

China: AI boom, property bust and K-shapes

China's big AI boom does support the Chinese economy and stock markets. However, the scale may not be sufficiently large, there are leakages from AI investment through imports and there are constraints imposed by the US in the era of G2. The AI boom will also likely worsen the two existing intertwined K-shapes, which in turn could dent aggregate demand. As the fruits of AI-driven growth are mainly reaped by a few selected "smart" cities, especially the four top-tier ones, a real property market recovery may only take place in those cities, especially as property restrictions there have been lifted.

For both markets and Beijing's policymakers, they cannot assume the new AI economy will cure China's economic woes caused mainly by the property bust. Beijing also needs to closely track the divergence between the upper arms and lower arms of the two K-shapes and take some precautionary steps to prevent too big gaps. Despite the AI boom, Beijing may eventually still be impelled to step up policy measures to clean up the mess in the property sector and speed up fiscal reform to support the left-behind cities.

The AI boom is bolstering the economy, but the impact should not be overstated

AI drives the economy mainly through fixed asset investment (FAI) with AI-linked capex contributing around 0.3pp to GDP growth in 2026. As Beijing is pushing an ambitious "AI+" strategy by aiming to integrate AI into 90% of the economy, we expect AI capex to rise further and to raise productivity. But the positive impact should not be overstated. As China is still heavily reliant on imports of advanced chips for running its AI models and its data centres, part of its AI investment leaks to other economies. Meanwhile, surging chip prices worsen its terms of trade and suppress China's net exports.

Meanwhile, the severe property bust has been persisting

In the decade before 2021, the property sector was China's single largest growth pillar, contributing around 25% of GDP, 38% of fiscal revenue and 60% of household wealth at the peak in 2021. Then came the dramatic bust with new home sales value of the top 100 developers slumping by 72.7% in 2021-25 and falling 19.7% y-o-y in the first four months of 2026. The collapse has sapped domestic demand, damaged the balance sheets of governments, corporates and households, and resulted in a huge amount of bad debt.

The demographic K-shape: Rising inequality in personal income and wealth

The property bust since 2021 has led to 14mn migrant workers losing their construction jobs. As home prices have dropped much more in low-tier cities than in big cities, and as those low-paid migrant workers tended to buy homes in their hometowns in low-tier cities, the property bust increased income and wealth inequality. The AI boom further split the social fabric into two classes: those that benefit from the boom on their talents, well protected jobs and wealth versus those that are fully or partly replaced by AI.

The geographic K-shape: Smart versus legacy cities in the AI boom

While the 2000-21 property boom was a broad-based wealth creator, the AI supercycle is a centralizing event. Success in this new AI era is gated by massive compute density, data pools and top talents, which are highly concentrated in a handful of existing top-tier cities. A few of those "smart" cities take much of the national gain of AI development and even siphoning resources from the rest of the country.

The two K-shapes could be re-enforcing each other

As top talents and financial resources flow to top-tier smart cities, displaced workers tend to be crowded out of those cities and are forced into the gig economy or low-end service sectors, driving down wages in legacy cities and worsening service sector deflation. The rapid demographic shift from the aging and falling population, a surge in college education and a highly unequal social welfare system could further solidify these two K-shapes.

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AI boom, property bust and K-shapes

Ever since the DeepSeek “Moment” at the beginning of 2025, Chinese society has enthusiastically embraced artificial intelligence (AI) and China has clearly stood out as a major AI participant, second only to the US. Markets are wondering whether the global AI supercycle could reboot the Chinese economy, which has been battered by the collapsing property sector since mid-2021. Will China finally say goodbye to deflation, ultra low interest rates and lackluster growth because of the AI boom? Will the property markets recover, the fiscal situation improve, household consumption spring back and credit demand rebound?

The AI boom is helping to bolster the Chinese economy

We believe the AI boom, via domestic fixed asset investment (FAI), exports and productivity gains, could bolster China’s growth, helping to mitigate the severe and long-lasting property bust. We estimate AI-linked FAI could contribute 0.3pp to GDP growth in 2026. Amid the global AI supercycle, we recently *raised* our export growth forecast for 2026 to 8.6% from 4.0%. Although still in the early stages, Chinese AI hyperscalers have started earning service revenues from their corporate clients. As Beijing is pushing an ambitious “AI+” strategy in its 15th Five-Year Plan (2026-30), with the aim to integrate AI into 90% of the economy, we expect AI to also bring about productivity gains, though it’s hard to quantify these now.

But the positive impact should not be overstated

However, the boost in AI-linked investment and exports may not be sufficiently strong to offset the continued property bust. Beyond that, AI’s macroeconomic impact might be far more complicated for four reasons. First, as China is still heavily reliant on imports of advanced chips for running its large language models and data centers, part of China’s AI investment demand leaks to other economies. Second, AI-led export acceleration has been primarily driven by the price effect. We estimate about half of headline *export growth* of 14.1% y-o-y in April was accounted for by surging prices of chips and electronic products, meaning the contribution to real GDP growth is much smaller. Third, China remains a large net importer of chips. Surging chip prices have raised China’s headline exports, but they have boosted headline imports even more, worsening China’s terms of trade and suppressing China’s net exports. Fourth, AI could further widen the inequalities within the population and among different cities. Combined with the property bust, these two K-shapes may dent both consumption and investment demand.

The severe property bust persists

In the decade before 2021, the property sector was China’s single largest growth pillar, contributing around 25% of GDP growth, 38% of fiscal revenue and 60% of household wealth at the peak in 2021. Then came the dramatic bust. New home sales in both value and volume terms dropped by 43.8% and 43.9%, respectively, during 2021-25, according to the NBS. The private sector’s data appeared much gloomier. For the top 100 developers, new home sales in value and volume terms dropped by 71.6% and 80.2%, respectively, in 2021-25. With the NBS’ new home sales in value still down 14.6% y-o-y in the first four months of 2026, there are no clear signs of a recovery yet.

The collapse of the once colossal property market have sapped domestic demand and damaged the balance sheets of local governments, corporates and households. The property slump has resulted in intertwined non-performing debt links, distrust among various entities, slower credit growth and weak aggregate demand. China now has by far the world’s lowest government bond yields and CPI inflation due chiefly to the property bust. The property fallout has also severely disrupted China’s fiscal systems and *worsened the business environment*, triggering sustained capital flight since 2021.

The confluence of the AI boom and property bust: The two K-shapes

The AI boom and property bust together are leading to two intertwined K-shapes, which may offset part of the AI boom’s boost to growth.

The K-shape among wage earners and wealth holders

In China, similar to other countries, the AI boom could split the social fabric into two distinct classes: those that benefit from the boom on their talents, well protected jobs and wealth versus those that are fully or partly replaced by AI. The property bust since 2021 has led to 14mn migrant workers losing their construction jobs. As home prices have dropped much more in low-tier cities than in big cities, and as those relatively low-paid migrant workers tended to buy homes in their hometowns in low-tier cities, the property

bust has hit the wealth of low-income members of the population much harder than those residents in big cities.

The geographic K-shape: Smart versus legacy cities

Beyond the first K-shape, which divides the population, we see another K-shape that divides cities and regions. While the 2000-21 property boom was a broad-based wealth creator that lifted provincial and lower-tier cities through rising land and property values, the AI supercycle is a centralizing event. Success in this new AI era is constrained by access to high-barrier scarcity assets, including massive computing density, proprietary data pools and a pool of top talents, which are highly concentrated in a handful of existing top-tier cities. In this landscape, a few of those “smart” cities extract much rent from those “legacy” cities, taking much of the national gain of AI development and even siphoning resources from the rest of the country.

The two K-shapes are re-enforcing each other

These two K-shapes could re-enforce each other. As top talents and financial resources flow to top-tier smart cities, displaced workers tend to be crowded out of those smart cities and are forced into the gig economy or low-end service sectors, driving down wages in legacy cities, worsening service sector deflation, and weakening overall consumption demand.

The rapid demographic shift from the aging and falling population, a surge in college education and a still deficient and highly unequal social welfare system could further solidify these two K-shapes. The young generation equipped with college degrees tend to move to big cities, depleting human resources of small cities. Already elevated youth unemployment may worsen in the AI boom, which has reduced the value of college education that has seen a great leap forward of college degrees over the past 25 years. The *backward social welfare system* is not ready to handle another surge in the unemployment rate if many white collar jobs are replaced and the gig economy is challenged by AI-equipped tech such as full self-driving (FSD).

Economic implications: Weak domestic demand and a prolonged property bust

The AI boom is real, and the boom does provide support to the Chinese economy and stock markets. However, the scale may not be sufficiently large, there are leakages of the AI investment through imports and there are constraints imposed by the US in the era of G2. The AI boom will also accentuate the two existing intertwined K-shapes, which in turn could dent aggregate demand. As the fruits of AI-driven growth are mainly reaped by a few selected “smart” cities, especially the four top-tier ones, a real property market recovery may only take place in those cities. This is especially the case, as most cities have lifted restrictions on home sales and purchases since late 2022, making a full-blown recovery of the national property market even more far-fetched.

Beijing's policy response to the two K-shapes

For both markets and Beijing's policymakers, they cannot assume the new AI economy will cure China's economic woes. Beijing may need to resist complacency, which naturally emerges from a great boom like the current AI one. Beijing also needs to closely track the divergence between upper arms and lower arms of the two K-shapes and take some precautionary steps to prevent too big gaps between them. They may introduce policies to support more local government “sovereign AI” to help lower-tier cities to share the AI boom benefits. They may improve the social safety network to mitigate the negative repercussions from those unemployed and underemployed workers due to either the property bust or the AI boom. They may slow the pace of adoption of some of the technology such as FSD, which could crowd out even blue-collar jobs. Last but perhaps most important, despite the AI boom, Beijing may eventually still be impelled to step up policy measures significantly to clean up the mess in the property sector. The geographic K-shape will also likely force Beijing to speed up fiscal reform to provide local governments with a more solid tax base after they lose more than 80% of their revenue from land sales (based on our estimates excluding land purchases by LGFVs).

China's AI boom and its arms race with the US

The "G2" idea, which refers to the two nations managing global affairs together, was frequently revisited during the 2026 summits between Trump and Xi. The dominance of these two nations has been significantly strengthened in this global AI super-cycle. While the US has focused on developing advanced models and building data centres, China leads in user adoption with over 600 million users and data consumption with its own cost-efficient models closing performance gaps with US counterparts. A Stanford University study indicates Chinese AI systems are bridging the gap with their US counterparts, with China excelling in publication volume and industrial robot installations, while the US leads in top-tier AI models.

Over the past two years China has witnessed a massive increase in AI model utilisation, processing 140 trillion tokens per day, up from 100 billion in early 2024. Although piling in comparison with the colossal investment scale in the US, the Chinese government and private sector put in a significant amount of resources into the AI supply chain, ranging from models and chips. Chinese manufacturers are also experiencing a surge in AI-linked hardware exports with integrated circuit exports doubling in April 2026. The AI boom has also rekindled stock markets, with Hong Kong reaching a five-year-high in IPOs, driven by a surge in AI companies. Beijing is accelerating commercialization through strong policy support, pushing AI into real-world applications across its physical economy, including in manufacturing and drones, whereas the US is focused on advanced model development.

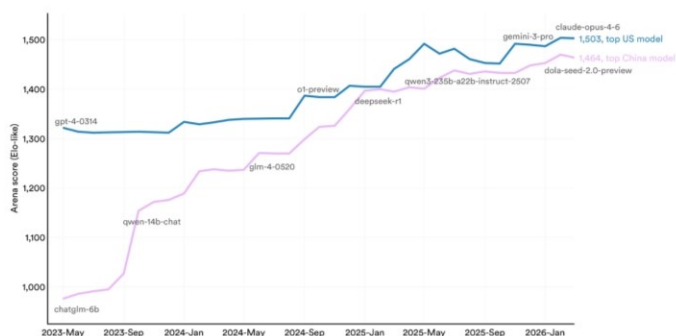
The overall landscape: A G2 duopoly in the making

US-China AI competition has effectively consolidated into a global duopoly, in which performance gaps between these nations' AI models have narrowed significantly, while investment scales, financing channels and supply-chains remain sharply different.

