

# Lecture 2a

## *Challenges for China's Economy*



# The Modern Chinese Economy I

- Transition toward socialist market economy (1979–2001)
  - First phase of transition was gradualist and consensual, and sought to decentralize resource control without fully eliminating distortions
    - Secret agreement to divide land into family plots, violating collectivism, eventually institutionalized as “household responsibility system”
    - A dual-track pricing system (*shuāngguǐzhì*) emerged with state-owned firms allocating resources according to plan while more private sector adopted market prices
  - First-stage reform was interrupted by Tiananmen, which in turn was due in part to economic dislocation
  - Second phase of transition was more rapid and directed, and sought institutional reform alongside recentralization of resource control
    - Reform efforts were revitalized after Deng’s Southern Tour
    - Institutional reform began with fiscal and monetary recentralization, accompanied by greater privatization of SOEs and culminating in integration into the global economy

# The Modern Chinese Economy II

- The transition to a socialist market economy involved a battle of ideas



Source: <https://youtu.be/R0lwKlMFmZY>

# The Modern Chinese Economy III

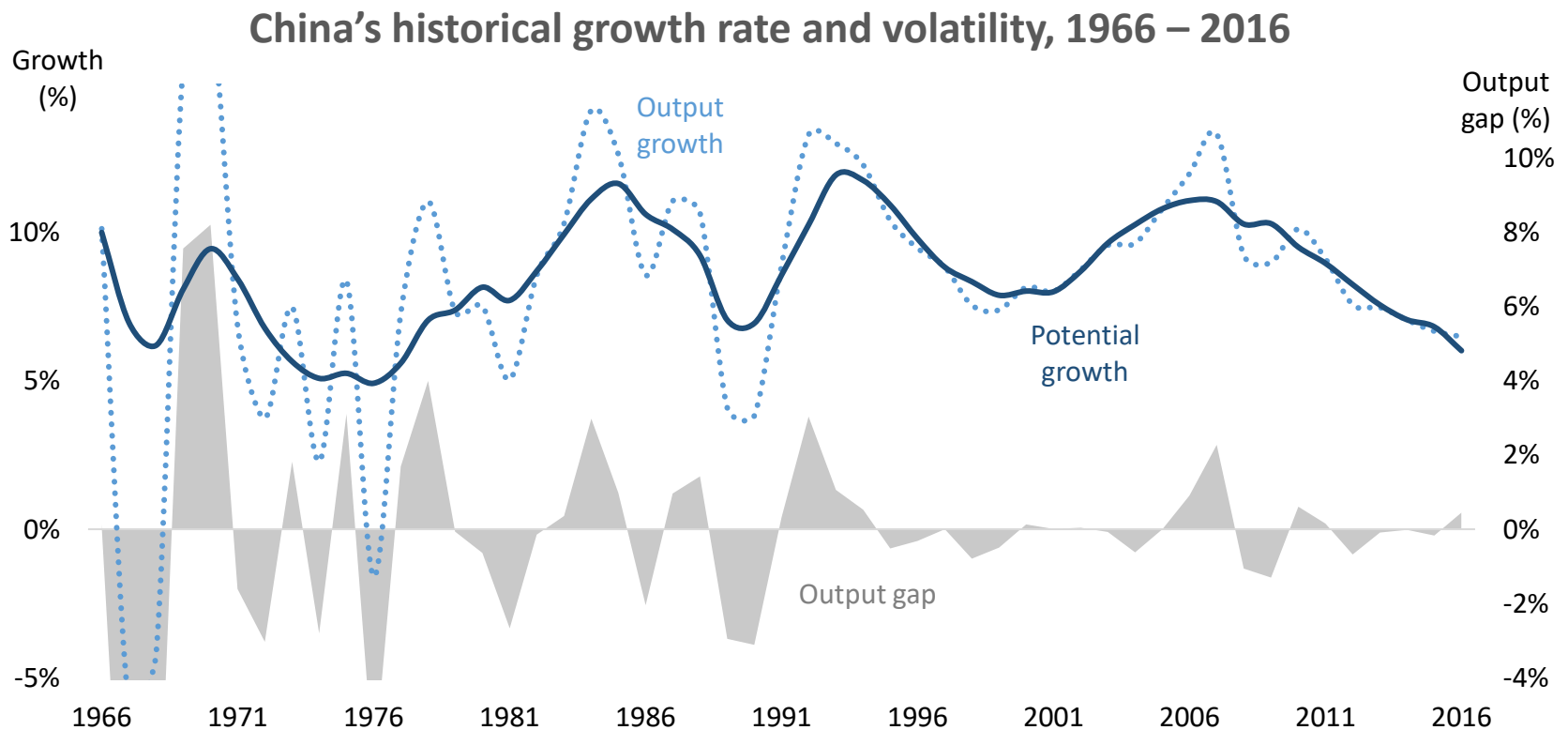
- China's contemporary challenges stem from a combination of incomplete transition and development
  - Successes of early reforms in 1<sup>st</sup> phase stemmed from China's relative underdevelopment, which permitted rapid mass resource mobilization and virtually no losers
  - Continued gains from 2<sup>nd</sup> phase reform thereafter required institutional transformation, which faces more political-economic resistance from entrenched potential losers
  - The reform process in the 2<sup>nd</sup> phase is ongoing

# The Modern Chinese Economy IV

- Modern economy is “Socialism with Chinese Characteristics”
  - Growth record unique among large developing economies
    - Tame business cycles (centralized macro management and misreporting)
  - China’s development has evolved from resolving inefficiencies to genuine technological progress
  - Rapid demographic transition from un/intended policy effects
  - *Hùkǒu* policy restricts rural-urban migration
  - Efficient (informal) private sector alongside inefficient state-owned enterprises
  - High domestic saving channeled toward capital accumulation, with historically large surpluses
    - Town-and-village enterprise (TVE) system of rural production
    - Special economic zones (SEZs) with high foreign direct investment
  - Financial liberalization alongside large debt burden
  - Recent shifts toward political centralization

