

The Economist

Can Jamie Dimon create a \$1trn bank?

Golden Dome and the battle for space

Poland's remarkable rise

The man with a plan for Vietnam

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Business



Photograph: Getty Images

Britain's consumer prices soared by 1.2% in April, pushing the annual rate of inflation to 3.5%. One factor behind the jump was a more than 26% rise in water utility bills. Households also felt the pinch from higher energy costs. Rachel Reeves, the chancellor of the exchequer, described the figures as "clearly disappointing". Traders pared their bets on further interest-rate cuts from the Bank of England.

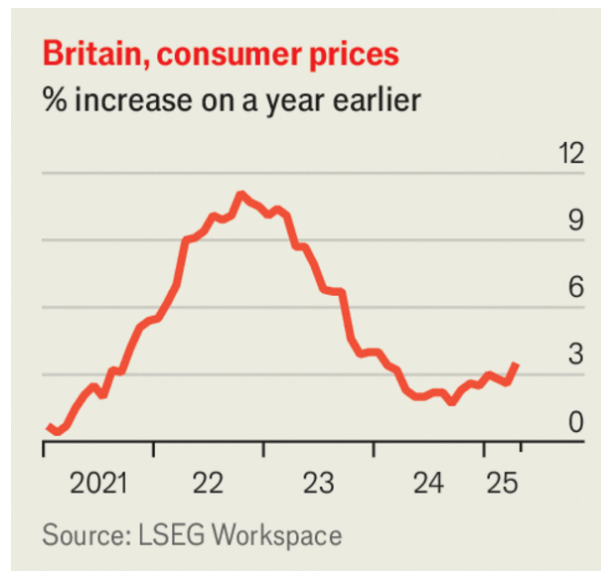


Chart: The Economist

America's Senate moved a bill forward that would create the first regulatory framework for stablecoins, digital currencies that are tied to the value of an asset, usually the dollar. The Democrats had initially blocked the bill over concerns about consumer protections, but in the end enough of them joined Republicans on a procedural vote to advance the legislation to its final stage.

An outage of Bloomberg's terminals affected markets for 90 minutes. The terminals are widely used in financial trading and carry data on live pricing. Users pay around \$28,000 a year for each terminal.

Novo Nordisk announced that its chief executive was stepping down. Investors have expressed concerns that the pharmaceutical giant is losing its competitive edge in the weight-loss market to rivals such as Eli Lilly. Novo Nordisk makes the Ozempic and Wegovy drugs. Its share price has slimmed down by 30% this year.

CATL made a successful debut on the Hong Kong stock exchange, with its share price rising by 16% on the first day of trading. The Chinese maker of electric-car batteries raised \$4.6bn, which could rise to \$5.3bn if the underwriting banks exercise their options. It is the biggest stock offering in the world so far this year, and the second listing for CATL, which first went public in Shenzhen in 2018.

In reverse

Honda became the latest carmaker to cut back its investment in pure electric vehicles because of slowing demand. It also scrapped a target to achieve 30% of its sales in EVs by 2030. The Japanese company is instead ramping up its forecasts for sales of hybrid vehicles.

The member countries of the World Health Organisation formally adopted the first ever pandemic agreement, which sets out the tools to combat a global outbreak of disease, including the sharing of vaccines. Once an annex covering data-sharing is agreed on the treaty will be sent to member states for ratification.

In an announcement that could potentially undermine its partnership with OpenAI, Microsoft said that it would add Grok's artificial-intelligence models to its Azure cloud-computing platform for developers. Grok is a generative AI created by Elon Musk's startup, xAI, a potential rival to OpenAI. Microsoft is OpenAI's biggest investor and has integrated its models with Azure. But it wants to add other models to the platform so that it eventually becomes the dominant hub for developers.

OpenAI shrugged off the news from Microsoft by announcing it was buying IO in a \$6.5bn deal. IO is a startup founded by Sir Jony Ive, best known for his work on designing Apple's iPhone. OpenAI will work with Sir Jony's team to develop new devices built specifically for AI technology. We can "completely reimagine what it means to use a computer", said Sam Altman, OpenAI's boss.

In Spain the backlash against mass tourism continued apace, as the government ordered Airbnb to take 66,000 rental listings off its website for breaking various regulations, such as not identifying whether the property is owned by a person or a company. A court in Madrid agreed that 5,000 listings must be removed immediately. Protests have been held across Spain claiming that holiday rentals are making local housing unaffordable.

A recent cyber-attack on Marks & Spencer could cost the company £300m (\$400m) in profit, it said, and operations won't return to normal until July. The British retailer's digital logistics system has been crippled, forcing staff to use pen and paper to replenish its shelves. M&S insists that it has not underinvested in its cyber-security systems and that the incident was a result of human error. It has not said whether it paid the attackers a ransom.

Shopping baskets

Home Depot bucked a trend among big American retailers and pledged not to raise prices in response to higher tariffs. Around half the goods that the DIY chain sells are produced in America and so it is less exposed to the duties than other companies. Target cut its sales forecast but said that raising prices because of tariffs would be a "last resort". Donald Trump recently told Walmart to "EAT THE TARIFFS" after it suggested it would have to increase prices. "I'll be watching," he said ominously.