Convergence of model performance

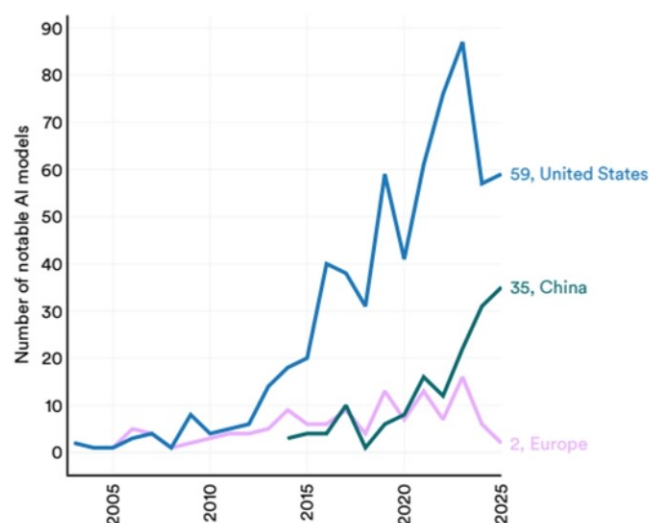
The performance gap between leading AI models of the two nations has narrowed dramatically within a short window. On task-specific benchmarks for LLMs (MMLU, MATH and HumanEval), the Stanford 2026 AI Index documents gaps of 17.5-31.6pp in mid-2023 shrinking to 0.3-3.7pp by end-2024 (Figure 1). On the Arena Leaderboard – which aggregates blind human evaluations – convergence continued with DeepSeek-R1 briefly matching the top US model in February 2025, and as of March 2026 Anthropic's Claude Opus 4.6 (Elo 1,503) leads ByteDance's Dola-Seed-2.0 Preview (Elo 1,464) by 39 points, a 2.7% margin. Over the past year the gap has remained in low single-digits, with US and Chinese models trading the lead multiple times. Moreover, the number of new models developed in the US and China have led other regions by a significant margin (Figure 2).

Fig. 1: Performance of top US versus Chinese AI models



Source: 2026 Stanford AI Index report, Arena Leaderboard

Fig. 2: Number of notable AI models by select geographic areas, 2003-2025



Source: Epoch AI 2026, 2026 Stanford AI Index Report

US leads in AI investment, but the difference might be overstated

US private AI investment reached USD285.9bn in 2025, which compares with China's USD12.4bn – a 23-to-1 ratio. This headline comparison, however, systematically undercounts China's total resource commitment. The Stanford 2026 AI Index report cautions that private investment figures likely understate China's actual AI spending, noting that government guidance funds deployed an estimated USD184bn into Chinese AI firms during 2000-23 through channels not captured in private capital databases. These likely include state-initiated investment vehicles, policy bank lending, and fiscal allocations. The effective annual funding gap is therefore considerably narrower than the headline ratio implies, though the precise magnitude remains difficult to quantify owing to the opacity of state-directed capital flows (an issue that we will revisit extensively in the next section).

Duopoly consolidation

The consequence of this convergence is the consolidation of a US-China duopoly at the frontier of this global AI competition. The EU has produced only a handful of notable frontier models despite considerable regulatory ambitions; no other economy is competing meaningfully at the cutting edge. Most of the rest of the world is effectively being positioned as a consumer rather than a producer of AI capability. The notable exceptions are South Korea and Taiwan, which retain irreplaceable positions in the AI hardware supply chain (especially high-bandwidth memory from Samsung and SK Hynix, leading-edge foundry capacity at TSMC), but they participate as critical suppliers rather than as model-layer competitors.

Domestic supply chain build-out under constraint

A distinctive feature of China's AI ecosystem is the deliberate construction of a full domestic supply chain spanning chips, models, power infrastructure, data centres and applications. This is mainly an unavoidable strategic choice due to US export controls on high-end AI related chips, but Beijing has also proactively embraced the strategy of self-sufficiency for national and economic security. Domestic accelerator market share is rising quickly: according to the OECD's 2025 review of AI infrastructure competition, Huawei made up roughly 28% of the Chinese AI accelerator market in 2025, against Nvidia's 54% – a market split that did not exist three years earlier. Beyond Huawei, a 2025 report from the China Academy of Information and Communications Technology (CAICT) on AI compute infrastructure documents that Baidu's Kunlun-3 ten-thousand-chip cluster became the first domestic system to receive the institute's five-star certification, capable of supporting full training of multiple hundred-billion parameter models. Domestic alternatives are crossing the threshold of practical deployment.

China's strengths in developing and applying AI

China's competitive advantage rests on five mutually reinforcing pillars, namely algorithmic efficiency, an open-source orientation, a deepening talent base, dominant industrial deployment, and a widening lead in energy infrastructure. The last of these is the most consequential for the medium-term economics of AI.

Algorithmic efficiency

Chinese laboratories and hyperscalers have become world leaders in Sparse Mixture of Experts (MoE) architectures, which decouple model performance from the raw compute on which the US holds its most commanding hardware advantage. The CAICT's 2025 evaluation confirms that, through co-optimised algorithm-hardware design, domestic chip deployments of large models have reached accuracy levels broadly on par with mainstream international systems. The implication is that compute power scarcity, while still binding, is not a hard ceiling on Beijing's capacity to remain near the frontier in terms of modelling.

Beijing's open-source strategy

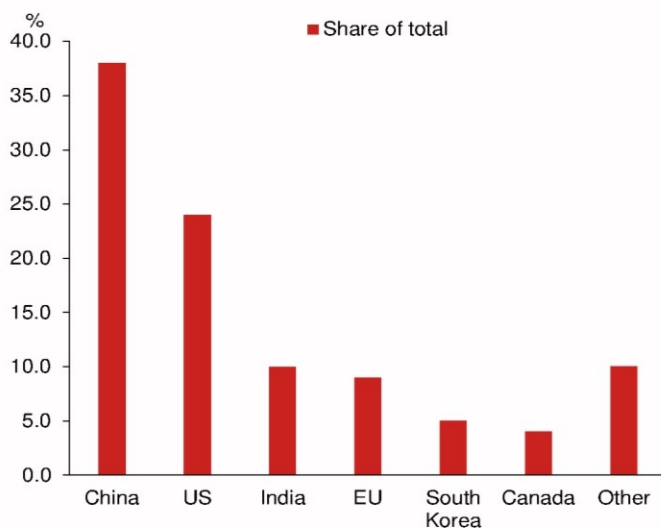
The US and China have diverged into fundamentally different strategic orientations: proprietary, capital-intensive platform rents versus efficient, open-weight, application-driven deployment. Beijing's open-source orientation serves multiple objectives simultaneously. Domestically, it accelerates industrial adoption at extremely low if near-zero marginal cost, allowing thousands of enterprises to integrate AI without paying licensing fees. Globally, open releases – Alibaba's Qwen, DeepSeek's V-series, ByteDance's Doubao – have become widely adopted across the Global South, building ecosystem influence that proprietary US systems cannot match on price.

Talent: Producing more, retaining more – with the top-tier still migrating

Human capital dynamics in AI are also shifting in Beijing's favour, though the picture is more complex than simple narratives of "brain drain reversal" suggest. China's production of elite AI talent has surged. The Paulson Institute's Macro Polo Global AI Talent Tracker 3.0 documents that 38% of the world's top AI researchers received their undergraduate education in China – up from 29% five years earlier – against 24% educated in the US (Figure 3). China is now the single largest producer of top-tier AI researchers by educational origin. At the same time, the pipeline carrying that talent to the US is narrowing sharply. The Stanford 2026 AI Index reports that AI researcher and programmer inflow into the US has fallen 89% since 2017, with an 80% drop in the past year alone. The very top-tier still migrates disproportionately – Macro Polo finds 72% of China-educated elite researchers currently work in the US – but the broader AI population is increasingly staying home: the share of Chinese-educated NeurIPS authors remaining in China rose from approximately 30% in 2019 to 68% in 2025, according to Carnegie Endowment for International Peace data (Source: *DefenseNews*).

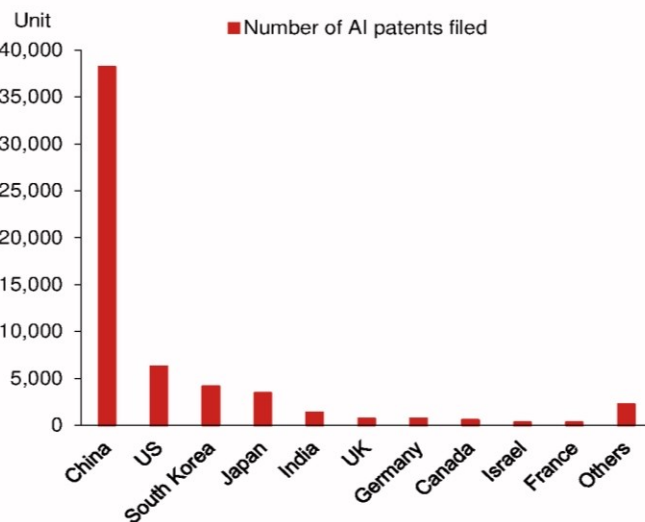
The net effect is a structural shift in the talent pipeline: China is producing a larger share of the world's AI researchers, the US is attracting fewer of them, and a growing mass of competent (if not frontier-leading) researchers is accumulating domestically. China also leads the number of GAI-related patents filed over the past decade (Figure 4). We view this as a distinctive feature of China's AI position relative to other EMs – not merely returning diaspora, but a deepening domestic base that can support industrial-scale AI deployment even if the absolute frontier remains concentrated in US labs.

Fig. 3: Where global top AI researchers were educated



Note: Country of origin is determined by undergraduate institution location.
Source: NeurIPS 2024, ICML 2024, and ICLR 2025 conference proceedings, Marco Polo Global AI Talent Tracker, Nomura Global Economics

Fig. 4: Where were the most GenAI technologies invented?



Note: Patents filed in 2014-2023.
Source: World Intellectual Property Organisation, Nomura Global Economics

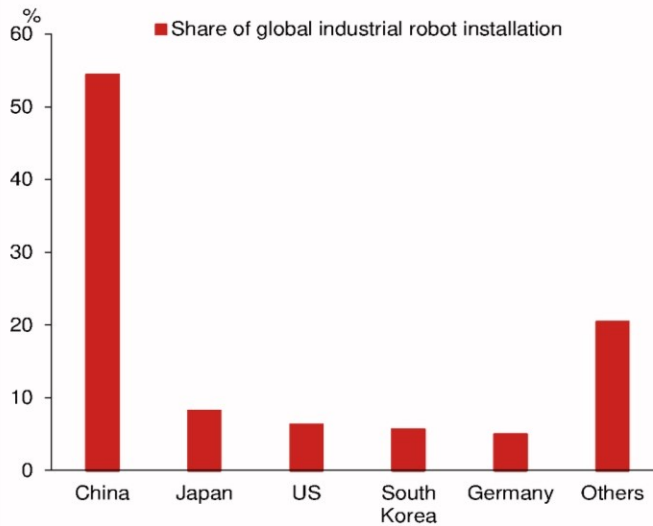
Physical AI and industrial deployment

China dominates physical-world AI deployment by margins that have no parallel elsewhere. The International Federation of Robotics reports that China installed 295,000 industrial robots in 2024, accounting for 54% of global installations and exceeding the combined total of all other markets (Figure 5). China's operational stock surpassed 2 million units in 2024, the world's largest installed base. Domestic suppliers' market share within China climbed to 57% in 2024 from roughly 28% a decade ago, indicating that deployment is increasingly supplied by domestic firms.

This dominance is being formalised by Beijing's policy. The State Council's August 2025 "Opinions on Deepening the Implementation of the AI+ Initiative" sets out a target of AI-powered intelligent terminals and agents penetrating more than 70% of key sectors by 2027, rising to above-90% by 2030. At the April 2025 Politburo study session on AI, President Xi Jinping instructed that China's AI industry should be "strongly oriented towards applications" (Source: *Xinhua*). The strategic judgement is that the economic

returns to AI deployment in the physical economy are larger and more durable than the returns to frontier model competition.

