

# The forces reshaping China's labour market

China's divergent labour market metrics  
reveal a familiar deindustrialisation concern

## Macroeconomic Research



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### Key points

- China, the world's largest labour market, is struggling to establish a comprehensive labour market indicator, predominately due to its two-tiered workforce
- An emerging counterintuitive trend reveals a labour shortage, alongside slowing wage growth, indicating a polarised job supply and hollowing out of the labour force. Mobility restrictions have further exacerbated the mismatch
- Deindustrialisation concerns risk China falling into the middle-income trap given its developing market status
- The long-term impact of an ageing and shrinking population has yet to fully arrive, providing leeway for China to adjust. Technological advancements could help upgrade the service sector. Further delays in retirement age and easing mobility restrictions would alleviate labour supply pressures, though more social resources support will be essential

### An enormous but unorthodox labour market

Few things define a nation's economic story as clearly as its labour market. In China's case, that story is one of staggering scale, deep-rooted divisions, and rapid transformation. With the largest workforce in the world, China's labour market should be one of the most closely analysed. Yet opaque information and complexities obstruct conventional analysis.

China's labour market is shaped by a unique mix of state intervention, rigid institutional frameworks and the legacy of its urban-rural divide. It is a system where official employment data tells only part of the story, where millions of workers flow between cities and villages in response to shifting economic conditions and where industrial jobs that once lifted millions out of poverty are now vanishing at an alarming rate.

In this paper, we unpick the structural peculiarities of China's job market, analyse why reported traditional employment metrics can be misleading; how decades of internal migration have shaped workforce dynamics; and the challenges posed by recent structural shifts and a shrinking labour force. While near-term challenges – such as the housing market adjustment and sharply rising trade tensions – are likely to dominate, we argue that deeper structural changes have been reshaping labour trends for over a decade. Furthermore, we suggest that China's workforce may now be experiencing the very

deindustrialisation which has affected other economies – ironically, a phenomenon often attributed to China itself.

## China's two-tier labour force

At the heart of the difficulty in assessing China's labour market is the unusually fixed distinction between urban and rural workers. This divergence, a legacy of China's deep-rooted agricultural history, is reinforced by the *Hukou* system – a household registration framework that classifies residents as either urban or rural, largely based on their birthplace. Each prefecture-level region is officially divided into rural and urban areas, which has significant implications for employment, social welfare and mobility.

Before the late 1970s 'opening up' economic reforms, rural residents were allocated farmland for cultivation and land for housing construction, while urban workers were assigned jobs in state-owned enterprises (SOEs), which typically came with housing allocations<sup>1</sup> and entitlements to state-subsidised grain and other benefits. The *Hukou* system was designed to control rural-to-urban migration, making it nearly impossible for rural residents to change their inherited status<sup>2 3</sup> or relocate to cities, especially in the absence of formal job and housing markets.

However, the market-oriented economic reforms of the 1990s and early 2000s fuelled a rapid expansion in manufacturing, creating an urgent labour demand. To address workforce shortages, policies were gradually loosened, allowing rural residents to migrate for employment, triggering the first major wave of rural-to-urban migration in China. As the economy thrived, driven by labour-intensive manufacturing and construction, urban job creation surged. To accommodate this growth, further legislative changes permitted rural workers to seek employment beyond their hometowns, leading to the largest migration in human history – an estimated 174 million people moved to cities in the two decades following 1978<sup>4</sup>.

Despite securing higher-paying jobs, compared to farming, in factories and construction sites, most rural migrants remained locked out of full urban residency rights. They were rarely granted *Hukou* reclassification and, in many cases, could not stay in cities without employment. As a result, losing a job often meant returning to the countryside. While migration-linked labour fluctuations are common globally, the institutionalised restrictions in China create a unique challenge in understanding the true dynamics of its labour market.

## Urban focus leaves labour metrics incomplete

In most economies, the unemployment rate is a crucial measure for assessing labour market dynamics and is closely monitored because of its strong relationship with overall economic growth. It is often regarded as the single best summary statistic amid a plethora of labour market indicators. However, in China, this barometer does not function in the same way as other nations, due to both its statistical design and the distinctive characteristics of the country's labour market.