# The Modern Chinese Economy V

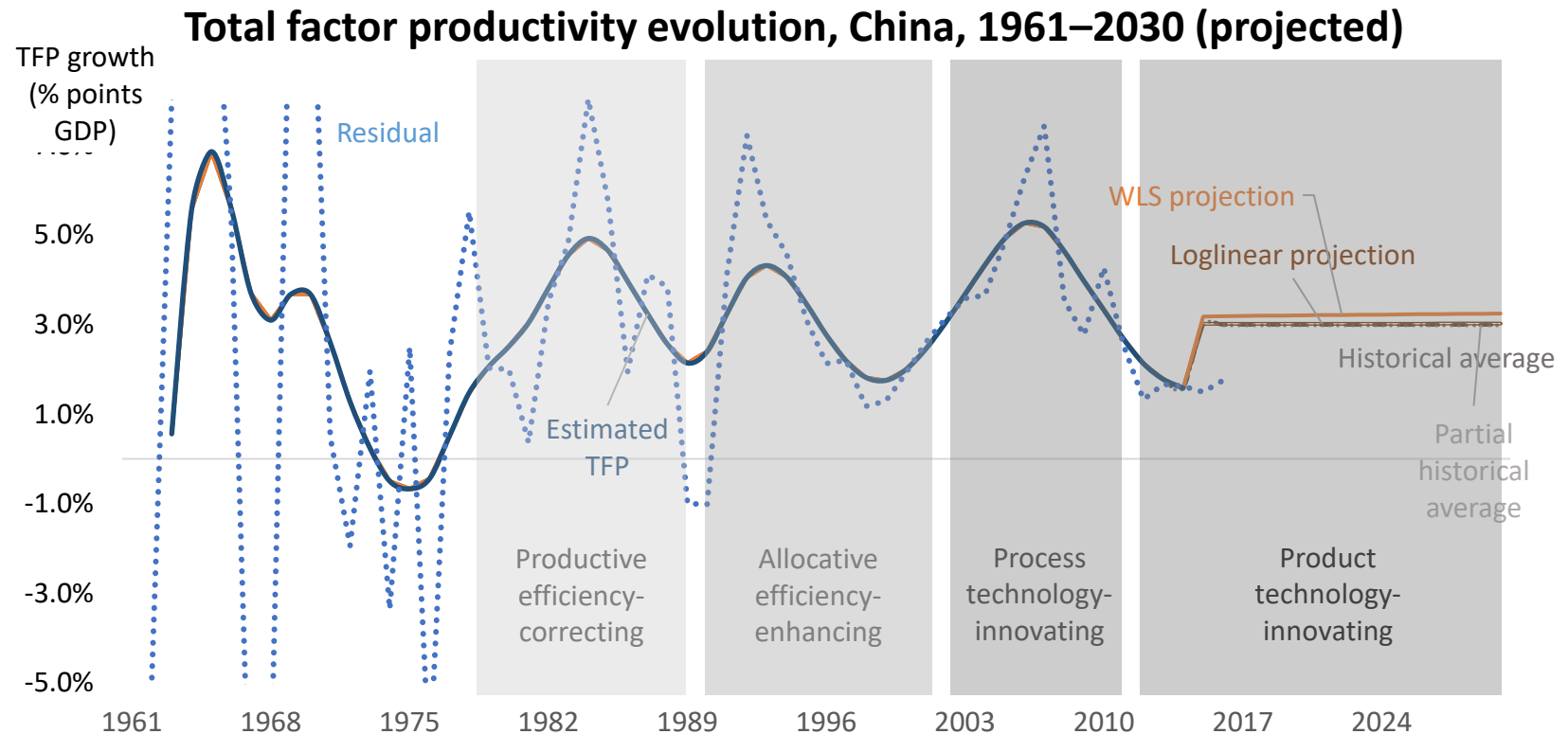
- China's growth over the 3 decades following communism has averaged in excess of 9% per year with very little volatility



Source: Authors' calculations, from Barro & Lee (2015, 2016), IIASA (2010), ILO (2014), UN (2013, 2015), World Bank (2017).

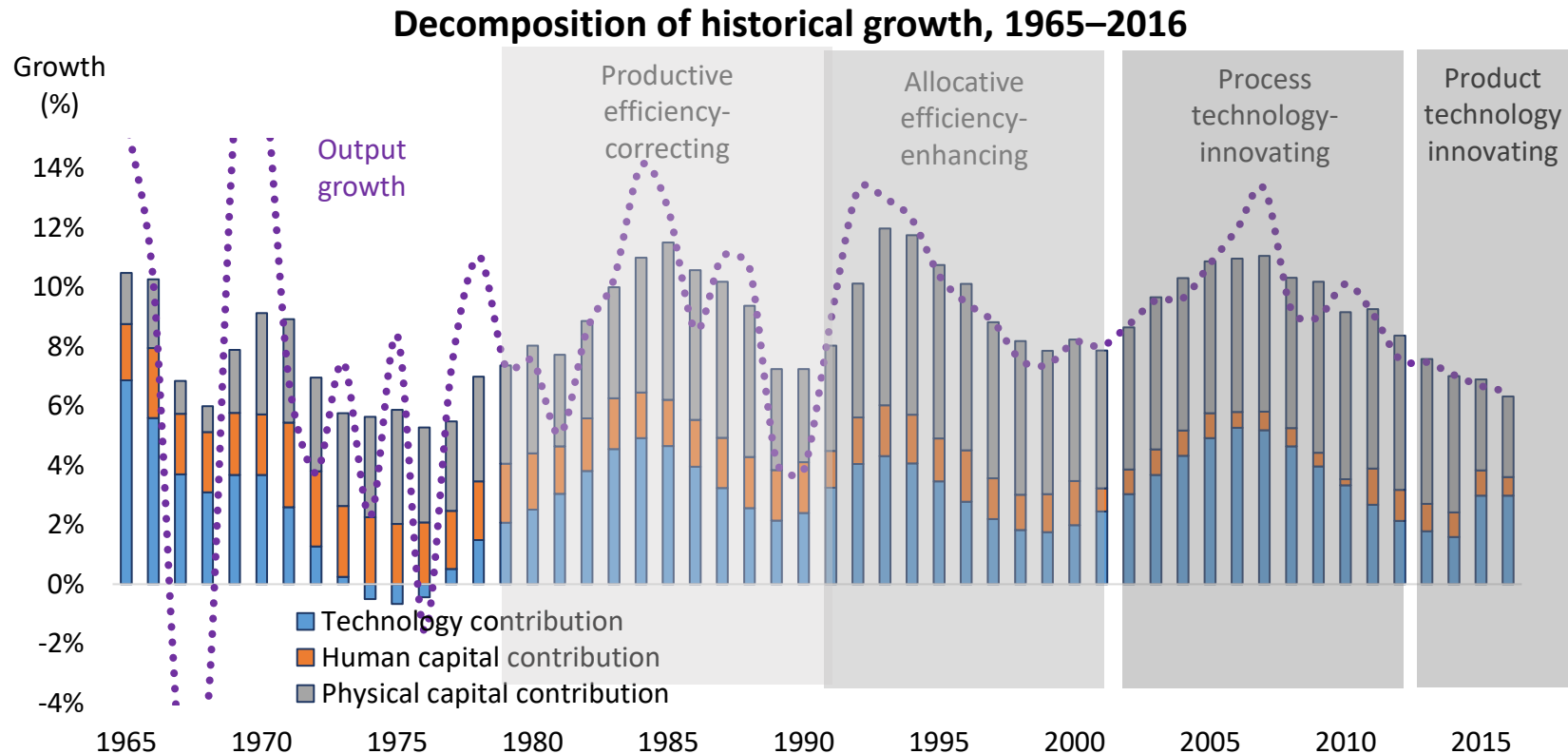
# The Modern Chinese Economy VI

- Productivity growth in China has benefitted from efficiency gains from reallocating factors, but will now need innovation



Source: Authors' calculations, from World Bank (2017)