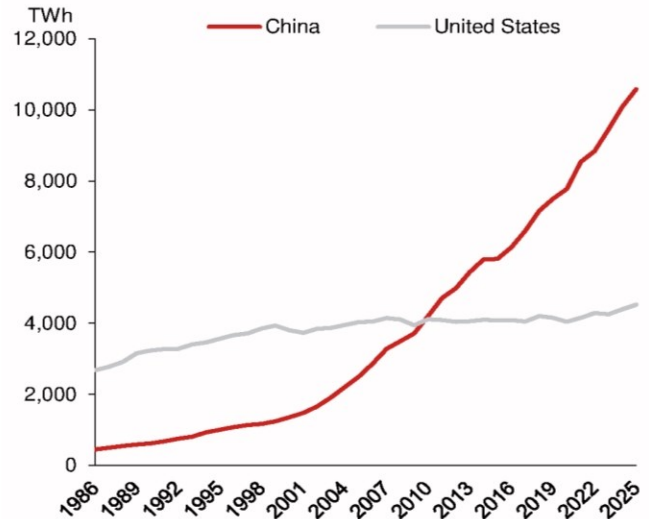
Fig. 5: China's predominant position in global industrial robot installations



Note: Data as of 2024.

Source: International Federation of Robotics, Nomura Global Economics

Fig. 6: Total electricity generation in China now leads the US by a huge margin



Note: Electricity measured in terawatt-hours.

Source: Ember (2026), Energy Institute - Statistical Review of World Energy (2025), Nomura Global Economics

Energy infrastructure and the "electron gap"

The economics of AI are shifting from training-intensive workloads to inference, where electricity cost is the dominant operating expense. On this dimension, Beijing's structural advantage is large and widening (Figure 6).

According to the National Energy Administration, China added 356GW of wind and solar capacity in 2024 – more than 4.5 times the EU's additions and nearly equivalent to the entire installed wind and solar capacity of the US at end-2024. Total renewable capacity additions reached 373GW, equivalent to 86% of all new capacity build-out that year. The contrast with the US is stark: the EIA reports that the US added approximately 50GW of solar photovoltaic capacity in 2024, alongside more modest additions in wind, battery storage, and nuclear, for total new utility-scale capacity of around 60GW. The annual renewable build-out differential is roughly six to one.

This capacity is being purposefully aligned with AI compute through the "Eastern Data, Western Computing" initiative. The NDRC's December 2023 "Opinions on Deepening Implementation" formalised the project as a national integrated computing network, channelling data processing demand from the densely populated eastern provinces to renewable-rich western hubs in Inner Mongolia, Gansu, Guizhou, and Ningxia. The strategic intent is to co-locate AI compute with abundant low-cost power, and to plan power capacity ahead of data centre demand rather than after it.

The US, by contrast, faces a compounding infrastructure constraint. Interconnection queues for new power projects stretch over a decade in some regional grids; ageing transmission infrastructure limits the speed of new build; and data centre power shortfalls may emerge as a binding constraint on US AI capacity expansion in the coming years. As AI workloads shift towards inference at scale, this "electron gap" is becoming the most consequential structural divergence between the two economies.

China's structural constraint: the evolving export control regime

US export controls on advanced semiconductors remain the most significant external constraint on China's AI trajectory. They impose a meaningful ceiling on training-frontier compute, but China's response is reshaping the constraint into something more porous than originally intended. Export controls do not prevent China from building competitive inference and application-layer AI: the evidence of DeepSeek, Qwen, and Kimi basically confirms this. Their binding effect operates at the training frontier, that is, the compute required to push beyond the current generation of models.

The integration of DeepSeek V4 with Huawei's Ascend 910C may be an inflection point, with the next generation Ascend 950 on the published roadmap. The CAICT 2025 review confirms that domestic chips, once co-optimised with software, can support full-scale training of trillion-parameter models on domestic ten-thousand-chip clusters. Industry forecasts suggest domestic chips might account for the large majority – close to 80% – of China's AI chip consumption by 2027, though such forecasts should be treated with appropriate caution owing to the execution risk at advanced process nodes. Yield rates at SMIC remain materially below those of TSMC, and the absence of EUV lithography continues to impose a multi-generation fabrication gap.

Critical mineral export controls constitute China's most consequential counter-lever. Following the December 2024 ban on gallium, germanium, antimony, and superhard materials to US end-users, China extended controls in February 2025 to tungsten, tellurium, bismuth, molybdenum, and indium, and in April 2025 to seven medium- and heavy-rare-earth elements. The US Geological Survey estimated that a full ban on gallium and germanium alone could subtract USD3.4-9.0bn from US GDP, owing to near-complete US import dependence. Following the Trump-Xi meeting in October 2025, China suspended much of the regime for 12 months pending negotiation, but the licensing framework remains intact and can be reactivated. The leverage is structural, not transitory.

AI's economic impact in China

To quantify AI's contribution to the Chinese economy, it is more convenient to measure it on the demand side, which includes the services demanded by end-AI users, AI-linked fixed asset investment (FAI), and exports related to the global AI boom. We will discuss China's AI capex and exports in detail in the next two chapters. Here we briefly discuss AI services provided to end users by LLM companies.

How do China's LLM giants monetise AI?

While Western AI leaders have emphasized premium consumer subscriptions, Chinese generative AI companies have developed a distinctly different strategy. They have challenged the idea that AI profitability depends solely on premium consumer paywalls. By combining architectural cost reductions, high-volume developer Application Programming Interfaces (APIs), private enterprise integrations and strategic cloud services, firms such as DeepSeek have built a resilient commercial model.

The API market

Instead of pursuing individual consumer subscriptions, companies such as DeepSeek commoditise raw model intelligence, delivering high-tier reasoning capabilities to software developers at prices that have surprised global expectations. In early 2025, DeepSeek launched its V3 and R1 models at a fraction of the cost of Western alternatives, sparking a domestic price war that compelled competitors to slash API pricing by as much as 90%. This aggressive undercutting stems from superior architectural efficiency.

Through innovative designs such as minimising active parameters processed per token during inference without compromising accuracy, DeepSeek has achieved a unit economics advantage that supports profitability, even at ultra-low-price points. The goal is high-volume adoption: once developers integrate an API deeply into their applications, switching costs and risks become prohibitively high. This creates a sticky, recurring revenue stream from enterprise customers.

For tech giants such as Alibaba and Tencent, open-sourcing flagship models serve as a cornerstone of a broader infrastructure application strategy, which echoes Google's approach with Android. While model weights are distributed freely, deploying and scaling these large architectures remains a significant hurdle for many enterprises. These companies monetize the resulting compute demands. Businesses downloading an open-source model such as Alibaba's Qwen often require substantial resources to host and run it effectively. Alibaba Cloud capitalizes on this by providing optimized, proprietary environments tailored to its models, generating revenue through cloud infrastructure leasing. For SOEs and financial institutions subject to strict data sovereignty rules, AI providers offer premium enterprise services. These include custom deployments in private data centres, fine-tuning on proprietary datasets, and high-margin consulting and licensing fees – all while ensuring full data privacy and compliance.

Unfortunately, it's still very difficult to quantify the revenues of all those AI-linked services as most of the above-mentioned business are not transparent yet, not to mention those provided by unlisted companies like DeepSeek. At this stage, one thing we can be relatively sure about, compared with AI-related FAI and exports, those AI services revenues (or expenses on the part of end users) are still of small scale, so we will just focus on AI capex and exports in the next two sections.

China's AI capex

This section focuses on China's capital expenditure in the AI sector. To begin with, it is critical to underscore the growing economic significance of AI. At a press conference held by the Ministry of Industry and Information Technology (MIIT) in January 2026, officials cited estimates that China's core AI industry scale exceeded RMB1.2trn in 2025, equivalent to 0.9% of GDP. Because of the explosive growth of AI-related industries over the past few months, its GDP share might easily surpass 1% in 2026, firmly demonstrating AI's rising role in China's economic landscape. We analyse China's AI capex based on both narrow and broad measurements. We will also compare the scale of China's AI capex to that of the US level, as well as core and emerging sectors in China.

The narrow measure

The narrow measure refers to computing infrastructure investment (see [Box 1](#)), covering core sectors such as semiconductors and data centres. In January 2025, the National Data Administration commented that digital infrastructure would attract about RMB400bn in annual direct investment, driving total investment to RMB2trn over the subsequent five years. In early 2026, the market consensus put China's overall computing infrastructure investment at around RMB450bn in 2026, up 28% from 2025. Recently, amid the global AI supercycle, leading cloud service providers (CSP) have revised up their capital expenditure budgets. For example, ByteDance raised its 2026 AI capex plan by 25% to over RMB200bn. Therefore, we believe China's overall computing infrastructure investment might reach about RMB500bn in 2026.

Box 1: China's AI Computing Infrastructure

At the core of computing power infrastructure lies high-end chips, which represent China's most prominent technological bottleneck in the AI industrial chain. Domestic capabilities in both high-end chip design and advanced manufacturing lag substantially behind global leading standards, trapped by prolonged external tech restrictions. This structural gap explains the government's aggressive deployment of multi-trillion-scale capital to pursue semiconductor breakthroughs and nationwide tech self-reliance.

Core chips supporting AI computing power can be categorized into two major segments: computing chips (GPU, CPU, NPU and other specialized AI processors) and memory chips (DRAM and NAND flash memory). In domestic computing chip design, leading participants include Huawei Ascend, Cambricon, Alibaba T-Head, and Baidu Kunlun, which independently have developed dedicated AI chips for model training and inference. For memory chips, CXMT based in Hefei has become the flagship domestic DRAM manufacturer, while Wuhan-based YMTC leads indigenous NAND flash memory mass production, forming the core domestic memory industrial layout. However, their market share is still relatively small, resulting in high import dependence on memory chips.

In advanced chip manufacturing, China's major foundries include SMIC and Huahong Semiconductor, both of which have received sustained, substantial funding support from "the Big Fund". Beyond wafer fabrication, the Big Fund has also targeted the most constrained upstream links, explicitly supporting domestic development of lithography machines – the most critical and bottleneck semiconductor equipment – to shore up weak links in the manufacturing chain.

Beyond core chips, the full-scale construction of AI data centres necessitates significant incremental capital expenditure across auxiliary hardware and complementary infrastructure. Key investment segments include high-speed optical modules, network switches catering to large-scale AI cluster interconnection, and liquid cooling systems tailored for high-power computing scenarios. These peripheral hardware and facility upgrades constitute indispensable supporting capex for the iteration and large-scale deployment of domestic intelligent computing centres, further expanding the AI industrial investment landscape.

The broad measure

The broad measure expands the scope to include investment in power infrastructure, an indispensable pillar underpinning China's AI advancement. Constrained by shortages of high-end AI chips and insufficient computing power, reliable power supply becomes China's unique comparable advantage in this G2 AI rivalry.

The relevance of power infrastructure spending

Significant spatial mismatch exists in China between power resources and demand: western regions boast abundant power reserves, while industrial power demand is overwhelmingly concentrated in the east. To address the mismatch and accommodate the

surging power consumption of AI development, national initiatives including the “East Data, West Computing” and “Computing-Electricity Synergy” have been launched (see [Box 2](#)), aiming to deliver stable, low-cost green power for data centres. A typical example is a recently launched data centre project in Zhongwei, Ningxia. The local electricity price for data centres there is RMB 0.36 per kWh, merely half of that in the US, while the share of green power used for data centres there has reached more than 80%.

Investment in power transmission

In China, power-related investment generally falls into two categories: power generation and power grid construction. Because China has already installed ample capacity of renewable energy, many regions suffer from underutilized green power, including widespread wind and solar redundancy. Against this backdrop, power grid investment targeting power transmission optimization and energy storage has emerged as the key bottleneck breaker. China’s two dominant grid operators, namely the State Grid and China Southern Grid have announced a substantial 40% increase in their total investment for the 15th FYP period, reaching RMB5trn in total, equivalent to an annual average investment of RMB1trn. In Q1 2026, the two grid operators registered solid investment growth of 37.0% y-o-y and 49.5%, respectively.

Box 2: “East Data, West Computing”

The rapid expansion of power source construction has arguably led to a relative surplus in China’s overall power generation installed capacity. Nevertheless, a stark spatial imbalance between power generation and consumption remains prevalent nationwide. Power generation resources are predominantly concentrated in Western and Northern China, while electricity demand is overwhelmingly clustered in the economically developed Eastern and Southern regions, especially the Yangtze River Delta and Pearl River Delta. The AI boom has further exacerbated this structural imbalance, placing pressure on the existing power supply and demand system. To effectively address the growing regional power imbalance and accommodate the long-term power demand of AI industrial development, China has strategically formulated two major development initiatives.