Finance & economics

Will Jamie Dimon build the first trillion-dollar bank?

We interview JPMorgan Chase's boss, and his lieutenants



Photograph: Benedict Evans for The Economist

“Serena Williams, Tom Brady, Stephen Curry.” When it comes to making sure the world’s biggest bank is a lean operation, Jamie Dimon takes athletic inspiration. “Look how they train, what they do to be that good,” says the boss of JPMorgan Chase. “Very often, senior leadership teams, they lose that. Companies become very inward-looking, dominated by staff, which is a form of bureaucracy.”

During Mr Dimon’s tenure, JPMorgan has become to banking what Ms Williams was to tennis. In most of the markets in which it competes, it ranks as America’s leading institution, or a close runner-up. It boasts a market capitalisation of \$730bn, or 30% of the total among America’s big banks, up from 12% when Mr Dimon took charge at the start of 2006 (see chart 1). The gap with competitors has

grown larger still since the covid-19 pandemic. JPMorgan has 317,233 staff, nearly twice as many as in 2005. Its share of American deposits has doubled to 12%.

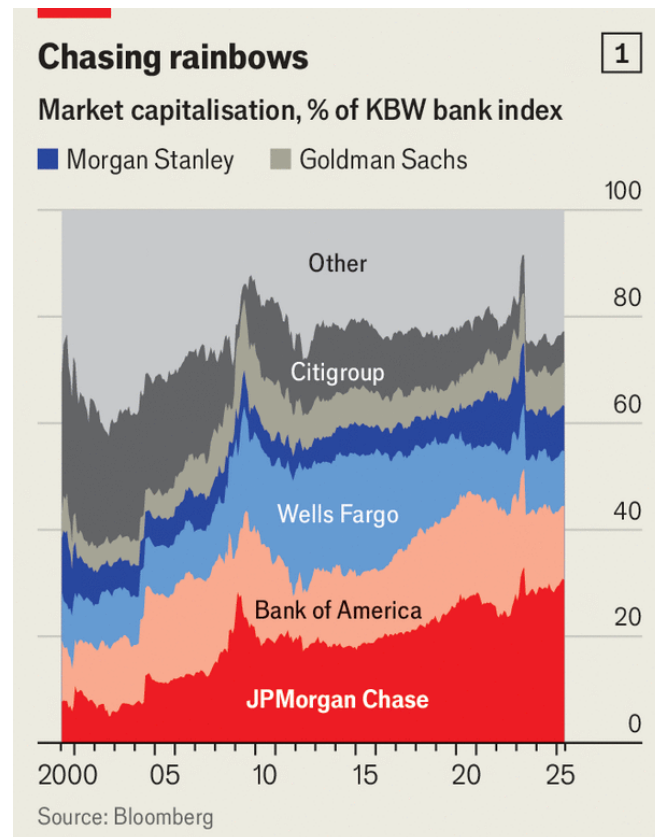


Chart: The Economist

America has never had a bank of such size. Even when John Pierpont Morgan, one of Mr Dimon's predecessors, bailed out the Treasury at the turn of the 20th century, he could not boast coast-to-coast operations. In 2021 JPMorgan became the first lender with branches in every one of America's 48 contiguous states. The bank's combination of scale and market-beating efficiency means that it can invest far more than its rivals in technology, draw on an immense hoard of deposits for cheap and sticky funding, and benefit from flights to safety when smaller banks wobble.

But the institution's tremendous size, success and prominence pose risks, too. Banking is not a business that suffers mistakes gladly; the larger and more unwieldy an institution, the longer the list of potential slip-ups. Being the biggest bank in a country where small lenders are sacred makes JPMorgan an obvious political target, from both the left and right. And then there is the succession question. How

do you replace a man of Mr Dimon's reputation? And how does someone without his stature prevent infighting and bureaucracy at an institution of JPMorgan's size?



Photograph: Benedict Evans for The Economist

Mr Dimon sat down for an interview with The Economist on May 16th. We also met the four bosses of the bank's biggest businesses—the most likely candidates to succeed Mr Dimon—beforehand. They are Troy Rohrbaugh, co-head of the commercial and investment bank; Douglas Petno, its other boss; Mary Erdoes, who runs the wealth-management arm; and Marianne Lake, leader of retail operations. Each is a loyal lieutenant and JPMorgan veteran. Mr Rohrbaugh is the most recent hire; he has worked at JPMorgan for 20 years.

On January 1st next year, Mr Dimon will have been at the helm of the bank for the same amount of time. On March 13th he will celebrate his 70th birthday. His succession has been a subject of relentless discussion on Wall Street for over a decade, spurred on by two health scares and the prospect that he

might be made treasury secretary. Mr Dimon says that in the next few years he will step down but remain the company's chairman, and stubbornly refuses to provide a firmer timeline. He does offer some traits for any future leader of the bank: "There's a work ethic; there's people skills. There's determination. You better have a little bit of grit. There's humility; there's ability to form teams. There's having courage. Constantly observing the world out there and thinking, 'Well, what can be done better?'"

