Structural Challenges to China's Economic Growth and Possible Remedies

by

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Structural Challenges to China's Economic Growth and Possible Remedies[§]

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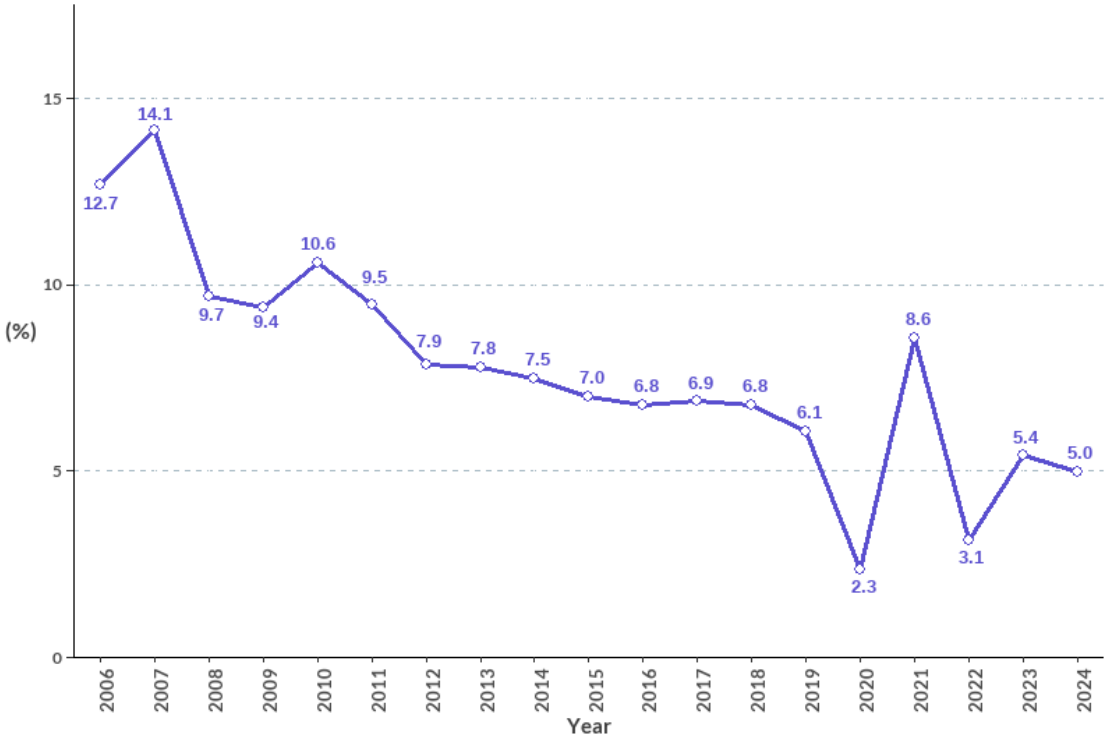
China's Economic Growth, 2015-2024

From 2015 to 2019, China's GDP had been growing at 6-7% per annum. The COVID pandemic, which erupted in 2020, and requisite measures implemented to contain the spread of the virus, including travel restrictions, lockdown measures, and limited people's movement, dampened economic activity, slowed growth to 2.3% in 2020. As China's COVID preventive measures proved effective and the pandemic abated somewhat, GDP growth in 2021 rebounded to 8.6%. However, in an inopportune turn of events, virus mutations resulted in the emergence of a more infectious variant, which triggered new waves of infections and, in turn, prompted more stringent restrictions on mobility in 2022. Economic growth rate fell to 3.1%. The phasing out of the zero-COVID policy in Q4 2022 induced a sharp rebound of the GDP in Q1 2023, but the growth momentum waned, so that the year ended with a growth rate of only 5.4%. Growth continued at a similar rate in 2024, yielding 5.0% in real terms.

It appears that China's economic growth has eased from about 7% in the period 2012-2019 to around 5% after COVID (see Figure 1). The question to ask is whether this slowdown is cyclical or structural. If it is the latter, what are the structural impediments to China's economic growth? How did such structural impediments exert a drag effect on GDP growth in the last few years, and what government policies are possible to mitigate the drag effect?

[*] The opinions expressed herein are those of the authors and do not necessarily reflect the views of the Institute.

Figure 1: Real GDP Growth of China, 2006-2024



Source: National Bureau of Statistics of China

Factors Contributing to GDP Growth

On the supply side, potential GDP or GDP capacity is typically given by a production function based on capital (including land) and labour (including different levels of skills) which gives the maximum level of output possible under the current state of technology. Economic growth or GDP growth is due to growth in the capital stock and labour. Any residual growth in GDP not explained by the growth in the observable factors is attributed to technological change in the use of these factors, in other words, total factor productivity. If growth in the factors of production and the total factor productivity slows down, so will economic growth.

On the demand side, the national output produced is either consumed by consumers, taken up by investors in investment, consumed by government or exported to other countries after netting out the imports. Consumption, domestic investment and government spending constitute the domestic demand, also termed "internal circulation" in the strategy of dual circulation promulgated by China, whereas foreign direct investment and exports are the foreign demand or "external circulation". If the aggregate demand is insufficient, some of the factors of production will be underutilised, and there will be unemployment of labour and idle production facilities, and in that sense excess capacity.

In a large economy like China, and, for that matter, also the U.S., the main driving force for economic growth has to be the growth in domestic demand, unlike small open economies of the Asian tigers, namely Hong Kong, Singapore, Taiwan and South Korea, which thrive on growth in external demand for their exports and foreign investment. China and the U.S., in contrast, cannot rely on foreign trade as the main driving force for their economic growth because they are already the largest two exporters in the world. They are the largest or the second largest exporter to most countries in the world, leaving little room for further expansion. Further growth in their exports depends on the growth in the demand of the other countries, which in turn will be determined by the global economic growth, a factor that is not under the policy control of China or the U.S.