At the end of 1999, China's National Bureau of Statistics (NBS) started to publish the *urban registered* unemployment rate. However, this self-reported statistic only included individuals who register for unemployment benefits with local governments, rather than being derived from representative sample surveys. In this sense, it is similar to jobless claims figures in other major economies, such as the US and the UK. The key difference, however, is that in China, only urban *Hukou* holders are eligible to register as unemployed and claim benefits. A migrant worker who loses their job in the city would not be captured in this unemployment statistic. Not surprisingly, this approach embeds delays and underreporting, which is widely believed to significantly underestimate the true unemployment rate in the economy<sup>5</sup> – an issue compounded by the fact that the series is only published on a quarterly basis.

As China's economy matures, the need for an accurate labour market indicator has become increasingly important. In response, in January 2017, the NBS started publishing a *surveyed* unemployment rate on a monthly basis, and in 2022 this replaced previous unemployment measures. This metric follows conventional unemployment survey methods and does not explicitly distinguish between *Hukou* statuses. However, it is still geographically limited to urban areas. Unlike the *urban registered* unemployment rate, unemployed migrant workers may be included in this survey – provided they remain in urban areas. Yet, given that migrant workers are largely ineligible for unemployment benefits in the cities where they work, many return to the countryside to subsist when job opportunities dry up. As a result, the surveyed unemployment rate still likely underestimates actual unemployment, albeit to a lesser extent than the *urban registered* rate as labour mobility effectively sees a sharp fall in local labour supply at times of weak labour demand. Furthermore, with less than nine years of data available, this series lacks the historical depth necessary for analysing long-term economic trends.

<sup>1</sup> Wang, Y., "[Brick by Brick: Unravelling China's property Puzzle](#)", AXA IM Research, May 2024.

<sup>2</sup> The "urban" *Hukou* status is formally "non-agricultural" status, while "rural" *Hukou* is "agricultural".

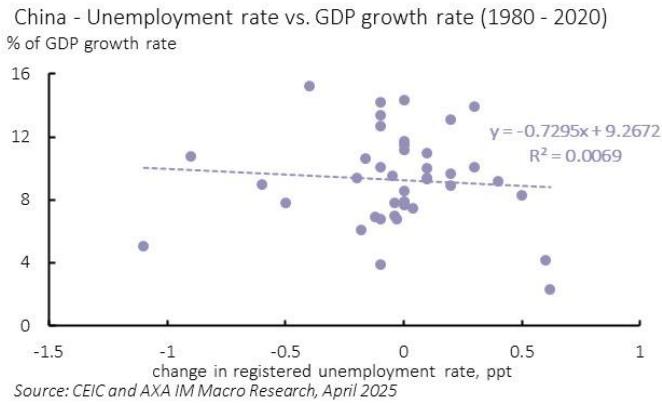
<sup>3</sup> Chan, K. W., & Zhang, L., "[The hukou system and rural-urban migration in China: Processes and changes](#)". The China Quarterly, Dec 1999.

<sup>4</sup> Zhang, K. H., & Song, S., "[Rural-urban migration and urbanization in China: Evidence from time-series and cross-section analyses](#)". China Economic Review, Sep 2003.

<sup>5</sup> Giles, J., Albert, P., & Zhang, J. "[What is China's true unemployment rate?](#)", China Economic Review, 2005.

Given the shortcomings of both unemployment metrics, many analysts, including those at China’s central bank, find an unusually weak correlation between China’s official labour market data and overall economic activity<sup>6</sup> (Exhibit 1). This disconnect is striking by international standards and highlights the limitations of existing labour market indicators in capturing the China’s true state of employment.

Exhibit 1: China’s weak Okun relationship



### The tight labour market, slowing wages conundrum

Despite China’s limitations in unemployment measures, other barometers, such as average wages and the balance between labour market demand and supply reveal intriguing and seemingly paradoxical trends.

China’s demographic shifts have drawn increasing attention in recent years. Once the world’s most populous country, China’s population began declining in 2022 – a demographic challenge not seen in decades. Many view this as the fading of China’s long-held demographic dividend, warning of an impending labour shortage. This perception has been reinforced by the decision to raise the statutory retirement age<sup>7</sup> – the first adjustment in over 70 years – seemingly to address the issue.

According to United Nations estimates, China’s working-age population peaked at one billion in 2015 and has since been contracting at an average annual rate of 0.2%. Over the next three decades, this decline is expected to accelerate to approximately 1.2% per year (Exhibit 2). By 2055, China’s labour force is projected to be just over 60% of its 2015 peak.

