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China Economics

The Macro-Micro Disconnect of AI-Driven New Economy

CITI'S TAKE

China's AI-driven new economy is catching up with the global frontier, fueling a tech-heavy equity rally. For GDP accounting, the new economy is now macro-relevant and may fully offset property's drag. The promising macro story, however, has failed to lift micro sentiment. AI may raise the risk of "jobless growth", deepening the macro-micro disconnect. Our estimates – conservative relative to the IMF's – suggest AI could impact 31% of jobs in China, with 9.6% (c. 70mn jobs) facing direct displacement risk and 21.4% seeing productivity augmentation but also more competition. The services sector and young people are most exposed. To avoid the Turing Trap, policy need to prioritize augmentation over substitution, strengthen the social safety net, and ensure equitable redistribution of AI's gains. Improving work-life balance is a key channel to translate AI's productivity gains into domestic consumption. AI governance is a critical, yet underappreciated, factor for AI investments in China.

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China's new economy is playing a great catch-up with the global frontier. The performance deficit in LLMs against the US is narrowing, especially post the "DeepSeek moment". And the government is doubling down on the push for hardware innovation, particularly in semiconductor chips. This has fueled a heavily tech-driven equity market rally. From a macro perspective, the new economy's growth contribution may now fully offset the drag from the property sector. The promising macro story, however, has failed to lift micro sentiment.

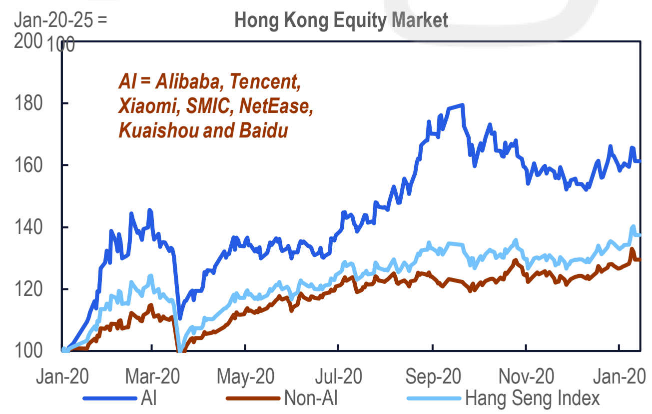
The AI-driven new economy may raise the risk of "jobless growth", partly responsible for the entrenched macro-micro disconnect. We estimate that 31.0% of employment has high exposure to AI in China, of which, 9.6% (c. 70.3mn jobs) faces a direct risk of displacement, while the remaining 21.4% may see productivity augmentation but also fewer available jobs. The services sector and young people are particularly exposed. This presents a higher-level challenge, as the services sector—a traditional cushion for stagnant manufacturing employment—is now also under pressure from disruptive technologies. Early warning signs are beginning to surface.

Policy should prioritize augmentation over substitution to avoid the Turing Trap. This aligns with top-level guidance, including the CEWC's explicit call to "improve AI governance" and the 15th Five-Year Plan's (FYP) pledge for "the all-round development of human (人的全面发展)". The MoHRSS just pledged to address AI's impact on jobs (Xinhua, Jan 27th). To navigate the AI transition, strengthening the social safety net and labor protection is now more urgent than ever. Improving work-life balance via fewer working hours and more holidays could be a key channel to translate AI's productivity gains into domestic consumption.

New Economy: The Great Catch-up

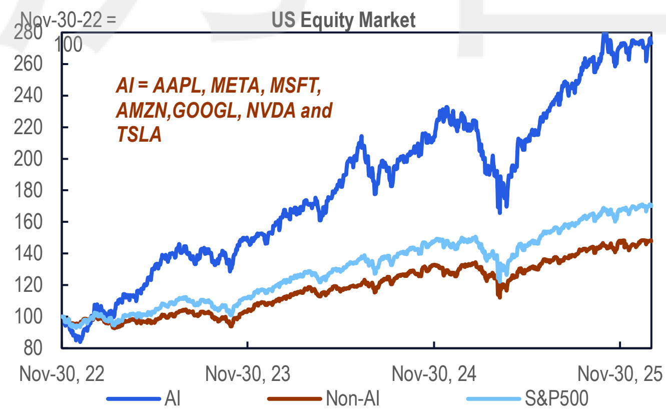
China's new economy is rapidly closing the gap with the global frontier. What follows the release of DeepSeek-R1 in January 2025 was a tech-led equity rally in the HK/China markets (Figure 1). New economy-related names (Alibaba, Tencent, Xiaomi, SMIC, NetEase, Kuaishou and Baidu) led the markets for the most of 2025, mirroring the US market's reaction to ChatGPT's launch in November 2022 (Figure 2). This outperformance was underpinned by fundamentals, as these firms delivered superior revenue and profit growth compared to the rest of the market amid a lackluster macro environment (Figure 3 and Figure 4).

Figure 1. A tech-led equity rally in the HK/China markets followed the release of DeepSeek-R1



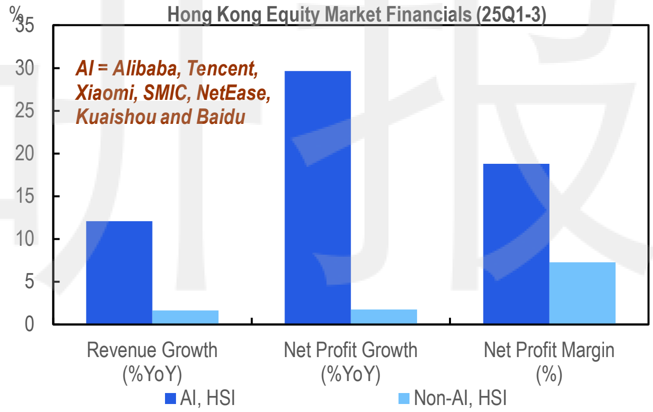
Source: Wind, Citi Research

Figure 2. It mirrored what happened in the US market post ChatGPT launch



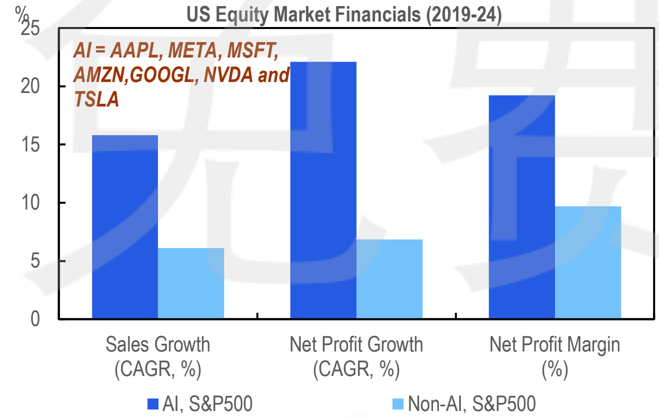
Source: Wind, Citi Research

Figure 3. New economy-related names delivered better financials than non-AI firms in the HK market