Structural Impediments on the Demand Side

Growth in domestic demand of consumption and investment in China has reduced from the double-digit growth rate since 2019 (see Table 1). The growth rate of both household consumption expenditure and gross capital formation declined noticeably after 2018, rebounded in 2021 from the low base of 2020, the beginning year of the COVID pandemic, and fell again in 2022.

Table 1: Household consumption expenditure and gross capital formation of China, together with their respective growth rates and percentage shares in GDP

	Household consumption expenditure (at current prices)			Gross capital formation (at current prices)		
Year	(100 million yuan)	Y-o-Y % change	% share in GDP	(100 million yuan)	Y-o-Y % change	% share in GDP
2016	298,101.1		39.19%	320,756.2		42.17%
2017	330,096.0	10.73%	39.06%	360,559.2	12.41%	42.67%
2018	364,515.0	10.43%	39.04%	405,421.8	12.44%	43.43%
2019	395,830.9	8.59%	39.32%	429,201.1	5.87%	42.63%
2020	394,993.4	-0.21%	37.90%	440,567.7	2.65%	42.27%
2021	450,442.5	14.04%	38.40%	501,014.2	13.72%	42.71%
2022	466,181.2	3.49%	37.80%	522,678.5	4.32%	42.38%
2023	512,120.6	9.85%	39.57%	532,330.2	1.85%	41.13%

Source: National Bureau of Statistics of China

In terms of the level of consumption and investment, it is important to note that the percentage share of household consumption in GDP is historically fairly low at less than 40%, whereas the share of gross capital formation is fairly high at over 41% (see Table 1), compared with the advanced G7 economies (see Tables 2a and 2b). We need to explore the factors contributing to the relatively low share of consumption and relatively high share of capital formation in China's GDP. Given the persistent nature of the phenomenon, the contributing factors are obviously structural, not cyclical.

Table 2a: Final consumption expenditure of households and non-profit institutions serving households (NPISHs) as a share of GDP, China and G7

Year	China	United States	Canada	France	Germany	Italy	Japan	United Kingdom
2016	38.67%	67.68%	58.48%	54.32%	51.74%	59.80%	54.70%	64.74%
2017	38.54%	67.77%	57.98%	54.12%	51.11%	59.98%	54.61%	64.20%
2018	38.52%	67.46%	57.89%	54.06%	51.10%	59.97%	54.77%	64.66%
2019	39.25%	67.03%	57.75%	53.73%	51.05%	59.57%	54.55%	63.92%
2020	38.20%	66.62%	56.82%	53.19%	49.53%	57.72%	54.05%	59.24%
2021	38.11%	68.05%	54.22%	52.45%	48.57%	56.06%	53.54%	59.92%
2022	37.39%	68.02%	53.79%	53.06%	50.06%	58.40%	55.58%	61.36%
2023	39.13%	67.90%	55.16%	53.36%	49.93%	58.36%	NA	61.08%

Source: World Bank Group
NA: Not available

Table 2b: Gross capital formation as a share of GDP, China and G7

Year	China	United States	Canada	France	Germany	Italy	Japan	United Kingdom
2016	42.63%	20.89%	22.76%	21.60%	19.73%	17.71%	24.84%	17.93%
2017	43.01%	21.16%	23.55%	22.18%	20.51%	18.17%	25.21%	18.48%
2018	43.79%	21.57%	23.38%	22.61%	21.47%	18.66%	25.64%	18.18%
2019	43.25%	21.67%	23.04%	23.03%	21.30%	18.36%	25.79%	18.38%
2020	43.37%	21.42%	22.67%	22.80%	21.67%	17.90%	25.25%	17.58%
2021	43.14%	21.33%	24.31%	23.45%	22.46%	22.00%	25.72%	18.03%
2022	43.15%	21.95%	25.36%	24.19%	23.02%	24.76%	26.59%	17.94%
2023	42.08%	21.54%	24.02%	23.15%	21.67%	22.75%	26.18%	17.17%

Source: World Bank Group

Weak Consumer Demand

There are a number of structural factors hampering the growth in consumer demand in China.

1. Low labour share of GDP

In the literature on household consumption functions, it is well known that consumption is a stable proportion of permanent income. If income is low, consumption is also low; if income grows slowly, so will consumption. In China, the labour share of GDP is 51%, which is quite low compared with 57-58% in the U.S. and the U.K., and 60-61% in Canada, France and Germany (see Table 3). The low labour share of GDP is the consequence of the relatively low labour compensation in China. Unless there is an upward breakthrough in the labour share, growth in consumption will be constrained.

Table 3: Labour income share in GDP, China and G7

Year	China	United States	Canada	France	Germany	Italy	Japan	United Kingdom
2016	51.52%	58.43%	61.23%	61.82%	61.39%	60.00%	53.11%	56.05%
2017	51.35%	58.56%	60.31%	59.86%	61.47%	61.44%	53.11%	55.54%
2018	51.24%	58.44%	60.71%	59.97%	61.99%	61.40%	54.52%	55.76%
2019	51.42%	58.33%	60.91%	59.61%	62.47%	59.09%	55.38%	56.52%
2020	51.98%	59.96%	62.16%	61.09%	62.53%	56.88%	56.58%	60.27%
2021	51.69%	58.78%	59.51%	59.78%	61.17%	58.04%	56.33%	59.05%
2022	51.79%	58.35%	58.28%	61.14%	60.32%	56.75%	55.72%	58.13%
2023	51.28%	57.73%	60.15%	60.50%	60.14%	55.93%	54.09%	58.10%
2024	51.41%	57.48%	60.13%	60.15%	61.03%	56.44%	53.71%	58.05%

Source: International Labour Organization ILOSTAT

Why is China's labour share of national income relatively low? There are historical reasons. Under a centrally planned economy before the reform and opening-up in China in 1978, wages were suppressed to make way for capital accumulation for heavy industry development. Hence, wages started at a very low base. In the 1970s before the reform, the monthly wage was as low as 36 RMB. Since the opening-up, wages have increased substantially but at a pace more modest than GDP growth, partly because the government has not let public sector wages increase too rapidly.

