyoming chosen for your Natrium project?

A Our decision to site our plant in Wyoming came from a partnership with our utility partner, Rocky Mountain Power Pacific Corp, who have been providing electricity throughout the west for many years now. Wyoming really has everything. It is by far the largest coal producer in the US, has oil and gas resources and the US's largest uranium deposits — the fuel for nuclear power. The recent growth of renewables, particularly wind, has been absolutely massive in the state. Wyoming really understands what it takes to produce and export electricity.

Q How was your nuclear project proposal received?

A We got a tremendously positive reception from the governor, legislature and the business community in the state. We did town hall meetings in each of the four communities that were slated to lose their coal plants and all of them said yes to seeing the development of a nuclear power plant. Kemmerer, in the south-west corner of the state, was extraordinarily enthusiastic. There is very high energy intelligence in the community and they welcomed the economic opportunity. ■

This interview has been edited for brevity and clarity.

Milei's Argentina: from misfit to darling

IT'S ONE OF THE FASTEST ECONOMIC TURNAROUNDS THIS CENTURY. BUT WILL IT LAST? **DAVID LEPESKA** REPORTS

After toting a chainsaw on the campaign trail in a vow to slash funding, president Javier Milei has largely delivered on his promises and revived Argentina's oft-troubled economy in just 14 months in office.

Nearly all goods in Argentina are dearer today than in late 2023, but public confidence and the president's approval ratings have ticked up as annual inflation has fallen from nearly 300% in April 2024 to 117% in the following December.

In 2024, the country reported its first budget surplus in years and a record trade surplus. The World Bank now forecasts around 5% GDP growth for Argentina this year and next. Buoyed by this reversal, Milei received a warm welcome at US president Donald Trump's inauguration and met with IMF chief Kristalina Giorgieva, who praised "Argentina's remarkable transformation".

South America's second-largest economy may be shifting from outcast to belle of the ball. "More and more foreign businesses, particularly in the US, are looking to do something in Argentina," says Mariano Sardans, CEO of Buenos Aires-based investment advisory FDI. "That's a major change from before."

Gas and lithium

Most are eyeing Argentina's top two opportunities: the Vaca Muerta formation in northern Patagonia, home to the world's second-largest non-conventional gas reserves and fourth-largest shale oil reserves; and world class lithium deposits in the so-called Lithium Triangle the country shares with Bolivia and Chile.

Both are developing rapidly, and the government's new Incentive Regime for Large Investments (Rigi), passed in July, seeks to generate further foreign investment by cutting federal income and dividend taxes and eliminating some capital controls and trade restrictions on projects over $200m, with additional benefits for deals over $1bn.

Critics say Rigi fails to address one of the key issues weighing on the minds of foreign investors: the country's strict currency exchange control regime, known as cepo cambiario, or cepo for short.

But Rigi has generated results already. Weeks after its passage, Malaysian firm Petronas announced Argentina's largest-ever foreign investment, partnering with state-run oil leader YPF to build a $30bn gas liquefaction plant in Rio Negro province. Dutch oil major Shell later stepped in to replace Petronas, which faced undisclosed issues, but observers expect the deal to be finalised soon.

"It's incredible news, nobody expected this project," says economist Pablo Besmedrisnik, director of VDC Consulting, who sees the country undergoing an economic structural shift. "All those big projects that never had the right macroeconomic conditions to be finalised and generate new opportunities for Argentina, they're now real."

With new tech cutting oil production costs to $36 per barrel, Vaca Muerta's output quadrupled from 90,000 bpd in 2019 to 380,000 bpd last year. The result is Argentina's largest energy trade surplus in nearly two decades, at $5.7bn. Despite Exxon Mobil's looming pull-out from Vaca Muerta and growing fears that increased US drilling could drive down oil prices, the government aims to produce a million barrels per day by 2028.

This will require $10bn in infrastructure investment, according to McKinsey. In December, Argentina's top energy firms agreed to build the $3bn Vaca Muerta Sur pipeline, expected to significantly boost export capacity. This came a few months after Norway's Logar announced a $3bn deal with Argentina's Pan American Energy to build a liquefaction barge in Rio Negro.

Lithium opportunity

Rigi-linked projects have also focused on Argentina's other white-hot product, lithium, an element used in batteries for electric vehicles, smartphones and more. Global demand is expected to increase 30-fold by 2040, which is why even oil powers like Saudi Arabia are climbing aboard. Chile is the world's top producer, but Argentina, which ranks fourth, is gaining ground. Exports more than trebled between 2018 and 2023 and the government is targeting a five-fold leap in output in the next few years.

Despite a sharp decline in the price of lithium, from $80 per kilo two years ago to around $10 today, foreign companies want in. Since 2020, Chinese firms have invested $3.4bn across seven projects, according to **fDi** markets.

As Chinese officials push the "new three" of solar cells, electric vehicles and lithium batteries, Ganfeng Lithium is also nearing completion of its $600m plant in Salta and considering four more Argentina projects worth $800m each.

With lithium being at the heart of the global rush to control critical mineral resources, US companies are showing an interest too. Shortly after taking office, Mr Milei said Tesla CEO Elon

Strongman tactics: Javier Milei during his successful presidential campaign

Musk and the US are "extremely interested" in Argentina's lithium. Months later, Argentina and the US agreed to deepen co-operation on critical minerals such as lithium.

Major mining companies are no exception. After laying out $6.7bn to purchase Arcadium Lithium, a US-Australian merger that oversaw two Argentine mines, UK-Australian mining major Rio Tinto committed $2.5bn in December to build a plant in Rincon de Salta.

Indian and French companies have also closed recent deals in the country's lithium mining.

Cepo: on or off?

Despite major inbound investment, the government needs more foreign reserves to move on from currency controls. Last June, Beijing renewed a multi-billion dollar currency swap. Most analysts expect the new deal the IMF is negotiating with Argentina to include an $11bn loan for the central bank, enabling the government to float the peso.

Without those funds, a sudden lifting of cepo risks devaluation and renewed inflation, similar to what happened during the presidency of Mauricio Macri, who served one term between 2015 and 2019. In early February, Mr Milei has signalled his intention to remove the cepo from January 2026.

"Things can change very quickly in Argentina," says Mr Besmedrisnik. "If you dismantle cepo now, you could feel pressure on exchange rates, which could imperil this government's main asset; its success reducing inflation via normal rates." He expects Milei to dismantle cepo after October's mid-term elections. Until then, foreign commitments, largely confined to the reinvestment of earning surpluses that cannot leave the country, could remain small.

But in October, the IMF ranked Argentina's investment as a share of GDP above the Latin American average for the first time in decades, underscoring greater investor confidence. And in January, JPMorgan urged clients to increase exposure to YPF, citing Vaca Muerta, a favourable energy outlook, reduced risk and growing investments in infrastructure.

Milei has vowed to seek a free trade deal with the US, despite the risk of fracture with Mercosur, the South American trade bloc. And a government initiative launched last month authorises foreign firms investing in Vaca Muerta to export 20% of their production without paying withholdings, keeping the foreign currency generated by those exports.

Big Oil has noted these developments with interest. On a recent visit to Houston, Jimena Blanco, head of Americas for risk analyst Verisk Maplecroft, spoke to multiple majors looking to invest in Argentina once its latest LNG plans move ahead. "They remain aware of potential stability issues," she said, "but the wallets are opening."

As Mr Trump threatens Canada, Mexico and Europe with tariffs, Argentina may spy an opportunity. "Globally, this is the only right-wing administration looking to open the economy rather than close it," added Ms Blanco. "Milei's providing an alternative, a very pro-investment economy rather than protectionist, as we're seeing in the US and other places." ■

David Lepeska is a freelance reporter based in Buenos Aires.

SEVERAL MAJOR PROJECTS ARE OVERSHADOWED BY PLANNED ZONAL PRICING MARKET REFORM

Risk for Scotland renewables

GREEN ENERGY

Scotland had some major wins in its booming renewable energy sector during the first month of 2025, but industry groups warn that proposals to split the UK's electricity market so that prices differ by region risk deterring future investment.

In early January, Copenhagen Infrastructure Partners said it will invest about £800m to build two of Europe's largest battery energy storage systems (BESS) in South Lanarkshire and Fife, each with power capacity of 500MW. The Danish firm claims it is now the UK's largest BESS investor, with a total planned power capacity of 1.5GW across three BESS projects of equal size.

Several others confirmed in January progress on their plans in Scotland, such as Germany's Energikontor receiving permits to build three onshore wind projects with a combined capacity over 200MW. Norway's Fred Olsen Renewables also launched proposals to develop a 158MW wind farm in the Scottish Highlands region with up to 22 turbines and 30MW of battery storage.

Despite dipping from a peak in 2022, Scotland's renewables still attracted more than $10bn in greenfield foreign direct investment announcements in 2024, according to **fDi** Markets.

Scotland's high wind speeds, large bodies of water and mountainous terrain have since 2022 led to investment pledges worth billions of dollars from renewable energy developers, including in onshore and offshore wind farms, solar parks and pumped hydro storage projects. These plans have come after successful annual UK auctions of government contracts, known as contracts for difference (CfDs), which guarantee developers electricity prices for 15 years.

But industry groups argue that a review of electricity market arrangements (REMA) has created uncertainty over the viability of future renewables projects in Scotland. Launched in 2022 under the previous Conservative UK central government, REMA would split the UK into regional electricity markets. This would mean wholesale electricity prices would differ by region, depending on supply and demand, rather than the current system of a single national wholesale price. This has the potential to make some existing investments unviable once their guaranteed CfD expires after 15 years.

Fred Olsen Renewables already has a presence in Scotland

"Zonal pricing would actively disincentivise the development of wind farms and other renewable energy technology in Scotland, derailing progress towards net zero and meaning Scotland would miss out on its most significant economic opportunity in decades," says Andrew MacNish Porter, head of economics and markets at Scottish Renewables, a local industry trade body. He adds that the industry "is currently under serious threat" from the proposed reforms.