- **West-to-East Power Transmission project.** China is aggressively scaling up investment in power grid infrastructure, particularly ultra-high voltage (UHV) projects, to enable efficient power transmission from resource-rich Western region to demand-intensive Eastern region, namely the West-to-East Power Transmission project.
- **“Computing-Electricity Synergy”.** China is proactively constructing new large-scale data centres in Western regions to underpin AI computing operations. Under the “computing-electricity synergy” framework, massive AI computing tasks are processed locally at data centres in the West, where green power is abundant, with processed data subsequently transmitted back to the East. This strategy notably lifts the proportion of green power utilization in data centre operations. A prominent case is the newly launched Zhongwei Cloud Base in Ningxia, with planned investment of RMB20bn. Driven by this landmark project, Ningxia’s investment in the information transmission sector, software and information technology services soared by 570% y-o-y in Q1 2026.

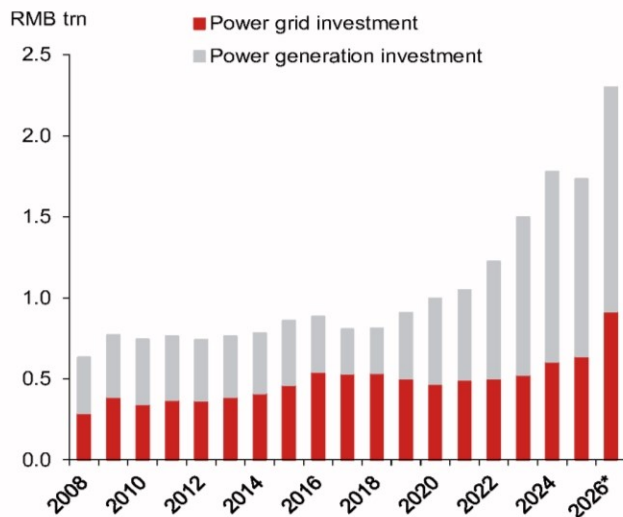
China’s AI capex is about one-third of the US, as a percentage of GDP

As such, we expect China’s total power grid investment to hit about RMB1trn in 2026, with AI-related grid investment accounting for around RMB500bn (Figure 7). Combined with the narrow measure of computing infrastructure investment and capital spending across other upstream and downstream AI industrial chains, we estimate the broad measure of AI capital expenditure might reach about RMB1.2trn in 2026, equivalent to 0.8% of GDP. To put this into context, we compare China’s AI capital expenditure with the US and other traditional core sectors in China.

According to the 2026 Stanford AI Index Report, US private AI capex stood at USD268bn in 2025. While according to a *Bloomberg* report in late April, US tech hyperscalers have lifted their 2026 capex forecasts to USD725bn. Overall, we think that US AI capex will be equivalent to about 2.5% of US GDP in 2026. By this metric (percentage of GDP), China’s AI capex scale is roughly about one-third of the US’s. Nevertheless, affected by lingering deflationary pressures across multiple sectors in China, adjusting for price effects, real capex in China’s AI industry might be higher than what nominal figures suggest. Even so, the fast rise of AI investment in China remains far from offsetting the drag from the prolonged downturn in the property sector.

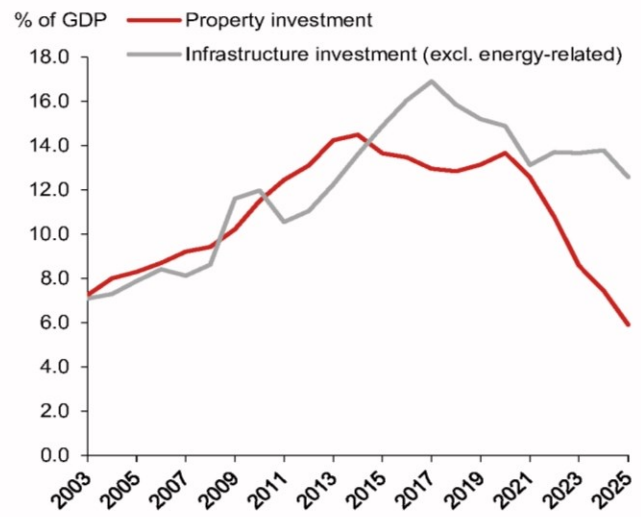
Compared with the core and emerging sectors in China, headline property investment peaked at 14.5% of GDP in 2013, and currently still accounts for about 6% of GDP, following the collapse over the past five years (Figure 8). In the meantime, excluding electricity, heat power, gas and water, traditional infrastructure investment (including transport, water conservancy, industrial parks, etc.) still accounts for about 14% of GDP. For emerging sectors, we estimate that investment in the “new three” sectors, including EVs, lithium-ion batteries and solar panels, accounted for about **2% of GDP** in 2022, when those sectors were boosted to push China’s green transition, before a notable slowdown in subsequent years due to significant overcapacity. Overall, the economic contribution of the AI sector remains considerably limited compared with property, traditional infrastructure and even the “new three” sectors.

Fig. 7: China’s power investment



Note: 2026* refers to projections based on y-o-y growth in Q1.
Source: National Energy Administration, Wind, Nomura Global Economics.

Fig. 8: China’s property and infrastructure investment



Source: NBS, Wind, Nomura Global Economics.

China's AI exports

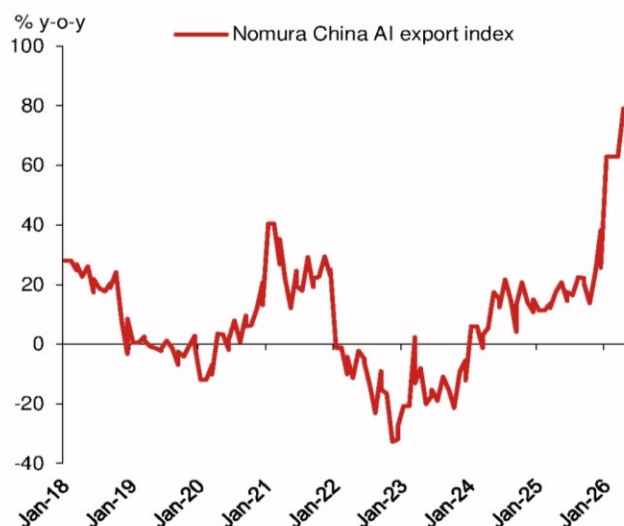
The global AI infrastructure build-out has become the single largest driver of China's export growth this year. In April, broad AI-related goods accounted for roughly half of total export growth with integrated circuit (IC) exports contributing 4.9pp to the 14.1% headline growth and automated data processing (ADP) equipment exports **contributing another 2.4pp**. IC export growth surged further from 77.5% y-o-y in Q1 to nearly 100% in April, driven almost entirely by price rather than volume.

This is unlikely to be a transient phenomenon. Major US hyperscalers plan to spend as much as USD725bn on AI-related capex in 2026, and combined with China's own AI infrastructure build-up, this demand flows directly through China's manufacturing ecosystem. We estimate the AI-driven chip upcycle alone could contribute 3.7-4.4pp to **our recently raised 8.6% 2026 export growth forecast**, making AI the single most important swing factor in China's external accounts.

A China AI-related export index

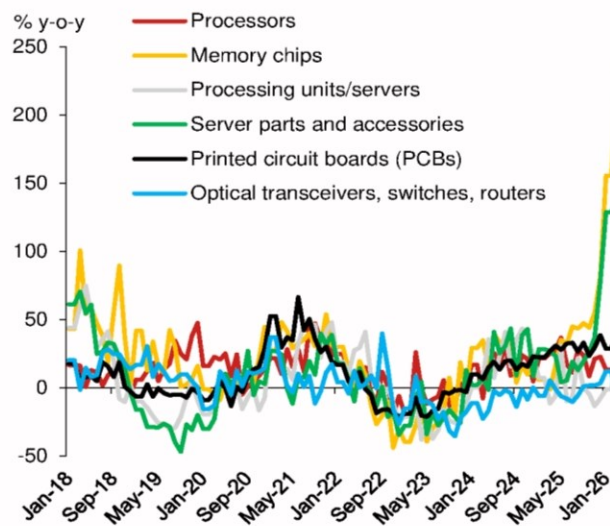
To systematically track this phenomenon, we construct an in-house China AI-related Export Index comprising 12 HS 6-digit codes across five layers of the AI infrastructure stack: core chips, server hardware, optical interconnect, power equipment and cooling systems, selected for their direct relevance to AI infrastructure build-out. The index tells a clear three-phase story. During the tech down cycle of 2023, quarterly growth contracted by 12-15% y-o-y. A moderate recovery followed through 2024, with growth accelerating from 3% y-o-y in Q1 to 15% in Q4. From Q2 2025, growth stepped up further (17% y-o-y to 26%), before an explosive jump to 63.2% y-o-y in Q1 2026 (Figure 9), with the export total reaching USD116bn, accounting for a sizeable 36% of Q1's export growth. The index increased further to 79.1% y-o-y in April.

Fig. 9: Our in-house index shows AI-related exports surged since early 2026



Source: General Administration of Customs, Wind, Nomura Global Economics

Fig. 10: Major sub-components of our AI exports index indicate notable divergences



Source: General Administration of Customs, Wind, Nomura Global Economics

Three layers of growth in China's AI exports

The 63% headline growth in Q1 in our index is not uniform. It decomposes into three layers with distinct drivers and durability: a price-cycle layer that dominates the near-term headline but could moderate in the medium term; a structural layer that reflects genuine physical build-out and should persist; and an emerging layer, where China holds its strongest competitive positions, but whose growth is not yet fully captured by GAC data.

The price cycle layer: Memory chips and server components

Two categories, memory chips and server parts, account for approximately 90% of the index's Q1 2026 y-o-y increment of USD44.8bn (Figure 10). Memory chip exports surged to USD46.0bn in Q1 (174% y-o-y), accounting for 40% of the total index, while server parts reached USD20.0bn (133%). The acceleration has been progressive: export growth of memory chips rose from 3% y-o-y in Q1 2025 to 28%, 45%, 61%, and finally 174% in

Q1 2026. Growth of memory chip exports surged further to 237.% in April. China's role here is partly as a processing node: importing high-end memory from South Korea (import growth from South Korea surged further to 63.4% y-o-y in April from 44.0% in Q1), performing packaging, testing and assembly, then re-exporting.

The structural layer: PCBs and power infrastructure

Beneath the price-driven headline, a steadier and more volume-driven growth layer is visible. Printed circuit boards (PCB) have maintained around 30% y-o-y quarterly growth through 2025, reaching 32.8% in Q1 2026, a consistency that reflects genuine demand-pull as global AI server build-out requires increasingly complex high-layer-count PCBs, and Chinese manufacturers hold dominant global market share. We view PCB export growth as the most organic proxy for actual physical pace of global AI infrastructure construction, stripped of price noise. Power equipment accelerated from a stable 7-11% y-o-y range in 2024-2025 to 20% y-o-y in Q1 2026, with GAC data showing exports of high-capacity diesel generator sets for data centres surging 132% y-o-y in January-February 2026, with orders from Germany more than doubling and strong demand from Southeast Asia (Source: *China Daily*).

The emerging layer: optical interconnect

China's most technically competitive and least substitutable position in the AI supply chain (Chinese firms supply approximately 60% of Nvidia's 800G optical transceivers) is paradoxically the least visible in customs data. The relevant 6-digit HS code (8517.62) recorded only 5.4% y-o-y growth in Q1 after seven consecutive quarters of negative growth, but this code encompasses all switches, routers, and transceivers, meaning declining traditional telecom equipment dilutes the AI signal. The GAC previously reported China's optical transceiver exports grew nearly 60% in 2025, and co-packaged optics (CPO) module exports rose 41% y-o-y in Q1 2026 (Source: *People's Daily*). Zhongji InnoLight, the world's largest AI optical module supplier, reported net profit growth of 108% in 2025 and 265% y-o-y in Q1 2026. This suggests our index may even understate the true pace of China's AI-related export growth in the networking layer.