2. High precautionary savings rate

China's overall national savings rate is very high. Table 4 shows that the gross national savings rate of China ranged from 43% to 46% during the period 2016-2024. The savings rate is much lower in the advanced countries, like 17-19% in the U.S. and 28-30% in Japan. The net household savings rate, which is the corollary of household consumption expenditure, in China is also very high. Table 5 shows that China has a net household savings rate as high as 34-35%, which is two to three times higher than those of the G7 economies. With the exception of 2020, when the rampant pandemic suppressed consumption and pushed savings to levels higher than usual, the net household savings rates of the G7 except Germany are mostly in the single digit range. China is a nation of high-savings and low-consumption households.

Table 4: Gross national savings as a percentage of GDP, China and G7

Year	China	United States	Canada	France	Germany	Italy	Japan	United Kingdom
2016	44.36%	18.47%	19.67%	21.07%	28.19%	20.17%	28.79%	12.41%
2017	44.71%	18.88%	20.75%	21.64%	28.20%	20.61%	29.34%	14.95%
2018	44.14%	19.13%	21.00%	21.91%	29.27%	21.16%	29.17%	14.12%
2019	43.79%	19.33%	21.09%	23.62%	29.33%	21.52%	29.24%	15.56%
2020	44.53%	18.23%	20.66%	20.75%	28.12%	21.66%	28.19%	14.64%
2021	45.28%	17.61%	24.33%	23.72%	29.63%	24.10%	29.69%	17.24%
2022	45.71%	18.32%	25.00%	24.63%	27.19%	23.01%	28.92%	16.64%
2023	42.98%	17.36%	23.29%	23.91%	27.83%	22.74%	29.95%	15.78%
2024	43.44%	17.91%	22.42%	22.35%	27.23%	23.15%	30.36%	14.31%

Source: IMF World Economic Outlook database

Table 5: Net household savings as a percentage of household disposable income, China and G7

Year	China	United States	Canada	France	Germany	Italy	Japan	United Kingdom
2016	34.57%	7.22%	1.62%	8.18%	10.20%	3.00%	1.95%	0.73%
2017	34.44%	7.50%	1.85%	8.37%	10.64%	2.56%	1.60%	-0.59%
2018	34.82%	7.82%	0.67%	8.62%	11.29%	2.54%	1.78%	-0.64%
2019	34.79%	9.13%	2.04%	9.17%	10.86%	2.38%	3.36%	-0.51%
2020	NA	17.49%	13.85%	15.19%	16.52%	10.21%	11.45%	11.21%
2021	NA	12.36%	10.54%	13.06%	14.92%	8.08%	7.79%	6.70%
2022	NA	NA	5.77%	11.20%	11.14%	1.82%	NA	2.02%

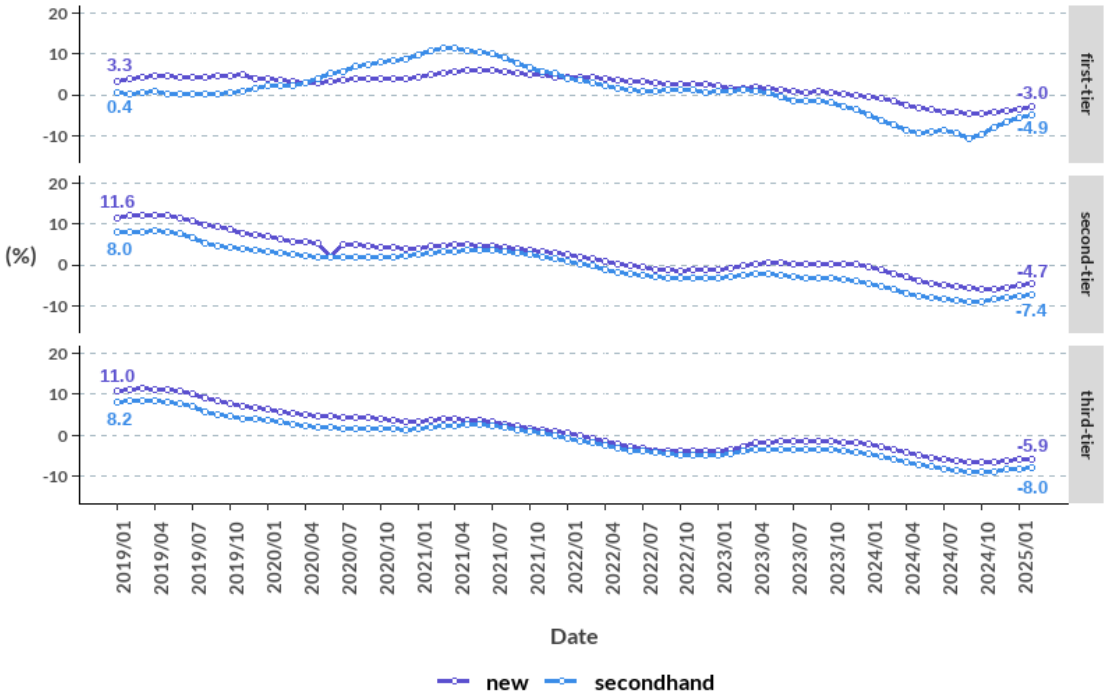
Source: OECD Data Explorer
NA: Not available

While frugality and saving money for the rainy days is a traditional Chinese virtue, the high savings rate is also a reflection of old-age income insecurity. People save for their advanced years as they perceive the social security net to be insufficient to cover the medical expenses of potential illnesses and living support for old age. The one-child policy (which was phased out only in 2016) has somewhat deepened the concern for old age income security. Most adults are the only child in the family, so, inevitably, each of them has to save to support himself/herself and his/her two parents in their senior years, whereas in a two-children family, the two children provide support for the two parents.