In 2022, Scotland successfully undertook ScotWind, the world's largest seabed leasing round for commercial offshore wind farms. This led to total investment commitments of £28.8bn by developers across 20 projects. ■

ALEX IRWIN-HUNT

90% PROPORTION OF US BUSINESSES SURVEYED BY AMCHAM EU THAT ANTICIPATE THE TRADE RELATIONSHIP BETWEEN THE EU AND US TO WORSEN FOLLOWING THE 2024 ELECTIONS

UK private R&D investment down

Business research and development (R&D) expenditure in the UK declined last year to its lowest level since the Covid-19 pandemic, as companies reassessed their spending plans in an important area for the UK's bid to boost economic growth.

In 2023, real spending on R&D by UK businesses fell year-on-year by 3% — or £3.4bn — to just short of £50bn, marking the second consecutive year of decline, according to data released on December 11 by the Office for National Statistics.

The same downward trend is reflected in FDI announcements in R&D activities in the UK, which declined from 112 to 74 projects over the same period, according to **fDi** Markets, a greenfield investment tracker.

Rosalind Gill, head of policy at the UK's National Centre for Universities and Business, tells **fDi** that the decline of R&D spending in the UK is the result of an "incredibly challenging" global operating environment and the turbulence of the UK's economic policies and strategies in recent years, including Brexit. ■

ALEX IRWIN-HUNT

Gloomy EU–US outlook

Almost 90% of US businesses anticipate the trade and investment relationship between the EU and US to worsen following the results of the 2024 elections in Brussels and Washington, according to a January survey by the American Chamber of Commerce (AmCham) to the EU.

Two-thirds of the 58 US-controlled member companies surveyed by AmCham EU expected Donald Trump's administration will negatively impact their European operations. This was slightly more than the 52% that anticipated a negative impact on their business from the new EU administration, which took office on 1 December 2024.

On February 3, Mr Trump threatened to place tariffs on EU goods imported into the US, which could happen "very soon". The EU vowed to "respond firmly" if it became a target for Trump's protectionist trade policies. ■

ALEX IRWIN-HUNT

LATEST INVESTMENTS

AEROSPACE
AIRCRAFT SERVICES

Technical aircraft services firm Lufthansa Technik, a subsidiary of Germany-based Lufthansa, has announced that it will establish a new 54,000 sq m maintenance, repair and overhaul facility at the Lusopark business park in Santa Maria da Feira, Portugal. Set to open by the end of 2027, the facility will focus on the repair of engine parts and aircraft components and will create 700 new jobs.

AUTOMOTIVE COMPONENTS
ELECTRIC STEERING GEAR

Bosch, which produces and supplies original equipment systems and products for automobile manufacturers and operates as a subsidiary of Germany-based Robert Bosch, has announced plans to invest Ft46bn ($114m) to expand its production of electric steering gear in Heves county, Hungary. The project is supported by Ft10.5bn in state investment.

COMMUNICATIONS
NEW DATA CENTRE

US-based CyrusOne, a co-location provider, is developing a new data centre in Segrate, Italy. Named MIL1, the three-story facility will offer 27 megawatts (MW) of capacity across 9000 sq m. The first 9MW of capacity will be operational by the third quarter of 2027.

FOOD & BEVERAGES
WAREHOUSE EXPANSION

Discount retail chain Lidl Austria, a subsidiary of Germany-based Schwarz Gruppe, has invested €70m to expand its warehouse in Laakirchen, Austria. The warehouse has been expanded to 50,000 sq m and includes new areas for non-food, dry goods, fruit and vegetables.

REAL ESTATE
UK–GERMAN JOINT VENTURE

Germany-based Feldberg Capital, a real estate investment management and development company, has entered into a joint venture with UK-based Henry Boot to establish three initial sites in Walsall, Welwyn Garden City and Makham Vale. The joint venture will be 75% owned by Feldberg with the 25% remainder going to Henry Boot. The combined plans have a gross development value of £100m.

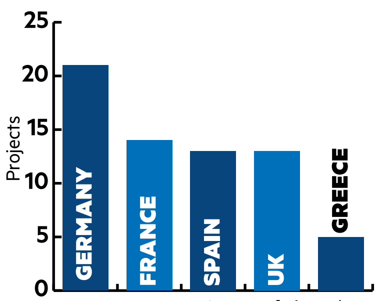
RENEWABLE ENERGY
GERMAN SOLAR

Israel-based N2OFF, an agri-food tech company dedicated to developing sustainable solutions for the plant-based food industry and Israel-based Solterra Renewable Energy, have announced a joint venture to develop a solar photovoltaic project in Melz, Germany. The Melz project, a 111 MWp solar photovoltaic facility, is N2OFF's first project in the renewable energy market.

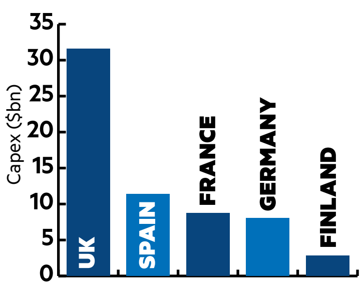
This investment news and data has been provided by fDi Markets, a crossborder investment tracking service that is part of The Financial Times Ltd's FT Locations division (www.ftlocations.com)

STATS

TOP 5 EUROPEAN DESTINATIONS FOR FDI IN ICT & INTERNET INFRASTRUCTURE IN 2024



Source: fDi Markets



Source: fDi Markets

View from
Europe

Four fault lines are becoming visible between local and national interests in the attraction of FDI.

The first clash is national security versus local development. The European Commission and national governments across Europe are tightening their FDI screening mechanisms — in some cases by broadening their scope to cover sectors not linked to traditional concepts of national security. However, these measures often clash with the priorities of regional investment promotion agencies (IPAs).

Second is central control versus regional autonomy. While decentralisation and devolution have gained traction in recent years, security and sustainability are tipping the balance back towards recentralisation.

The next is between high-tech ambitions and job creation goals. Looking at national IPAs' lists of target sectors, there is clearly a high-tech fixation. Regional IPAs of disadvantaged regions prioritise industries that deliver broad-based employment.

Finally, there is the clash between environmental, social and governance (ESG) goals and regional realities. The national emphasis on ESG in many parts of Europe conflicts with the economic needs of regions within those countries reliant on high-energy, heavy industries.

High-tech ventures concentrate in the well-developed areas around London, Oxford or Paris. In stark contrast to this, we have plenty of low-skill, low-productivity regions. The no-hope regions are where economic decline hits hardest.

It is therefore imperative that we balance national security requirements with local needs, that we balance high-tech ambitions with job creation. Not to support simple warehouses or old-fashioned medium-sized manufacturing would deprive semi-skilled workers of their life's chances. And IPAs, by deciding on what type of investment they support or target, play a key role in this. ■

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Greenland: the reality behind the hype

THE ARCTIC ISLAND IS IN THE SPOTLIGHT AS A STRATEGIC ECONOMY, BUT HAS LITTLE TO SHOW FOR IT SO FAR. **MADELEINE WRIGHT** REPORTS

Nuuk International Airport had barely been open for a month when Donald Trump Jr flew in for a "personal day trip" on January 7. Images of Trump Force One, his dad's private jet, parked on the frosty tarmac have come to define a new phase of intense interest in Greenland, a vast Arctic island prized for its rich mineral deposits and strategic location between the US and Russia.

President Donald Trump's proposals to buy Greenland, first in 2019 and again in 2024, are part of a longer saga. US officials first raised the idea of annexing the territory, along with neighbouring Iceland, in 1867. Oil and gas majors began exploring its waters in the 1970s. Talk of an Arctic 'cold rush' peaked in 2008, when reports identified major mineral and hydrocarbon reserves in the region.

So far, reality has failed to live up to the hype. Greenland banned new oil and gas exploration in 2021, after costly exploration efforts turned out empty-handed. Although it has enjoyed some mining success in the past, Greenland now hosts just two active mines: Amaroq Minerals' Nalunaq gold mine in south Greenland and Lumina's White Mountain (Qaqortorsuaq) anorthosite mine in west Greenland.

Another gemstone mine by Norwegian Greenland Ruby shut down because of low levels of production and forced the company to declare bankruptcy in September.

For all the interest generated by Mr Trump's first term, only one US firm holds a mineral exploration licence in Greenland, compared with 18 from the UK, six from Canada and five from the Czech Republic. Anglo American, which is searching for minerals in west Greenland, is the only major mining firm on the island.

"We have been digging and asking for investment now for 50 years and nothing has happened," says Minik Rosing, a Greenlander and geobiology professor at the University of Copenhagen.

Tourists and mines

Greenland is a constituent territory within the Kingdom of Denmark, after its official status as a Danish colony came to an end in 1953.

The ruling government has promised to pursue independence through a referendum, but many fear the impact it could have on living standards. Greenland's economy, which has an annual GDP of just $3.2bn, is dominated by fishing and the public sector. Danish subsidies account for nearly half of the government's budget.

"The government is looking towards both tourism and mining" to build economic self-sufficiency, says Christian Keldsen, CEO of the Greenland Business Association.

Greenland's fjords and glaciers offer the natural beauty many tourists want. 141,000 people visited the island in 2023 — the highest number on record. Its first international airport opened in Nuuk, the capital, in late November. It is the first of three airport projects partially backed by Denmark that collectively cost more than $800m. United Airlines will launch direct flights from New York to Nuuk in June.

The island also boasts 43 of the 50 minerals deemed 'critical', or essential to the economy and national security, by the US government. This includes the world's eighth-largest reserves of rare-earth elements, which are vital to the production of green technologies and military equipment.

Companies 'have to build everything'

Harsh weather conditions and limited infrastructure remain significant challenges, however. Greenland is the world's largest island, as well as its most sparsely inhabited territory. It has 54 settlements, but no roads linking them. Roughly 80% of the island is covered in ice.

"Even though the climate is warming and accessibility in Greenland is improving, it's [still in] the Arctic," Tim Boersma, fellow with the Center on Global Energy Policy at Columbia University, notes. "It's very remote. There's no railway or bus systems."