# Success in ensuring innovation-led growth will also require rebalancing of the economy

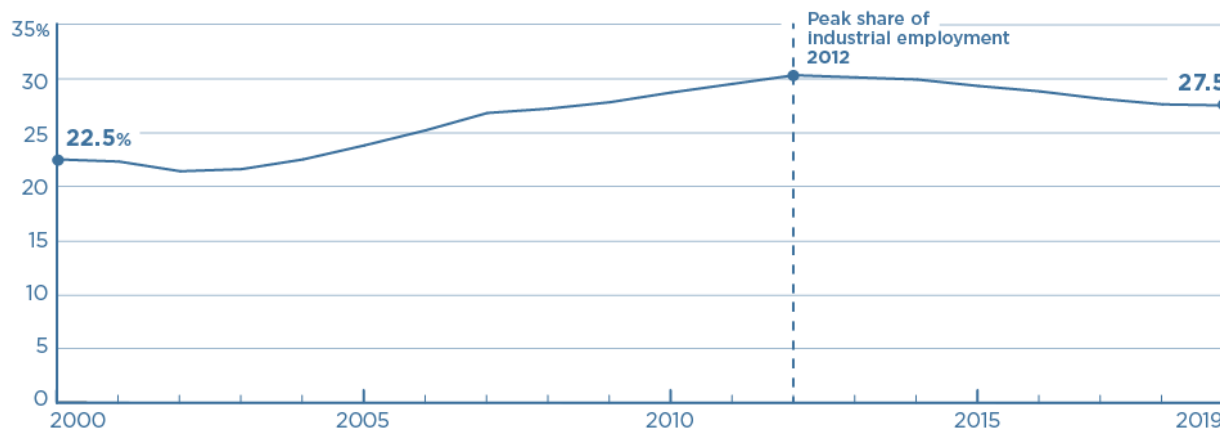


Source: Authors' calculations, from Barro & Lee (2015, 2016), IIASA (2010), ILO (2014), UN (2013, 2015), World Bank (2017)

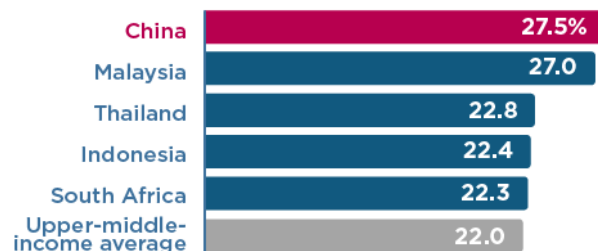


# China is deindustrializing but has a way to go to match other upper-middle-income economies

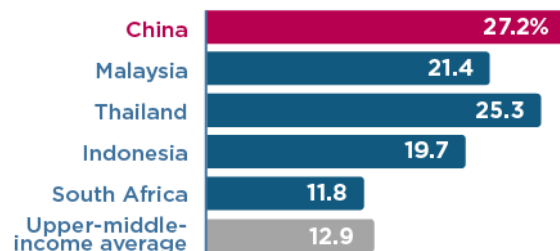
a. Share of workers employed in China's industrial sector



b. Industry as share of total employment among selected upper-middle-income countries, 2019



c. Manufacturing value added as share of GDP among selected upper-middle-income countries, 2019



#PIIECharts

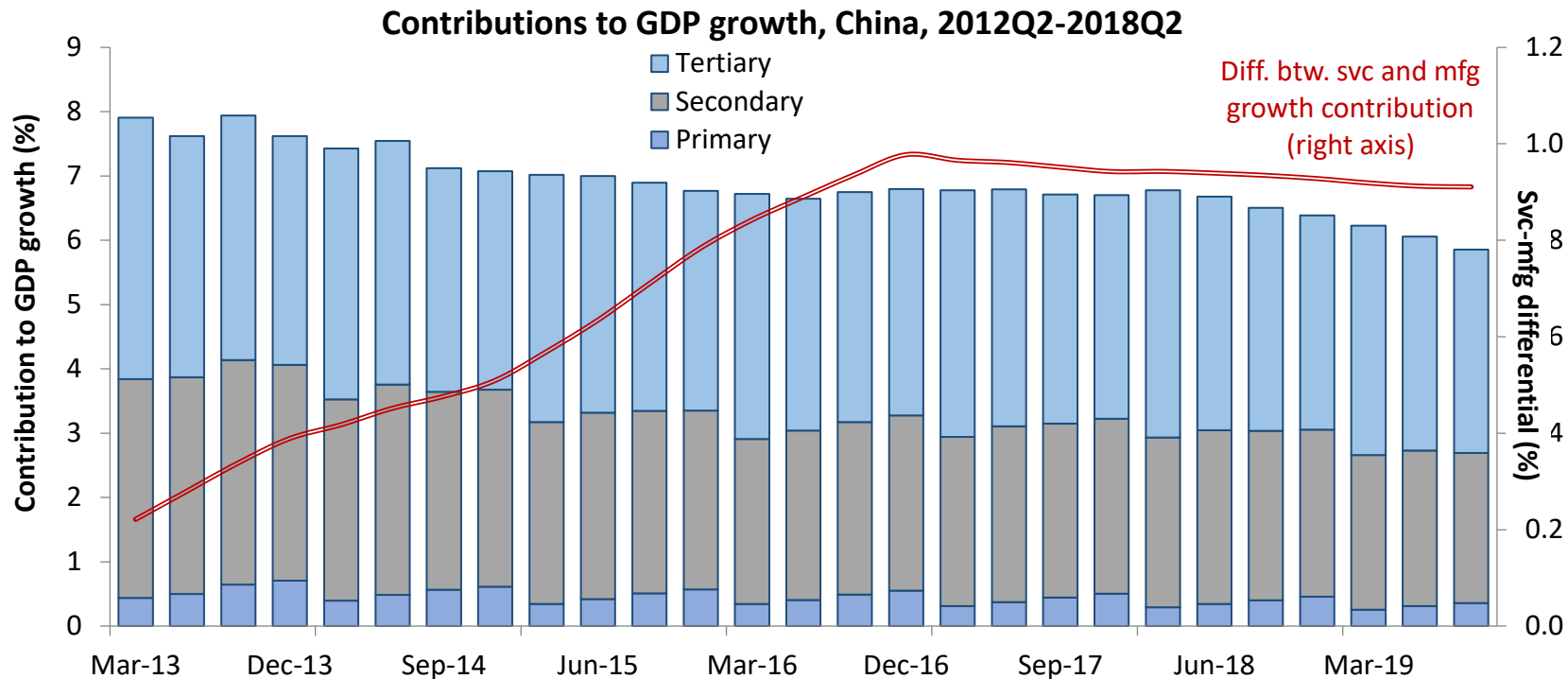
Learn more at [piie.com/research/piie-charts](https://piie.com/research/piie-charts)



**Note:** Upper-middle-income average data refer to the average of all non-island upper-middle-income countries excluding Iran and China.