Source: company data, Wind, Citi Research

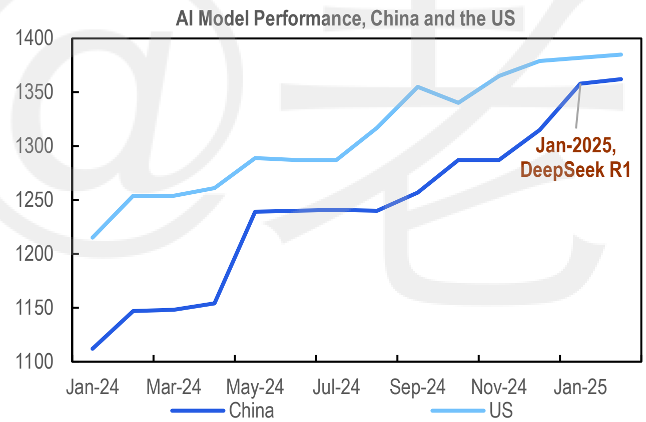
Figure 4. … just like large-cap techs in the US market



Source: company data, Wind, Citi Research

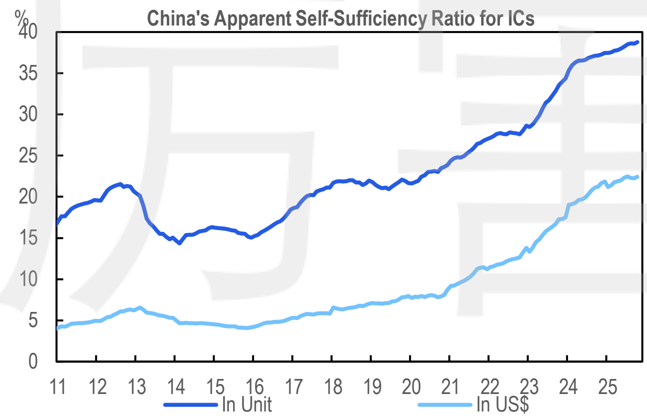
The great catch-up in the equity market is well supported by the great catch-up in technology. China's performance gap in LLMs vs. the US has narrowed rapidly, catalyzed by releases like DeepSeek-R1 (Figure 5). This, combined with a cost advantage, creates competitive inroads, as evidenced by DeepSeek's adoption in Africa (Bloomberg, Oct 22nd, 2025). The hurdle from hardware could be loosening as well. We calculate that China's apparent self-sufficiency ratio for ICs has risen to 38.7%, from 15.0% in 2015, in volume terms, and the progress is similar in US$ terms (Figure 6). With sustained policy support for the semiconductor sector, further progress appears likely to us.

Figure 5. The performance gap in LLMs vs. the US has narrowed, catalyzed by releases like DeepSeek-R1



Source: Chatbot Arena, Stanford, Citi Research

Figure 6. The hurdle from hardware could be loosening with progress on chip self-sufficiency

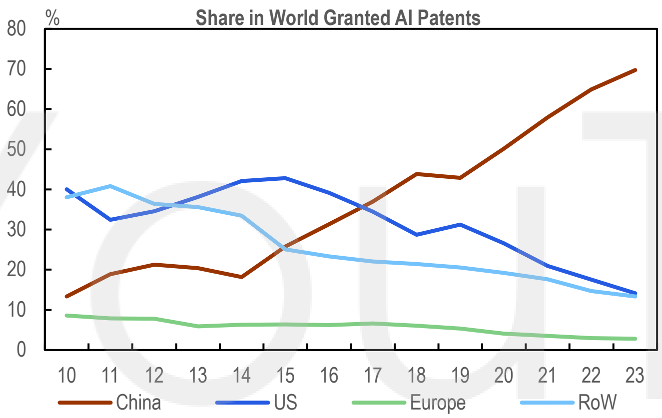


Note: Apparent Self-Sufficiency Ratio = (Domestic Production - Non-processing Exports) / (Domestic Production - Non-processing Exports + Imports)

Source: China Customs, NBS, Wind, Citi Research

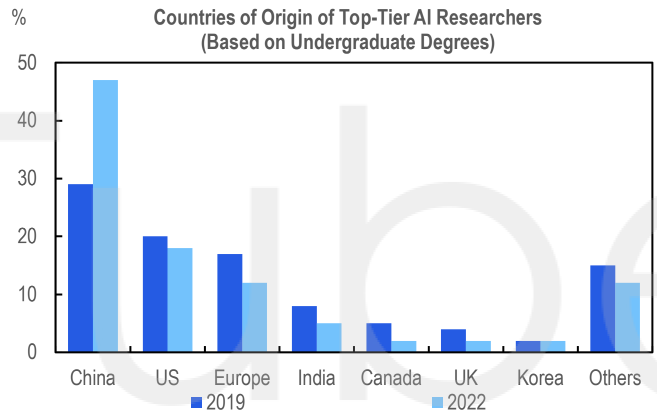
China has the potential to become a global center for the "AI+" economy. As a measure of (interim) innovation outcome, the country accounted for 69.7% of global AI patents vs. 14.2% for the US in 2023, laying a strong foundation for future breakthroughs (Stanford AI Index Report, 2025,Figure 7). What's behind that development is that China has surpassed the US as the top producer of AI talent, with Chinese-born researchers making up nearly half of the world's top-tier AI researchers (MacroPolo's Global AI Talent Tracker 2.0, 2023, Figure 8). This is complemented by a robust industrial ecosystem, which facilitates rapid AI adoption. More than half of all new industrial robot installations globally now happen in China (Figure 9). Further, substantial investment in energy infrastructure provides the necessary power for large-scale AI deployment (Figure 10). These factors suggest China could be approaching the inflection point of the productivity J-curve for new technology.