Mining companies "have to build everything", Jørgen T Hammeken-Holm, deputy minister of Greenland's Ministry of Mineral Resources, explains. "Our economy is so small that we can't even help building an airport, a harbour or a road."

Amaroq Minerals, a Canadian mining company, acquired the Nalunaq gold mine in South Greenland in 2015. CEO Eldur Ólafsson says the company has built a permanent base, including drill rigs, specialised mining equipment, a processing plant and an environmental, social and governance department.

"This kind of infrastructure is unknown in Greenland, in any company," he adds. Amaroq completed its first gold pour there in November and plans to increase production this year.

Flying visit: Donald Trump Jr took Trump Force One to Greenland in January

Skills gap

Another challenge is that rare-earth mining might involve the extraction of uranium as a by-product. In 2021, Greenland limited the amount of uranium allowed in mined resources due to its environmental impact. The new law halted development at the Kuannersuit mine, which holds one of the largest rare-earth deposits in the world, but would have fallen foul of the new restrictions. The mine's owner, Australian mining company Greenland Minerals, remains locked in legal disputes over its future.

Access to local labour is also a major impediment for many companies. Greenland's workforce numbers just 27,800 — of which only a minority are classified as skilled.

"The idea of locals working in the mine is promoted as a potential way of creating benefits for them. But often the locals are not interested because they already have jobs or live from fishing and hunting," says Anne Merrild, head of sustainability and planning at Aalborg University, who grew up in Greenland.

The Greenlandic government funds the Greenland School of Minerals and Petroleum to improve expertise levels. But the school's general manager, Hans Hinrichsen, said a lack of mining activity in Greenland has led to budget cuts. "We were starting to make agreements with Amaroq Materials about joining forces to [create] this underground search and rescue programme, but I simply can't find the budget to buy the equipment I need for that," he says.

As demand for critical minerals and rare earths rises, and concerns around China's dominance of both industries intensifies, stable and democratic Greenland is an increasingly attractive location for many companies.

Last year, US and Danish officials lobbied Tanbreez Mining, the previous private developer of the eponymous rare-earth mine, not to sell to interested Beijing-linked firms, according to Reuters. Instead, the company ended up selling it to Australian Critical Metals Corp. The new owner believes Tanbreez will produce 500,000 metric tons of rare-earth elements per year, eventually rising to 3 million per year, with production starting in 2026.

"It is important for the West not to have to rely on China for these materials. This is what drove our thesis behind acquiring the Tanbreez project, as we believe this asset will play a key role in meeting the demand for these materials and helping the West reduce its reliance on China," Critical Metals Corp's CEO Tony Sage says.

The company discovered the world's highest concentrations of gallium, a metal essential in the production of computer chips and military equipment, at Tanbreez in November. China banned exports of gallium to the US in December.

"It will take years," Mr Hammeken-Holm notes. "We have the minerals, we have the potential, but we need the investment to deliver what you [would] like to have." ■

IT IS IMPORTANT FOR THE WEST NOT TO HAVE TO RELY ON CHINA FOR THESE MATERIALS

Joint venture: representatives from CATL and Stellantis celebrate the Zaragoza battery plant deal

Spanish politics win over Chinese investors

AN INFLUX OF SINO FDI INTO THE COUNTRY SHOWS THE SWAY OF PRO-BEIJING INVESTMENT STRATEGIES, DESPITE THE EU'S DE-RISKING STANCE. **DANIELLE MYLES** REPORTS

Chinese investors have set their sights on Spain. In 2024, they announced a record 33 foreign direct investment (FDI) projects in the country, **fDi** Markets data shows, including a spate of cleantech megaprojects over the last five months of the year. This includes a €2bn electrolyser production facility by Hygreen Energy in Andalusia and CATL's €4.1bn joint venture with Stellantis to build a battery plant in Zaragoza.

This surge continues an upward trajectory that began in 2018, and is in stark contrast to China's declining FDI project numbers across Europe as a whole over the same period. Spain's attractiveness to Chinese firms is driven in no small part by it being the world's fastest growing major advanced economy in 2024. Abundant natural resources for renewable energy projects and having the EU's second-biggest auto industry for electric vehicle (EV) makers are oter draws. But other factors are also at play.

"For Chinese companies, it is also important that Spain is not seen as antagonistic to their country," a Spanish government official that prefers to remain anonymous tells **fDi**.

Spanish overtures, EU antagonism

Against the backdrop of souring EU-Beijing economic relations, the Spanish government has been working to bolster rapport and investment ties with China's government and investors.

In a trip to meet Xi Jinping last September, Spanish president Pedro Sánchez said "we want more trade and investment with China" and an open relationship despite "geopolitical ... realities". That month, the two countries signed an investment co-operation agreement, while earlier in the year Catalonia's government opened a desk dedicated to attracting Chinese FDI. Notably, Spain abstained from the EU vote in October to impose tariffs on Chinese EVs alongside another 11 member countries.

"One of Sanchez's priorities is to open Spain to Chinese investors," says Víctor Cortizo, a lawyer in Madrid focused on Chinese FDI. "He is trying to be the big supporter of Chinese interests in Europe."

It sets the country apart from the combative environment facing Chinese businesses across the bloc. A survey of 200 such companies, conducted by the China Chamber of Commerce to the EU (CCCEU) last year, identified political barriers and anti-Chinese sentiment as their biggest hurdles to operating in the bloc. "We were not surprised," says Linlin Liang, the CCCEU's director of research. "The political environment has always been [a] negative for the business environment facing Chinese companies."

However the situation has worsened since 2019, when the European Commission updated its China strategy by designating the country a competitor and systemic rival, and started rolling out a string of policies — from de-risking to the Foreign Subsidies Regulation and EV tariffs — targeting China.

Alexander Brown, senior analyst at the Mercator Institute for China Studies, notes that despite this backdrop, Mr Sanchez did everything possible to ensure last year's Chinese mega projects "which were on the table came to fruition, especially in the midst of a politically charged year with EU debates around Chinese EV tariffs".

A fragmented approach

Spain's push for Chinese investment comes as the EU works towards a more harmonised approach to FDI, with the European Commission seeking a tighter grip on national security screening and Mario Draghi's competitiveness report recommending a more coordinated approach to the bloc's FDI decision-making.

Madrid's actions underline the fragmented approach to Chinese investment emerging across the EU, with some member states aligning with Brussels' protectionist stance while others remain more open. "Historically, we have seen significant divergence," says Jimena Blanco, chief analyst at Verisk Maplecroft. "There's this view in [the EU] of 'we have to stand up to China', but at the bilateral level countries are also trying to protect their own companies, investments and trade relationships with China."

Other EU members pushing investment ties with China include Hungary, which remains part of Belt & Road and has been labelled by Beijing a 'comprehensive strategic partner', and Greece which is also part of Belt & Road. Slovenia also pushed a pro-China investment agenda last year.

The Spanish government official, however, stresses the country is following the EU's ground rules, but welcoming Chinese investment in less-sensitive sectors. "We are very rigorous. Large foreign investment operations have to be screened and approved by the government," he says, adding that the approach changes by sector and the European Commission is consulted "at every point" necessary.

Over the past four years, **fDi** Markets data shows that the industry attracting the most Chinese FDI to Spain — by both project numbers and capital expenditure (capex) — is electronic components, the bulk of which are linked to clean technologies. The other biggest magnets are logistics, renewable energy, automotive and industrial equipment.

Making friends and FDI?

Data from **fDi** Markets suggests that governments proactively chasing stronger commercial ties with China could have a winning strategy. Since January 2021, the three European countries to attract the most Chinese FDI capex have adopted this strategy: Hungary, Spain and non-EU member Serbia. They have displaced the region's historic recipients of Chinese FDI: Germany, France, the UK and Russia.

Many put this down to China's state-backed economy and Beijing's influence hanging over many private companies' FDI decisions. "While most Chinese firms will primarily be basing their decisions on commercial considerations, it's clear that the Chinese government is being more interventionist in the way it influences those investments," says Mr Brown. For example, following the EU's vote on Chinese EV tariffs last October, Reuters reported that Beijing had ordered its automakers to not invest in member states that supported the tariffs.

Ms Liang argues that Beijing does not take a "top-down approach" to directing FDI decisions. However, she says investors consider how their choices will be received at home: "Companies take into consideration the political sentiment from both perspectives — the EU's, but also China's."

Southern bridges

Both China and Spain are strengthening investment ties as part of bigger ambitions. "Spain could be the bridge to open investment for China into the EU, Latin America and north Africa," says Mr Cortizo. Its economic and political clout exceeds that of the other EU countries forging pro-China investment policies, making it a prime candidate to soften the combative policy environment emanating from Brussels. Meanwhile, Spain's commercial, geographic and historic ties with north Africa and Latin America make it a potential springboard for Chinese firms' global expansion.

"[Europe's] importance for Chinese companies has been on the rise, but the political environment has served as a deterrent," says Ms Liang. Spain, however, "is a very welcoming investment destination for Chinese investors". By taking a balanced approach to Beijing, Madrid could just prove how much EU countries have to gain. ■

AT THE BILATERAL LEVEL COUNTRIES ARE TRYING TO PROTECT THEIR OWN COMPANIES, INVESTMENTS AND TRADE RELATIONSHIPS WITH CHINA

INTERVIEW: ENCARNA PIÑERO

Building bridges to the Caribbean

THE CEO OF SPANISH TOURISM COMPANY GRUPO PIÑERO SPEAKS WITH **DANIELLE MYLES** ABOUT ITS NEW HYATT JOINT VENTURE, ASSET-LIGHT INVESTING AND THE REGION'S MOST INVESTIBLE LOCATIONS

CURRICULUM VITAE

ENCARNA PIÑERO

2017
Grupo Piñero
CEO

Previously
Grupo Piñero, vice-president

Over the past half-century, Spain's Grupo Piñero has built itself into a leader of *sol y playa* (sun and beach) tourism. The family-owned and run business headquartered in Mallorca and founded in 1975 has expanded from its origins as a tour operator to include real estate, golf, mobility and hotels — the latter accounting for more than three-quarters of its operations.