**Sources:** National Bureau of Statistics of China; World Bank World Development Indicators.

## China's rebalancing process was well underway, but in recent times, progress has stalled

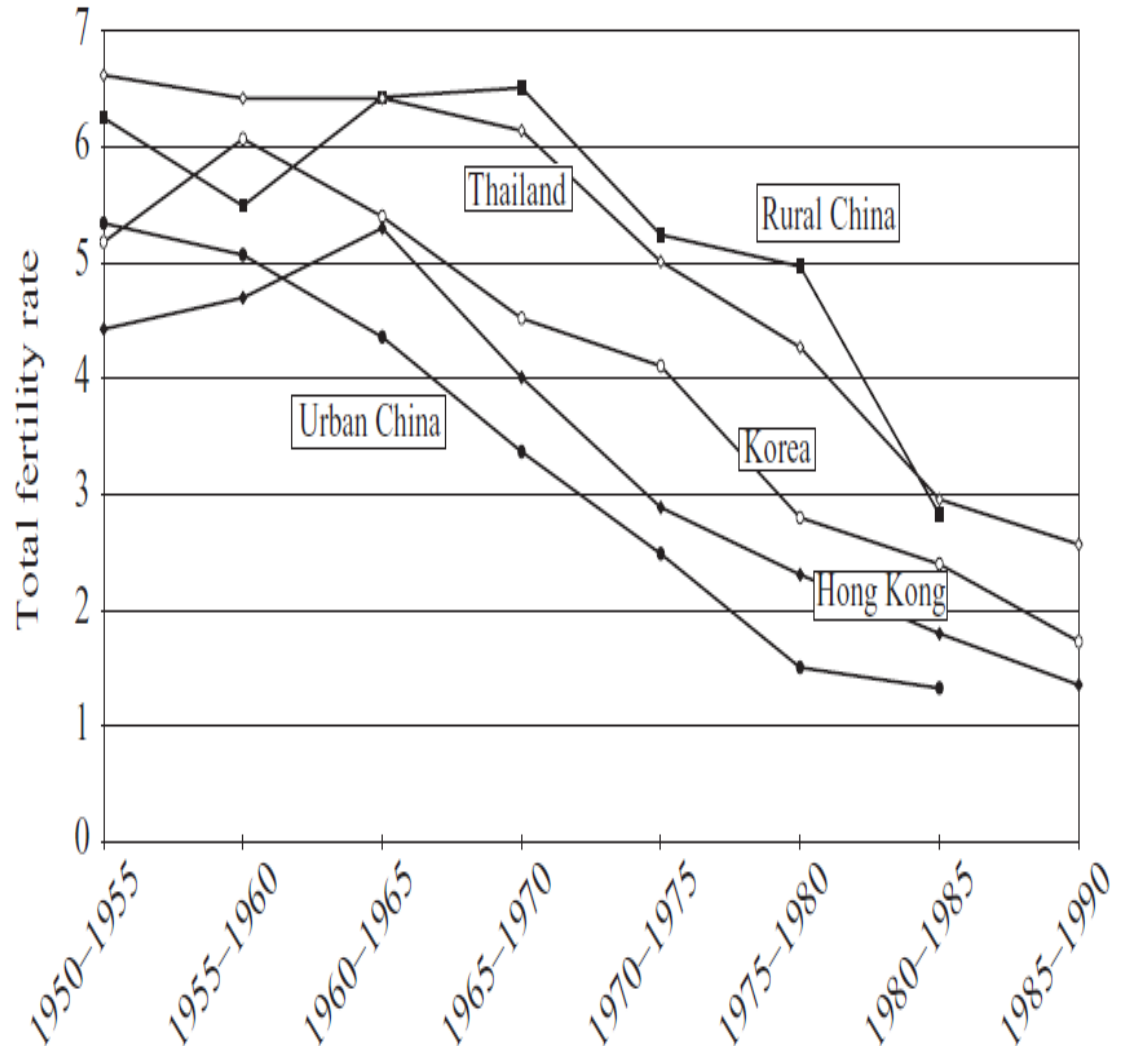


Source: Author's calculations, from China ONS/Datastream.

Notes: Contributions to seasonally-adjusted annualized real QoQ GDP growth. Government comprises government consumption and investment. MA(4) of service-manufacturing contribution differential given by hollow maroon line.

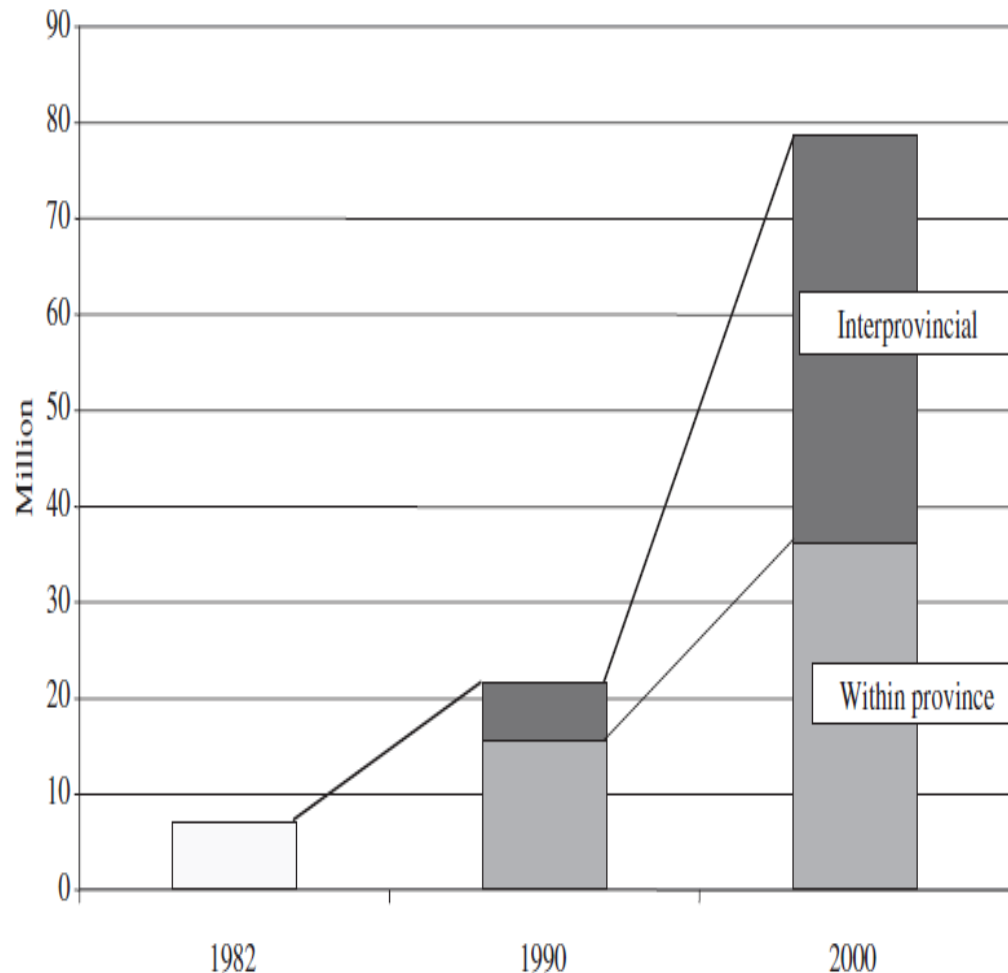
## China's fertility decline compared to East Asia, 1950–1990

- Between 1970 and 1977, China's fertility rate declined by 50%
- Mortality also declined rapidly after the Great Famine, and steadily trended down thereafter
- Government policy was instrumental in fertility decline and mortality spikes