Figure 7. China accounted for 69.7% of global AI patents vs. 14.2% for the US in 2023



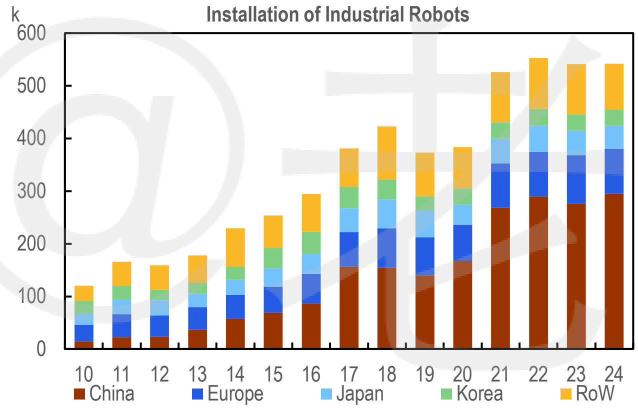
Source: Stanford, Citi Research

Figure 8. China has surpassed the US as the top producer of AI talent



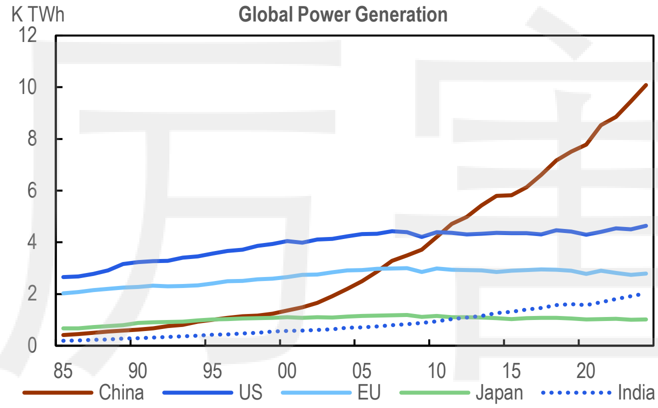
Source: Global AI Talent Tracker 2.0/Macro Polo, Citi Research

Figure 9. More than half of all new industrial robot installations globally now happen in China



Source: IFR, Wind, Citi Research

Figure 10. China accounted for 32.3% of global electricity production in 2025, as the world's largest generator



Source: BP, Wind, Citi Research

Macro-Micro Disconnect: A New Economy Perspective

The booming new economy has helped headline growth but not micro sentiment, as we have documented in our earlier discussion of the K-shaped economy (see: 2026 Outlook: Mind the Gap). The K-shape may have started to take form with domestic supply stronger than domestic demand during Covid. The AI-driven new economy, as an emerging divergence in 2025, could further underpin the K-shape and the entrenched macro-micro disconnect, in our view.

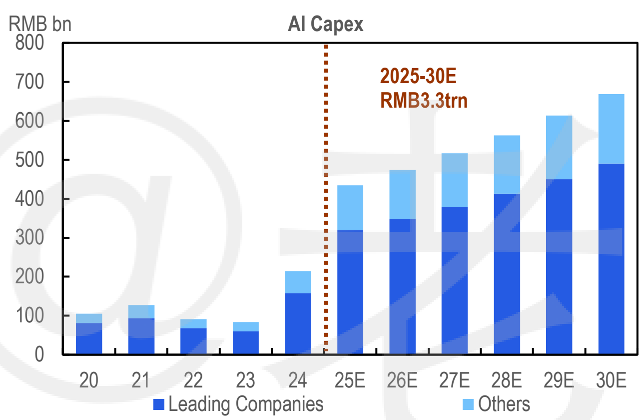
Macro Accounting

The new economy is macro-relevant now. We estimate AI capex totaled ~RMB435bn last year, ~0.3%/0.9 of GDP/FAI, and expect it to accumulate to ~RMB3.3trn during 2025-30E (Figure 11). While capex is the most tangible channel through which the new economy exercises its GDP impact, we also consider sizing it relative to the property sector:

- **Narrow Coverage:** The property sector's GDP declined to 5.9% as of 2025, down from the peak of 8.3% in 2020, while IT services' has steadily risen to 5.0% from <2% a decade ago. If we extrapolate their trends, IT services, only a subset of the new economy, should outsize property in 2027E (Figure 12).

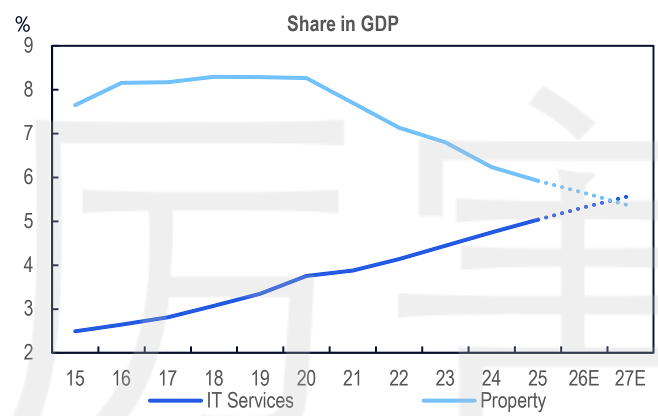
- **Broad Coverage:** We calculate the total contribution of the property sector, including all input-output linkages, based on our earlier calculation for 2020 and extrapolate the series to recent years using property investment (excluding land purchases). The sector could have shrunk to 13.3% of GDP in 2025 from the peak of 28.7% in 2013. In contrast, the "three new economies" constituted 18.0% of GDP in 2024 – this NBS concept covers new industries, new formats and new business models (NBS, Aug 1st, 2025) and could be the most comprehensive account for the new economy (Figure 13). In a broad sense, the new economy now fully counterbalances the property's drag (Figure 14).

Figure 11. We estimate AI capex totaled ~RMB435bn in 2025, ~0.3%/0.9% of GDP/FAI



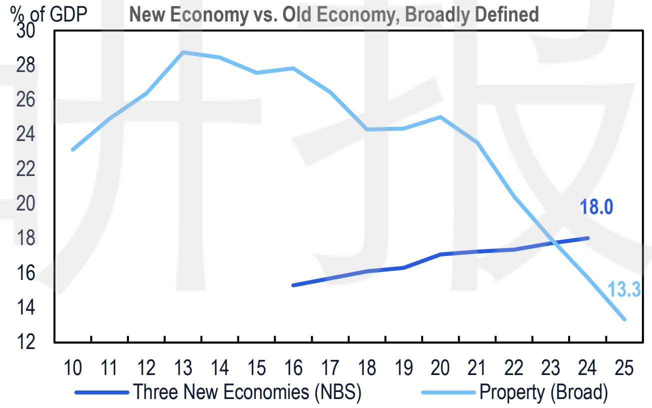
Source: company data, Wind, Citi Research

Figure 12. Share of IT services in GDP could exceed that of property in 2027E



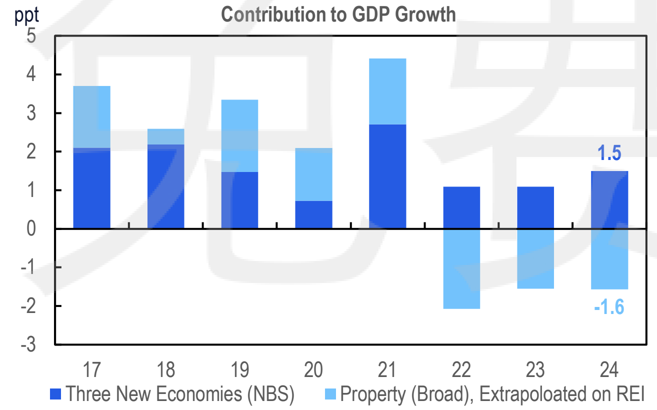
Source: NBS, Wind, Citi Research Estimates