Grupo Piñero's focus on destinations offering an endless summer, however, has remained. It has stayed true to the original vision of leveraging Spain's linguistic and cultural links abroad, with its activities stretching from its home country to the Dominican Republic, Jamaica and Mexico.

This strategy has seen Grupo Piñero grow into a business generating some €987m in consolidated revenue during 2024. But post-pandemic, the group decided it needed a partner that "adds value to the brand, amplifies its distribution in new markets" and aligns with the group's sustainability principles, says CEO Encarna Piñero.

"Eighty per cent of our business is based in the Caribbean, with North America as our natural source market," Ms Piñero says. The US followed by Canada are the Caribbean's two biggest source countries for tourists. "We needed to find a partner with a strong position in the North American market ... to enhance our brand's relevance in this market to attract more customers," she adds.

This goal came to fruition on December 27, when it closed a €419m joint venture with Hyatt. The deal encompasses 22 resorts, including more than 12,000 hotel rooms, within its Bahia Principe and Cayo Levantado Resort brands in its four countries.

Grupo Piñero retains ownership and operation of the resorts, but their management has been spun out into a new company owned in equal parts by the Spanish group and Hyatt.

From the deal, the US hotel conglomerate sees its all-inclusive room portfolio grow by 30%. While Grupo Piñero will have access to Hyatt's 51 million members who can use their loyalty points at the Spanish group's resorts. "We think we can improve our position in the North American market ... with a joint venture with Hyatt," says Ms Piñero.

The deal is part of the group's post-pandemic focus on what she calls asset-light investing, whereby hotels leverage alliances and local resources to grow their business. Another example is the group's debut investment in Africa, announcing last year that it will open a resort in Cape Verde in 2027, in partnership with local investor BFI Bank. This will mark the first time Grupo Piñero will manage and operate a hotel, but will not directly own the property assets.

"Our strategy from the very beginning was to own our hotels, [but] this limits growth. So to improve our speed [of growth], we should adopt new models," says Ms Piñero.

> WE NEEDED TO FIND A PARTNER WITH A STRONG POSITION IN THE NORTH AMERICAN MARKET

What tourist investors want

While Grupo Piñero is continuing its international expansion, **fDi** Markets data shows that FDI in tourism and hospitality globally has not bounced back since the pandemic. That is despite global tourist and flight data rebounding.

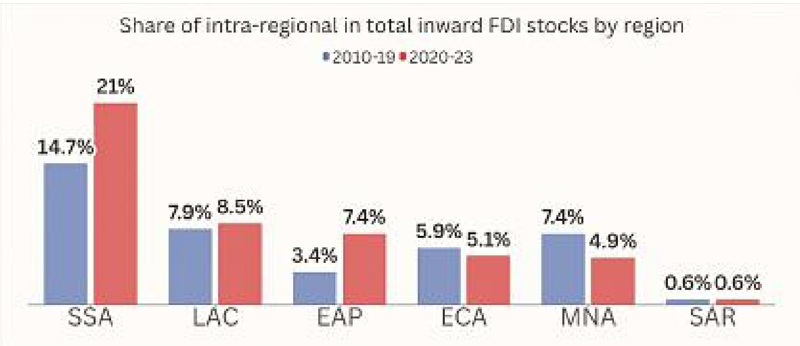
However Ms Piñero calls for "patience", noting there are "more factors hotel groups must keep in mind when making an investment decision that you didn't have before the pandemic". These include the destination country's health security, and a bigger focus on political stability, civil security and social peace. "It's important that you don't expect [disruptions] in the two years after you invest, as that is when you start returning profit," she adds.

Policies that foster such an environment are part of the handful of factors she says governments must prioritise to help attract tourism FDI. Others include tax incentives, a suitable labour force, and public-private collaboration.

Based on those factors, she believes Grupo Piñero's markets in the region — Dominican Republic, Jamaica and Mexico — are the best bet for tourism FDI. "Taking an integral view, as an investor ... those three destinations are the leaders in the Caribbean," she says. ■

INTRA-REGIONAL FDI IS MORE PROMINENT IN SUB-SAHARAN AFRICA THAN ANY OTHER DEVELOPING REGION

The rise of intra-Africa FDI



Source: World Bank • LAC= Latin America & Caribbean, EAP = East Asia Pacific, ECA= Europe and Central Asia, MNA = Middle East and North Africa; SAR = South Asia.

DATA TRENDS

Intra-regional investment within sub-Saharan Africa (SSA) has soared in recent years. Nigerian conglomerate Dangote has built cement plants stretching from Tanzania to Senegal. Regional players from South African telecoms group MTN to financial firms like Togo-based Ecobank have set up across the continent.

Intra-regional FDI made up, on average, 21% of SSA's total inward FDI stock in 2020-23, up from 14.7% in 2010-19, according to World Bank analysis of data from the IMF's Coordinated Direct Investment Survey (CDS). This was more than double the 8.5% intra-regional FDI share in Latin America and the Caribbean and four times the 4.9% in the Middle East and North Africa in the same period.

At first glance, African firms investing across borders in their neighbours is a boost for efforts to support economic integration in the world's poorest region. But data shows that Africa has become more reliant on FDI from its own backyard as inward FDI flows from outside the continent have declined.

Dirk Willem te Velde, director of ODI's International Development Group, explains that a rise in the intra-regional share of FDI stock in SSA was due to a rapid decline in the level of extra-regional FDI. "This is a concern and not a cause for celebration of the level of integration on the African continent yet," he says.

In absolute value, intra-Africa FDI stocks gradually increased from $19bn in 2010 to reach a high of $88bn in 2022 before falling back to $76bn the following year, according to ODI analysis of IMF CDS data. Between 2022 and 2023, inward FDI stock in SSA from outside the region fell from a high of $423bn to $347bn.

Since 2020, the lasting impact of the Covid-19 pandemic has weighed on FDI into Africa alongside divestments by western firms. Oil and gas majors like Eni and Equinor and pharma giant GSK have sold their assets in Nigeria. Luxury watchmaker Rolex closed its South Africa office in June 2024, while UK bank Barclays exited Africa in 2022, ending 96 years of presence on the continent.

While intra-regional FDI has become more prominent, the World Bank notes that SSA still received just 6% of net FDI inflows in 2020-23 across emerging market and developing economy regions. Matthew Ferreira, a Johannesburg-based senior consultant at Africa Practice, says that this data is evidence that "the region is not a top priority for global investors" and that "lower external interest is likely to have spurred increased intra-regional investment" on the continent. ■

ALEX IRWIN-HUNT

21% INTRA-REGIONAL FDI MADE UP 21% OF SUB-SAHARAN AFRICA'S TOTAL INWARD FDI STOCK IN 2020-23

Mecca opens to foreign capital

Saudi Arabia has taken another step towards opening up to foreign investment, by loosening restrictions on foreign capital within its holy cities. On January 27, the country's Capital Market Authority announced that foreigners are permitted to invest in real estate in the cities of Mecca and Medina via the Saudi stock market.

The two cities had previously been off limits to foreign investment. However companies and individuals from abroad can now hold up to 49% of the shares of companies listed on the Tadawul, which own property in the holy cities.

It continues a series of reforms since 2016 that aim to clear the regulatory path for increased foreign investment into a country historically closed off from the West. Last year, for instance, it introduced a new investment law designed to cut red tape and level the playing field between local and foreign firms. ■

DANIELLE MYLES

UAE's $1.2bn metals JV

US-based investment firm Orion Resource Partners has established a $1.2bn joint venture with Abu Dhabi sovereign wealth fund ADQ in the emirate which will invest in metals and mining in the UAE and overseas.

Announced on January 30, the new venture is called Orion Abu Dhabi and represents the US firm's third operation abroad – after London and Sydney. The joint venture plans to invest its initial $1.2bn in capital over the next four years, with its initial focus abroad being emerging markets in Africa, Asia and Latin America.

Minerals and mining is gaining new prominence in the UAE, along with other Gulf states, as a number of countries seek to diversify their oil-dependent economies. Last year, the UAE's Titan Lithium announced plans for a $1.4bn processing plant in the Khalifa Economic Zones Abu Dhabi. Saudi Arabia's government recently announced its goal to attract $100bn in mining investments to the country. ■

DANIELLE MYLES

LATEST INVESTMENTS

AEROSPACE

UAE UAS PARK

Insitu, a producer of unmanned aircraft systems for the defence market and a subsidiary of US-based Boeing, has opened its new uncrewed aircraft systems (UAS) centre of excellence in Abu Dhabi, UAE. Located in Tawazun Industrial Park, the centre will localise UAS maintenance, repair, overhaul, training, and other essential services for the UAE Armed Forces.

BUSINESS SERVICES

WATER TREATMENT

US-based Fluence Corporation, a provider of packaged water and wastewater treatment solutions, plans to build a water treatment plant in Côte d'Ivoire. It will incur an investment of €48.4m ($50.38m).

COMMUNICATIONS

GHANAIAN EXPANSION

UK-based London Internet Exchange, which provides a neutral, not-for-profit platform for network operators to exchange internet traffic through peering arrangements, has announced that it is to establish a new interconnection facility in Accra, Ghana. It will serve west Africa.

ELECTRONIC COMPONENTS

SOLAR TRACKING

Spain-based PV Hardware, a provider of solar tracking solutions, has expanded its factory in Jeddah, Saudi Arabia. The expanded plant will have an annual production capacity of 12 gigawatts. The facility is now equipped with an in-house torque tube machine, further enhancing the company's production capabilities. This expansion was in partnership with the Saudi Arabia Ministry of Energy and will serve global markets.

METALS

EGYPTIAN COMPLEX

China-based Hebei Xinfeng Steel plans to build a $1.65bn industrial complex in Ain Sokhna, Egypt. The 3,750,000 sq m project will be built in the Ain Sokhna Industrial Zone, in two phases over five years. It is expected to create about 8000 direct jobs. The first stage will see the establishment of four plants to produce automotive components, household appliances, standard fasteners and hot-rolled steel coils. The second stage will see the construction of five more plants.