3. Negative wealth effect

Wealth has a positive effect on consumption. If consumers have assets that appreciate in value, like property and stocks, they spend more. The current decline in property prices, as shown in Figure 2, exerts a drag on consumption. The problem of the property market has a structural origin: Local governments encourage property developers to buy land to develop residential housing and office buildings because proceeds from land sale are one of their major sources of revenue. Property developers are highly geared and therefore vulnerable to changes in interest rate and a tightening of credit. When the property market slumps, the large stock of unsold inventory of completed residential flats and office buildings, as shown in Table 6, weakens home buyers' confidence and depresses prices. Homeowners' net worth has thereby declined; consumers have become more cautious in spending.

Figure 2: Year-on-year percentage change in new and second-hand home prices in China by city tier



Source: National Bureau of Statistics of China

Table 6: Floor space of commercial buildings for sale in China

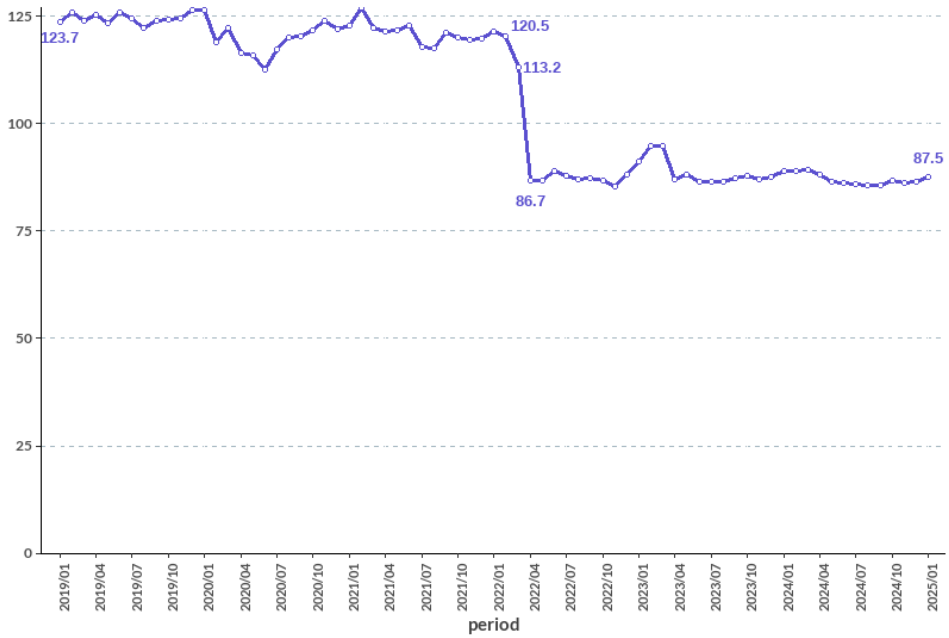
	Floor space of commercial buildings for sale (10,000 square metres)			
Year	**Residential buildings**	**Office buildings**	**Buildings for commercial business**	**All building types**
2016	40,257	3,631	15,838	69,539
2017	30,163	3,664	15,204	58,923
2018	25,091	3,649	13,793	52,414
2019	22,473	3,800	13,282	49,821
2020	22,379	3,796	12,934	49,850
2021	22,761	3,795	12,767	51,023
2022	26,947	4,073	12,558	56,366
2023	33,119	4,854	14,231	67,295
2024	39,088	5,313	14,437	75,327

Source: National Bureau of Statistics of China

4. Weak consumer confidence

Consumers spend less today if they are not confident about the future. Besides asset prices, consumer confidence also depends on their evaluation of their prospective income, job prospects, and predictability of government policies. Consumer confidence (and also investor confidence) is weakened by the sometimes swift changes in policies concerning sectors such as the digital economy and the property market. Figure 3 indicates a significant drop in consumer confidence circa April 2022, presumably associated with the lockdown measures notably in Shanghai and other cities, which has yet to recover. Even though the dynamic zero-COVID policy was phased out in late 2022, confidence in the future and trust in the consistency of government policies, once dented, take time to be re-built.

Figure 3: Consumer Confidence Index in China, Jan 2019-Jan 2025



Source: National Bureau of Statistics of China

Weak Investment Demand

Growth rate in gross capital formation has slowed down palpably after 2018 from 12.4% to single-digit growth. With the exception of 2021, which sees a rebound from the low base of 2.65% in 2020, the growth rate has steadily declined to 1.85% in 2023 (see Table 1). There are at least two major factors underlying this decline.

1. Debt overhang

While the total debt, which includes general government debt, non-financial corporate debt and household debt, as a share of GDP in China is not high relative to the advanced economies, the increase of over 40 percentage points from 246.8% in 2019 to 289.5% in 2023 is still swift as compared to previous periods (see Table 7). The household debt to GDP ratio increases mildly and remains fairly stable at about slightly over 60% after 2019 (see Table 8). The largest increase is attributable to the expansion of general government debt, which includes local government debt. While the national government external debt ratio is very low, at 13% to 16% of GDP (see Table 9), the general government debt to GDP ratio grows from 60.4% in 2019 to 84.4% of GDP in 2023 (see Table 10). Though the ratio is arguable low compared with advanced economies, the increase of 24 percentage points over a short period of four years nonetheless merits concern. The reason for this discernible increase is the increasing indebtedness of the local governments amid a period of property market slump and the pandemic.