Exhibit 2: Demographic projection not looking optimistic

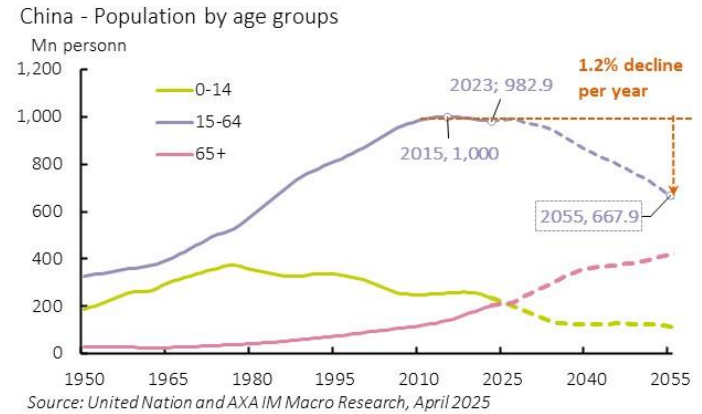
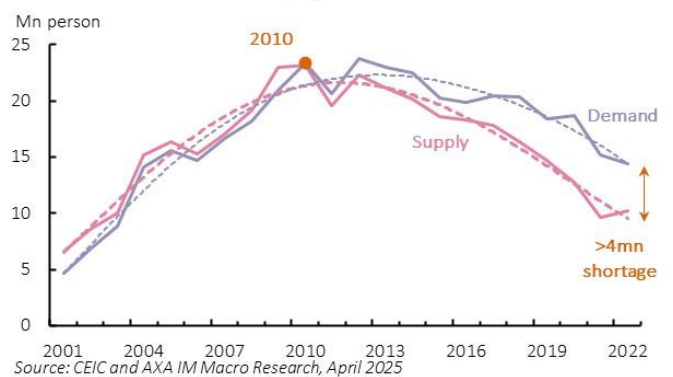


Exhibit 3 presents estimates of Chinese labour demand and supply. Although the shrinking labour force is a major structural shift, it alone does not fully explain the labour supply shortages observed since 2010.

Labour demand growth – measured by the number of new jobs created each year – has declined in tandem with the contraction of China’s labour-intensive manufacturing sector. This shift partly reflects a natural increase in capital intensity in industries where significant productivity gains have been possible. In many cases, businesses have successfully transitioned towards automation and higher-value production, reducing reliance on labour while improving efficiency. This transition represents an expected and beneficial evolution of a maturing economy, allowing China to move up the value chain and benefit from long-term growth. Surprisingly, however, labour supply – measured by the number of job seekers – has fallen at an even faster pace. As a result, unfilled job vacancies have steadily increased since 2010, surpassing four million in 2022.

Exhibit 3: A growing gap between labour demand and supply

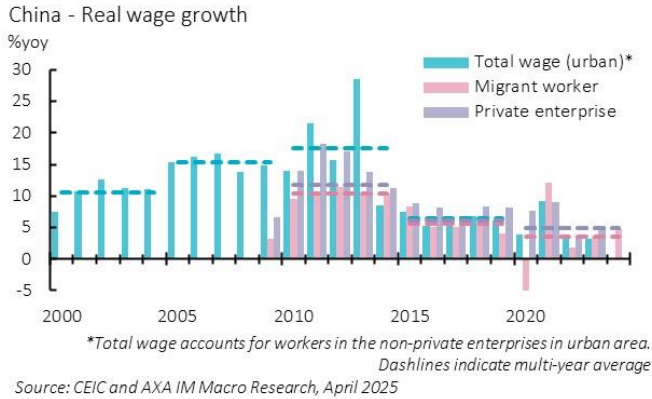


<sup>6</sup> People’s Bank of China, “Labour market and inflation: the case of China”, BIS Papers chapters, Inflation and labour markets, volume 127, pages 85-101, Bank for International Settlements, Nov 2023.

<sup>7</sup> The State Council Information Office, “China implements gradual retirement age increase to address population aging”, Jan 2025

Typically, an economy experiencing labour shortages would see faster wage growth. Yet China presents an exception. Despite demand consistently outpacing supply since 2010, wage growth has been slowing. With a relatively stable working age population in the 13 years since 2010, total wage growth accounting for urban workers in non-private enterprises, wage growth for migrant workers and that of private enterprises have all slowed materially (Exhibit 4).