TRANSPORTATION & WAREHOUSING

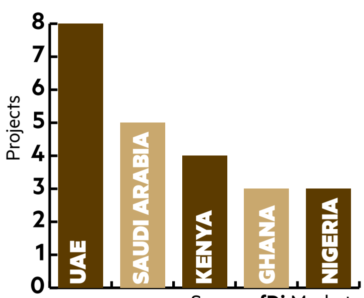
NEW PORT IN SENEGAL

DP World, a subsidiary of UAE-based logistics specialist Dubai World, has commenced construction on a new port in Senegal. The company will invest $1.2bn to build the Port of Ndayane, which will serve as a logistics hub for west Africa. Phase one of the project will include an 840m quay and a five kilometre channel capable of accommodating the world's largest container ships.

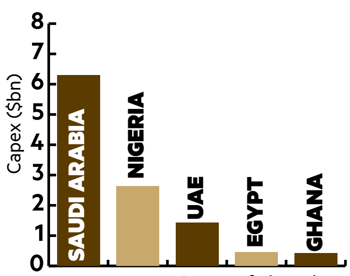
*This investment news and data has been provided by **fDi** Markets, a crossborder investment tracking service that is part of The Financial Times Ltd's FT Locations division (www.ftlocations.com)*

STATS

TOP 5 MIDDLE EAST & AFRICA DESTINATIONS FOR FDI IN ICT & INTERNET INFRASTRUCTURE IN 2024



Source: **fDi** Markets



Source: **fDi** Markets

View from the Middle East & Africa

The recent regime change in Syria is not just hugely important for its own people, but for the whole region. January saw Lebanon freed from Syrian domination and the election of a president after 12 failed attempts. The president can now appoint a prime minister and central bank governor.

It's even more interesting to watch Syria's regime begin the same process. In its first days in power, the new ruling group had to persuade the police to return to work. Just a month later, Syria's foreign minister flew to Davos — the country's first attendance at the event — promising privatisation and seeking FDI.

The good news for Syria and Lebanon is that their populations are relatively well educated. Their human capital might be comparable to Germany and Japan in 1945, whose economies were largely obliterated in the second world war. Both managed to stun the world with their economic resurgence in the 1950s — in Germany's case (like Syria today), that required finding jobs for millions of displaced refugees.

But the challenges are immense. Syria will need modern, investor-friendly laws and a judiciary that can interpret them. It needs a functioning and competitive energy sector to power the economy. The government must help recreate trade routes, restore customs official skills and sign trade deals, all while trying to get off multiple sanction lists.

Of the foreign investors who remember liberated Iraq's descent into civil war, few will be brave — or arguably foolhardy — enough to invest big sums into Syria in the short term. The Gulf states and Turkey are its most likely financial umbrella. Their companies may one day become the dominant foreign investors in both Lebanon and Syria.

Saudi or UAE cash can also fund the economic revival and their companies can profit by exporting to these re-opened markets. For the first time in decades, the Middle East could be a region of recovery. ■

Charlie Robertson is head of macro-strategy at FIM Partners and author of The Time-Travelling Economist.

WHEN WE HAVE A STEADY SUPPLY OF POWER — RELIABLE AND AVAILABLE 24/7 — THEN MANY INVESTORS WILL SET UP THEIR BASE HERE

Can Kenya's geothermal riches drive an industrial revolution?

THE EAST AFRICAN COUNTRY HOPES THAT PLENTIFUL GREEN ENERGY CAN MAKE IT A HUB FOR CARBON CAPTURE, DATA CENTRES AND OTHER INDUSTRIES. **BEN PAYTON** REPORTS

At Olkaria, in east Africa's Rift Valley, an energy revolution is well underway. Columns of steam rise from dozens of wellheads. Overhead cables run from six large power stations, taking electricity towards Kenya's major cities. Hot water flows along a network of pipes, which are painted to blend into the landscape and contain passing places for the roaming wildlife.

Far below the Rift Valley, where Africa is slowly splitting in two, magma produces superheated pools of water and steam. As Kenyans tapped into this geothermal power source, their energy system has transformed. Kenya is now the world's sixth-largest geothermal power producer.

The next step is to use these geothermal riches to power an industrial revolution.

Geothermal energy is an ideal source of base-load power for industry, says Peter Njenga, CEO of KenGen, the partly state-owned company that operates the power stations at Olkaria. "It is consistent, it is stable, it is reliable and available 24/7, and it is not affected by changes in weather patterns," he says. "Geothermal is green and renewable energy, and that provides industries with green energy, reducing their carbon footprint."

Further, geothermal "is actually cheaper than any other form of electricity, at least here in Kenya," Mr Njenga adds.

KenGen is seeking to capitalise on the geothermal opportunity by opening a 'Green Energy Park' at Olkaria, where a special economic zone will provide tax relief and expedited licensing approvals for investors. Mr Njenga says KenGen has already received "a lot of interest". He expects industrial developments to start taking shape by late 2026 or early 2027.

There is no shortage of geothermal resources to tap into in Kenya. Mr Njenga says that the country has around 10,000 megawatts (MW) in potential capacity, of which only around 1000MW has been harnessed. "When we have a steady supply of power — reliable and available 24/7 — then many investors will set up their base here," he predicts.

Industries line-up

Geothermal energy expert Jack Kiruja agrees that Kenya has "great potential" to attract industry with geothermal energy. In addition to supplying electricity, he highlights how heat can be harnessed by multiple industries.

Olkaria is a centre of Kenya's horticulture industry, and some greenhouses already tap into heat from the older geothermal power stations in the area. Further developing agribusiness is therefore a "low hanging fruit", Mr Kiruja says, adding that aquaculture could be another beneficiary. A pilot project in the Rift Valley has shown that fish can grow twice as quickly in geothermal-heated tanks than in normal conditions, he says.

Beyond agriculture, many industries have already recognised the benefits of plugging into Kenya's geothermal resources. Microsoft, in partnership with UAE-based G42, announced plans for a data centre campus at KenGen's Green Energy Park last year as part of a $1bn investment in Kenya.

One of the more innovative uses of geothermal technology is in carbon capture and storage — particularly through direct air capture (DAC), in which carbon is essentially sucked out of the atmosphere through giant filtration devices.

"Kenya is the world's best place for DAC [for]

Steam heat: KenGen's facility in Olkaria takes advantage of geothermal energy's immunity from changing weather patterns

three reasons: energy, geology and talent," says Martin Freimüller, CEO of Octavia Carbon, a company working on a project to capture carbon, mineralise it, and permanently store it deep in the Rift Valley. Having some form of renewable energy power source is vital for DAC, since it would be illogical to emit carbon by trying to remove it from the atmosphere. Geothermal sources are ideal, Mr Freimüller explains, since they also provide access to heat.

"We are expecting to bring in geothermal heat over the course of this year," he says. "And it will be very exciting, because 80% of the energy we use, or more, is basically just heat — it's just what we use to regenerate our filter."

The geology part of Mr Freimüller's equation refers to the capacity to store mineralised carbon in the Rift Valley. As for talent, this is available in the form of Kenya's large workforce and its relatively low cost of labour.

A processing powerhouse

James Mwangi, CEO of investment firm Africa Climate Ventures, agrees that DAC is a compelling use-case for geothermal energy. "The equation for doing that in the Kenyan Rift is just as good as you're going to get anywhere in the world," he says. Great Carbon Valley, a company backed by Africa Climate Ventures, is partnering with Swiss-based Climeworks — which runs an existing DAC facility in Iceland — on a project to develop DAC in Kenya.

Mr Mwangi believes that Kenya's geothermal resources can attract other energy-intensive industries. One example could be the production of green ammonia. Currently, African farmers face huge costs in purchasing imported ammonia. Using Kenya's geothermal energy to produce green ammonia could bring major savings, Mr Mwangi says. "You are cost competitive on day-one if you can deliver green ammonia at scale in Africa."

Where he sees "the biggest opportunity" is in using Africa's geothermal and other renewable energy resources to process raw materials locally. Today, he points out, "all of Africa's low-value raw material exports undergo high-energy, high-emissions processing immediately when they arrive in their destination country." If raw materials extracted in Africa could be processed in Kenya — or other African countries with plentiful renewable energy — the carbon footprint of their supply chains would be reduced substantially. And, Mr Mwangi argues, countries that currently process raw materials could free-up their own electricity supply for other activities.

"It's a pure win–win," he says. While these kinds of industries will take longer to establish in Kenya, he believes they are "the most certain to eventually scale".

Mr Mwangi emphasises that the energy requirements of these heavy industries in a country like Kenya would not rely solely on geothermal sources. Instead, geothermal can provide the baseload power "at the bottom of the energy stack" that enables large volumes of wind and solar to also be brought online.

"It is a combination of geothermal, wind, solar and some hydro, that actually allows you the possibility, the technical possibility, to deliver some of the cheapest green electrons at scale available anywhere in the world." ■

Ben Payton is a freelance reporter based in London.

Morocco's EVs tread a fine geopolitical line

AFRICA'S LARGEST CAR PRODUCER WANTS TO BECOME A HUB FOR ELECTRIC VEHICLES. BUT RISING CHINESE INVESTMENT IS NOW UNDER SCRUTINY. **HASSAN JIVRAJ** REPORTS

Driving force: Morocco's automotive sector grew to producing 570,000 vehicles in 2023

Over the past decade, the automotive industry has become an important pillar of Morocco's economy. It attracted significant investment from global auto manufacturers, turning the north African nation into Africa's leading automotive manufacturing hub.

Morocco's advancement in electric vehicle (EV) component production has further enhanced its reputation as an automotive hub, drawing interest from major US, European and, more lately, Chinese car companies.

Following Donald Trump's return to the White House, Rabat faces an insidious balancing act as both the US and the EU increasingly filter foreign trade and investment through the lens of national and economic security.

The rise of Morocco's automotive sector

Morocco's automotive sector has seen remarkable growth. The country has grown from producing less than 50,000 vehicles annually a decade ago to 570,000 in 2023. Around 80% of its vehicle exports go to Europe.