## China's long-distance “floating population” (líudòng rénkǒu), 1982, 1990 and 2000

- Inter- and intra-provincial migration, typically reflecting rural-urban movements, provided continuous supply of low-cost labor
- Large-scale migration tends to flow to prosperous regions such as Lower Yangtze and Guangdong



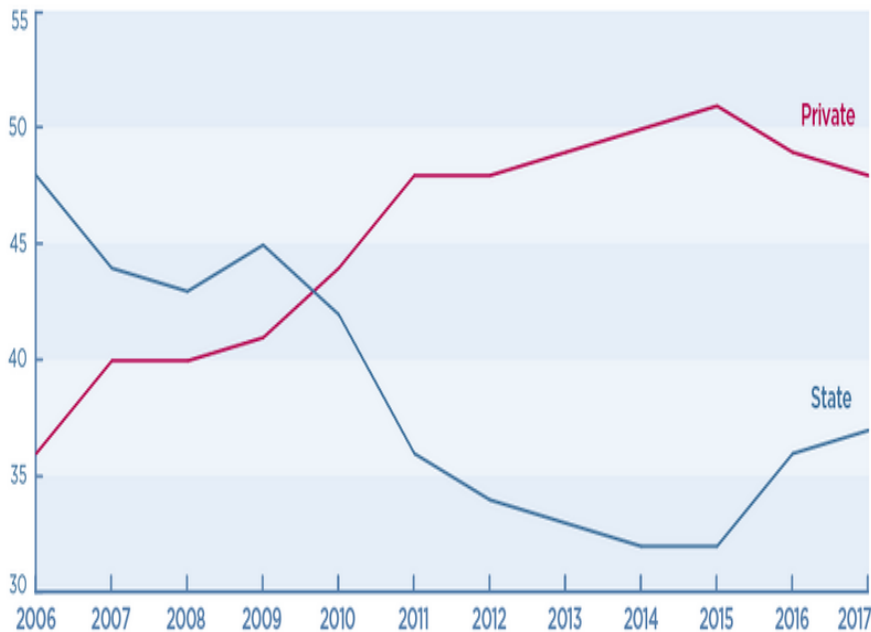
The *hùkǒu* registration system exacerbated the rural-urban divide, as did weak compensation for real estate property owners displaced by development



# The Modern Chinese Economy VII

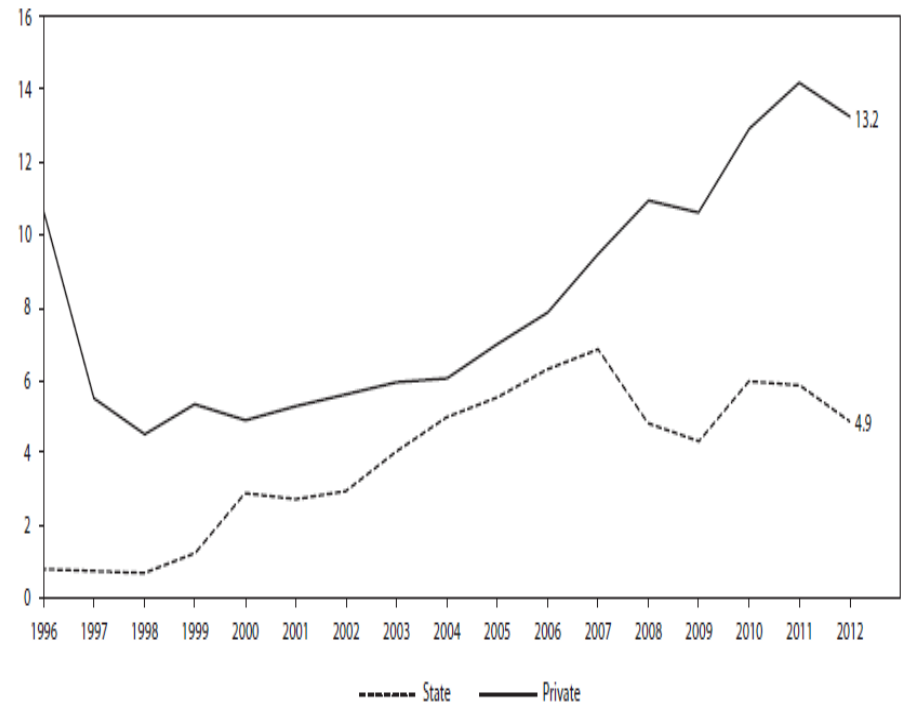
**The private sector grew in importance for economic activity, but this slowed in 2012 and even reversed after 2015...**

Chinese state and private investment, percent



**...and this is a concern because the private sector is more efficient and generates higher returns than the state-owned sector**

total profits/total assets (percent)

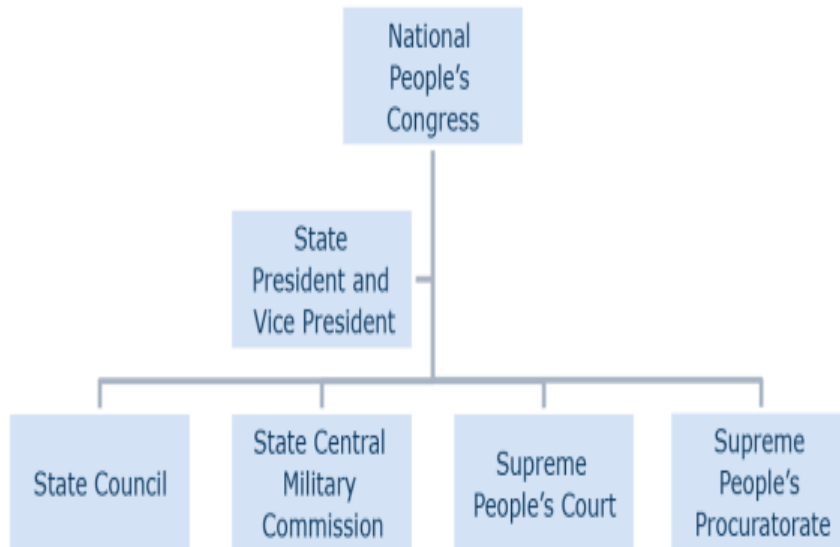


Note: Total profits are earnings before corporate income tax.

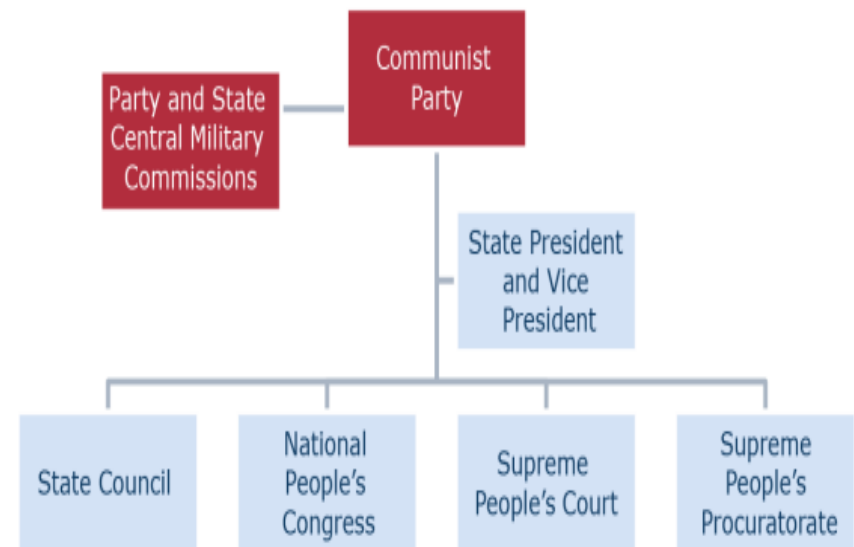
Sources: National Bureau of Statistics of China (2013c, 475-93); National Bureau of Statistics of China, [www.stats.gov.cn](http://www.stats.gov.cn) (accessed on February 28, 2014).