Exhibit 4: Slowing income growth across the country



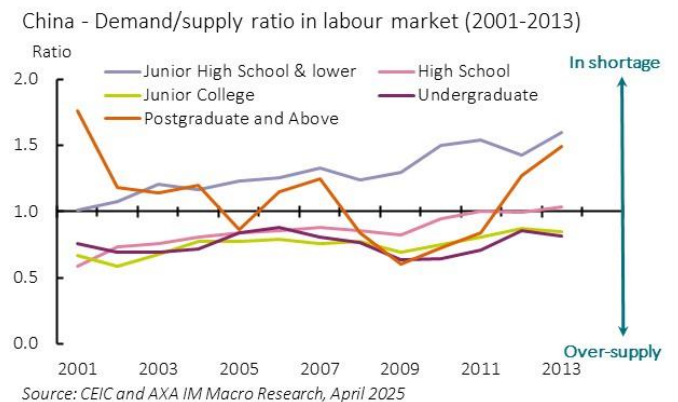
One possible explanation for this paradox is an increasing mismatch in China’s labour market<sup>8</sup>. A breakdown of labour demand by education level offers valuable insight (Exhibit 5). The data series ends in 2013 but up until then indicates a stark divergence in demand-to-supply ratios across education levels which if anything has only gone further since.<sup>11</sup>

Since the early 2000s, demand for low-skilled workers – those with junior high school education or lower – has consistently outstripped supply, reaching a shortfall of 60% in 2013. By contrast, the most highly educated group also faces a notable imbalance with overall demand significantly lower than expected. Meanwhile, there has been a persistent oversupply of workers with junior college and undergraduate degrees<sup>9</sup>. More recent studies indicate the employment prospects for individuals with college or undergraduate degrees have further deteriorated. Their employment elasticity coefficient<sup>10</sup> turned

negative in 2021, meaning that as the economy expands, their employment contracted. This reflects that, while more people are receiving tertiary education, the labour market is increasingly unable to accommodate them, leading to an “employment crowding-out effect” from economic growth<sup>11</sup>. This mirrors the “hollowing out” phenomenon observed in many Western economies, where demand for high and low-skilled jobs is strong but demand for mid-skilled roles is lacking.<sup>12 13</sup>

A highly educated workforce is a long-term economic advantage. However, if industrial development and high-value job creation fail to keep pace with rising educational attainment, it results in significant inefficiencies in job matching<sup>14</sup>. Over-education is essentially an underutilisation of workers’ educational skills, which provides a slower growth of productivities and economic returns compared to if they were fully utilised<sup>15</sup>. It also leads to wage penalties and underemployment. Research suggests these inefficiencies reduce potential returns on education by roughly one-third to a half<sup>16</sup>, while the mismatch leads to a 5% wage shortfall<sup>17</sup> relative to expected income levels<sup>18</sup>. In the absence of further training, mid-skilled workers slip into low-skilled employment. And this relative shift has a compositional effect on average wages, lowering the overall average wage even while overall demand for labour remains strong.

Exhibit 5: ‘Middle education’ trap?



<sup>8</sup> Molnar, M., Wang, B. & Gao, R., “Assessing China’s skills gap and inequalities in education”, OECD Economics Department Working Papers, No. 1220, OECD Publishing, May 2015.

<sup>9</sup> In the highest educated group, people with college and undergraduate degrees are referred as “middle-educated”, though conventionally would be recognised as “highly educated”.

<sup>10</sup> A metric that measures the relationship between employment expansion and economy growth – the bigger the coefficient, the more important role economic growth plays in employment expansion.

<sup>11</sup> Xiang, B., Wang, H., & Wang, H., “Is There a Surplus of College Graduates in China? Exploring Strategies for Sustainable Employment of College Graduates”, Sustainability, September 2023.

<sup>12</sup> Goos, M. & Manning, A., “Lousy and lovely jobs: The rising polarization of work in Britain”. The review of economics and statistics, February 2007.

<sup>13</sup> McIntosh, S., “Hollowing out and the future of the labour market”. BIS research paper, October 2013.

<sup>14</sup> Wu, N., & Wang, Q., “Wage penalty of overeducation: New micro-evidence from China”. China Economic Review, August 2018.

<sup>15</sup> Tsang, M. C., “The impact of underutilization of education on productivity: A case study of the US Bell companies”. Economics of Education Review, November 1987.