In 2023, Morocco surpassed South Africa as the continent's largest car exporter and now exports more cars to Europe than many central and eastern European nations.

There are several factors that have driven Morocco's automotive success.

Firstly, the country is strategically located 14 kilometres across from the Spanish coast. This makes it a natural gateway to Europe, giving it an edge in exporting vehicles to key consumer markets.

Secondly, the Tanger Med port, one of the world's largest ports, serves as an important logistics hub. Located on the Strait of Gibraltar, it connects to more than 180 global ports. In 2024, it handled 10.24 million containers and 600,872 vehicles.

Industrial zones like the Tanger Automotive City and Atlantic Free Zone have played a significant role too. These zones offer incentives including a five-year exemption from corporate tax as well as exemptions from VAT, customs duties and simplified foreign exchange transactions.

Beyond geography and physical infrastructure, Morocco also has free trade agreements (FTAs) with more than 50 jurisdictions accessing more than 1.3 billion potential customers. These agreements include the US, EU and UK. Morocco does not have an FTA with China, but it signed up to the Belt and Road Initiative in 2017 and mutual trade and investment has been on the rise.

These advantages have drawn investments from major automakers like Renault and Stellantis. Chinese EV companies like BYD, have pledged to establish a manufacturing presence in the country.

Pivot to electric vehicles

As the global auto industry transitions towards sustainability and EVs, Morocco has positioned itself to become a hub for the EV value chain. ▶

Santiago Arieu, autos analyst at BMI, part of Fitch Solutions, notes the country's extensive phosphate resources play a pivotal role in attracting companies across the EV value chain, as this mineral is essential for producing lithium iron phosphate battery cells.

"Furthermore, although on a smaller scale, Morocco's reserves of cobalt and manganese are noteworthy, as they can also attract companies within the EV supply chain due to their significance in the battery chemistries of leading EV battery producers today," he says.

In addition, Morocco's strong renewable energy production capacity — bolstered by the local government's commitment to sustain clean energy generation — will play an important role in attracting companies to its burgeoning EV ecosystem.

Under its energy strategy, the country aims to source 52% of its energy from renewable sources by 2030. Key parts of the strategy are to increase both wind and solar to 20% each and hydroelectric to 12%.

Overall, Moroccan authorities aim to increase EV production from less than 50,000 currently to 100,000 vehicles by 2025, with a goal of EVs comprising 60% of automotive exports by 2030. This is ahead of the EU's 2035 fossil fuel car ban.

Growing influence of China

In November 2024, president Xi Jinping's visit to Casablanca marked a significant milestone in the evolving relationship between China and Morocco.

"Morocco's proximity to Europe and its free trade agreements with multiple global regions make it an attractive node in China's broader Belt and Road Initiative," says Chao Li, deputy editor of China Central Television's Middle East bureau. "It serves as a gateway for Chinese products to enter European and African markets efficiently, creating an additional layer of importance in the supply chain."

Accordingly, Chinese companies like Gotion are eyeing investments in Morocco's EV ecosystem. In June 2024, it announced plans to build Africa's first EV battery gigafactory in Kenitra, with an initial investment of $1.3bn. The factory is expected to have a starting production capacity of 20 gigawatt hours (GWh), with potential expansion to 100GWh in later phases.

> MOROCCO'S RESERVES OF COBALT AND MANGANESE CAN ATTRACT COMPANIES WITHIN THE EV SUPPLY CHAIN

A geopolitical tightrope

Morocco's warming to Beijing coincides with Donald Trump's return to the White House. Both the US and the EU have imposed import tariffs on EVs and EV batteries made in China.

With its network of trade agreements, Morocco is a gateway for international Chinese manufacturers to export EVs with reduced or no tariffs into the US and EU. But the new US administration seems committed to close loopholes in FTAs with third countries allowing Chinese producers to bypass US tariffs.

Mexico, which has greatly benefited from nearshoring foreign direct investment from China and other countries, is already feeling the chill. Although the US is not the main market for its exports, Morocco has to keep an eye on these developments too.

Joshua Cobb, an independent automotive analyst, believes Morocco is probably among the least exposed among the main EV investment hotspots like south-east Asia, Mexico, South Korea and Latin America.

"Much of the EV investments in the kingdom are geared towards the European market. This means that the Chinese investment in Morocco is unlikely to be significantly affected, even if they end up on the US list of Foreign Entity of Concern." Unless the EU also commits to closing those loopholes.

Even if it does not, uncertainty over the EU's future demand of EVs looms large. With European legacy automakers in disarray, pressure is mounting for Brussels to reconsider its EV roadmap.

Mr Cobb adds that a shift in the political landscape in the EU to right leaning political parties could see the EU and member states roll back its EV adoption support and emissions policies.

"While this is unlikely to reverse the EV adoption trend in general, it will drag down the demand for EVs and batteries from Morocco over 2026 to 2029," he says.

Even if European demand falls, Morocco can leverage export access to other markets, particularly African countries, many of which have significant energy needs.

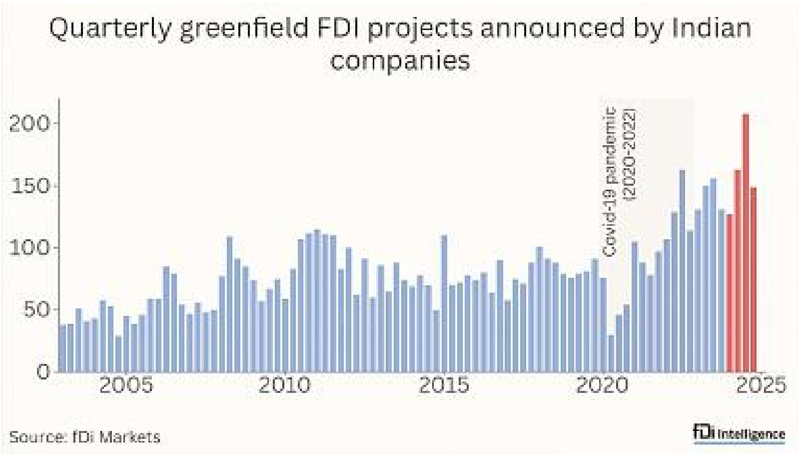
"In the event of slower demand for EVs, the battery industry in Morocco will shift focus to producing battery energy storage systems (BESS) for renewables and export more EVs and BESS to Africa through the African Continental Free Trade Area," Mr Cobb says.

Besides, Morocco faces increasing competition from other automotive hubs in the Mediterranean basin like Turkey, Egypt and Algeria. And the new dynamics of industry 4.0 and automation reduce its cost advantages.

But the country enters 2025 with plenty of wind in its sails and is well positioned to maintain its role as Africa's leading auto manufacturing and emerging EV hub. As specific challenges loom and a new geopolitical arena emerges, Rabat will have to navigate these shifts to maintain its edge. ■

OVERSEAS INDIAN GREENFIELD INVESTMENTS HIT RECORD IN 2024 AMID WEAK SENTIMENT AT HOME

India Inc flexes its muscles



OUTBOUND INVESTMENT

Indian companies are setting out more investment plans abroad than ever before, pursuing international growth in a hedge against weakening domestic consumer demand and pressure to establish a physical presence in major export markets.

India has become an increasingly larger source of global greenfield foreign direct investment (FDI) since 2022, reaching a record of 647 overseas projects announced in 2024 — about double the 2019 level, according to the latest data from **fDi** Markets.

The country was the eighth-largest source of greenfield FDI projects in 2024, ahead of Canada and Singapore, but just behind China and Japan, and lower than advanced economies such as the US, UK, Germany and Switzerland. This is a jump upwards from India's position as the 11th-largest source of greenfield FDI projects between 2015 and 2019.

While Indian companies rank lower in terms of their greenfield FDI capital expenditure than other source countries, official statistics from India's Department of Economic Affairs show that total overseas direct investment reached $33.45bn in the 2023 financial year, up from $17.53bn a year earlier. The increasing confidence of India Inc on the global stage is also reflected by the country's growing cohort of overseas investors.

In 2024, some 523 Indian companies announced at least one greenfield FDI project abroad, ahead of the previous record of 439 companies a year earlier, **fDi** Markets shows. This is a significant increase on the 351 Indian companies investing abroad in 2022 and a pre-pandemic average of 209 companies between 2010 and 2019.

Naresh Chandra, Delhi-based senior partner at Fox&Angel, a global expansion consultancy, says that many Indian companies are investing abroad to increase revenues, diversify and launch new products. "The Indian market may not be enough [for companies] because it is a developing market," he adds.

India's quarterly GDP growth slowed to 5.4% in the third quarter of 2024, down from 8.1% a year earlier, as concerns mount about weaker consumer spending and corporate profits in the world's most populous country.

Indian conglomerates like Tata and Mahindra, as well as tech giants like Infosys, Wipro and Zoho, have for years been establishing physical presence in international markets. But Indian overseas investors are now found across more sectors, including wealth management firms like Neo Group, real estate consultancy Geetanjali Homestate and 4baseCare, a biotechnology start-up. ■

ALEX IRWIN-HUNT

647 INDIAN COMPANIES ANNOUNCED A RECORD 647 OVERSEAS GREENFIELD FDI PROJECTS IN 2024

Tesla's China fight

At first glance, Tesla is doing well in the world's largest car market. Tesla China said its sales rose by 8.8% to more than 657,000 units in 2024. But the Elon Musk-run battery electric vehicle (BEV) maker faces a suite of challenges.

Tesla is clinging onto its title as the world's largest EV maker by sales, but Chinese pure EV players and legacy automakers are in close pursuit. Slower than-expected demand in Western markets has weighed on its global sales and combined with fierce competition and regulations in China.

In 2024, Tesla's global vehicle deliveries declined by 1.15% to 1.79 million units, the first annual drop since 2011. Tesla is yet to release granular data on sales by region in 2024, but GlobalData estimates Tesla BEV sales declined by 4.6% in North America and by 10% in Europe, making China the only major automotive region where the company's sales grew in 2024. Tesla's business in China, where strong growth propped up an otherwise sluggish global BEV market, shows wider woes for Western automakers. ■

ALEX IRWIN-HUNT

AWS's $5bn Thai spend

AWS plans to invest $5bn in Thailand to set up a new cloud region in the country. Announcing the news on January 7, the Amazon subsidiary estimated the investment will add $10bn to the country's gross domestic product and will support 11,000 full-time jobs at external business within the project's supply chain.