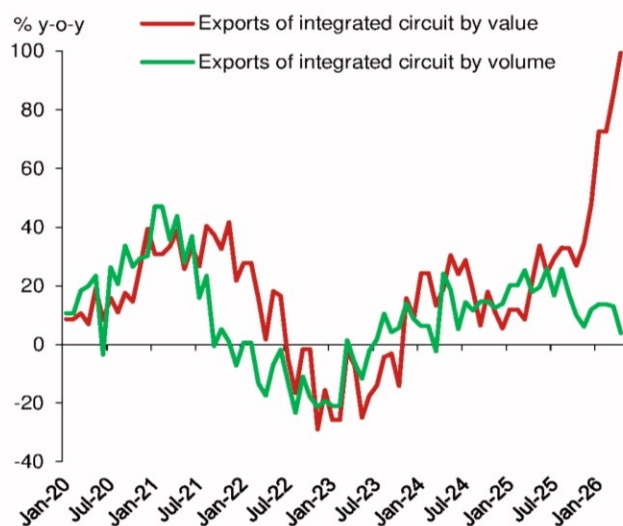
Decomposing the IC price effect and its implications for the trade balance

The dominance of the price effect in integrated circuit (IC) exports warrants careful decomposition. In Q1 2026, IC export value surged 77.5% y-o-y while volume grew a more modest 13.4%. This implies a price contribution of 56.5pp, meaning roughly three-quarters of the value growth was attributable to higher unit prices rather than increased shipments (Figure 11). By April, this divergence widened further: IC export value growth accelerated to 99.6% y-o-y while volume growth slowed to just 3.7%, pushing the price contribution to 92.6pp. In other words, China exported virtually the same quantity of chips in April as a year earlier, but at nearly double the ASP. This price inflation reflects the global AI-driven shortage of memory semiconductors (particularly HBM and high-specification DRAM) rather than a significant shift in China's productive capacity.

The contribution to headline export growth is correspondingly large. ICs contributed 4.9pp to China's 14.1% headline export growth in April, of which the price effect alone accounted for 4.5pp. On the export side, we expect the IC price tailwind alone would contribute 3.7-4.4pp to overall export growth, comprising 43-51% of our full-year export growth forecast. On the import side, projected 24-30% IC import value growth would contribute approximately 4.3-5.4pp to overall import growth, representing 32-40% of our 13.4% full-year import forecast. As such, AI-related trade flows now constitute the single most important swing factor in China's trade balance, and the semiconductor price cycle has become a first-order determinant of the trajectory.

The IC price tailwind is unambiguously positive for China's export growth rate. However, examining the same price surge through the lens of absolute trade balance increments reveals a more complex picture, and one that distinguishes the AI boom fundamentally from the "new three" export cycle.

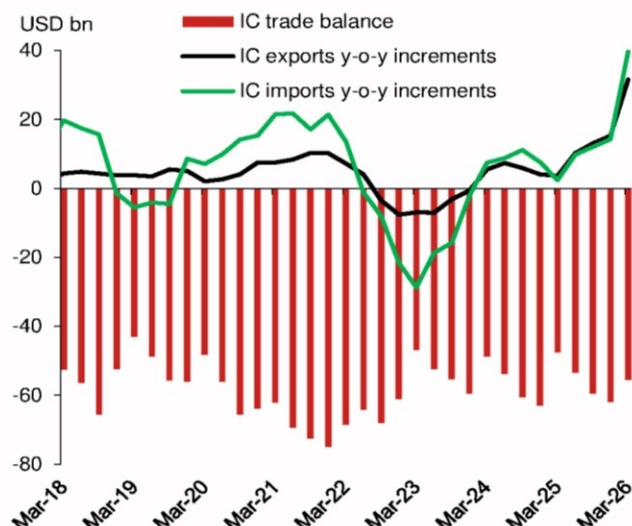
Fig. 11: Growth of integrated circuit exports surged to 100% y-o-y in April, with a huge divergence between value growth and volume growth



Note: 2026 data are as of April.

Source: General Administration of Customs, Nomura Global Economics

Fig. 12: China still runs a sizeable deficit in trade of integrated circuits



Source: General Administration of Customs, Wind, Nomura Global Economics

The net importer caveat: a structural contrast with the "new three"

Unlike the "new three" export boom (EVs, lithium-ion batteries, solar panels) where China is a dominant net exporter and rising prices directly improve terms of trade, the AI/IC boom operates through a fundamentally different mechanism: China remains a large net importer of ICs, and the current chip price surge is simultaneously inflating both sides of the ledger.

As of Q1 2026, China still runs a USD55.5bn quarterly deficit in integrated circuits (Figure 12). While this represents a meaningful narrowing from the 2021 peak of approximately USD75bn per quarter, the deficit remains substantial. More importantly, the trajectory reversed in Q1 2026: after four consecutive quarters in 2025 during which the IC trade deficit narrowed on a year-over-year basis, the deficit widened by USD8.1bn year-on-year in Q1 2026, from USD47.5bn to USD55.5bn.

This reversal may sound counterintuitive given that IC export growth (77.5% y-o-y) far exceeded import growth (45.0%) in Q1. The resolution lies not in growth rates, but in the asymmetry of absolute value bases. IC imports carry a significantly larger absolute base: Q1 2025 IC imports of USD88.3bn were 2.2x the export base of USD40.9bn. Even with a much higher export growth rate, the absolute increment on imports (USD39.7bn) exceeded the absolute increment on exports (USD31.6bn), widening the deficit by USD8.1bn year-over-year in Q1.

This dynamic carries an important implication for China's overall trade balance. The AI boom is simultaneously the largest single contributor to both export growth (4.9pp in April) and import growth (8.7pp in April). On a net basis, the vast IC price surge contributed more to import growth than to export growth, which is one reason why we forecast 2026 import growth (13.4%) to exceed export growth (8.6%), and why we expect the trade surplus to narrow modestly from its 2025 record. The AI super cycle benefits China's semiconductor supply chain participants through processing margins and value addition, but it weakens China's terms of trade.

The IC price tailwind is expected to persist through 2026, supported by continued hyperscaler capex acceleration and sustained chip price strength. However, downside risks centre on an earlier-than-expected AI capex slowdown or chip price normalisation in H2, which would trim the price-cycle layer's contribution and simultaneously narrow the IC trade deficit.

China's prolonged property bust

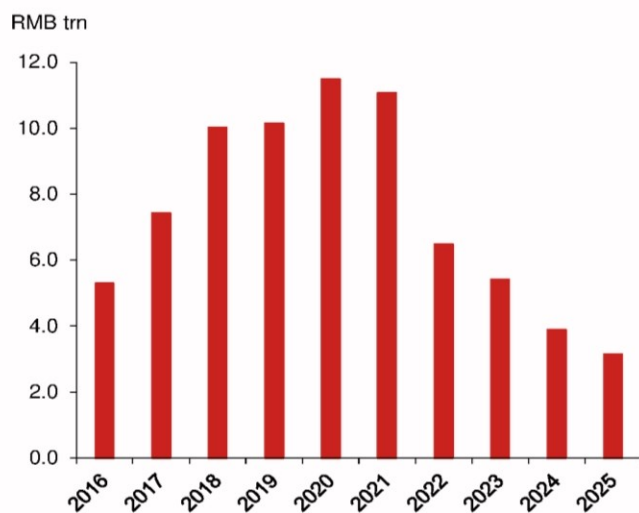
As mid-2026 is fast approaching, China's property market is about to enter its sixth year of correction. In five years, the property sector, which was China's largest sector, has contracted by more than half. Housing prices have already dropped by an average of 40% from their peaks in mid-2021. The collapse of property markets severely impacted China's economy by reducing demand, shrinking household wealth, slashing fiscal income, adding to mounting debt burdens of developers and local governments, indirectly creating massive overcapacity in some green sectors, and finally causing deflationary pressures. Despite recent green shoots in some top-tier cities, we expect a stark divide to emerge across regions. Large cities with more AI companies and talents are more likely to recover, while most small cities remain in a dire situation. Overall, we expect property distress in most parts of China to linger, due to entrenched expectations, deeply intertwined non-performing debt, and a lack of decisive policy solutions.

China's unprecedented property collapse

Since spring 2021, the property sector (which was China's largest sector), has contracted by more than half. The "Five Red Lines" to rein in property financing, the sweeping pandemic-led lockdowns, *mortgage boycotts*, and a confidence crisis have derailed property indicators to levels not seen in many years. From 2021 to 2025, new home sales by value, new home sales by floor space, housing starts, and property investment have plummeted by 50.3%, 44.9%, 70.4% and 39.8%, respectively, according to the NBS. Alternative data point to an even sharper decline in property sales. According to China Real Estate Information Corporation (CRIC), from the peak in 2020 to 2025, contract sales of the top 100 developers plunged by 72.7% in value terms (Figure 13) and 80.6% by floor space. Housing prices have dropped by an average of 40% from the peak in mid-2021, returning to levels a decade ago.

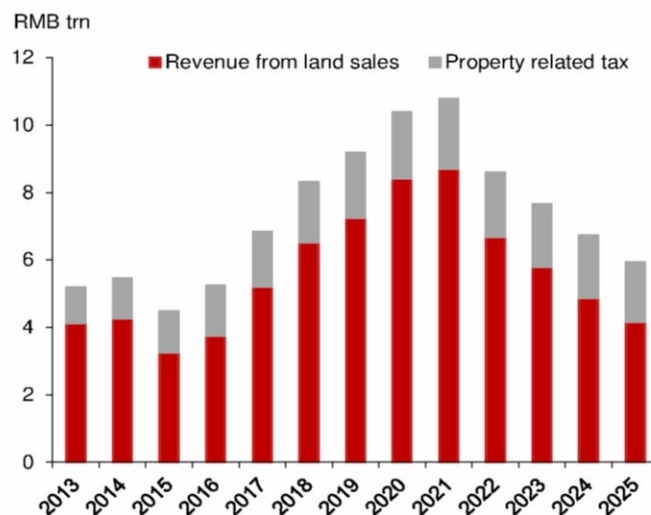
Despite some signs of recovery in the existing home markets in top tier cities, the property sector continued to fall rapidly during the first four months of this year, with new home sales in value, new home sales in volume, and housing starts dropping by 14.6%, 10.2%, and 22.0% y-o-y through April, respectively. The private sector CRIC data again point to an even more dismal picture with new home sales by value and volume falling 19.7% and 22.3% y-o-y through April, respectively.

Fig. 13: Contract sales value for top 100 developers



Source: CRIC, Wind, Nomura Global Economic.

Fig. 14: Local government revenue



Note: Revenue in 2024 is estimated using realized growth in July Ytd.
Source: Wind, Nomura Global Economics.

During the unprecedented property downturn, Beijing did not sit idle. Multiple rounds of conventional easing measures have been introduced, including cuts to mortgage rates and down payment ratios, relaxation of home purchase and resales restrictions, and reductions in home transactions taxes. Beijing has also tapped funding from both monetary and fiscal resources to support the delivery of overdue presold homes and facilitate state purchases of unsold housing inventory. However, all policy measures

implemented thus far have failed to stem the downward spiral in the property sector.

Impact on the economy

The collapse of property markets profoundly undermined the economy by stifling demand, eroding household wealth, and depleting fiscal revenues, while simultaneously exacerbating the debt burdens of both developers and local governments. Furthermore, the property slump triggered a cycle of intertwined non-performing debt, widespread distrust, sluggish credit growth, and falling bond yields, resulting in weak aggregate demand and persistent deflation.

Direct economic damage

At its peak in 2021, the property sector represented approximately 25% of national GDP. Despite the contraction observed since then, the sector still constitutes more than 10% of the national economy and continues to shrink at an annual rate of roughly 10%. As China's largest single industry, its collapse has severely curtailed investment activities and decimated the primary income sources for millions of jobs.

The negative wealth effect

Plummeting home prices have caused significant damage to the net worth of Chinese households. Prior to the crisis, property accounted for around *60% of household wealth*; consequently, a 50% drop in property values resulted in a 30% reduction in total household assets. While there have been green shoots of price stabilization in the secondary markets of major tier-one cities since the start of the year, these trends are likely to impose a negative spillover effect on smaller cities. This erosion of wealth has impaired both the capability and the willingness of consumers to spend, creating a substantial drag on domestic consumption.