Table 7: Total debt as a percentage of GDP, China and G7

Year	China	United States	Canada	France	Germany	Italy	Japan	United Kingdom
2016	237.83%	259.81%	306.16%	297.55%	182.84%	249.21%	387.88%	251.13%
2017	242.90%	260.35%	304.54%	299.92%	179.50%	245.94%	387.37%	250.45%
2018	242.19%	260.79%	306.83%	305.48%	178.57%	244.54%	391.79%	244.89%
2019	246.78%	261.84%	311.38%	311.65%	178.56%	243.18%	400.71%	242.65%
2020	268.85%	297.36%	363.19%	355.32%	197.13%	276.48%	441.62%	282.48%
2021	264.66%	285.94%	346.33%	341.19%	195.99%	260.64%	437.27%	269.05%
2022	275.92%	276.55%	324.59%	334.08%	190.18%	246.59%	441.83%	248.89%
2023	289.46%	273.16%	327.89%	322.74%	182.81%	235.72%	429.98%	241.76%

Source: IMF Global Debt Database
Note: Total debt is calculated as the sum of general government debt, non-financial corporate debt and household debt.

Table 8: Household debt as a percentage of GDP, China and G7

Year	China	United States	Canada	France	Germany	Italy	Japan	United Kingdom
2016	44.74%	77.39%	104.18%	57.11%	52.29%	41.17%	59.82%	88.12%
2017	48.87%	77.04%	103.60%	58.59%	51.90%	40.76%	60.28%	87.20%
2018	52.30%	75.43%	103.04%	60.64%	51.64%	40.76%	61.38%	86.86%
2019	55.85%	75.11%	103.52%	62.35%	52.55%	41.07%	62.54%	85.70%
2020	61.61%	78.46%	112.18%	68.19%	56.28%	44.89%	67.49%	92.91%
2021	62.09%	77.75%	106.43%	66.41%	55.55%	42.46%	67.65%	87.94%
2022	62.32%	75.47%	101.55%	65.83%	53.88%	40.59%	67.85%	82.46%
2023	63.67%	72.93%	102.21%	62.63%	51.33%	37.83%	65.66%	77.76%

Source: IMF Global Debt Database

Table 9: National government external debt as a percentage of China's GDP

Year	National government external debt ratio (% GDP)
2016	12.60%
2017	14.30%
2018	14.30%
2019	14.50%
2020	16.30%
2021	15.40%
2022	13.60%
2023	13.70%

Source: National Bureau of Statistics of China

Table 10: General government debt as a percentage of GDP, China and G7

Year	China	United States	Canada	France	Germany	Italy	Japan	United Kingdom
2016	50.70%	107.16%	92.40%	98.02%	67.63%	134.20%	232.42%	87.83%
2017	54.95%	106.00%	90.94%	98.48%	63.95%	133.69%	231.32%	86.72%
2018	56.66%	107.16%	90.78%	98.16%	60.73%	134.14%	232.38%	86.35%
2019	60.40%	108.45%	90.21%	97.89%	58.56%	133.82%	236.38%	85.66%
2020	70.16%	132.56%	118.20%	114.85%	67.86%	154.29%	258.37%	105.80%
2021	71.85%	125.44%	113.48%	113.09%	67.88%	145.73%	253.65%	105.20%
2022	77.39%	120.44%	107.37%	111.95%	64.79%	138.35%	256.30%	100.43%
2023	84.38%	123.01%	107.49%	110.64%	62.66%	134.79%	249.67%	101.15%

Source: IMF Global Debt Database

Many local governments are facing financial difficulties because their revenue from the sale of land has evaporated. In the current depressed property market, they struggle to sell land, which is one of their major sources of revenue. Expense on preventing the spread of COVID, while critical to public health and hence cannot be spared, has further weighed on local

governments' finances. The debt overhang of local governments restrains growth in public investments.

2. Weak investor confidence

Of greater importance is the slowdown in private sector investment in fixed assets, which constitutes the bulk of capital formation in the GDP.[1] A sizeable share of private investments of fixed assets is in the residential housing sector. This share has declined from 21.0% in 2019 to 14.8% in 2024 (see Table 11). Within a market where prices are depressed, property sales are sluggish and the vacant unsold inventory is huge, interest in homeownership is understandably weak. It is not surprising that there is a substantial reduction in new investments in the residential property development, which affects the whole supply chain of architectural services, construction, fitting out, property sale, and furniture manufacturing.

Table 11: Investment in residential buildings as a share of total investment in fixed assets in China

Year	Investment in fixed assets (excluding rural households) (100 million yuan)	Investment actually completed for residential buildings (100 million yuan)	Share of total investment in fixed assets (%)
2016	362,055.85	64,809.07	17.90%
2017	385,371.75	70,683.79	18.34%
2018	408,176.18	79,643.61	19.51%
2019	430,145.18	90,462.96	21.03%
2020	442,791.45	97,122.10	21.93%
2021	464,665.35	103,281.53	22.23%
2022	488,549.15	93,420.11	19.12%
2023	503,036.03	84,961.22	16.89%
2024	514,374.00	76,040.00	14.78%

Source: National Bureau of Statistics of China

As for non-housing investments by private enterprises, they depend much on investment confidence and the credit market. Currently, investment confidence is weak. Policies such as the tightening of regulations on the digital economy, stepping up regulations of commercial extramural tutoring for school children to alleviate their excessive homework burden, and limiting access of adolescents to electronic games on the e-platforms in 2021 have sent negative signals to private enterprises. An unintended consequence is that the market

[1] Compare the investment in fixed assets in Table 12 with the gross capital formation figures in Table 1.

interprets such regulations as a shift in policy stance, shaking investors' belief that the government continues to support private enterprises, which become less confident of the consistency and predictability of government policies vis-à-vis the private sector. Such uncertainty tends to defer private enterprise investments, as reflected by the slowing growth in non-governmental investment in fixed assets since 2021 shown in Table 12.

Table 12: Non-governmental investment in fixed assets in China

Year	Non-governmental investment in fixed assets (excluding rural households) (100 million yuan)	Y-o-Y % change
2016	194,952.00	
2017	205,153.00	5.2%
2018	223,001.00	8.7%
2019	233,482.00	4.7%
2020	235,701.00	1.0%
2021	252,082.00	6.9%
2022	254,451.00	0.9%
2023	253,544.00	-0.4%
2024	257,574.00	1.6%

Source: National Bureau of Statistics of China

Weak External Demand

Geopolitical tension between China and the U.S. is a structural factor affecting external demand. It is likely to last a number of years, causing a drag on China's economic growth.