It follows an uptick in foreign direct investment into Thailand's data centre industry, with **fDi** Markets tracking nine projects in 2024 up from just four a year since 2021.

Southeast Asia's data centre industry continues to be dominated by Singapore. But the island's spatial constraints, pressure on its electricity grid and rising costs hae prompted investors to look further north. Malaysia is the primary target, however Thailand, Vietnam and Indonesia are also growing data centre hubs. ■

DANIELLE MYLES

LATEST INVESTMENTS

COMMUNICATIONS
FIJIAN CABLE
Google has started development on its second cable-landing station in Fiji. It will be located in the town of Sigatoka. It will serve the domestic market and aims to enable better connection to the US, Australia, and Japan.

CHEMICALS
SLURRY PLANT EXPANSION
Japan-based conglomerate Fujifilm has announced that it will expand operations at its CMP slurry plant in Cheonan, South Korea. Fujifilm plans to invest several billion yen in the new facility that is expected to start mass production by spring 2027.

CONSUMER PRODUCTS
UZBEK LOGISTICS HUBS
Russia-based e-commerce retailer Wildberries has announced plans to open two further logistics hubs in Uzbekistan in 2025. The company previously announced plans in October 2023 for a logistics facility in the Tashkent region of Uzbekistan. The investment is part of the company's wider expansion plans to establish 2.3 million sq m of warehouse complexes in its areas of operation in 2025.

ELECTRONIC COMPONENTS
VIETNAMESE EXPANSION
Universal Scientific Industrial, a company specialising in design and manufacturing services and a subsidiary of Taiwan-based Advanced Semiconductor Engineering, has plans to expand its investment in its factory in Hai Phong, Vietnam. The company is increasing its investment in the facility to $290m, up from $200m in its initial phase. The project is based in the Dinh Vu Industrial Park of Dinh Vu-Cat Hai Economic Zone, with operations commencing in September 2025. The expansion will increase the factory's annual output to 245 million units.

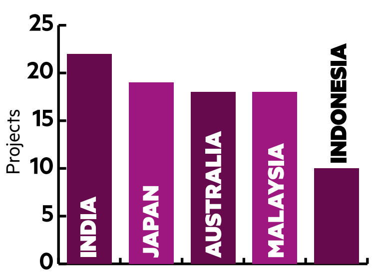
PHARMACEUTICALS
INSULIN PRODUCTION
France-based Sanofi, a healthcare company that develops therapeutic solutions, is investing €1bn to establish a new insulin production base at the Beijing Economic and Technological Development Area in Beijing, China. This is Sanofi's largest single investment in China and will be its fourth production and supply base in the countrry.

REAL ESTATE
DORMITARY COMPLEX
Taiwan-based consumer electronics manufacturer Foxconn has invested $230m to build dormitories for its workers in Sriperumbudur, India. The dormitory complex includes six 10-storey residential blocks over 80,940 square metres within the company's premises. The facilities will accommodate up to 18,000 workers.

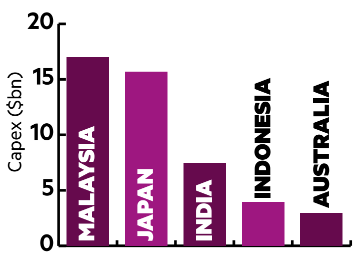
*This investment news and data has been provided by **fDi** Markets, a crossborder investment tracking service that is part of The Financial Times Ltd's FT Locations division (www.ftlocations.com)*

STATS

TOP 5 ASIA-PACIFIC DESTINATIONS FOR FDI IN ICT & INTERNET INFRASTRUCTURE



Source: **fDi** Markets



Source: **fDi** Markets

View from Asia

Singapore is south-east Asia's biggest data centre hub, with Thailand, Indonesia, Vietnam and Malaysia the other key markets. However, there is a dark side to this growth. Singapore is a cautionary tale for the huge amount of power that data centres demand. The sector accounts for 7% of the country's total electricity usage, which sparked the government to impose a temporary moratorium on new data centres in 2019.

Singapore's government has also stated that data centres generate 82% of the ICT sector's carbon emissions, making it a challenge to coincide the sector's growth with environmental goals. A third challenge for the city-state is high data centre construction costs, with Cushman & Wakefield data suggesting Singapore is about 30% costlier than Malaysia.

The result is that more data centre investment is being attracted to Malaysia. However, data centres' large demand for water disrupts and reduces supply for local use. Water supply is becoming increasingly scarce in Malaysia. As for the social benefits, data centres will not create mass employment but only benefit a smaller segment of highly skilled IT workers.

For neighbouring countries looking to grow their data centre sectors, some lessons they can draw include reducing carbon emissions by shifting electricity production from natural gas to renewable sources like solar power. Second, authorities must ensure that there is enough water to supply both the local communities and the data centres. Third, clusters of construction and building material producers must be developed close to data centres to allow more job creation. Fourth, they should coordinate land acquisition and grant concessions for foreign-owned data centre operators. Finally, they must monitor the supply of data centres to avoid overcapacity and the unintended consequences that can follow. ■

Lawrence Yeo is CEO of AsiaBIZ Strategy, a Singapore-based consultancy that provides Asia market research and investment/trade promotion services.

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[THE POLICY] WILL DISCOURAGE NEW PLAYERS FROM EXPANDING INTO INDONESIA SINCE THE INITIAL INVESTMENT WOULD BE SUBSTANTIAL

Indonesia's local sourcing row against Apple has investors on watch

PRESIDENT PRABOWO IS PUSHING FOREIGN COMPANIES TO ADD MORE VALUE TO THE LOCAL ECONOMY. **NATASHA TEJA** REPORTS

Indonesia has locked horns with Apple over its local sourcing shortcomings. Newly elected president Prabowo Subianto's government banned the sale of the iPhone 16 family of phones in Indonesia in October and rejected several offers by the US company to fix the issue.

Investment minister Rosan Roeslani told Bloomberg News on January 22 that the government is close to reaching a deal with Apple. Whatever the case, the issue is not expected to end there as Mr Prabowo may adopt a similar stance with other large multinational corporations in his efforts to chase economic self-sufficiency.

"[The president's] ongoing emphasis on protecting and developing local industries is something we expect to continue," says Laura Schwartz, senior Asia analyst at risk intelligence company Verisk Maplecroft. "Local content regulations are central to this aim, but they are consistently cited by foreign investors as a challenge to investment."

Poison Apple?

The dispute has been a test case for Indonesia's growing economic assertiveness as a global player.

Apple was deemed to be in non-compliance with Indonesia's local content requirements, known as TKDN, which mandate that around 40% of components in electronic devices must be sourced locally.

The legal basis for the policy was first introduced in 2014, with reiterations following the change of government. The policy was implemented during former president Joko Widodo's administration and Mr Prabowo is expected to continue to enforce it.

While the policy is intended to encourage domestic production, it has also been viewed as a political power play that risks alienating investors.

"While such demands aim to stimulate domestic industry, they often are only a political power play rather than a true business move," says Marco Förster, Asean director at Hong Kong-based professional services firm Dezan Shira. "It can lead to basic compliance, such as minimal assembly, without fostering substantial technology transfer or industrial development."

Apple initially offered an investment of almost $10m to start manufacturing goods in Indonesia, but as pressure mounted, the company raised this to $1bn for a manufacturing facility in Batam.

But this substantial increase has not satisfied Indonesian authorities, who appear to be pushing for additional concessions, including investments in research and development. The impasse has left the iPhone 16 blocked from Indonesian retailers, despite the country representing a significant market. Apple sold 2.3 million units in the country 2023 alone, according to local media.

A grey area

Indonesia's local content requirements and other similar policies fall under a grey area in international trade rules. WTO rules, which generally discourage discriminatory and protectionist practices, make allowances for developing countries to help create policies to foster local industries, known as special and differential treatment provisions.

India, for example, has previously tried to leverage its status as a developing nation to advocate for policy flexibility in digital trade, opposing the WTO's ban on digital trade taxes in 2024. The country argued that developing nations should be allowed to charge import duties on digital products to help grow their own tech industries and

Locked out: Indonesia's tech stores are unable to sell the latest Apple iPhone

collect tax revenue.

In addition, under the WTO agreement on trade-related aspects of intellectual property rights, developed countries are encouraged to incentivise their companies to transfer technology to least-developed nations.

"Countries implementing such policies [as local content requirements] must carefully navigate the balance between fostering development and adhering to international trade norms," Mr Förster explains. "It's a fine line."

Success or scaremongering?

Apple is not the first major company to fall foul of Indonesia's local content rules. Less than a month after it placed restrictions on the iPhone 16, the government banned the sale of Google's Pixel phones.

"This ban [follows] the same philosophy — Indonesian companies can make many of the components, so the government says that they should buy from those local suppliers," says Greg Poling, senior fellow and director for the south-east Asia programme at the Center for Strategic and International Studies (CSIS).

Indonesia is not new to policies and regulations meant to encourage local investment and businesses, and add value to Indonesian exports. In 2023, the government forbade TikTok from offering its e-commerce services in the country in a bid to protect local businesses and merchants. Eventually, TikTok's parent company, ByteDance, got around the ban by acquiring a majority stake in Indonesian giant e-commerce business Tokopedia and integrating it into its platform.

Similarly, in 2019, Jakarta announced a ban on the export of non-processed nickel ore, which came into effect in 2020. This triggered a wave of new investment in mineral processing, which increased three-fold between 2019 and 2022, according CSIS analysis. The investment mostly came from China.

These investment policies may have achieved some success among large foreign multinationals, but raise major challenges for foreign small and medium-sized enterprises interested in the local market.

"[They] will discourage new players from expanding into Indonesia since the initial investment would be substantial," Primadi Wahyuwidagdo Soerjosoemanto, president and principal partner at Jakarta-based consultancy BI International, says. ■

Natasha Teja is a freelance reporter based in Singapore.