<sup>16</sup> Hartog, J., “Over-education and earnings: where are we, where should we go?” Economics of Education Review, April 2000.

<sup>17</sup> Zheng, Y., Zhang, X. & Zhu, Y., “Overeducation, major mismatch, and return to higher education tiers: Evidence from novel data source of a major online recruitment platform in China”. China Economic Review, April 2021.

<sup>18</sup> Sicherman, N., ““Overeducation” in the labor market”. Journal of Labor Economics, April 1991.

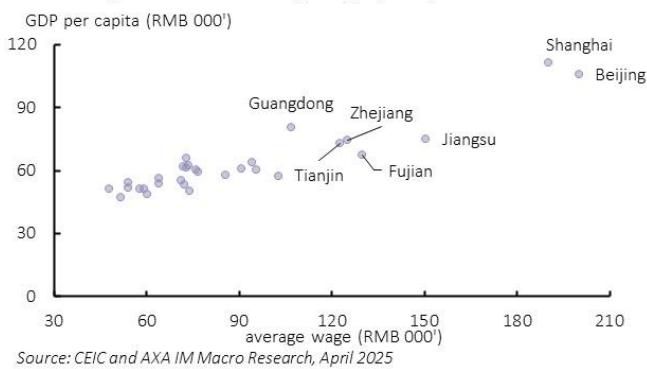


Beyond the mismatch in education levels, geographic labour imbalances also play a critical role. Restricted interprovincial mobility and high living costs, particularly for low-skilled workers, exacerbate regional disparities in labour supply and demand.

More low-skilled workers are needed in developed regions to complement the expanding high-service sectors, which continue to attract high-skilled talent across the country. However, with local government support, these low-skilled workers face stricter cross-regional migration policies and have more limited access to social benefits for public services such as healthcare and education in their new province. Some cities have recently eased mobility restrictions, yet high living costs in major urban centres often means that migration does not always lead to a better quality of life – especially for those who can only find work in informal sectors.

In high-performing regions, the tight market for low-skilled workers may push wages higher as employers compete for a smaller pool of available workers. However, this upward wage pressure is largely offset by the excess supply of low-skilled labour in less prosperous areas, where demand remains weak (Exhibit 6). Mismatches between educational attainment and job requirements, alongside barriers to interprovincial migration, have reduced market efficiency. The result is a drag on wage growth, posing a significant challenge to China’s long-term economic trajectory.

Exhibit 6: Unbalanced regional development and wage level  
China - Regional GDP vs. average wage (2023)



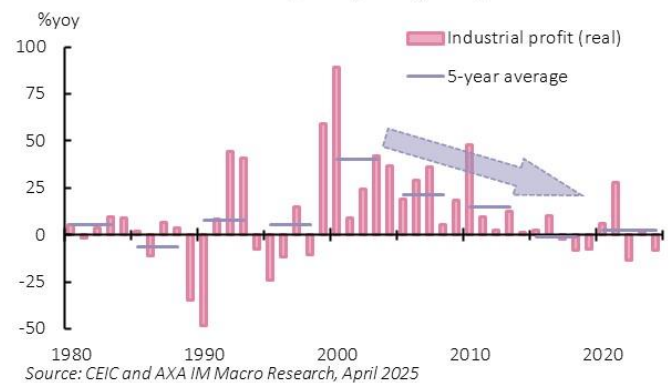
One explanation of China’s puzzling labour market paradox – a shrinking workforce; persistent labour shortages; but slowing wage growth – is at the core an issue of structural mismatches in education, sectoral shifts in demand, and regional labour mobility constraints. While policymakers have recognised the need for reform, the key question remains whether these efforts will be sufficient to rebalance the labour market – or whether China will continue grappling with underutilised talent, declining wages, and growing economic inefficiencies. The direction China takes in the coming years will be crucial, not just for its domestic economy but for the global labour market as well.

<sup>19</sup> Lu, X., et al. “Government regulation and China’s natural gas price distortion: A sectoral perspective”. Natural resources forum, February 2025.

## The waning role of industry

China’s slowdown in wage growth has occurred alongside a persistent deceleration in industrial profit growth. Both peaked in the early 2000s, driven by rapid industrial expansion, partly spurred on by China’s World Trade Organization (WTO) accession, but have since slowed significantly over the past two decades (Exhibit 7). The simultaneous decline in profits and wage growth is unsurprising and likely in part reflects a natural catch-up in Chinese wage levels. Initially, wages surged from low pre-WTO accession levels as Chinese industry capitalised on an abundant supply of cheap labour. However, as labour costs rose, the country’s industrial competitiveness began to erode, putting downward pressure on profit growth, which in turn constrained future wage growth.