# The continued evolution of China's political economy since liberalization and reform

***De jure* national-level political organizational structure for China, 1982**

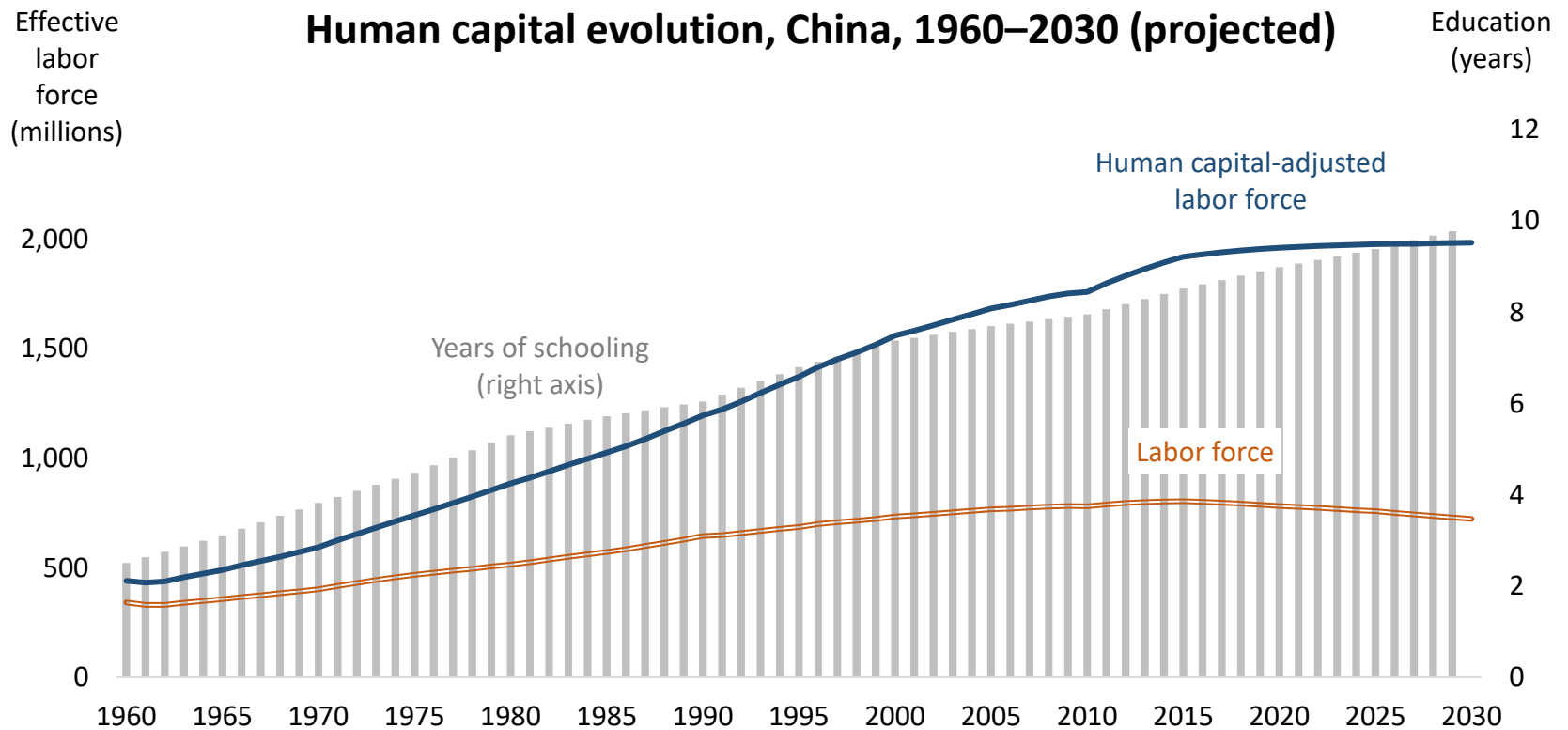


***De facto* national-level political organizational structure for China, 2013**



# The Modern Chinese Economy VIII

- Socialist planning has supported educational attainment (in spite of policy setbacks), but demographic challenges loom



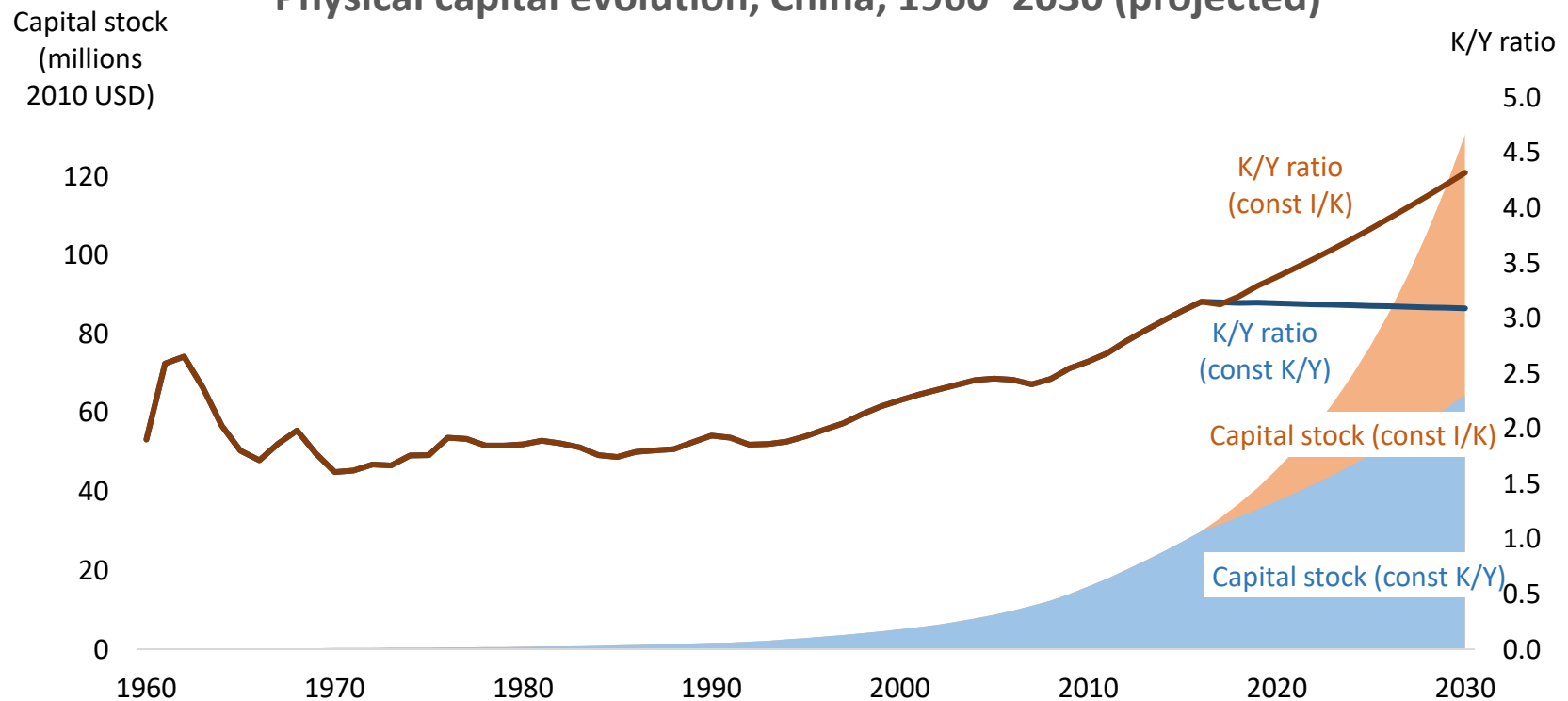
Source: Author's calculations, from Barro & Lee (2015, 2016), IIASA (2010), ILO (2014), UN (2013, 2015), World Bank (2017)