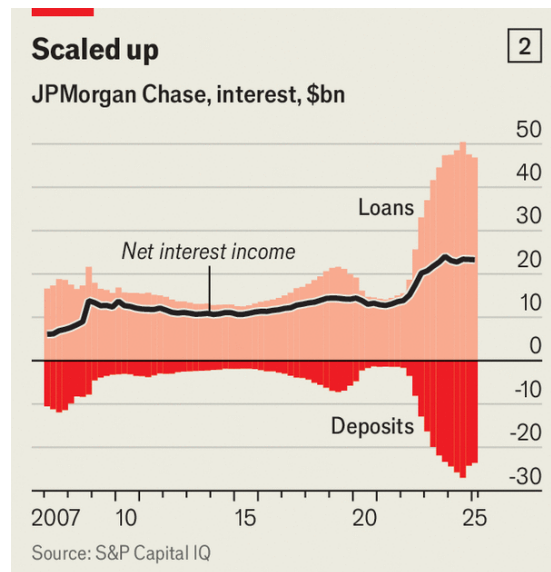


Chart: The Economist

Well, what could be? Not much, if you listen to Mike Mayo of Wells Fargo, the most prominent JPMorgan analyst and an uber-bull. Indeed, Mr Mayo has asked why Jamie Dimon would want to step down at all. The bank is, he says, the "Goliath of Goliaths" and the best he has covered in his career; he expects it to be the first with a trillion-dollar valuation. Part of his argument is that advances in artificial intelligence mean investment in tech has grown in importance, and JPMorgan, which he also calls the "Nvidia of banking", can afford more than any rival. The bank will spend about \$18bn on tech this year, some 40% more than Bank of America.

The heft that JPMorgan has developed under Mr Dimon provides the bank with a compounding advantage. Wall Street executives moan about how hard it is to compete across JPMorgan's full range of businesses. The bank has an enormous base of \$2.5trn in deposits. Over the past two years it has paid out \$190bn in interest on deposits, while hoovering up \$374bn in interest on loans (see chart 2). Yet the bank is not just larger than its rivals—it is also more streamlined. Its efficiency ratio (non-interest expenses as a share of total revenue) has dropped from 61% in 2015 to 51%, a figure that is 15 percentage points lower than any competitor (see chart 3).

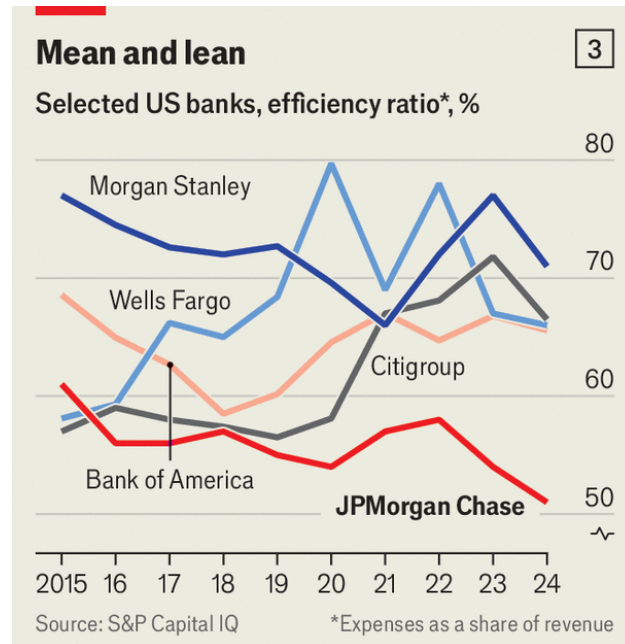


Chart: The Economist

Increasingly, JPMorgan's competition is to be found outside banking. "I want us to be better than the best in class, which is in many ways the non-bank trading houses," says Mr Rohrbaugh. "In other parts of our business, like in payments, we're not only competing against the big banks, we're competing against fintechs." Vast trading firms such as Citadel Securities and Jane Street have seized market-making activities once dominated by banks, while techy upstarts such as Stripe eat into payments.

According to clients, JPMorgan has stayed efficient because its businesses have remained complementary. It has avoided both becoming a conglomerate made up of unrelated silos and falling into zero-sum internal competition. "You have to sew all those pieces together," says Ms Erdoes, who has run wealth management since 2009, meaning she has been in her current job the longest of the four bosses. "That's really easy at our operating-committee level, because we live with each other. It's harder when you've got the person in the Milan office who's trying to find the person in the Austin, Texas office."

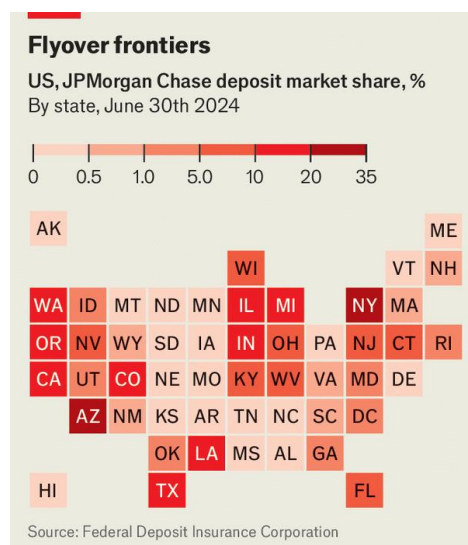
Mr Dimon's "fortress" balance-sheet helps. Large reserves, low leverage and plentiful capital serve JPMorgan well in times of stress, allowing it to snap up firms. The bank bought Bear Stearns and Washington Mutual, a pair of banks, as the financial crisis worsened in 2008. Two years ago, during a smaller crisis, it acquired the lion's share of assets from First Republic, America's 14th-largest bank.