Figure 13. The broadly defined new economy could also have surpassed the property's total contribution



Source: NBS, Wind, Citi Research Estimates

Figure 14. The new economy's support could fully counterbalance the property's drag to growth



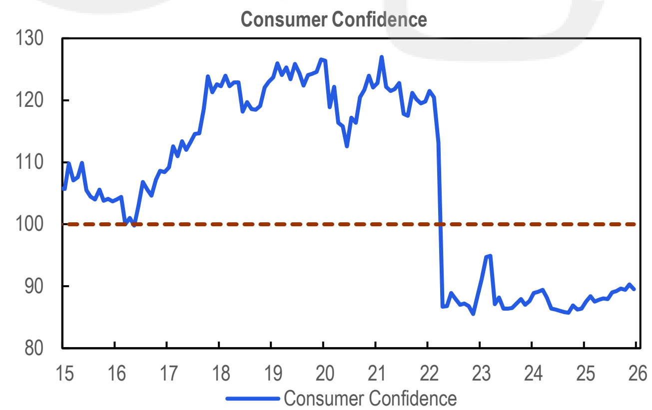
Source: NBS, Wind, Citi Research Estimates

Micro Reflection

Micro sentiment has failed to track positive macro news. Consumer confidence stayed subdued throughout 2025 despite the equity rally (Figure 15). The ~90 reading didn't improve much from the Covid lows, still far below the neutral benchmark of 100.

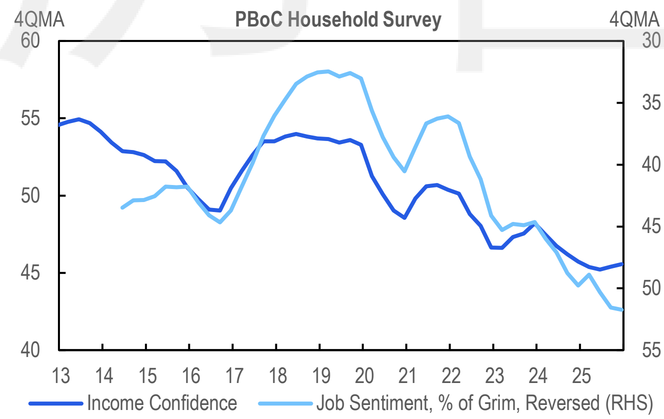
- **Balance Sheet:** The housing downturn continues to drive a negative wealth effect. Five years into the downcycle, property still takes a dominant share in household assets, and a 1% price decline could erase ~RMB2.5trn in household wealth. The wealth effect from the equity market is neither significant nor broad enough to offset this.
- **Cash Flow:** What's new from the new economy is the additional job headwinds. Despite resilient headline growth and exports, household expectations on income and employment have turned grimmer, according to a PBoC survey (Figure 16). This trend may be amplified by rising AI adoption, mirroring developments in the US labor market (ADP Research, Jun 10th, 2024).

Figure 15. Consumer confidence stayed subdued throughout 2025



Source: NBS, Wind, Citi Research

Figure 16. Household expectations on the job market have turned grimmer according to a PBoC survey



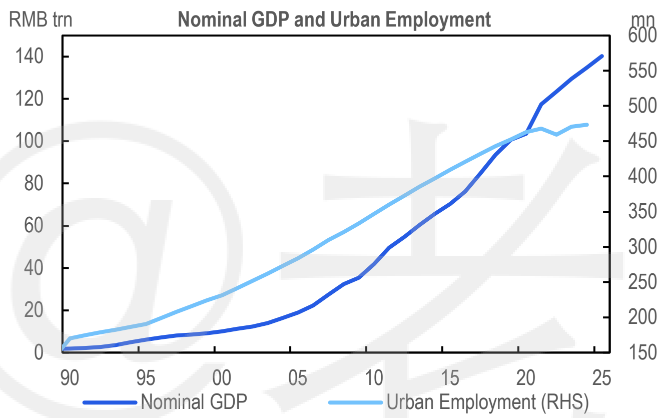
Source: PBoC, CEIC, Citi Research

"Jobless Growth"? A Tentative Quantification of AI's Job Impact

China's labor market has decoupled from its economic expansion in recent years. Despite solid GDP growth meeting the ~5% target in 2023-25, urban employment appears to be peaking out (Figure 17). Job destruction is happening at the same time with the creation of >10mn new jobs each year (12.7mn in 2025). We gauge job destruction by the gap between the net change in employment and gross new employment figures, which includes natural reductions (自然减员, NBS, Feb 28th, 2025). By this measure, cumulative job losses reached 53.6mn over 2014-24 (Figure 18). And the pace of this destruction appears to have accelerated recently. With the rise of job market turnover, some 200mn people are engaged in "flexible employment" (Gov, May 20th, 2021), ranging from food delivery riders to ride-hailing drivers, which account for ~26% of China's labor force (Figure 19).

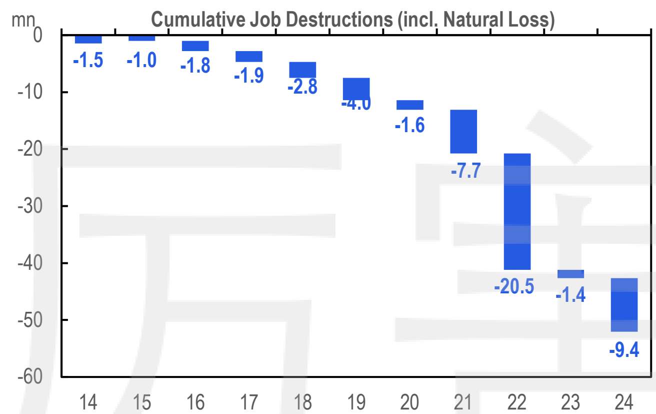
Chinese employees are not working less despite tech-driven productivity improvements. Average weekly work hours reached 48.6 as of end-2025 – up from 46.8 in 2019 and well above the normal work hour standard of 44 – making China an outlier among global peers (Figure 20). This trend suggests intense labor market competition, likely driven by a structural divergence where the new economy leads growth but fails to create sufficient jobs, ultimately translating into longer hours.