Strained local government fiscal space

During the market peak, approximately 38% of fiscal revenues were generated by the property sector, primarily through land sales (Figure 14). Currently, two-thirds of that revenue stream has disappeared. The initial wave of the property collapse led to conventional cuts in fiscal spending. However, by mid-2024, *a second wave of shocks* began impacting the economy through more indirect channels. As land sale revenues evaporated and debt pressures mounted, an increasing number of local governments adopted predatory fiscal behaviors, such as charging exorbitant fees, imposing frequent fines, and utilizing aggressive tax collection tactics to bridge budget gaps, which ultimately forced Beijing to announce a slew of *policy stimulus in September 2024*.

Demand-driven deflation and low yield environment

The fallout of the property sector suppressed aggregate demand and pulled the economy into a deflationary spiral. Stagnant credit growth and slowing economic momentum have led to a persistent decline in long-term bond yields. While the government attempted to pivot investment toward the "new three" industries to find new sources of growth, this massive influx of capital resulted in significant overcapacity, crashing prices, and further financial losses. These deflationary pressures eventually compelled Beijing to launch an *anti-involution campaign*. However, the deflation itself only reached a *turning point in March* of this year following the onset of the Iran war.

The overhang of non-performing debt links

Prior to the collapse, China's property sector operated with excessive leverage. That explains why regulators introduced the stern "Five Red Lines" to curb property financing and de-leverage the sector. As a systematically important sector, property's collapse resulted in intertwined non-performing debt links across various economic entities, including local governments, banks, households and contractors. To rein in heightened credit risks, a RMB10trn debt swap program was introduced to lower interest payments of local governments, while a total RMB800bn of ultra-long central government special bonds were arranged to recapitalize state banks. However, limited policy support has been provided for the household sector and the upstream/downstream enterprises.

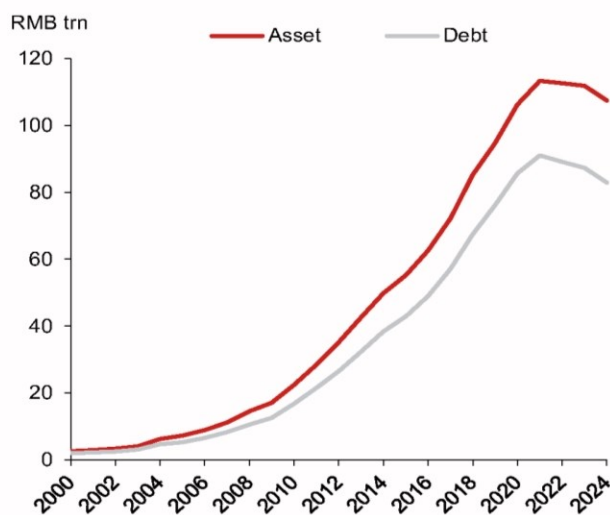
As China's property sector still heavily relies on the presales model, homebuyers face lingering risks of developers failing to deliver presold homes on schedule. Suppliers such as construction firms and construction raw material producers may experience delayed payment from developers and severe cash flow pressures. According to data from the NBS, the overall debt of developers reached RMB83trn in 2024 (the latest data available, Figure 15), and we estimate developers' debt owed to upstream/downstream enterprises was around RMB25trn, based on the PBoC data. As the property fallout persists, a broad scope of the economy is still battered by non-performing debt links, weighing on domestic

consumption and investment.

A stark divide is emerging across different cities

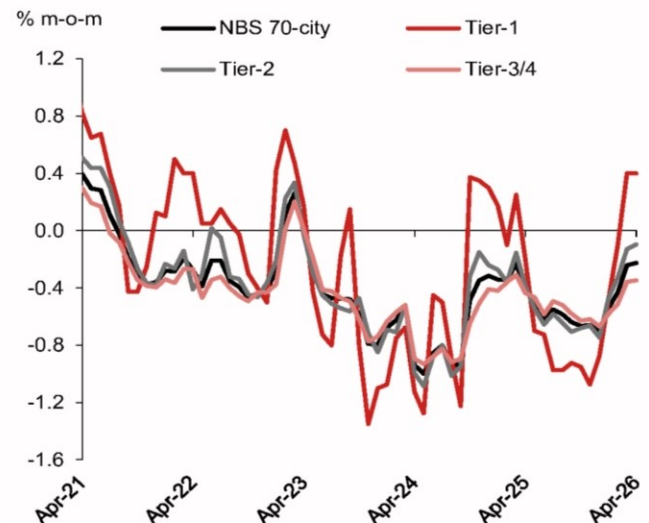
China's existing housing market is exhibiting signs of a cautious recovery, especially in some top-tier cities (Figure 16). Shanghai is under the spotlight, with its existing home sales volume reaching a five-year high and prices edging higher. We *believe* the latest easing in home purchase restrictions, state purchases of small and old homes, the uneven wealth effect of the stock market rally, and stabilized income for financial professionals amid surging stock trading activity are main reasons behind Shanghai's special recovery. As the *April Politburo* meeting vowed to press for efforts to be made to stabilize property markets, followed by a slew of easing measures announced by local governments, including Shenzhen, Guangzhou, Tianjin, Wuhan and Suzhou, some major cities are likely to join Shanghai in showing signs of stabilization. Cities with significant investment in AI-related sectors are also more likely to recover from the property malaise, while the number of such cities is scarce. The dire situation in most part of China, mainly small cities, is likely to persist, due to sustained population flows and deeply pessimistic expectations.

Fig. 15: Total asset and debt of property developers



Source: NBS, Wind, Nomura Global Economics.

Fig. 16: NBS existing home prices by city tier



Source: NBS, Wind, Nomura Global Economics.

The K-shape in labor markets

AI reshapes the labour market through two channels. 1) The displacement effect: AI directly substitutes human labour in specific tasks, particularly routine cognitive functions. This suppresses wage growth, displaces workers, and shifts the national income share from labour to capital. 2) The productivity effect: AI-driven automation lowers production costs, stimulates capital accumulation and aggregates demand. This efficiency dividend lowers prices, increases real consumer income, and creates economy-wide demand. Ultimately, the net impact depends on the balance between these forces. In the short term, however, the displacement effect dominates.

China might be perceived as the ultimate beneficiary of the AI revolution as the country, thanks to both the one-child policy and rapid economic growth, will face a shrinkage of 100mn in working-age population by 2035, according to estimates from the United Nations. However, the long-term cure of an AI boom, which may save on both white- and blue-collar labourers, could trigger an acute short-to-medium shock to consumption demand and social stability.

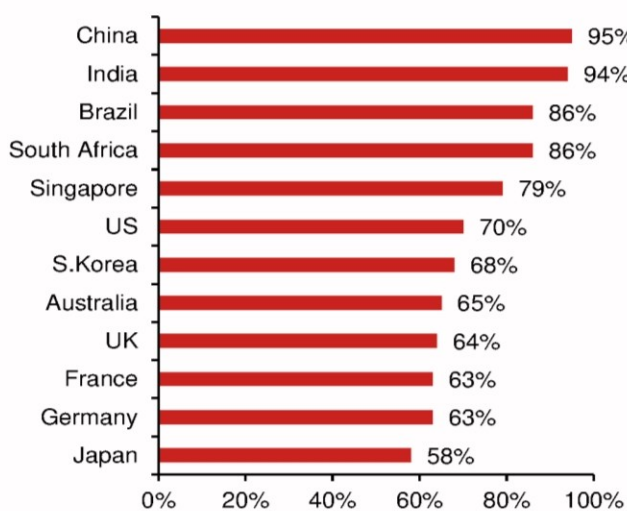
Instead of a seamless transition, the rapid integration of generative models could fracture the labour market into a “K-shaped” divergence. At the top, capital owners and AI augmented elites may capture unprecedented gains. At the bottom, however, AI could replace the routine cognitive roles that have so far absorbed millions of China’s college graduates. The disruption may pull the entry-level rungs off the corporate ladder and worsen the already double-digit youth unemployment rate.

The upper arm in the K-shaped labor markets

We think the primary beneficiaries are AI technology owners and highly skilled white-collar professionals. For senior managers, AI acts as a powerful productivity multiplier. By automating routine processing, the technology elevates the economic value of complex human judgment, allowing top-tier talent to capture massive wage premiums.

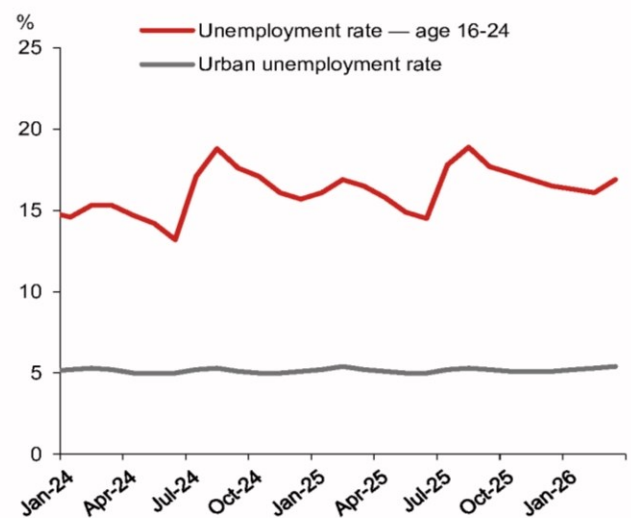
The 2025 AIGC Talent Employment Report by Zhaopin Research Institute and Peking University notes that average monthly salaries for NLP experts and algorithm engineers surged above RMB30,000, representing an 80% premium over traditional software development roles. *Boss Zhipin*, China's largest online recruitment platform, reported that 2025 AI-related job postings expanded by 74% in 2025, up from 37% in 2024.

Fig. 17: China ranks top for organizational adoption rate



Note: The study surveyed more than 48,000 people from 47 countries, with data collected between November 2024 and January 2025 using an online survey.
Source: KPMG, Nomura Global Economics.

Fig. 18: Elevated youth unemployment rate



Source: Wind, Nomura Global Economics.

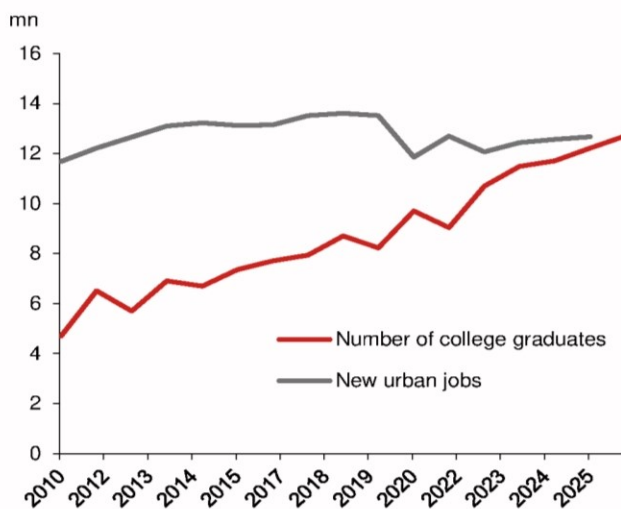
And the lower arm...

One report by Anthropic indicates that AI disruption is concentrated within five sectors: computer programming, finance, legal, customer service and arts/media. These industries share a structural vulnerability: core workflows rely heavily on standardized information

processing and rule-based execution. Amid declining headcount in these sectors, entry-level positions are the most exposed, placing recent graduates at the epicentre of this labour friction. This reduced demand threatens to exacerbate youth unemployment. The lower arm of the K-shape may be especially marked in China for three reasons:

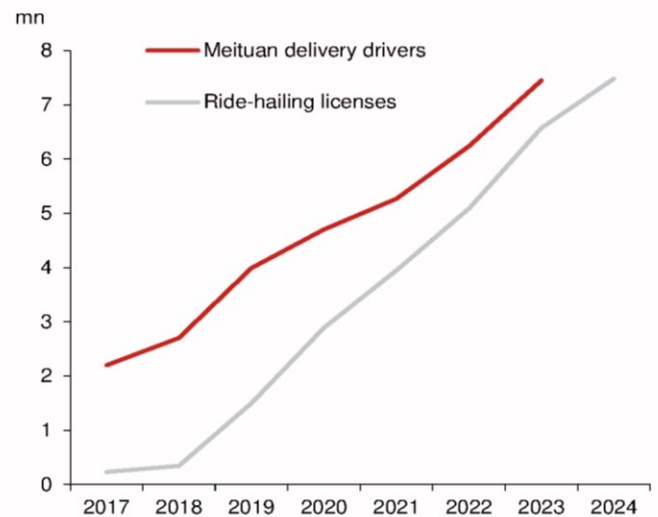
- First, AI adoption has been exceptionally rapid in China compared with most other countries, including the US. According to KPMG, China's organizational adoption rate of AI ranks first globally (Figure 17). According to *2026 Stanford Index Report*, the proportion of employees regularly using AI also leads the world. This accelerated adoption may expedite the pace of job displacement.
- Second, the youth unemployment rate has already been quite elevated, with the latest reading at 16.3% in April 2026, significantly above the 5.2% urban unemployment rate (Figure 18).
- Third, owing to Beijing's heavy investment in higher education, Chinese nationals' strong inclination in investing in degrees, and challenging job markets in recent years, China's youth have flooded universities (including graduate schools). Last year, the number of newly minted university (including graduate school) graduates rose to a record high at 12.2mn, and this year the number is poised to rise further to 12.7mn (Figure 19). As the youth equipped with college diplomas prefer to avoid factory work, AI may be especially damaging because those white-collar jobs, especially entry-level ones, are precisely those most exposed to AI.