“We did it because the government needed it,” says Mr Dimon. But “we have to make it financially attractive to ourselves, obviously.”

Manning the fort

The stress in 2023 had lessons for JPMorgan. “When Silicon Valley Bank failed, we learned a lot about what we didn’t do properly covering Silicon Valley,” says Mr Dimon. “Even though we’re out there all the time and we did a lot of stuff. The [lesson of the] deep-dive was that we didn’t have a consistent, devoted calling on venture capitalists.” That year JPMorgan hired John China, former president of SVB Capital, Silicon Valley Bank’s venture-capital arm, to jointly run its “innovation economy” business. His job is to tie America’s financial capital to its tech capital.

At the same time as other firms are cutting back in San Francisco, or abandoning the city altogether, JPMorgan last month announced plans to increase the size of its offices in the city by 30%. “When you bank the venture capitalist, you bank them individually, you bank their firm, you bank their startups and you bank their founders,” notes Mr Petno. The exercise-obsessed, joke-cracking Mr Petno is a veteran even among the veterans, having worked at JPMorgan for 35 years. The firm’s analysts think that his promotion, in January, to jointly run the investment bank puts him in serious contention for the top job.



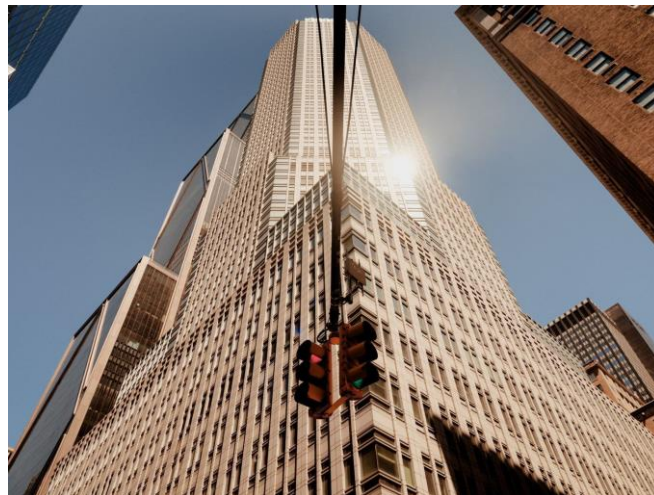
Map: The Economist

Meanwhile, the bank’s retail operations are spreading across the country. Ms Lake, their boss, who grew up in Britain and speaks with a crisp English accent, wants a 15% share of American deposits, a cautious goal. Over the past six years, JPMorgan has established a physical presence in 25 states. It takes several years for branches to reach their potential, and in dozens of cities—Boston, Salt Lake City and Washington included—the bank still oversees less than 3% of deposits. JPMorgan is growing

overseas, too. Almost four years after launching a digital consumer bank in Britain, it has 2m customers. Germany is next. “We have previously said Europe is more difficult, but that is different today with digital banking,” explains Ms Lake.

Could anything halt JPMorgan’s ascent? Scale is no guarantee of success. At the turn of the century, another institution accounted for 30% or so of the market capitalisation of American banks. After a barrage of mergers and acquisitions, Citigroup was a titan. But its lead was eroded by a series of scandals in the 2000s, and a bad financial crisis. Today it accounts for less than 6% of the industry’s market capitalisation. By comparison, JPMorgan has been pretty scandal-free under Mr Dimon—with the exception of the “London Whale” farrago, when a rogue trader cost the institution over \$6bn.

JPMorgan’s size also makes it a target. In normal circumstances, American law would not allow it to merge with another lender, owing to its market share. But the rule does not apply if the lender is failing, which is what allowed it to buy First Republic. All the same, JPMorgan was criticised. Elizabeth Warren, a left-wing senator, paired up with J.D. Vance, now vice-president, to attack the sale. It made “the nation’s largest bank grow even bigger”.



Photograph: Benedict Evans for The Economist

Mr Dimon is unrepentant, arguing large banks offer America vital heft. “We move \$10trn a day...We have lent \$35bn to a company to get a deal done. You know, we bank the biggest companies around, we bank countries,” he says. “I don’t think necessarily the people making those statements understand why you need a big bank that does business in 100 countries and that market-makes like we do.”

A world of trade wars and geopolitical strife is difficult for any globetrotting firm. JPMorgan and Bank of America were recently criticised by members of Congress for underwriting a sale of shares by CATL

on May 20th. The firm is a Chinese battery manufacturer. Its products are found in electric cars everywhere, but it is also blacklisted by the Pentagon for links to China's armed forces. Mr Dimon notes that CATL does not face American sanctions. And he still believes in commercial engagement: "It is not my thing to say we are not going to engage with China anymore...I do not think the Chinese or the Americans want us to leave. I do not think the American economy wants to leave. But we are going to have these issues at the margin...It's going to be harder."