Figure 17. Urban employment looks to be peaking out in the 2020s, decoupling from GDP growth



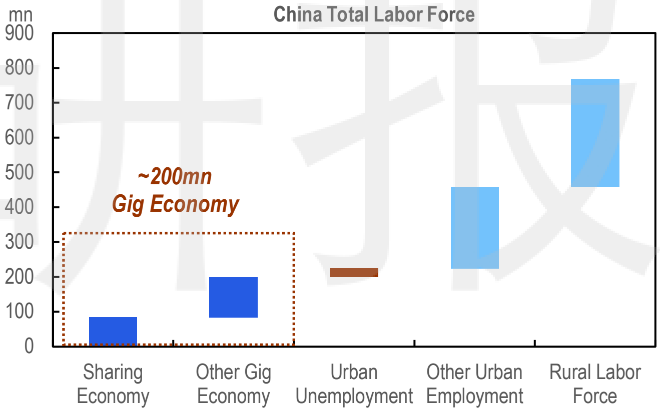
Source: NBS, Wind, Citi Research

Figure 18. Urban job loss (including natural reductions) could have accumulated to 53.6mn since the turn of 2014



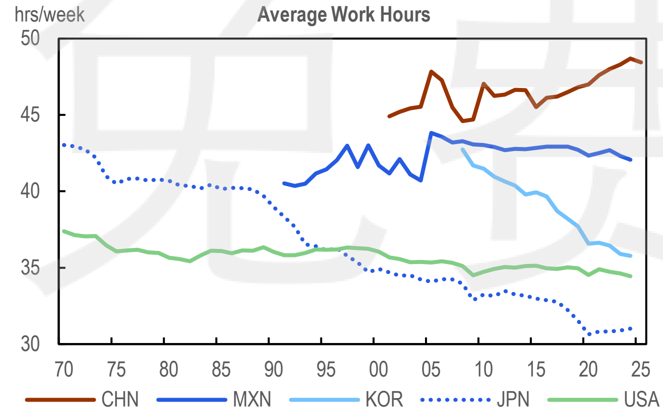
Source: NBS, Wind, Citi Research

Figure 19. Some 200mn people are engaged in "flexible employment", representing ~26% of labor force



Source: NBS, Gov, Citi Research

Figure 20. Chinese workers are working longer hours despite productivity gains

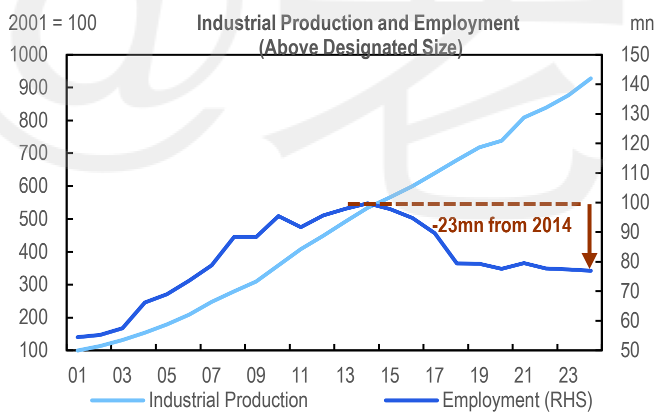


Source: NBS, OECD, Wind, Citi Research

The Established Story: Automation for Manufacturing

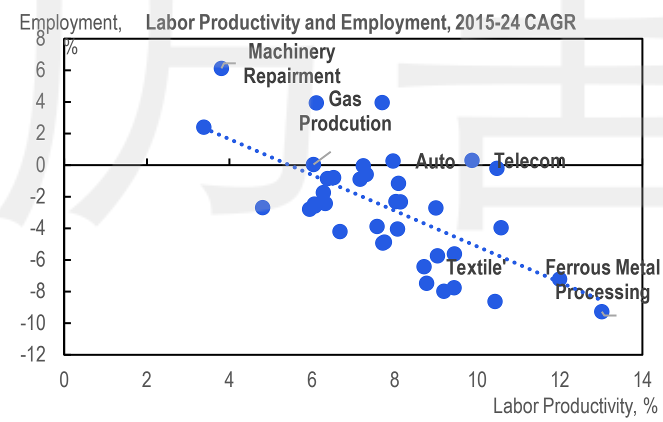
Automation has boosted manufacturing productivity without creating new employment in China. The loss of agricultural jobs amid urbanization is not a surprise. Employment in large industrial enterprises, however, has also fallen by 22.9mn from its 2014 peak, stagnating at ~77mn over the past decade (Figure 21). Even booming sectors are not hiring many more workers. For example, while auto manufacturing revenue grew 49.3% (5.1% CAGR) over 2017-25, its employment remained largely flat at ~4.8mn. Sectors facing demand stress, such as textiles and steel, have unsurprisingly experienced deeper job contractions (Figure 22). This surprising decline in manufacturing jobs contrasts sharply with China's robust industrial output and historic trade surplus.

Figure 21. Around 23mn jobs have been lost to automation in large industrial enterprises since the 2014 peak



Source: NBS, Wind, Citi Research

Figure 22. Productivity improvement could be partly responsible for the "jobless growth" of industrial sectors



Source: NBS, Wind, Citi Research

The Developing Story: AI for Services

The key question is then how AI will impact services employment. People transitioning out of agriculture and industry land jobs in services sectors. This labor reallocation, combined with the rise of tech platforms, created the world's largest gig economy in China. However, with GenAI's potential to automate 20-40% of tasks as our global team noted, this vital employment engine now faces a critical test. If large-scale AI adoption were to lead to more job substitution than creation, the full force of tech-driven job market pressures would be exposed.

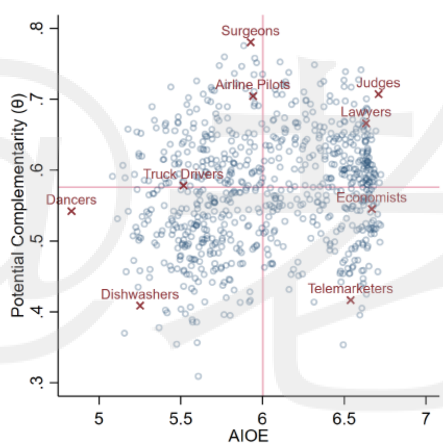
Substitution vs. Augmentation

We assess AI's potential job impact using an IMF framework (Jan 14th, 2024), which analyzes occupations based on their *exposure* and *complementarity* to the technology. We map the 74 occupation categories from China's 2020 population census into a 2x2 matrix along these two dimensions (Figure 23 and Figure 24).

- **Exposure:** We define an occupation's exposure to AI as the overlap between its tasks and AI's capabilities, drawing on recent economic literature covering the global market (ILO, May 20th, 2025), the US (MIT, Oct 9th, 2025) and China (NSD, Sep 19th, 2025). For our analysis, we utilize the exposure gradient from the ILO's detailed breakdown of 427 occupations, which we then average to align with the 74 NBS categories.