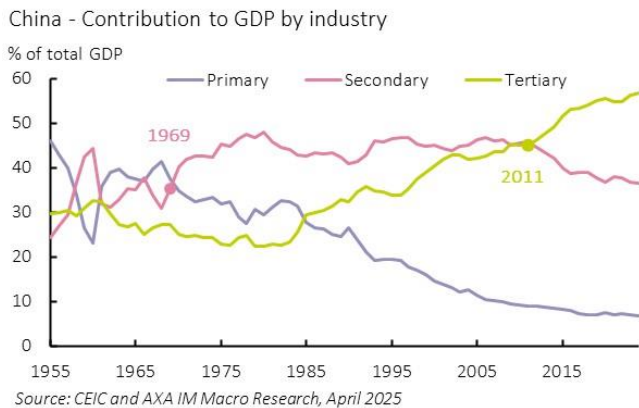
Exhibit 7: Industrial profit on the slide  
China - Growth of industrial profit (PPI adjusted)



Additional downward pressure on industrial profits may have stemmed from government intervention in industrial pricing. Government policy that aimed to stabilise supply and demand shocks – such as implicit or explicit price caps on key industrial products – would likely have squeezed profit margins<sup>19</sup>, distorted market incentives, and ultimately placed further constraints on wage growth.

China’s economic structure has rotated in the past two decades or so. Since 1969, the industrial sector had been the dominant GDP contributor as the country underwent industrialisation. However, since 2011, the services sector has overtaken industry as the leading contributor to GDP (Exhibit 8). Since the early 2000s, tertiary sector growth has remained strong, with a few exceptions – notably, the post-WTO accession boom, which unlocked global demand, and the global financial crisis, where China’s industrial-heavy mega-stimulus temporarily boosted secondary industry output.

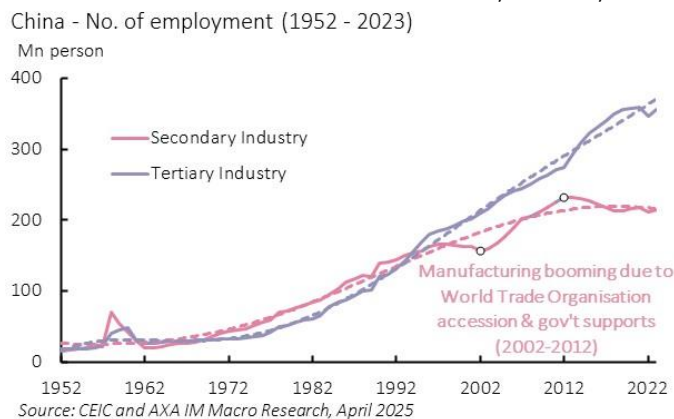
Exhibit 8: Tertiary industry leading in GDP contribution



Alongside rapid services growth, employment has also risen sharply, particularly since 2012. This surge mirrors the decline in secondary industry employment (Exhibit 9). However, the recent slowdown in services industry expansion, since 2017, is likely due to government-led crackdowns on fast-expanding private service sectors, including private tutoring, video gaming and financial technology.<sup>20</sup>

The broader shift in employment towards the services sector underscores the impact of technological advancements in displacing industrial labour, particularly after significant productivity gains in the manufacturing sector, and a subsequent transition of workers from factories to service-based roles.

Exhibit 9: Labour exodus from the secondary industry



Meanwhile, investment in the industrial sector, previously bolstered by direct and indirect government support, has cooled substantially since 2018, additionally due to deleveraging pressures<sup>21</sup> following the rapid credit expansion driven by government stimulus in 2015-2016. In contrast, investment in services, predominately led by private businesses, has remained relatively stable in recent years.