The last, and toughest, challenge is succession. During Mr Dimon's time as chief executive, more than a dozen supposed candidates have been and gone. Indeed, he has been in the post for so long that some have had several jobs since. Bill Winters, the boss of Standard Chartered, and formerly of JPMorgan's investment bank, aspired to take Mr Dimon's throne. Now he may retire before Mr Dimon. In 2020 The Economist wrote that no one, even Mr Dimon, thought that he would remain in his role for another decade. That was five years ago, and Mr Dimon says he will remain for a few more. We would no longer bet against him going the distance.

When probed on how they might run the bank, internal candidates predictably do not step out of line: all are, it turns out, focused on their jobs, work closely with one another and do not dream of being the next boss. Each faces a fearsome job interview when the time comes. And could the bank try to recruit from elsewhere?

Whoever triumphs will lack their predecessor's stature. No matter their experience, they will not have built a megabank. Few people are recognisable by their first name on both Wall Street and Capitol Hill. In a sign of his influence, Jamie was even credited with softening President Donald Trump's tariffs. It was not hearsay. Mr Trump himself said that he changed his mind after watching an interview with Mr Dimon on Fox News, during which JPMorgan's boss had said a recession was likely because of the wave of protectionism. "He's a genius financially, he's done a fantastic job at the bank," the president gushed. Today's all-conquering JPMorgan has been built in Mr Dimon's image.

Mr Dimon recalls the advice that he gave to Charlie Scharf, formerly head of JPMorgan's retail bank, when he left the firm to run Visa, a payments giant. Two things change when an executive moves into a top job, explains Mr Dimon. "The first one is there is nobody to complain to." Second, a chief executive can no longer rely on a backstop from a higher power. "There is no tacit approval. It is your decision. It's just different. Heavy is the head that wears the crown." And no Wall Street crown is heavier than JPMorgan's.

What the failure of a superstar student reveals about economics

Aidan Toner-Rodgers was enjoying a meteoric rise at MIT. Then questions started to be asked about his work



Photograph: Getty Images

When the economics department at the Massachusetts Institute of Technology issues a statement, it is often to celebrate a Nobel Prize. In the past decade, six of its professors have won the award—as many as the next two universities combined. But on May 16th it issued a different sort of press release: one disavowing research by a high-flying graduate student.

Aidan Toner-Rodgers was the author of the paper in question. It assessed the use of an AI tool by an unnamed materials-science firm. Even for techno-optimists, the results were striking: “AI-assisted researchers discover 44% more materials, resulting in a 39% increase in patent filings.” They were widely reported, including by *The Economist*. The work was praised lavishly by Daron Acemoglu and David Autor, two of MIT’s leading economists.

MIT now declares “no confidence in the provenance, reliability or validity of the data and...in the veracity of the research”. Mr Toner-Rodgers’s paper has been withdrawn from the pre-print repository on which it first appeared; his personal website has been taken down. The lab at the heart of his findings remains unknown.

Academic misconduct often triggers a reckoning. In 2015 political scientists grappled with the retraction of a well-publicised article that claimed door-to-door canvassers could lift support for gay marriage. More recently, behavioural science has come under scrutiny: Francesca Gino of Harvard University and Dan Ariely of Duke University have faced investigation over allegedly manipulated data (both deny wrongdoing). Economics has some protection owing to its record. The five leading journals have seen just four withdrawals in their combined 570-year history, according to Retraction Watch, a database.

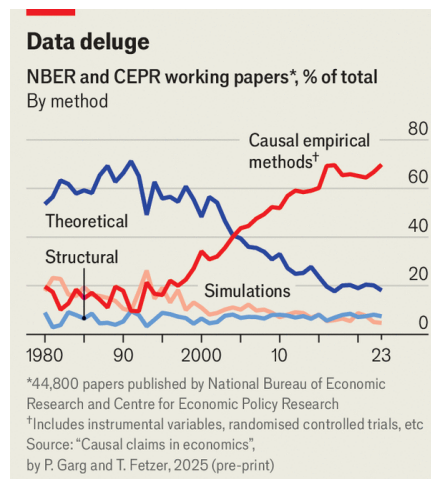


Chart: The Economist

But even if economics is not the worst offender, it is no stranger to social science's replication crisis. Its biggest recent trend has been empirical research, with a focus on credible causal designs (see chart). Statistically significant results are prized, incentivising cherry-picking and selective presentation of results. Prashant Garg of Imperial College London and Thiemo Fetzer of the University of Warwick find that the share of papers reporting "null results" fell from 15% in 1980 to 9% in 2023. Use of private data doubled.

More than in other disciplines, success depends on a few high-stakes events. Job-market candidates are evaluated on a single paper, rather than a body of work. Because institutional pedigree and advisers carry lots of weight, young researchers may face pressure to overstate results.