1. Decline in foreign direct investments due to geopolitical tension

On the external demand side, foreign direct investment (FDI) from overseas, especially from the U.S. and Europe, has been slowing down. The U.S. and some European governments have issued warnings to their enterprises about the potential geopolitical risks of investing in China. Some existing businesses have scaled down their operations or left China, while new investment inflows have slowed down. Table 13 shows the marked drop in the growth rate of FDI in 2022 and 2023 to -44.7% and -77.5%, respectively. The significant drop cannot be attributed to the disruption of COVID as there have been sizeable rates of growth in 2020 and 2021, the first two years of the pandemic. The decline in foreign portfolio investment over this period is even more dramatic (see Table 13).

Table 13: Foreign direct investment and portfolio investment into China

Year	Foreign direct investment (100 million USD)	Y-o-Y % change	Foreign portfolio investment (100 million USD)	Y-o-Y % change
2016	1,747.50		504.99	
2017	1,660.84	-4.96%	1,243.01	146.15%
2018	2,353.65	41.71%	1,603.81	29.03%
2019	1,871.70	-20.48%	1,473.66	-8.11%
2020	2,530.96	35.22%	2,467.75	67.46%
2021	3,440.75	35.95%	1,766.28	-28.43%
2022	1,902.04	-44.72%	-1,089.80	-161.70%
2023	427.28	-77.54%	140.57	112.90%*

Source: State Administration of Foreign Exchange
*: Absolute value

2. Slow growth in exports due to geopolitical tension

After years of double-digit expansion, growth in exports of goods slows down after 2017, as displayed in Table 14. Except for 2021 and 2022, when there was a high demand for China's exports of medical and preventive devices to combat the pandemic in many countries, the growth rate of China's export of goods has slowed to a range of 1% to 7% after 2018 following the imposition of tariff on China's exports of goods to the U.S. by the first Trump

administration. In the second Trump administration starting in 2025, the huge tariffs imposed on Chinese exports to the U.S. will likely have a larger negative impact on China's export growth as compared to those imposed during the first Trump administration.

Table 14: Chinese exports and imports of goods

Year	Export of goods (100 million Yuan)	Y-o-Y % change	Import of goods (100 million Yuan)	Y-o-Y % change
2016	138,419		104,967	
2017	153,309	10.76%	124,790	18.88%
2018	164,129	7.06%	140,881	12.89%
2019	172,374	5.02%	143,254	1.68%
2020	179,279	4.01%	142,936	-0.22%
2021	214,255	19.51%	173,137	21.13%
2022	236,337	10.31%	180,391	4.19%
2023	237,656	0.56%	179,854	-0.30%
2024	254,545	7.11%	183,923	2.26%

Source: General Administration of Customs of the People's Republic of China

Structural Impediments on the Supply Side

On the supply side, the potential GDP is determined by factors of production, including labour and capital, whose growth rates directly contribute to the GDP growth rate. The level of technology deployed affects the productivity of the use of these factors. The GDP growth rate over and above the growth rates of labour and capital can be attributed to an improvement of technology, which impacts directly the type of output produced as well as the process of producing that output, in other words, how labour combines with the available capital in the production process. Technology, broadly defined, enhances the total factor productivity of the deployed factors in production.

Population Decline, One-Child Policy and Low Fertility Rate

The most important and long-term structural issue on the supply side is the decline in population. Negative population growth, at -0.06%, began in 2022 and has stayed negative since (see Table 15). Population growth underpins the growth in the labour force. The other determining factor is the labour force participation rate, which, incidentally, has also seen a decline in China, towards the levels of the G7 countries, as evidenced in Table 16. A shrinking labour force over time due to declining population and labour force participation rate will reduce GDP growth as there are fewer workers to produce output. In the long term, it may even reduce the GDP growth rate to such an extent that it becomes negative, unless it is offset by faster growth in the other factors, such as capital. But growth in the capital stock comes from investment. Given that the capital stock is already very large, its rate of growth is unlikely to be sizeable. The key to long term economic growth on the supply side therefore lies in the increase in total factor productivity arising from technological advancement.

Table 15: Chinese population size and growth rate

Year	Population (at year end, thousand people)	Y-o-Y % change
2016	1,392,320	
2017	1,400,110	0.56%
2018	1,405,410	0.38%
2019	1,410,080	0.33%
2020	1,412,120	0.14%
2021	1,412,600	0.03%
2022	1,411,750	-0.06%
2023	1,409,670	-0.15%
2024	1,408,280	-0.10%

Source: National Bureau of Statistics of China

Table 16: Labour force participation rate (as a percentage of total population aged 15+), China and G7

Year	China	United States	Canada	France	Germany	Italy	Japan	United Kingdom
2016	68.88%	62.43%	65.64%	55.40%	60.41%	49.16%	59.99%	62.38%
2017	68.35%	62.55%	65.79%	55.26%	60.66%	49.50%	60.44%	62.38%
2018	67.81%	62.59%	65.55%	55.30%	60.86%	49.60%	61.45%	62.60%
2019	67.38%	62.85%	65.81%	54.94%	61.31%	49.59%	62.01%	62.60%
2020	65.98%	61.56%	64.10%	54.27%	60.48%	48.25%	61.95%	62.54%
2021	67.11%	61.50%	65.20%	55.54%	60.40%	48.44%	62.12%	61.95%
2022	65.80%	61.79%	65.25%	55.85%	60.93%	49.03%	62.50%	61.91%
2023	65.83%	62.08%	65.36%	55.64%	61.12%	49.80%	62.90%	61.78%

Source: World Bank Group

The main reasons why China's population is shrinking are the one-child policy and the low fertility rate. The one-child policy was implemented in 1979 with the aim to reduce China's population growth rate, which was high back then. In order to stabilize the size of the population at zero growth rate, in the long run the lifetime total fertility rate of the woman has to be 2.1, that is, on average a woman needs to have over her lifetime 2.1 children. The gap between the total fertility rate of 2.1 and 1, the target fertility rate under the one-child policy, dampens China's population growth for almost 40 years until 2016 before the policy was relaxed. Under the relaxed policy, couples who are both the single child of their parents are allowed to have two children. The effect of this relaxation on population growth is, however, insignificant. The one-child policy was finally completely phased out after 2016, allowing all couples to have two or more children. The aim is to reverse the trend of population decline. The effectiveness of the ending of the one-child policy has yet to be seen because by this time, the preference for small families may have become entrenched among young Chinese couples.