Fig. 19: Influx of college graduates



Source: Wind, Nomura Global Economics.

Fig. 20: The growing gig economy



Note: Meituan stopped reporting number of delivery drivers since 2024.
Source: Meituan, Ministry of Transport, Nomura Global Economics.

The rapid rise of STEM graduates from less than 0.7mn in 2000 to an estimated 4.5mn in 2025 provided an “engineer dividend”, pushing China up the global value chain. However, China's education system has long been highly biased towards rote memorization and algorithmic problem-solving at the expense of creative thinking. Consequently, university graduates may not be well suited in an AI-augmented economy where routine cognitive execution is automated, and the labour premium shifts toward unstructured problem-solving.

The AI impact on the gig economy

As AI automates routine tasks, the displaced workforce might be forced into “downward mobility”, migrating into the gig economy or low-skill service roles. Historically, flexible employment functioned as China's primary labour shock absorber. However, as this sector swells with former white-collar workers, these platforms face severe saturation, suppressing real hourly wages and diminishing the marginal returns of flexible work.

Corporate micro-data highlight this surge, with registered DiDi drivers and Meituan couriers expanding rapidly between 2020 and 2025 (Figure 20). In December 2025, the

Ministry of Human Resources and Social Security (MHRSS) stated the flexible workforce exceeded 200mn, while industry research cited by Sina estimated the scale at 240mn by end-2024. Against a total employed population of 734mn (470mn urban) reported by the NBS, flexible workers now account for roughly 30% of total national employment and a staggering 50% of the urban workforce.

Blue-collar workers face delayed but inevitable exposure

While blue-collar workers face less immediate exposure, they are not immune. Physical automation currently lags digital automation due to the hardware hurdles of unstructured environments and the relatively low cost of human manual labour in China. However, capital-intensive physical automation is accelerating. Autonomous vehicles and delivery drones are moving rapidly to mass commercial deployment. According to the CFLP, 33,000 short-range autonomous delivery vehicles were operating on roads by end-2025, and unmanned robotaxis are projected to reach 14,000 active units by end-2026.

The geographic K-shape amid AI boom and property bust

AI is set to reshape China's economic landscape. The question of which cities will benefit most from the AI boom is not merely a matter of AI adoption: It is more about which cities will become the centres of LLMs, top AI talent, compute, and data. Here we may borrow the concept of "Sovereign AI", which, according to NVIDIA's CEO Jensen Huang, is whether a country can build and train AI models on its own computer infrastructure, use its own local data, leverage its own talent and expertise, and align AI with its national values, laws, language, culture, and security needs instead of relying on foreign hyperscalers.

In our view, while the 2020-21 property boom acted as a broad-based wealth creator that lifted provincial and lower-tier cities through rising land and property values, the AI supercycle is a centralizing event. Success in this new AI era is gated by high-barrier scarcity assets including massive computing density, proprietary data pools, and a pool of top talent, which are highly concentrated in a handful of existing top-tier cities. In this landscape, a few cities could act as the landlords of the digital age, while the rest of the country increasingly pays "rent" to these intelligence hubs. In coming years, we may observe an evident "siphon effect" with these AI hubs taking much of the national gain of AI development and even siphoning resources from the rest of the country.

Why could wealth be highly concentrated in a few cities in the AI economy?

Unlike the previous real estate and infrastructure booms, which acted as broad-based wealth distributors across the whole of China, or even the "New Three" green technologies (EVs, batteries, and solar), which allowed for massive investment in dozens of cities, the AI economy is a relentless value concentrator. By analysing the components of the AI stack from LLMs and advanced semiconductor design to AI talents and Embodied AI, we can map out how these high barriers could funnel the nation's resources into a small circle of elite hubs, primarily Beijing, Shanghai, Shenzhen, and Hangzhou, which could be called "smart cities", leaving "legacy cities" structurally sidelined (see [Box 3](#)).

The prohibitive barriers of LLM development and the Maas economy

Developing foundation LLMs requires a staggering convergence of data, capital, and computing infrastructure. First, there is a high scale requirement. To train competitive foundation models, a company must command tens of thousands of advanced GPUs operating in low-latency synchronization, alongside vast, cleaned proprietary data pools. Second, it requires a highly advanced network architecture and direct access to state-backed research infrastructure. Consequently, the dominant developers of foundational models such as Baidu, ByteDance, Zhipu AI, Moonshot AI, and DeepSeek are almost exclusively headquartered in Beijing or Hangzhou.

More concentration of Maas than Saas

Model-as-a-Service (MaaS) is a cloud-based delivery model where pre-trained AI and machine learning models are provided as on-demand, accessible services, typically via APIs, with pay-as-you-go or consumption-based pricing. It's the AI equivalent of Software-as-a-Service (SaaS), but focused on models rather than full applications. Users can invoke powerful AI capabilities without building, training, hosting or maintaining the underlying models and infrastructure themselves. While both models encourage some level of offshoring or reduced in-house technical headcount, MaaS might have a much stronger suppressive effect on local hiring compared to SaaS. When an enterprise in a tier-3 or tier-4 legacy city adopts an AI agent to optimize its local operations, it pays a recurring subscription fee to these coastal platforms. Wealth generated by local industrial activity is thus continuously siphoned out of low-tier cities and deposited directly into the corporate treasuries of those smart cities.

The high barriers of AI chip design and fabrication

While China invests heavily in semiconductors at the national level, advanced AI chip design and fabrication remain extremely concentrated in just three coastal powerhouses: the Yangtze River Delta (Shanghai), the Pearl River Delta (Shenzhen) and Beijing. For most second- and third-tier cities, competing meaningfully in this space is exceptionally difficult due to deep structural barriers.

- Ecosystem concentration is the biggest obstacle. Decades of development have created self-reinforcing clusters with superior infrastructure, suppliers, research institutes and downstream industries. Shanghai leads in advanced foundry operations via SMIC, Shenzhen dominates fabless design (anchored by Huawei), and Beijing drives R&D and policy. Inland cities such as Xi'an, Wuhan, Chengdu, and Chongqing

lag, mostly limited to lower-end manufacturing or niche roles.

- Capital intensity adds another prohibitive layer. A competitive fab requires tens of billions of dollars and years to build, with significant scale needed for viable economics. Only projects backed by central government priority or the National Integrated Circuit Industry Investment Fund ("Big Fund"), which favour established hubs, have real prospects.
- Talent shortages further widen the gap. Elite engineers prefer major hubs for better pay, careers and ecosystems, leaving peripheral cities with shallow pools and limited appeal. Supply-chain constraints compound the issue: scarce high-end equipment, materials and technologies are prioritized for national projects in core clusters.

In summary, for most Chinese cities, barriers to AI chip design and fabrication are not just high but prohibitive without exceptional central backing and long-term ecosystem building. A few superstar cities drive frontier progress, while the rest support legacy or lower-tier roles.

Box 3: Smart versus legacy cities in the AI era

The smart cities: High-margin wealth, equity gains, and corporate surpluses are heavily concentrated among platforms and foundational AI chipmakers in tier-1 cities. Consequently, these leading municipal governments are securing stronger fiscal revenues, robust returns on state-backed guidance funds, and a resilient inflow of demand for local commercial and premium residential real estate.

The legacy cities: In stark contrast, most other regions are increasingly reduced to client status under the Model-as-a-Service (MaaS) economy. Instead of generating local white-collar wages that circulate within regional boundaries, these cities face a drain of capital to the coast. This leaves their local property sectors stranded as low-liquidity assets, heavily pressured by balance-sheet recession dynamics and an accelerating hollowing-out of their young, highly educated populations.

Aggregation of elite talent

The AI economy operates on a highly unequal labour structure that may exacerbate regional polarization. Unlike traditional manufacturing or service sectors that scale linearly with employment, AI advancement is driven by a small group of elite researchers, machine learning architects, and software-hardware co-designers. These premium professionals require proximity to academic centres (e.g., Tsinghua and Peking Universities in Beijing, and Zhejiang University in Hangzhou) and pre-existing tech clusters. They cannot be encouraged to migrate to lower-tier cities through simple fiscal subsidies. This could create a stark bifurcation of human capital across China, with the highly compensated AI elites staying in those intelligence hubs and driving up luxury retail sales and high-end property values there. Meanwhile, legacy cities may suffer from "brain drain", losing their educated youth to the coast and facing deflationary wage compression as entry-level white-collar roles in their home regions are automated by the very models developed in the hubs.

Embodied AI: The physical-digital feedback loop

Embodied AI, which is the integration of artificial intelligence into physical machinery, robotics and autonomous systems, represents the next frontier of industrial value creation. Successful embodied AI cannot be developed in isolation; it requires a tight, reflexive feedback loop between AI model architects and physical manufacturing supply chains. Shenzhen, together with the broader Greater Bay Area, dominates this space, pairing the computational design power of its tech giants with the world's most agile hardware prototyping ecosystem. Hangzhou has also become a major hub for its AI+ strategy. Meanwhile, legacy manufacturing cities in China's interior are increasingly forced into becoming subcontractors or users of these systems.

Cities benefiting from the AI boom

We believe the four top-tier cities (Beijing, Shanghai, Hangzhou and Shenzhen), could gain the most from this AI boom, acting as the primary recipients of the "siphon effect", extracting talent and resources from the rest of the country through the MaaS economy.



Several tier-2 cities are benefiting from their chipmaking sectors, while some other interior cities may reap a bit of revenue from their data centres.

Beijing remains the undisputed capital of China's AI ecosystem

As of early 2026, Beijing leads the nation with over 2,500 AI firms and the highest number of registered large AI models (183). It is the headquarters of some top AI providers, including leaders like Baidu (Ernie), ByteDance (Doubao), and frontier labs such as Zhipu AI and Moonshot AI. The city is also the centre for advanced logic chip design, with key players such as Cambricon.

Shanghai: The silicon and fabrication nexus

If Beijing is the “mind”, Shanghai is the “body” of China's high-end silicon industry. Shanghai's Zhangjiang Hi-Tech Park is the global centre of AI chip fabrication and advanced packaging. It is home to SMIC, which is doubling its capacity at advanced nodes to meet the surge in domestic AI demand. The city is also a design powerhouse, as it hosts domestic GPU leaders like Muxi Technology and Biren Technology, both of which have seen sharp growth in 2025-26.

Hangzhou: The hub of both LLMs and AI+

Hangzhou has perfected the MaaS economy, turning intelligence into a recurring utility fee. As the home of DeepSeek and Alibaba (Cloud and T-Head), Hangzhou earns AI subscription revenue from provincial SMEs. When a factory in a tier-3 city uses an AI agent to optimize its supply chain, the liquidity flows directly to Hangzhou's cloud balance sheets. Humanoid and bionic robots are a flagship focus of Hangzhou, aligning with national goals for “Robot+” and embodied intelligence to address labor shortages, boost manufacturing, and achieve tech self-reliance.

Shenzhen: The chipmaker and the hub of embodied AI

Shenzhen thrives on the convergence of hardware and intelligence of the AI era. The home of Huawei (HiSilicon), Shenzhen dominates the edge-computing and NPU (Neural Processing Unit) market for robotics, drones, and autonomous systems. Shenzhen is the leader in “embodied AI”, where specialized industrial data are compounded into a competitive advantage that maintains its status as a key AI centre.