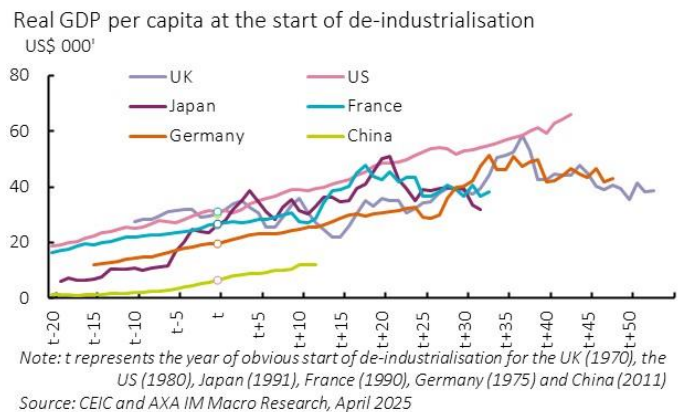
<sup>20</sup> That stance has seen reverted in the past few months, and a rebound in services employment is expected to follow.

<sup>21</sup> Li, K., "Report on the work of the Government". 12th National People's Congress, 15 March 2017.

Taken together – the declining contribution of industry to GDP; the reduction in industrial employment; and the slowdown in fixed asset investment in industrial sector, China's industrial sector is losing momentum and services – despite receiving comparatively little government support – has outpaced the industrial sector on all fronts. China is undergoing a relative deindustrialisation.

Internationally, deindustrialisation has characterised the evolution of maturing economies. However, unlike the process in the UK, where manufacturing peaked in the 1970s, or the US in the 1980s, China's deindustrialisation started, in terms of growth of overall wealth, comparatively much earlier. Despite decades of rapid economic growth, China's real GDP per capita was only around US\$6,600 in the early 2010s, when clear signs of structural change and industrial decline began to appear. This is significantly lower than other countries such as Germany, France, Japan, the UK and the US at comparable stages. Even Germany – the country which had the lowest real GDP per capita – had reached over US\$19,000, three times that of China's at a similar stage (Exhibit 10).

Exhibit 10: China may experience a premature structural change



Historically, industrialisation has been the primary driver of long-term economic, productivity, and wage growth in international economies. It contributes to growth, not only because of the impact of reallocation from low-productivity agriculture,<sup>22</sup> but the fact that productivity gains in manufacturing are predominantly from physical capital growth, which is relatively easier to achieve than human capital improvement. While deindustrialisation has been a natural evolution of maturing economies – typically associated with rising labour costs; technological advancements reducing labour demand; and higher-income populations shifting consumption towards services – it can pose serious risks if it happens before an economy reaches high-income status. Such a premature structural shift can hinder economic development<sup>23</sup>, as it blocks off the main avenue for rapid

<sup>22</sup> Rodrik, D., "Unconditional convergence in manufacturing". The Quarterly Journal of Economics, February 2013.

<sup>23</sup> Rodrik, D., "Premature deindustrialization". Journal of Economic Growth, March 2016.

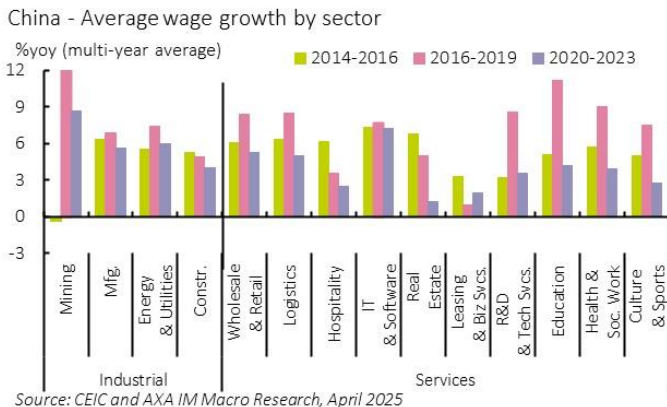
economic convergence and pushes workers into lower-wage service jobs without sufficient productivity improvements.

Brazil is a notable example, having undergone significant industrialisation in the mid-20<sup>th</sup> century, led by the then fast-growing steel, automotive, and textile industries. However, its industrialisation process stalled in the 1980s, due to a combination of economic mismanagement, external shocks – chiefly China’s rise and its commodities boom – and weak industrial policy. This has left the country stuck in middle-income status, a situation that persists to this day. India presents another case, having largely bypassed industrialisation by transitioning directly from an agricultural economy to a service-based one. This shift has left millions trapped in low-paying informal jobs, which are now increasingly threatened by the rise of artificial intelligence (AI).

While there is no definitive conclusion yet as to whether China is undergoing such a premature deindustrialisation, the declining output, shrinking industrial employment, and stagnating wage growth would all be consistent with such a shift.