The total fertility rate of women in China was 1.18 in 2022, which is lower than many advanced countries (see Table 17). After the relaxation of the one-child policy in 2016, instead of an expected rise in total fertility rate, it actually falls rapidly and continuously from 1.81 in 2017 to 1.18 in 2022. It is well known that the total fertility rate of women in high income economies tends to be low. China has got to this low level of fertility when its per capita GDP is only about US$13,300, indicating that it is an issue warranting special attention if economic growth is to be boosted in the longer term. There are a number of explanations for China's low fertility, which is not the focus of this article and hence will not be elaborated here.

Table 17: Total fertility rates in selected economies (births per woman)

Year	China	United States	Canada	France	Germany	Italy	Japan	United Kingdom
2016	1.772	1.8205	1.59	1.92	1.60	1.34	1.44	1.79
2017	1.813	1.7655	1.55	1.89	1.57	1.32	1.43	1.74
2018	1.554	1.7295	1.51	1.87	1.57	1.29	1.42	1.68
2019	1.496	1.706	1.47	1.86	1.54	1.27	1.36	1.63
2020	1.281	1.6415	1.41	1.83	1.53	1.24	1.33	1.56
2021	1.164	1.664	1.44	1.84	1.58	1.25	1.30	1.56
2022	1.175	1.665	1.33	1.794	1.455	1.24	1.26	1.57

Source: World Bank Group

Structural Impediments and Economic Impact on China

To summarize, on the demand side, the growth in both the domestic demand for consumption and investment, and the external demand for China's exports and FDI have weakened due to a number of structural issues, contributing to the discernible reduction in China's GDP growth rate in recent years. On the supply side, the decline in fertility and the population poses a long-term hindrance to China's economic growth.

Some of the structural impediments on both the demand and the supply sides have been present in China for quite some time, such as the relatively low labour share of GDP, the high precautionary household saving rate, and the demographics. Others have arisen from recent developments: geopolitical tensions between China and the U.S., which impacts China's economy starting from around 2018-19 when the first Trump administration initiated a trade war on China by imposing a 25% tariff on a substantial portion of Chinese exports to the U.S., followed by a technology war which restricts China's access to U.S. and European high-tech products and production technology. Geopolitical rivalry and tension have intensified in the second Trump administration, with the U.S. imposing sky-high tariffs on Chinese exports and China retaliating.

Since geopolitical tension and its economic ramifications are not likely to disappear in the short term, it can be viewed as structural impediments to China's economic growth at least in the medium term. After the trade war initiated by the first Trump administration, Chinese enterprises are forced to relocate their production facilities to other countries, such as Mexico and Southeast Asian countries, to avoid the tariff, disrupting the supply chain of Chinese manufacturing. The supply chain was further disrupted by the outbreak of the COVID pandemic. The disruption, though by itself not structural in nature, does have a lasting impact on the configuration of the global supply chain as countries like the U.S. and some European countries start to relocate part of the supply chain onshore or near-shore for security reasons. All of these factors have a structural characteristic and have a dampening effect on China's exports.

Arising from the heightening tension of the geopolitical rivalry, the U. S. and European government and regulatory agencies advise their enterprises against investing in China, citing geopolitical risks and national security concerns. Among western fund managers there is this

investment criterion of ABC (Anywhere but China). Foreign investors' confidence in investing in China has been considerably undermined. As a result, foreign interest in both direct investments and portfolio investments have declined noticeably.

Unfortunately, external factors like geopolitical tension and the pandemic coincide in timing with a series of domestic policies and measures which transpire to weaken domestic consumer and investor confidence. Measures to contain the pandemic reduced people movement and, as a corollary, economic activity from 2020 to late 2022. During this period, the government also announced the three red lines in lending to and financing property developers, tightened regulations on activities of the digital economy, on extramural tutoring for school children, and on e-platforms limiting access of adolescents to electronic games. While all these policies and measures by themselves have entirely reasonable objectives with good intention, launching them all within a short period around the time of the pandemic, the embattled property market, and geopolitical tension inadvertently induces private enterprises to perceive them as a sign that the Chinese government is tilting away from the private sector and favouring state-owned enterprises instead.

Policies to Address Structural Issues

The Chinese government recognizes that the issue of inadequate domestic demand in both consumption and investment is critical, as indicated in different government documents and most recently emphasized again in the government work report delivered at the third session of the 14th National People's Congress in March 2025. The government has injected liquidity into the market by lowering the reserve ratio of banks. It has issued bonds to raise at least a trillion dollars to alleviate the financial difficulties of local governments and to buy up vacant flats in the market to reduce the inventory of unsold flats. It stimulates consumption by subsidizing the trade-in of used home appliances and durables for new ones. Some local governments have also handed out consumption vouchers. All these measures are basically counter-cyclical measures. While they have a stimulating effect on domestic demand, they are relatively short-term. By and large they have not addressed the longer-term structural issues of the economy. Counter-cyclical measures have an alleviating effect and buy time for structural transformation.