Bad economics research has real-world consequences. Mr Toner-Rodgers's paper was cited by the European Central Bank and in Congress. It surely led more than one research-and-development lab to consider its internal processes. Other retracted papers advised against large debt-to-GDP ratios and on how to price corporate bonds. All academic red herrings matter. But they matter more when they have implications for national budgets, financial markets and, indeed, the future of AI.

America's scientific prowess is a huge global subsidy

And it is now under threat

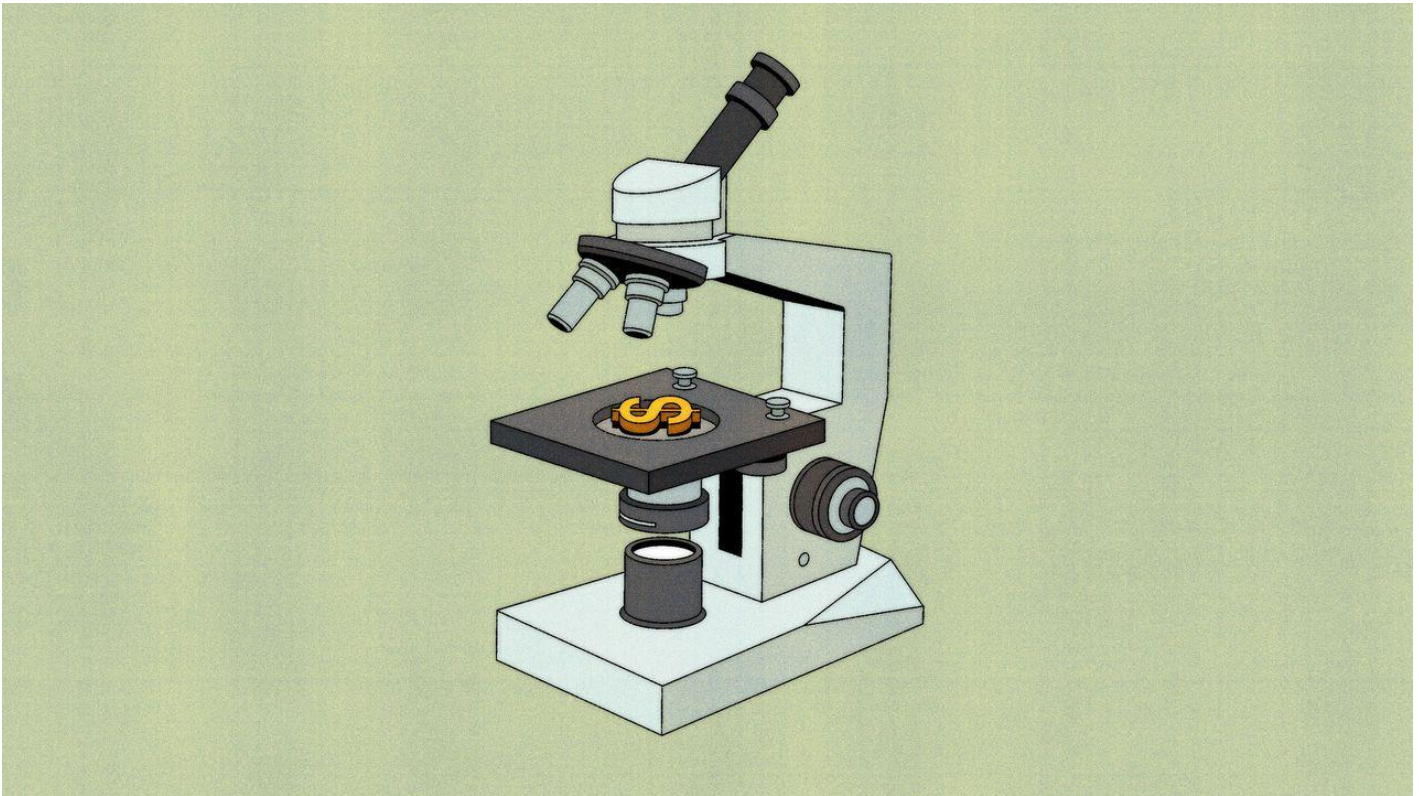


Illustration: Álvaro Bernis

One of the best things about living in Europe is America. Faced with a moribund domestic stockmarket, European investors can redirect their savings into the s&p 500. Residents enjoy the protection of America's security umbrella without having to foot the bill. At times of crisis the continent's central banks rely on swap lines from the Federal Reserve. All the while they enjoy better food, nicer cities and superior cultural offerings.

But America, under President Donald Trump, now threatens to withdraw many of these implicit subsidies. His administration's attacks on science, involving deep cuts to the budgets of institutions, may damage the biggest subsidy of all. America is a research powerhouse. It has the best universities.

It accounts for 4% of the world's population, yet produces a third of high-impact scientific papers. It also accounts for a third of global research-and-development spending.

Americans benefit most of all from their country's scientific prowess. The average American medical scientist earns \$100,000 a year, for instance—some 60% more than the average American worker. But as any economist knows, knowledge is a public good, meaning science has large “spillover” benefits. In 2004 William Nordhaus of Yale University argued that companies only capture 2.2% of the total returns from their innovations. Patents expire and even before that competitors copy ideas. Innovation therefore drags up everyone's living standards, as lots of companies become more productive and ordinary people benefit from better goods and services. America's average incomes are fantastically high.