China’s working-age population began to decline in 2015, eroding the demographic dividend that had previously supported rapid economic expansion. Rising relative labour costs have driven many labour-intensive manufacturers to relocate production to neighbouring countries (e.g. Indonesia, the Philippines, Vietnam) more recently exacerbated by rising trade tensions, leading to a wave of factory closures in China. As a result, a growing number of workers have been pushed into lower-end service sector employment, particularly the informal economy. At the same time, improving living standards and generational change have led many young people to prefer service jobs with better working conditions over factory work, even at a cost of lower wages. This employment shift, both voluntary and involuntary, has contributed to slowing average wage growth (Exhibit 11), which in turn has constrained consumer demand and reinforced deflationary pressures in China’s economy.

Exhibit 11: Wage growth slowed more in low-end services



Indeed, while many see the pandemic as the start of China’s slowdown, a broader perspective suggests early signs of

premature structural shifts were already present, with the COVID-19 pandemic merely amplifying underlying vulnerabilities.

### Coping with a shrinking labour force

Despite the long-term trend of population decline, short-term challenges including a deflating asset price bubble, an external trade war and structural factors including labour market mismatches, and the risk of premature structural shifts pose more immediate threats to the economy. That said, these issues are arguably more responsive to policy interventions than the challenge of a declining labour force. Indeed, China’s central government must continue investing in – and reduce barriers to private sector investment in high-end manufacturing and service sectors to fully utilise its highly educated workforce.

Meanwhile, local governments, particularly in top-tier cities, should take greater steps to attract low-skilled workers from other regions. This could be achieved by enhancing social rights and benefits, protecting wages, and reducing mobility barriers. Such measures would not only help balance the lower end of the labour market in major cities but also enable better job matching for highly educated workers, reducing deadweight loss and improving overall productivity in the economy.

As for the long-term demographic decline, China still has some time to adapt. Moreover, while the full impact remains uncertain, recent advancements in AI and cutting-edge robotics may offer promising solutions to mitigate labour shortages in the future. Advancements in robotics have alleviated some labour shortages in low-skilled service sectors. In China’s developed regions like Beijing and Shanghai, it is increasingly common to see robots performing simple and essential tasks in hotels and restaurants, reducing reliance on human labour. Meanwhile, AI looks likely to materially accelerate productivity growth in some services sectors as well.

This outcome could be further enhanced if the government takes decisive steps to upgrade the services sector, fostering the growth of high-value industries such as finance, culture, education, and other professional services. As seen in other mature economies, these sectors are typically led by private enterprises. This suggests Beijing must cultivate a more favourable business environment, which would require stronger legal protections, fairer competition against state-owned enterprises, and greater government transparency to build business confidence. President Xi Jinping’s recent outreach to such enterprises (tellingly after the emergence of the Chinese developed DeepSeek AI model) is one suggestion which might be underway.

Longer-term demographic decline could also be ameliorated by further extensions of working age. The beginning of 2025 saw China’s first adjustment in retirement age in more than seven

decades, rising by three years to a range of 55 – 63 years old, yet still below other economies. Further delays in retirement in China may become easier as more jobs move into services, which are more flexible and less physically demanding.

### **Challenges alongside opportunities**

China has the largest labour market globally, yet the labour metrics are less clear than in international peers and pose counterintuitive insights. By examining the country's two-tiered labour force, we highlight why the urban unemployment rate alone does not adequately capture the broader state of labour market underutilisation and spare capacity.

The counterintuitive juxtaposition of rising unemployment amid falling wages points to a polarised job market, with a hollowing out of the labour force. This disparity is exacerbated by migrant restrictions, which asymmetrically hinders the mobility of workers by the level of skills, exacerbating imbalances. A

combination of these developments has led to a slowing in average wage growth and large portions of the workforce remain underutilised. In turn, this echoes deindustrialisation concerns seen in advanced Western economies. However, in China's case, the question arises whether these trends are emerging prematurely for a developing economy.

The long-term consequences of labour supply declines have not started to bite yet, leaving China some time to adjust. Advances in technology, such as general-purpose robotic humanoids and AI, could drive productivity in service industries, raising capital intensity and shifting the economy's growth model. Focusing on the development of high-end services could help manage this transition, while dismantling structural barriers to worker migration may enhance job matching efficiency and reduce dead-weight loss in the society. However, these changes would require more targeted social resources to support areas experiencing significant labour inflows.



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