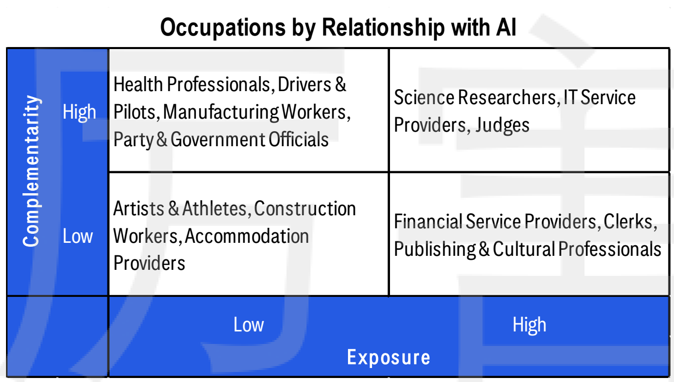
- **Complementarity:** Following the IMF's relative judgment approach (IMF, Jan 14th, 2024), we classify occupations as having *low complementarity* with AI if their tasks are [1] routine and structured (e.g., clerks, financial services workers), [2] dependent on physical activities (e.g., athletes, construction workers), or [3] require significant human interaction and judgment (e.g., accommodation services). Based on these criteria, we put 50.9% of surveyed occupations into the low complementarity group.

Figure 23. We apply the IMF's framework...



Source: IMF

Figure 24. ... to China's case



Source: Citi Research

A Tentative Quantification

We estimate that ~31% of jobs could be at risk from AI in China, a conservative figure compared with the IMF's 40% global assessment. To dive further into this, we focus on occupations with high exposure, distinguishing between substitution and augmentation based on their complementarity with the technology (Figure 25).

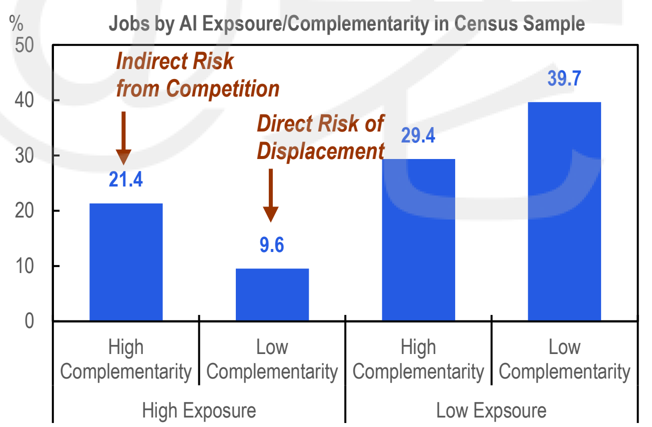
- **Substitution Risk (Low Complementarity):** Jobs with high exposure but low complementarity face a direct risk of displacement. In these roles, such as clerks and financial services workers, AI's capabilities heavily overlap with job tasks without significantly boosting human productivity. We estimate this group accounts for 9.6% of employment, covering 70.3mn people.

- **Augmentation & Competition Risk (High Complementarity):** Jobs with high exposure and high complementarity are more likely to be augmented by AI, leading to significant productivity gains. This group, including researchers, judicial workers, and IT professionals, faces indirect risks from intensified competition and narrowed paths for career advancement as productivity improves. We estimate it accounts for 21.4% of employment.

The labor market risks from AI are likely to be uneven, disproportionately impacting services sectors and younger workers. Services industries like finance and IT, which have been major sources of high-income jobs, could face the most significant disruption (Figure 26). Furthermore, young workers, with the unemployment rate still elevated at 16.5% as of end-2025 (Figure 27), could be more vulnerable to AI risks than others: we estimate 13.6% of those aged 20-29 are in jobs at direct risk of displacement and 26.4% face indirect competition risk – significantly higher than the 6.2% and 15.5% respective risks for the age group of 50-59 (Figure 28). This mirrors trends observed in the US labor market (Stanford, Nov 13th, 2025).

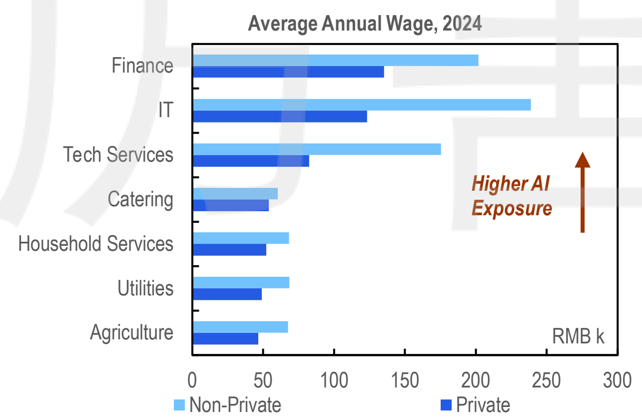
While mindful of analytical caveats, we believe our exercise serves as a reasonable starting point for assessing the impact of the impending AI boom. The rapid evolution of AI and the lack of granular occupation data make the assessment difficult. Our account of exposure and complementarity is also on a relative basis, which is set to change as GenAI penetrates more sectors and tasks. In any case, our estimate that ~9.6% of jobs face a direct displacement risk, along with the 21.4% of jobs facing indirect pressure, is broadly consistent with academic findings for EMs (IMF, 2024), reinforcing its value as an initial assessment.

Figure 25. We estimate ~31% of jobs could be at risk from AI in China, with 9.6% facing direct replacement risk