Structural impediments can only be removed by structural transformation in the economy; such changes take time to implement and to take effect. This means economic growth will continue to be relatively subdued in the near future. Here are some of the structural economic policies that the government can consider:

1. Strengthen consumer and investor confidence

Reassuring entrepreneurs of the government's commitment to supporting private enterprises will be conducive to enhancing investment sentiment. Confidence was dented by the tightening of regulatory measures on the real estate market and the digital platform economy in 2020-21. Investors need to have a stable and predictable environment to commit to long-term investments. Consumers also need to feel secure to dissave and consume. With regard to how trust and confidence can be restored, verbal reassurance is indispensable, but the markets are likely to remain cautious until they observe concrete policy actions. The recent widely publicized meeting between President Xi Jinping and a group of technology entrepreneurs sends a clear signal that the government is committed to its policy of supporting private enterprises, which is an encouraging sign. This needs to be followed by actions at the various levels of governments.

2. Increase disposable income

To raise the level of consumption, consumer disposable income needs to be increased. Local government officials' promotion is often based on their performance in achieving GDP growth rate targets. In the past, one of the often-used ways to meet GDP targets is to sell land to developers for residential development, which adds to GDP, and use the proceeds and other funds from local government financing platforms to build infrastructure, which also adds to the GDP. A serious effort to raise the labour share of GDP so as to increase consumption is to revise the key performance indicators (KPI) of local government officials to give weight to the growth in disposable income of the citizens, instead of emphasizing only GDP growth rate.

3. Strengthen social security support

Strengthen the social security net to reduce the precautionary motive to save excessively now to prepare for retirement. This may entail the government's injection of funds into social security and requiring employers to make a higher contribution. Admittedly, providing the optimal level of incentive that allows overly frugal households to loosen their purse strings to consume while not encouraging people to overspend will be an intricate matter. The potential reward of bolstering domestic consumer demand in the long run may well justify any short-term adverse effect. In addition, with respect to enhancing income security, deferring the official retirement age will be useful as workers have more years of working life to earn and save for retirement. The government has decided to raise the official retirement age for males from 60 to 63, and for females from 50 and 55 to 55 and 58 starting from 2025. The retirement age can be further increased to 65 as life expectancy lengthens.

4. Invest in technology to raise productivity

If contributions of labour and capital to growth slow down, GDP growth will have to depend more on growth in productivity. In this regard, the government has been very active in promoting technology which, in the long run, will raise total factor productivity. In view of the declining population, robots will play an increasingly important role in both industrial and household production in the future. The point to note here is that government needs to create the space and to encourage private sector participation in technological development, say, through tax policy on research and development. In China, the private sector has always been

very active and vibrant in innovation. Examples of private enterprises leading the world in their respective technological expertise are not in short supply, and to just name a few: Alibaba, Tencent, TikTok, DeepSeek, Dajiang Innovation Technology, BYD, and CATL.

5. Labour market and education policies

To mitigate the impact of the decline of the population and the labour force, we need a host of population, labour market and education policies. While increasing fertility is the most basic one, it is also the hardest to achieve. There have not been many successful country stories of increasing fertility in the world. Subsidizing child birth, strengthening maternal support and increasing provision of child care services are helpful in the margin but not effective enough to reverse the downward trend in fertility rate.

A more direct way of increasing labour supply is to defer the official retirement age as mentioned earlier. Given the lengthening life expectancy and better medical care, a longer working life may be welcome by most people.

Extending the free and compulsory education to senior high school will increase the supply of better educated labour with higher skills, even though the total labour force after completion of schooling remains unchanged. Implementing the expansion of compulsory education to senior high school will require a nationwide programme of school construction, which will also boost the domestic demand.

6. Household registration (hukou) and urbanization

Gradual and orderly relaxation of the household registration policy has the potential of bringing more rural population into towns and cities. Currently, the rural population constitutes 33% of the total population, a ratio that has been declining over the years (see Table 18) but is still significantly higher than most advanced economies (see Table 19). Urban labour force engaging in manufacturing and service industries are more productive than agricultural labour in the rural areas. With the relocation of the rural residents to urban areas, we can make up for the shortfall in the urban labour force arising from the decline in population and raise overall productivity and hence GDP growth. Increase in agricultural productivity through investment in agricultural technology will enable an increase in agricultural output using fewer rural

workers, as has been the experience in the U.S., where the rural population is less than 20% of the total population.

Table 18: Rural population in China

Year	Population (at year end, thousand people)	Rural population (at year end)		
		(thousand people)	Y-o-Y % change	Percentage of total population (%)
2016	1,392,320	573,080		41.16%
2017	1,400,110	556,680	-2.86%	39.76%
2018	1,405,410	541,080	-2.80%	38.50%
2019	1,410,080	525,820	-2.82%	37.29%
2020	1,412,120	509,920	-3.02%	36.11%
2021	1,412,600	498,350	-2.27%	35.28%
2022	1,411,750	491,040	-1.47%	34.78%
2023	1,409,670	477,000	-2.86%	33.84%
2024	1,408,280	464,780	-2.56%	33.00%

Source: National Bureau of Statistics of China

Table 19: Rural population as a percentage of total population, selected economies

Year	China	United States	Canada	France	Germany	Italy	Japan	United Kingdom
2016	43.26%	18.14%	18.70%	20.08%	22.78%	30.15%	8.54%	17.11%
2017	42.04%	17.94%	18.65%	19.82%	22.74%	29.86%	8.47%	16.86%
2018	40.85%	17.74%	18.59%	19.56%	22.69%	29.56%	8.38%	16.60%
2019	39.69%	17.54%	18.52%	19.29%	22.62%	29.26%	8.30%	16.35%
2020	38.57%	17.34%	18.44%	19.03%	22.55%	28.96%	8.22%	16.10%
2021	37.49%	17.13%	18.35%	18.76%	22.46%	28.65%	8.13%	15.85%
2022	36.44%	16.92%	18.25%	18.49%	22.35%	28.34%	8.05%	15.60%
2023	35.43%	16.70%	18.14%	18.22%	22.24%	28.03%	7.96%	15.36%

Source: World Bank Group