New hope: the JS-SEZ promises to streamline cross-border movement along the typically congested Johor–Singapore causeway

New Johor SEZ promises Singapore+1 opportunity

INDIFFERENT TO GLOBAL MINIMUM TAX RULES, THE HUGE ZONE ADDS TO THE REGION'S FDI MOMENTUM **JACOPO DETTONI** REPORTS

More often than not, cross-border special economic zones (SEZs) struggle to live up to expectations.

Local authorities hype them as harbingers of cooperation. They give in to the temptations of 'win-win' narratives and generous incentive packages. A few years down the line, everyone wakes up to the fact that borders are hardly fertile ground for cooperation.

Will the new Johor–Singapore SEZ (JS-SEZ) be any different?

Bigger than Shenzhen

So far the script is familiar.

"There are many strengths we can harness from both sides that will allow us to enhance our value proposition," Singapore's prime minister Lawrence Wong said on January 7. "Very rarely, you find two countries working together as a team," his Malaysian counterpart Anwar Ibrahim echoed.

The JS-SEZ will extend over the Iskandar development region and Pengerang in south Johor, Malaysia, that share a maritime border with Singapore. It is a sizeable development by any means. At more than 3,500 square kilometres, the new SEZ is about five times bigger than Singapore; 1.5 times bigger than Shenzhen, China's first SEZ; and just shy of the whole of Dubai.

Although technically not a cross-border SEZ — its whole area remains confined to Johor — its success is anchored to the development of a cross-border ecosystem.

The two countries will jointly promote investment into the zone and make it a destination for multinational enterprises (MNEs) to expand beyond the saturated Singaporean market. They will do so by enhancing cross-border movement of goods and people. They will share financial duties too: Malaysia will fund its infrastructure development on a build-as-they-invest basis; Singapore will contribute by financing investment facilitation.

Overall, they aim to promote and facilitate the expansion of 50 projects within the first five years and a cumulative 100 projects within the first ten years and create 20,000 skilled jobs along the way.

Challenging the win–win mantra

Win-win is the mantra of cross-border SEZs, with the JS-SEZ being no exception. Singapore's

> BUSINESSES WILL BE IN A BETTER POSITION TO DO MANUFACTURING IN THE JS-SEZ AND EXPORT THEIR PRODUCTION FROM SINGAPORE

tremendous economic success has come at the cost of saturation. Doing business in the city-state is notoriously expensive and industrial land availability is limited. On the other hand, Malaysia has tried for years to attract investment and foster development in south Johor, with mixed results.

The new set-up would facilitate a Singapore+1 set-up, whereby "companies set up headquarters in Singapore and do manufacturing in the JS-SEZ", argues Udai Panicker, Singapore country manager of management consulting company Tractus.

"Businesses will be in a better position to do manufacturing in the JS-SEZ and export their production from Singapore," adds Lawrence Yeo, managing director at Singapore-based consultancy firm AsiaBIZ Strategy. "For most companies this will be the way to go."

However, both experts also agree that implementation poses more than a challenge.

Although improving, Malaysia–Singapore relations have been very troubled at times. Besides, the two countries come to the table from very different governance perspectives. Singapore is a beacon of stable, good governance; Malaysia hardly so, with prime ministers coming and going in the most spectacular way and with the spectre of the 1Malaysia Development Berhad scandal still taking a toll on the reputation of the country's highest echelons of government.

If the Johor Bahru–Singapore rapid transport system is anything to go by when gauging the potential of economic cooperation between the two countries, the precedent it sets is not promising. Officially launched with great pomp in 2010, the project has been marred with mutual controversy and delays. Completion is expected by the end of 2026 — eight years behind schedule.

Global minimum tax

The usual promise of generous incentives is another major selling point of the new JS-SEZ. Notably, the JS-SEZ will offer a 5% corporate income tax for 15 years to investors in high value added sectors. While not surprising per se, in the context of SEZ incentives, it is to be noted that both countries are implementing the 15% global minimum tax (GMT) reform. That will limit the reach of such incentives.

"If a company is part of a group which is within the scope of GMT [MNEs with revenues of more than €750m based or operating in countries implementing the reform], it is the understanding of market players within the Malaysian taxation industry that the group will then need to calculate its effective tax rate (ETR) in Malaysia, based on GMT principles," says Jennifer Lee, a partner with law firm Christopher & Lee Ong based in Kuala Lumpur. "If the jurisdiction's ETR is below 15%, a top-up tax will be payable."

It's still very early days for the JS-SEZ. In the first place, both countries will have to ratify the January 7 memorandum of understanding (MoU). After that, regulations will have to be jointly designed and approved. Finally, business will have to buy in. The JS-SEZ has a chance to prove the sceptics of cross-border SEZs wrong. But it's a long and winding road ahead, fraught with obstacles. Living up to the hype generated by the MoU will be a real cross-border achievement. ■

MUTUAL TRADE HAS BEEN ON THE RISE

VALUE OF EXPORTS TO AND FROM MALAYSIA AND SINGAPORE

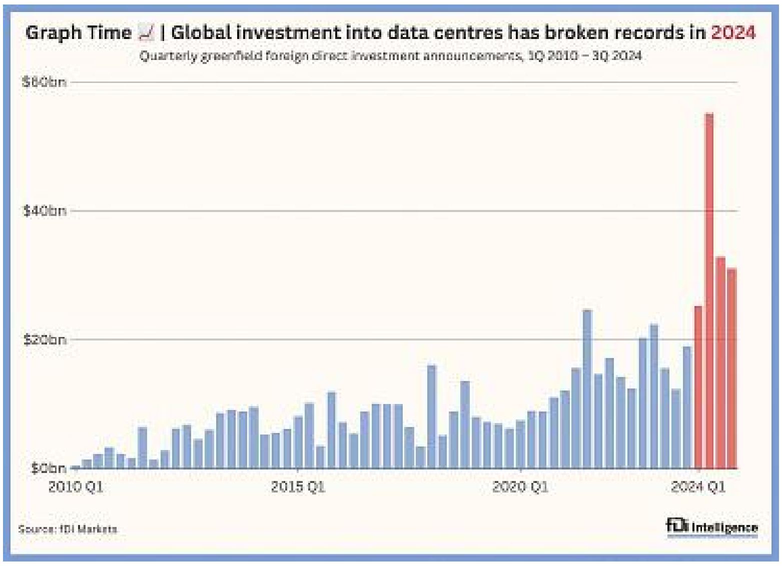
Source: UN Comtrade via Trading Economics

fDi Endnotes

DATA SPOTLIGHT

More than $144bn of greenfield FDI was committed to build data centres around the world in 2024, more than double the previous year, according to the latest data from **fDi** Markets. Insatiable demand for computing capacity, especially for artificial intelligence, has led to a frenzy by tech groups and developers to build data warehouses.

Scan for more data insights



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Danielle Myles
How will Donald Trump's policies change US inbound FDI flows during his presidency?

Charlie Robertson
FDI under Trump 1.0 halved (partly tax-related reasons) even before Covid-19 and base case it should fall again under Trump 2.0, particularly if he scraps Biden's investment tax incentives.

Jerry Harris
Tariffs and deregulation attract, but instability and political chaos may drive investors away.

Rachel Ziemba
The sectors of focus for FDI will likely shift away from the areas supported by Biden's industrial policy to other sectors. FDI will likely remain strong given lower tax but security reviews etc will be a constraint.

This is an extract from our reader survey on the Donald Trump administration's expected impact on foreign direct investment. For the full results see page 28.

QUOTES OF THE MONTH

I BELIEVE THE WHOLE AI ECOSYSTEM IS A BUBBLE AND BILLIONS WILL BE LOST FROM INVESTORS WHO DOLED OUT CAPITAL AT HIGH VALUATIONS

Shaun Rein, managing director of China Market Research Group, China

MORE OF THE GENERAL PUBLIC UNDERSTAND TARIFFS NOW. I'VE BEEN MORE INTERESTING AT COCKTAIL PARTIES THAN I'VE EVER BEEN IN MY WHOLE LIFE

Melissa Irmen, Director of advocacy and strategic relations at the National

CLEANTECH INDUSTRIES ARE BECOMING STRUCTURALLY IMPORTANT ... GLOBALLY. THE IDEA THAT [MR TRUMP IS] GOING TO GIVE THE WHOLE INDUSTRY A RED CARD? IT DOESN'T WORK THAT WAY

Gareth Hagan, CEO of OCO Global, Ireland

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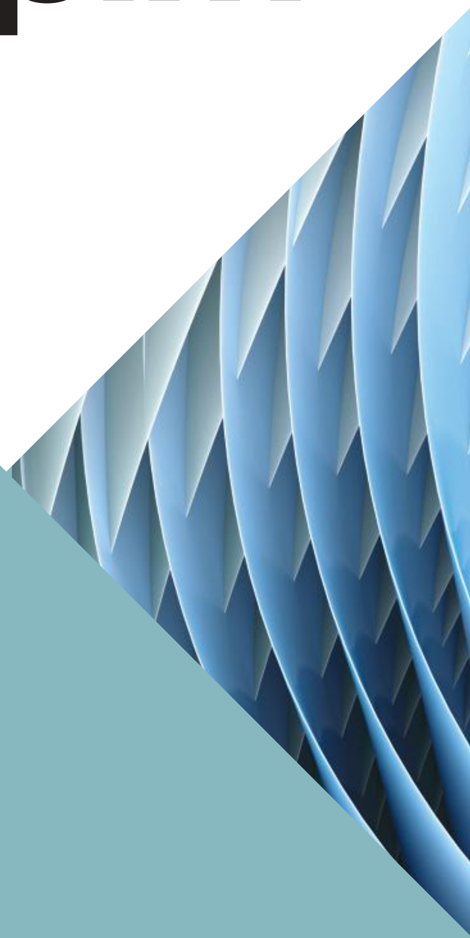

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Housing Matter! le 10 mars

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Palais des Festivals, Cannes, France

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