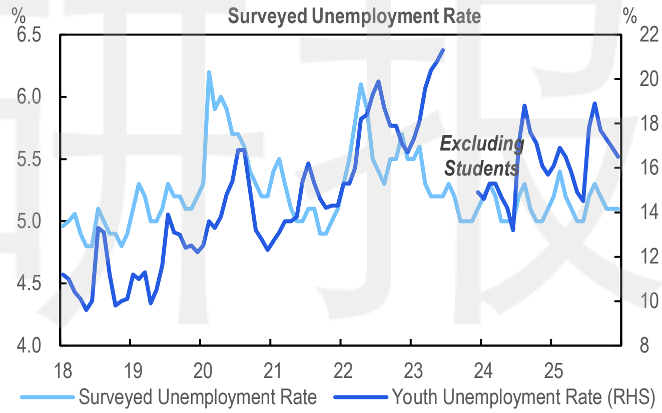
Source: NBS, Citi Research Estimates

Figure 26. High-to-middle-income services jobs could be more impacted by AI



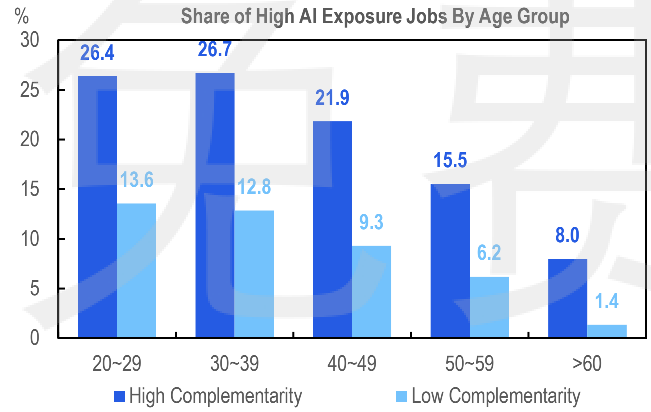
Source: NBS, Citi Research

Figure 27. Youth unemployment rate has been elevated



Source: NBS, Wind, Citi Research

Figure 28. The younger population could be more exposed



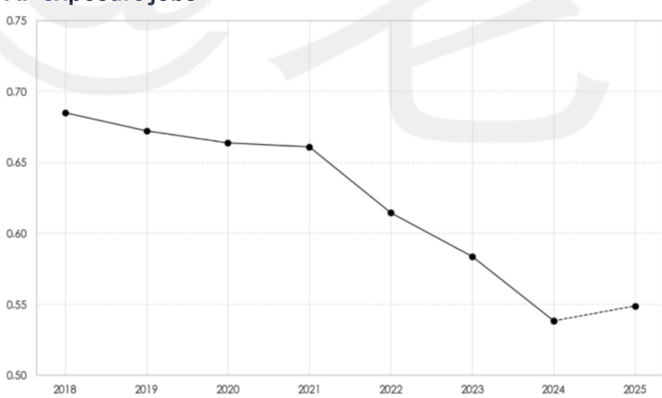
Source: NBS, Citi Research Estimates

The Surfacing Impact

AI's impact is already surfacing in China's labor market. Job postings have shown a clear trend of shifting towards low-AI-exposure roles, as demonstrated by Peking University scholars (NSD, Sep 19th, 2025, Figure 29). Rising career uncertainty has also led to a youth "flight to safety". The number of applicants for civil servant positions surpassed those for graduate school for the first time in 2025 (Figure 30).

The service sector, which previously acted as a crucial labor market cushion, now faces its own AI-driven disruption (Figure 31). It absorbed workers displaced from manufacturing by automation, as seen in the surge of ride-hailing drivers to 7.5mn by October 2024 (Sina, Nov 30th, 2024, Figure 32). Given the number of cruising taxi drivers was already significant at 2.7mn as of end-2023, this gig economy could be close to the edge. Should technologies like robotaxi automate these roles, the same group of workers would face a second wave of tech-driven displacement.

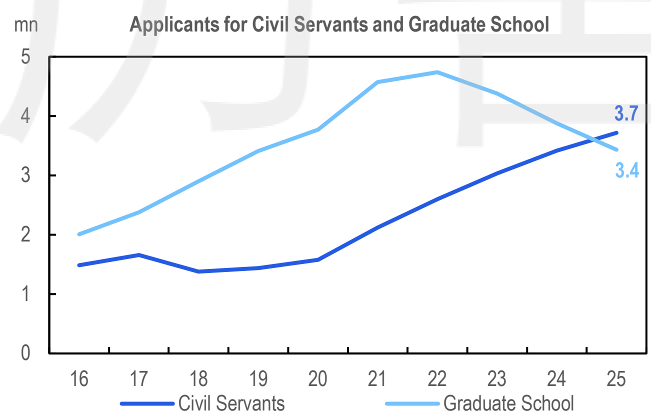
Figure 29. Job postings have shown a trend towards low-AI-exposure jobs



Note: https://www.nsd.pku.edu.cn/xzyj/kyfb/zsfb/ai/index.htm

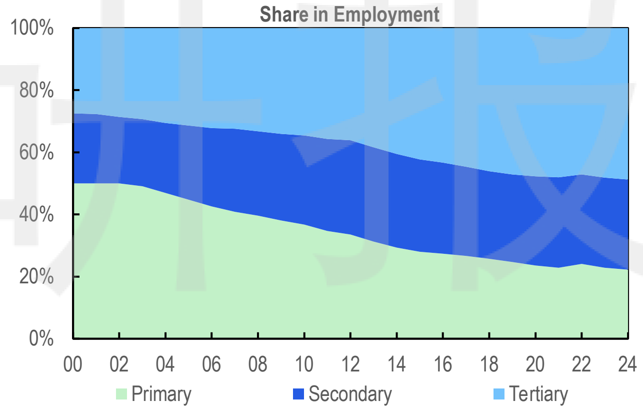
Source: NSD

Figure 30. The number of appliances for civil servant jobs exceeded that of graduate school in 2025



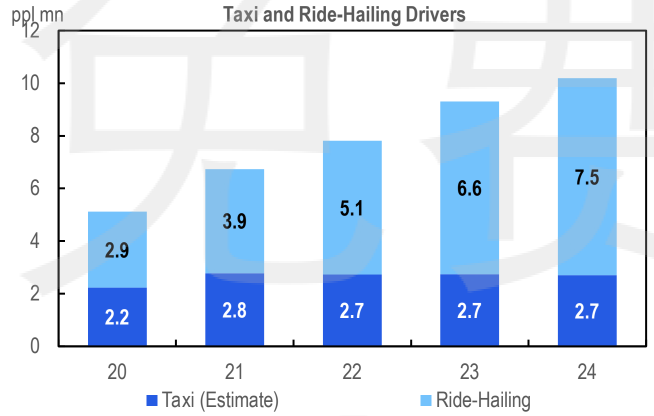
Source: Xinhua, Citi Research

Figure 31. The services sector had been a cushion to the labor market in the past



Source: NBS, Wind, Citi Research

Figure 32. AI could be a further shock with the notable case of robotaxi



Source: MoT, NBS, Wind, Citi Research

From Capex to Governance: Embracing the New Economy but Avoiding the Turing Trap

AI governance is becoming a critical, yet underappreciated, factor for AI investments in China. While the market remains focused on commercial metrics like capex, energy usage, labor-cost savings and productivity gains, we believe policymakers will increasingly pay attention to the socio-economic consequences of AI deployment. Just as regulatory risks were once a defining factor for internet platform investment, AI governance will need to be incorporated into the AI investment framework. Emerging policy and social constraints are perhaps no less important than technological capabilities.