# The Modern Chinese Economy IX

- Chinese takeoff growth relied heavily on capital buildup from high domestic saving alongside large FDI inflows

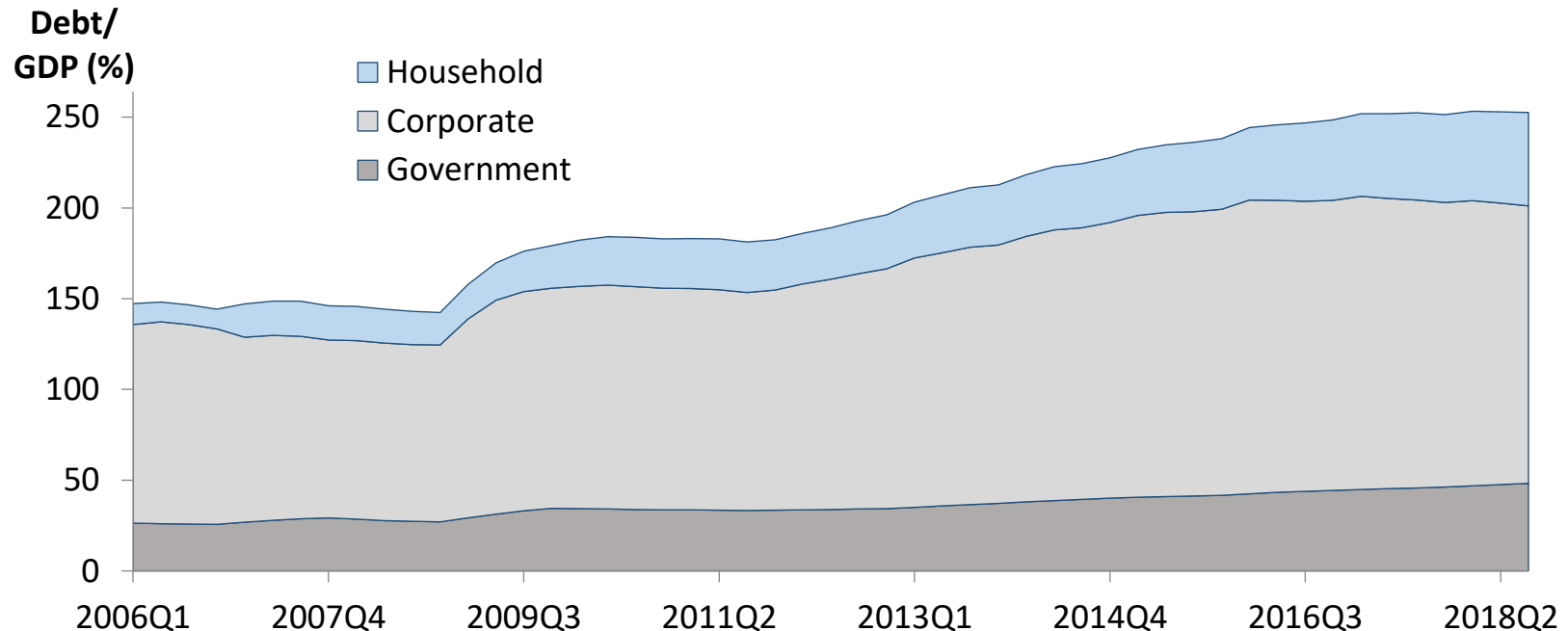
Physical capital evolution, China, 1960–2030 (projected)



Source: Author's calculations, from World Bank (2017).

# The Modern Chinese Economy X

- Financial liberalization with less financial repression, reduced capital restrictions, and capital market development