The tier-2 beneficiaries

These cities are the only tier-2 mega-cities that have avoided the “Legacy Trap” by building specialized “Physical AI” clusters. However, their status as beneficiaries is more “industrial” than “sovereign”.

- Hefei: Leveraging the “Hefei Model” of state-backed equity, it has secured a vital role in robotics and memory fabrication (e.g., CXMT). It acts as a vital “Hardware Node”, though the highest-value IP rents often flow back to Beijing.
- Wuhan: Wuhan has successfully pivoted its “Optics Valley” into an AI-plus optics and sensor hub. Its electronic manufacturing sector grew by a strong 62.4% in early 2026, securing its place as a specialized node for autonomous driving and sensor technology.
- Suzhou: Suzhou is emerging as a leader in service robots, with output increasing by 6.0 times year-on-year by early 2026. It has successfully integrated AI into its high-end equipment manufacturing base.

The compute and data centres outside intelligence hubs

These regions are the primary hosts of the “East Data, West Computing” initiative. While they see billions of RMB in infrastructure investment, their benefit is limited. These facilities are low-labour-intensity nodes. They require massive power but very few onsite staff. While they generate tax revenue from electricity and server hosting, they do not create the white-collar job growth and high revenues from those AI model providers, which are necessary to reboot their local property markets. For these cities, AI may create seemingly impressive GDP numbers that fail to generate local residential demand.

Economic and policy implications of the two K-shapes

The AI boom is real, and it provides support to China's economy and stock markets. However, the scale may not be large enough, and there are leakages of AI investment through imports. The AI boom is also likely to exacerbate the two existing intertwined K-shapes, which carry macroeconomic costs via denting aggregate demand. We believe that the AI boom alone is unlikely to resolve China's economic woes resulting from the property bust; deflation over the past few of months was mainly due to external shocks, and as Beijing, in our view, has no scope for complacency, it might need to consider stepping up policy support to stabilize growth.

K-shaped implications on consumption

This K-shaped divergence poses a structural drag on domestic consumption. The "upward arm" (capital owners, elites) captures the productivity dividend but exhibits a structurally low marginal propensity to consume (MPC). Conversely, the "downward arm" (graduates, gig workers) boasts a high MPC and drives mass-market consumption. As AI displaces these workers and suppresses wages, their purchasing power is eroded. Faced with acute financial insecurity, this cohort delays major life milestones, such as marriage and childbirth, creating a persistent deflationary drag on the broader economy.

Implications of the AI-led geographic decoupling on the property sector

The AI supercycle functions as a powerful value concentrator, driving a decoupling, in which asset values and fiscal health diverge sharply along geographic lines. The bifurcation has become especially evident as China remains in a long-lasting property bust, which had a harder impact on the low-tier cities, even due to both the oversupply during the past decade, demographic declines, and the ongoing population flow from low- to high-tier cities.

By siphoning resources from the legacy interior to coastal intelligence hubs, the AI supercycle could further worsen a geographical imbalance already in place. As the fruits of the AI boom are mainly reaped by a few "smart" cities, especially the four top-tier ones, a real property market recovery may only occur in those cities. Most cities have lifted restrictions on home sales and purchases since late 2022, making a full-blown recovery of the national property market even more difficult, in our view. Because most Chinese cities appear unable to retain the fruits of AI-driven prosperity, we believe aggregate domestic demand will eventually be suppressed over the medium- to long term.

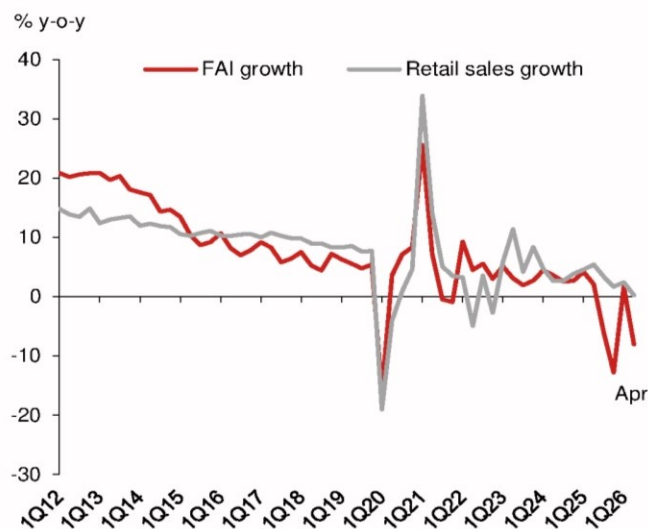
April activity data prove highly dismal

On 18 May China's NBS released its *April* activity data, with broad-based disappointment. Growth in industrial production, retail sales and fixed-asset investment (or lack thereof) slumped to 4.1%, 0.2% and -8.0% y-o-y in April from 6.1%, 2.4% and 1.7%, respectively, in Q1 (against market expectations at 6.0%, 2.0% and 1.7%). Once again, worsening domestic demand (Figure 21), in combination with elevated 14.1% y-o-y export growth in April, lends strong support to our view of *a great divide*. The divide also explains why, despite a rise in stock indices and an AI boom, China's *credit demand* has been so weak and its 10y CGB yields have dropped by 10bp so far this year despite no policy rate cuts by the PBoC and a rise in headline inflation readings.

Beijing's policy response to the two K-shapes

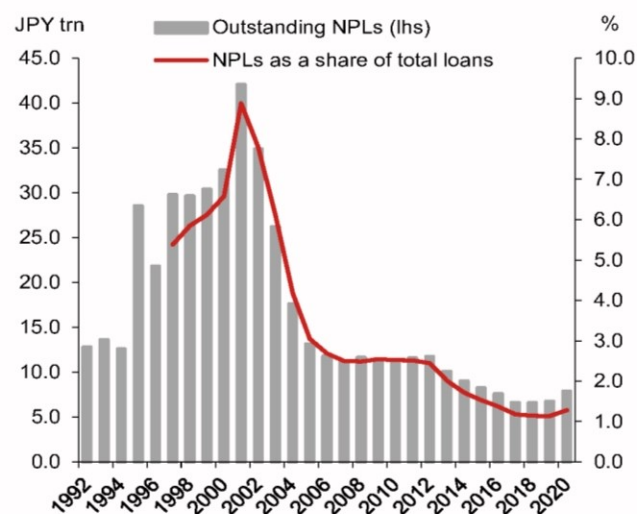
Both markets and Beijing's policymakers cannot assume the new AI economy is the miracle cure for China's economic challenges. Over the past couple of years, the "new three" sectors (EV, battery and solar) had provided similar optimism, but they failed to meet expectations and even made deflation significantly worse due to excess capacities and fierce price cutting. We expect the ongoing AI boom to do a better job – at the very least we do not expect it to directly lead to worse deflation, as investment in AI and chips have high barriers. However, having too much optimism in the AI sector for stabilizing growth and rescuing the economy from the property bust may be somewhat unrealistic. We maintain our below-consensus Q2 GDP growth forecast of 4.1% (Consensus: 4.7%), and we believe some of our competitors might be inclined to revisit their GDP growth forecasts.

Fig. 21: Falling growth in consumption and investment



Source: Wind, Nomura Global Economics.

Fig. 22: NPLs at Japanese banks



Source: Financial Services Agency, Nomura Global Economics.

Policy response to the export-property great divide

As argued in our “*Great divides*” report (the divide between strong exports and weak new home sales), Beijing is stuck in a dilemma. Beijing needs export growth to offset the crashing property market, but the resulting staggering trade imbalance is unlikely to be sustained. It’s a dilemma that Beijing will have to resolve to avoid sudden and disorderly unwinding, and *we don’t expect RMB appreciation to bring in capital and reflate the Chinese economy*.

Policies for addressing the two K-shapes

Faced with the two intertwined K-shapes, we think Beijing may consider treading cautiously. Beijing could push forward its AI+ plan and channel an increasingly larger amount of resources into the AI sector. In the era of G2, Beijing might have run out of options. However, we think Beijing’s policymakers may prefer to resist the complacency that can emerge from a great boom like the current AI one. Beijing might also consider closely tracking the divergence between the upper and lower arms of the two K-shapes and taking some precautionary steps to prevent the gaps between them from becoming too big. Beijing may introduce policies to support more local government “sovereign AI” to help lower-tier cities share the AI boom benefits. They could improve the social safety net (see *Box 4*) to mitigate the negative repercussions from those unemployed and underemployed workers due to either the property bust or the AI boom. In addition, Beijing may slow the pace of adoption of some technology such as FSD, which could crowd out even blue-collar jobs.

Last but perhaps the most important, despite the AI boom, Beijing could eventually still be impelled to significantly step up policy measures to clean up the property sector. We believe that at some point Beijing may consider taking more decisive steps to clear the nonperforming loans (NPLs) at financial institutions and nonperforming debt between developers and other non-financial entities. Back in 2002-04, more than a decade after the Japanese property bubble burst, Japan’s government and the BOJ employed an aggressive strategy to force major banks to accurately classify bad loans, write them off aggressively, and halve their NPL ratios by utilizing strict accounting standards, public capital (including BOJ funding) injections, and expanded bad loan purchasing (Figure 22). We believe Beijing may learn some lessons from Japan’s experience in this regard. The geographic K-shape could also result in Beijing speeding up fiscal reform to provide local governments with a more solid tax base after they lose more than 80% of their revenue from land sales.

Box 4: Exacerbation of a bifurcated pension system

AI displacement threatens to severely exacerbate China's already bifurcated pension system. Currently, government retirees (7.0% of total retirees) retain most of their pre-retirement wages. Corporate employees (38.0%) lose around half. The rural elderly and former migrant workers (55.0%) suffer a severe income plummet, averaging pension benefits of just RMB244 per month (roughly USD 1.1/day), which is only 7.3% of corporate and 3.8% of government pensioners (Figure 23).

This extremely low replacement ratio (around 10% for migrant/flexible workers) forces a sharp income decline at retirement, destroying consumption demand. According to the "permanent income hypothesis," the expectation of this decline compels workers to save more and consume less prior to retirement.

The significant influx of workers into the platform economy worsens this dynamic. Flexible workers are typically excluded from formal urban pension systems, relying on voluntary residential programs. While official coverage appears broad, actual contribution rates are alarmingly low due to income instability. A *Peking University survey* of 30,000 delivery workers conducted in late 2024 found less than 10% were willing to participate at current contribution rates.

Consequently, Beijing faces escalating pressure to subsidize this shortfall. In 2024, fiscal pension subsidies reached RMB1.9trn (6.6% of public budget expenditure), but resources skew heavily toward formal retirees. The rural elderly captured only 23% of these funds, equating to a per capita subsidy of RMB196 per month, in stark contrast with RMB2,345 for government retirees and RMB540 for enterprise employees.

Fig. 23: Pension benefits and fiscal subsidies for three retiree cohorts

	Urban employee basic pension (UEBP)		Urban and rural resident basic pension scheme (URRBP)
	Government	Corporate	
Retiree population (mn)	23	125	180
Overall pension benefits (RMBtrn)	1.76	4.99	0.53
Per capita monthly pension benefits (RMB)	6,243	3,342	223
Overall fiscal subsidies (RMBtrn)	0.667	0.825	0.435
Per capita monthly fiscal subsidies (RMB)	2430	552	201
Replacement rate*	~85%	~45%	~10%

Note: URRBP are mainly rural elderly. The table shows the latest data for 2024.

Source: Ministry of Finance, Ministry of Human Resources, Nomura Global Economics.

Policy measures for workforce protection

The 15th Five-Year Plan explicitly aims to cap the unemployment rate at 5.5% and manage AI substitution impacts. The Ministry of Human Resources and Social Security (MHRSS) has vowed to establish robust risk-monitoring mechanisms tracking employment shifts. However, explicit fiscal incentives, tax mechanisms, or centralized reskilling subsidies tailored to AI displacement remain pending.

In the absence of top-level macro policy, the judiciary is acting as a guardrail. In April 2026, the Hangzhou Intermediate People's Court ruled against a technology firm that fired a worker replaced by generative AI. The court reasoned that enterprises cannot illegally shift the inherent costs of technological iteration entirely onto the worker. Consequently, while these labour protections secure existing jobs, they may inadvertently make firms more reluctant to hire new workers amid the ongoing technological transition.

Appendix A-1

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