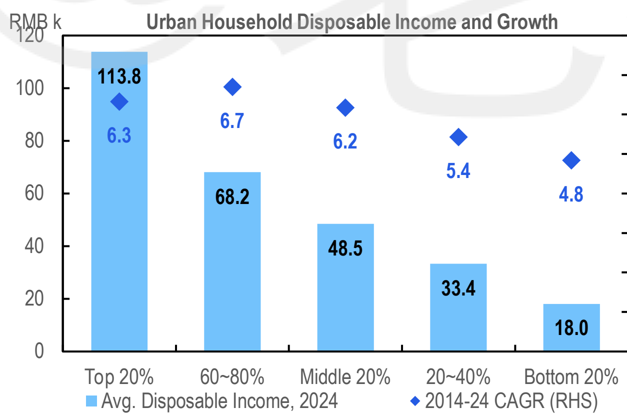
- **Navigating the Turing Trap: Policy to Favor Augmentation over Substitution.** The "AI+" strategy is set to be a top priority for the 15th FYP, driven by the push for "new productive forces" amid the US-China tech race. However, the Turing Trap could arise when technology solely automates existing human tasks – suppressing wages and increasing inequality – rather than augmenting human capabilities to create new value. As the social impact of AI surfaces, we could see a policy shift away from an "all-out" approach. The year-end CEWC explicitly called to "improve AI governance" (Xinhua, Dec 11th, 2025). The MoHRSS is reportedly prepared to release a new policy document to address AI's labor market impact (Xinhua, Jan 27th). Restrictive measures would not be a surprise to us if technology leans too far in pure automation. For example, the large-scale deployment of robotaxi will have to consider its implications for >10mn drivers, not just its technical readiness. We believe long-term policy is likely to favor companies that use AI to augment workers and create new tasks, rather than those focused purely on substitution.

- **The Social Safety Net: A Prerequisite for Unlocking AI's Full Potential.** There is a strong consensus among economists and international organizations such as the IMF (see, for example, IMF, Dec 12th, 2025) that China needs to provide greater support for the rural elderly and parenting families. A robust social safety net is no longer just a social issue but an economic prerequisite for large-scale AI deployment (**Figure 33** and **Figure 34**). The emerging impact of automation and AI on employment – particularly for the youth and gig workers – makes it more urgent than ever to strengthen job protection, unemployment benefits and retraining programs, in our view. Government spending on social security in turn enables a faster and smoother AI transition.

- **Redistributing AI's Gains: A Growing Fiscal Issue.** Economic research suggests that without intervention, AI tends to concentrate wealth and increase capital's share of income at the expense of labor (see, for example, NBER paper by Acemoglu, 2024). Fiscal policy will likely adapt to ensure a more equitable distribution of AI's productivity gains, a growing priority under the "common prosperity" campaign. This could occur through two channels: **[1] Primary distribution via. direct wage support.** The NDRC is drafting a "household income growth plan" (城乡居民增收计划, Xinhua, Jan 20th), which may guide firms to raise wages, while the government is also hiking minimum wages directly. Growth in averaged minimum wages across provinces (~RMB2,270/month) picked up to ~8.1%YoY in 2025, compared with ~4% in 2021-24. This reflects a deliberate effort to counter AI's disinflationary pressure on wages. **[2] Secondary distribution via. the tax system.** While the new economy currently benefits from supportive tax incentives and even subsidies (Figure 35), we think investors should model a plausible future scenario where these are phased out or replaced with targeted "AI taxes" to fund social programs as the sector matures. In general, this aligns with our view that the era of big tax cuts is behind us.

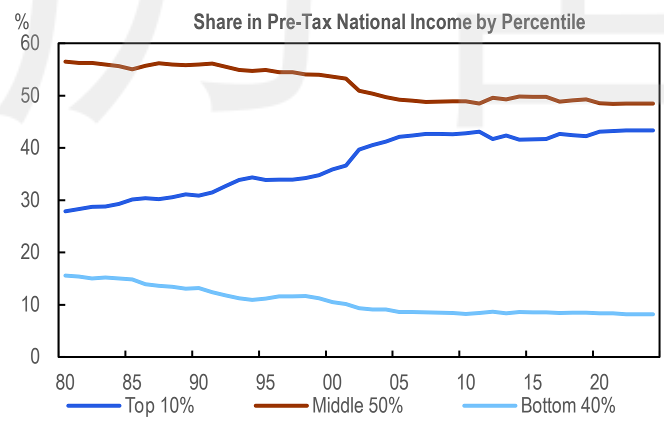
- **Work-Life Balance: A Key Channel for AI-Driven Consumption.** We reckon improving work-life balance is a key channel to translate AI's productivity gains into domestic consumption (Figure 36). More leisure time is a precondition for a services-tilted consumption rebalancing, and the AI-led efficiency leap allows employees to work fewer hours if employment is kept stable. Policy appears to be moving in this direction, with the NDRC pledging to optimize holiday arrangements (SCIO, Jan 20th) and the MoHRSS mentioning revisions to paid leave guidance (Xinhua, Jan 27th). These measures, along with stricter enforcement of labor laws, would expand leisure time from the current base of 13 public holidays and 5~15 days of paid leave. Powered by AI, these moves could be largely cost-neutral to firms while representing a structural tailwind for consumer services.

Figure 33. Income growth of higher-income groups has outpaced the bottom half in the past decade



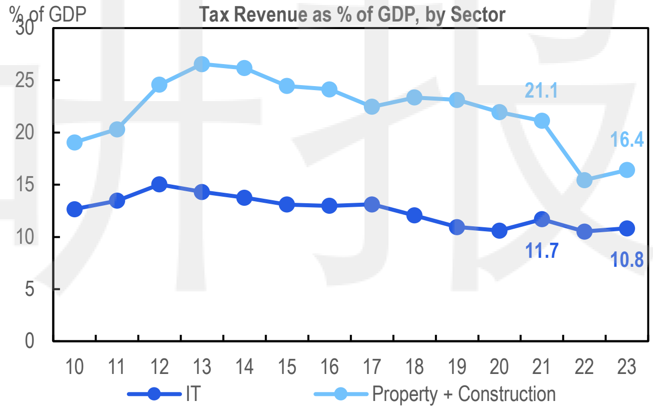
Source: NBS, Wind, Citi Research

Figure 34. Share of the top 10% in national income has risen and stayed higher



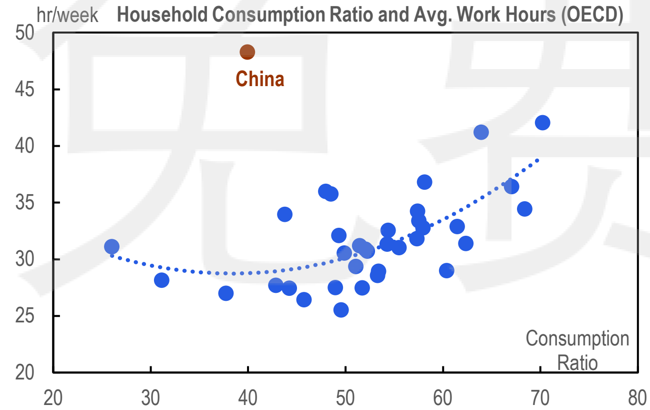
Source: WID, Citi Research

Figure 35. The new economy is enjoying a lower tax rate compared with the old economy



Source: ChinaTax, NBS, Wind, Citi Research

Figure 36. Better work-life balance could be a precondition for a services-tilted consumption rebalancing



Source: NBS, OECD, WDI, Haver Analytics, Wind, Citi Research

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