Economists have devoted less attention to the question of international spillovers. Nevertheless, America almost certainly runs a surplus in science with the rest of the world, providing much more to foreigners than it receives in return. In recent years, too, the size of this subsidy has almost certainly grown. Three mechanisms stick out—all of which are now under threat.

First, people. American scientific institutions are a melting pot. There are twice as many foreign students today as in the early 2000s. Many outsiders, having graduated, return home, taking ideas with them. We estimate that around 15% of the people who have graduated from MIT, a top American science school, live abroad. On that basis, the raw material of future scientific progress has already spilled out from America to elsewhere.

Second, new ideas. When a scientist publishes a paper online, almost anyone in the world can read it. Traditionally research was a domestic affair. One bibliometric study found that in 1996 only about 40% of citations of American scientific publications were from foreign researchers. More recently the globalisation of scientific knowledge has intensified. By 2019 foreign scientists accounted for about 60% of America's citations. Scientists in the rest of the world thus stand on the shoulders of American giants.

American consumers also subsidise R&D. This is most well-known in the case of pharmaceuticals. Prescription drugs are more expensive domestically than abroad. American consumers, in effect, pay for the research that creates them. And this pattern is apparent elsewhere, too. National-accounts data suggest that, on average, American corporations earn returns on domestic capital that are more than 50% higher than abroad. So while Americans may fund corporate R&D, the world shares the benefit.

The third factor is new technologies. Every other country has long drawn from the well of American innovations. This was how Europe rebuilt itself following the second world war. French steel executives visited American steelworks in order to copy workflow designs. Britain's car bosses turned to American executives in an attempt to improve plant efficiency. Economists struggle to measure the ways in which American tech spills abroad today. In some cases the American government explicitly provides it to the world for free, as in the case of gps. During the covid-19 pandemic America gave away vaccines to poor countries. Many American artificial-intelligence companies release "open source" models. Even when American firms try to protect their intellectual property, foreign competitors find workarounds. Many other smartphone companies have copied Apple's aesthetic, for instance.

According to Nancy Stokey of the University of Chicago, one quantitative measure of technological spillovers involves looking at capital goods, in which new tech is often embodied. From the early 1990s to 2024 America exported nearly \$5trn-worth of high-tech capital goods, more than any other country, spreading the American way to every corner of the Earth. Another proxy is outward foreign direct investment. This is when an American buys a controlling stake in a foreign business or builds a new industrial facility abroad—and often introduces new tech as part of the bargain. Americans' direct investments abroad are worth some \$10trn, which is far more than any other country.

Nutty professor

If Mr Trump follows through with his proposed cuts, and America's scientific system stumbles, can another country pick up the mantle? Many American scientists say they want to leave the country; a few already have. China, which on some measures of scientific prowess already surpasses America, may hope to capitalise. Yet few foreigners want to do their phd in China. A closed political system slows down the diffusion of innovations across international borders. So does the language barrier.

Even if China changed, however, decades of research on economic clusters shows that they are rarely replicated. Just as you could not uproot Hollywood and move it elsewhere, scientists leaving Berkeley and Boston will not carry on as before when they arrive in Beijing or, indeed, London. If America's scientific system sneezes, the rest of the world will catch a cold.

Technology

America is in danger of experiencing an academic brain drain

Other countries may benefit. Science will suffer



Illustration: Ben Hickey

Matthias Doepke was impressed when he moved to America as a graduate student in the 1990s. Academic pay was better than in his native Germany and university departments were slick and organised. But what he appreciated most was the attitude. “You come to the US and you have this feeling that you are totally welcome and you’re totally part of the local community,” he says. In 2012 he became a professor of economics at Northwestern University in Illinois, and in 2014 became a naturalised citizen.

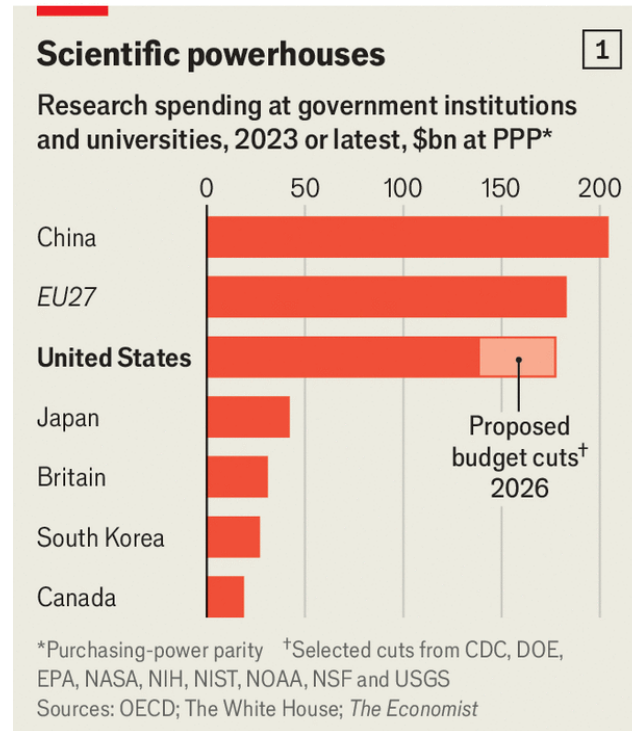


Chart: The Economist

But in April Dr Doepke resigned from Northwestern; he is now a professor at the London School of Economics. He is clear about why he and his family left: the election of Donald Trump as president. “Once the election happened,” he says, “it was clear we weren’t going to stay.” Mr Trump’s government is taking a chainsaw to American science, pulling grants, revoking researcher visas, and planning enormous cuts to the country’s biggest funders of research (see chart 1). Academics talk of a “war on science”. Few have followed Dr Doepke’s example and moved overseas just yet. But plenty of data suggest they soon might. An exodus from the world’s scientific superpower beckons.

Springer Nature publishes *Nature*, the world’s most prestigious scientific journal. It also runs a much-used jobs board for academics. In the first three months of the year applications by researchers based in America for jobs in other countries were up by 32% compared with the same period in 2024. In March *Nature* itself conducted a poll of more than 1,200 researchers at American institutions, of whom 75% said they were thinking of leaving (though disgruntled academics were probably more likely to respond to the poll than satisfied ones). And just as American researchers eye the exit, foreigners are becoming more reluctant to move in. Springer Nature’s data suggests applications by non-American candidates for American research jobs have fallen by around 25% compared with the same period last year.

Attitudes are souring at the bottom of the academic totem pole as well. Searches for American PhDs on FindAPhD, a website that does exactly what its name suggests, were down by 40% year on year in April. Interest from students in Europe has fallen by half. Data from another website, Studyportals, show less interest in domestic PhDs among Americans, and a rise in interest in international studentships compared with 2024 (see chart 2).

Greener pastures

Why is America losing its allure? The most straightforward reason is money, or the looming lack of it. Mr Trump's administration has cancelled thousands of research grants since January, when he took office. Grant Watch, a website, calculates that at least \$2.5bn-worth have been rescinded so far, leaving researchers without salaries and unable to pay expenses. Much more could be coming. The White House's budget for 2026 aims to slash science spending. The National Institutes of Health (NIH), the world's biggest funder of biomedical research, faces a nearly 40% cut. The National Science Foundation (NSF), another big federal funder, may lose 52%.

Such cuts must be approved by Congress. But if the budget is enacted, The Economist calculates that more than 80,000 researchers could lose their jobs. American funding for academic science would fall significantly behind that of either China or the European Union, after adjusting for costs.



Chart: The Economist

Funding is not the only issue. Many scientists, especially those who are citizens of other countries, are beginning to feel intimidated. In the first four months of 2025 at least 1,800 international students or recent grads had their visas revoked without explanation, only to have them restored again in April. Senior scientists report difficulty obtaining visas for incoming researchers, and have advised junior colleagues from overseas not to travel home, lest they be detained on their return.

Others allege that the government is meddling with their research. Kevin Hall, a researcher at the NIH, quit in April after two such incidents. First, he says the NIH asked him to edit a section of a paper that

mentioned “health equity”. (“Equity” is an unpopular word among Mr Trump’s supporters.) Later Dr Hall published a study showing that ultra-processed foods did not activate the same addiction pathways in the brain as drugs do—contradicting the views of administration officials. Dr Hall alleges the NIH edited his responses to a journalist, without his approval, to downplay his findings. (The NIH told The Economist that it does not respond to false allegations by former employees.)

Some other countries spy in all this an opportunity to beef up their own scientific capabilities. Several Canadian universities, including the Toronto’s University Health Network and Laval University in Quebec, have announced funding worth tens of millions of dollars explicitly aimed at diverting researchers from America. On May 5th Ursula von der Leyen, the president of the European Commission, gave a speech in Paris urging scientists to “choose Europe”, highlighting a wedge of new money and the bloc’s social safety-net. The University of Helsinki has been targeting Americans with adverts on social media, promising them “freedom to think”.

China is likely to be another beneficiary. According to the South China Morning Post, the country is redoubling its efforts to lure Chinese-born scientists from America by offering big salaries. Between 2019 and 2022 the share of non-native artificial-intelligence (AI) researchers who left America for China after their PhD doubled, from 4% to 8%. Springer Nature’s data suggest that in the first quarter of this year applications for jobs in China from scientists based in America were up by 20% compared with the same period last year.

That matters, for much of America’s scientific pre-eminence has been built by researchers who were not born there. Since 1901, researchers based in America have won 55% of academic Nobel prizes, and more than a third of these scientists were foreign-born. Immigrant inventors produce an outsize share of patents, too. The Paulson Institute, a think-tank, reckons that in 2022 almost two-thirds of top-tier AI researchers working in America hailed from overseas. Losing even some of those would be a blow to American innovation.

Other countries might gain, but the disruption would harm science as a whole. At around \$40bn, Mr Trump’s planned funding cuts are too big for other countries to make up by themselves. (The extra funding promised by Mrs von der Leyen, for instance, is worth only €500m, or \$566m, over three years.) Many researchers will probably leave science altogether. Everyone would lose—even if America lost most.

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