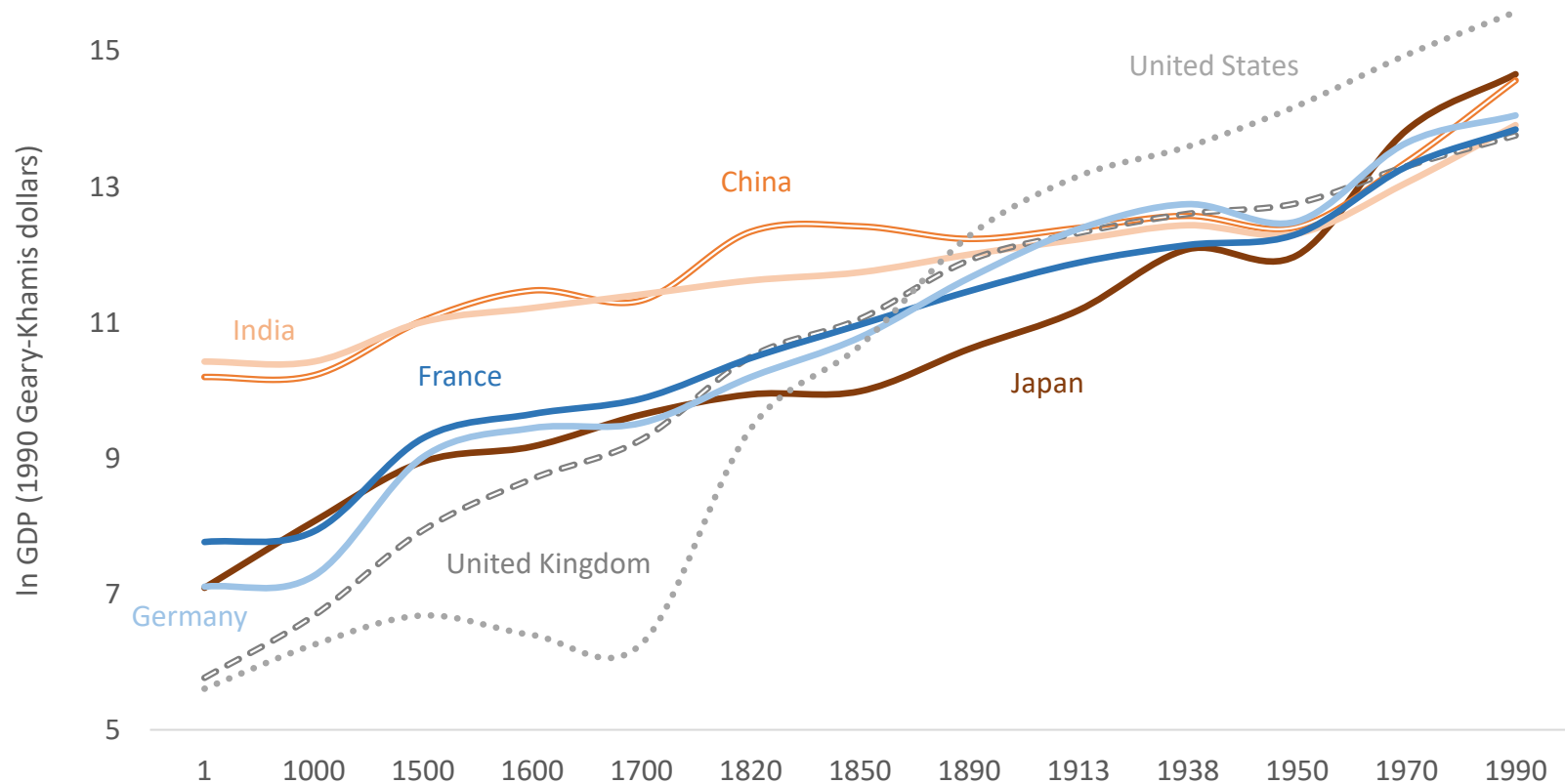


Source: Author's compilation, from BIS.

Notes: Credit to nonfinancial household (series Q...:H:A:M:770:A), Corporate (series Q...:N:A:M:770:A), and general government (series Q...:G:A:N:770:A) from all sectors, market value for private, and nominal value for public, adjusted for breaks.

# China's Development in Comparative Perspective I

GDP, major Western and Asian economies, 1–1990



Source: Author's calculations, from Maddison (2003)

# China's Development in Comparative Perspective II

- Why did the Industrial Revolution begin in Britain, not China?
  - The “Great Divergence” in the paths of China (or India) vis-à-vis the West occupies the minds of scholars to this day
    - One argument is that parts of China (and India) did not lag Britain, but rather lacked resources made available by colonialism along with the invention of coal power
    - A counterargument is that Britain/Netherlands had already far exceeded the other contenders by the mid-17<sup>th</sup> century due to its institutions, which enabled the Industrious Revolution
  - Hence, China's failure to takeoff may be attributable to a *failure* of the traditionally strong state during the late Qing, rather than the state inhibiting institutional formation

## China's Development in Comparative Perspective III

- After almost a century of conflict, China's per capita GNP had fallen behind that of India's by the beginning of the socialist era

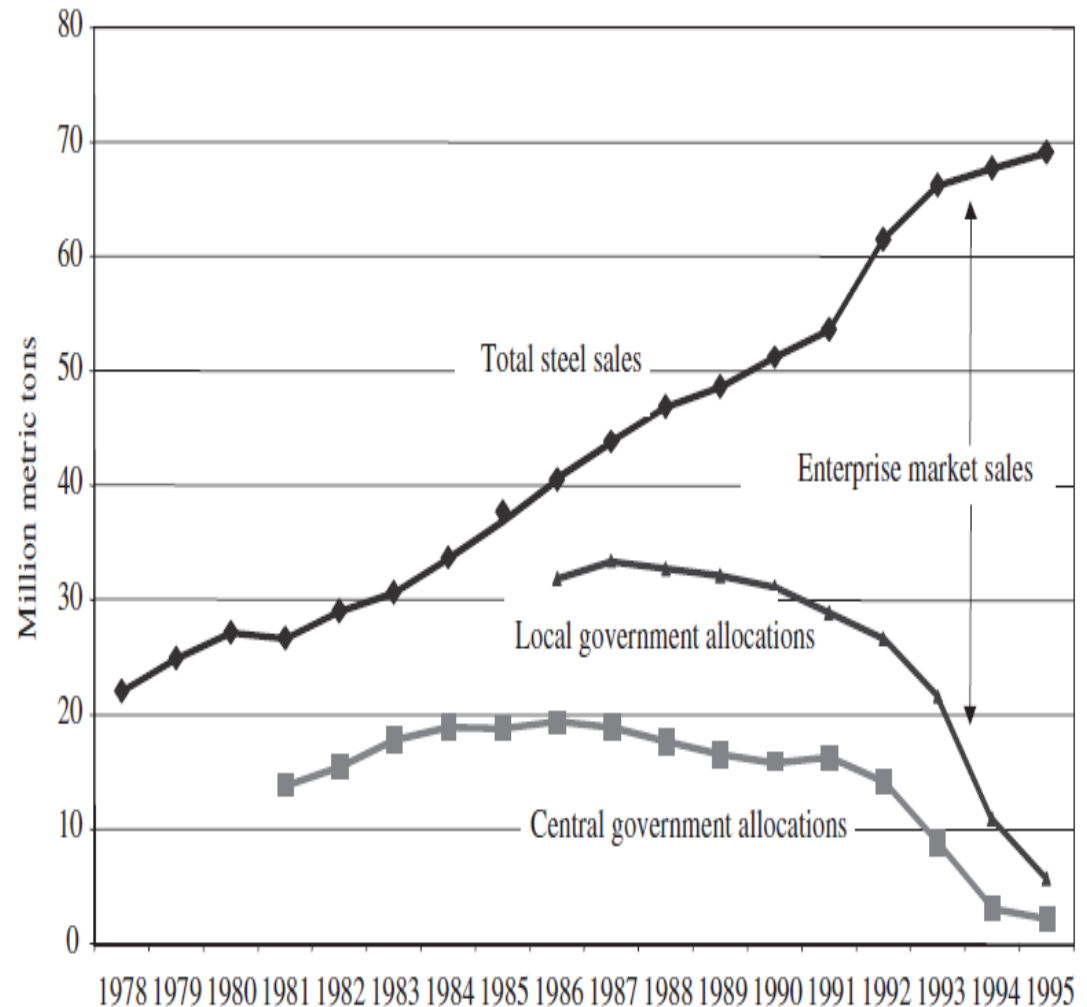
|                              | China 1952 | India 1950 |
|------------------------------|------------|------------|
| GNP per capita (1952\$)      | 50         | 60         |
| Population (million)         | 573        | 358        |
| Rice yields (ton/acre)       | 2.5        | 1.3        |
| Wheat yields (ton/acre)      | 1.1        | 0.7        |
| Industrial output per capita |            |            |
| Coal (kg)                    | 96         | 97         |
| Steel (kg)                   | 2          | 4          |
| Electricity (kW)             | 0.005      | 0.04       |
| Cotton spindles              | 0.01       | 0.03       |
| Railroads (km; 1936)         | 20,746     | 72,000     |

# China's Development in Comparative Perspective IV

- China's transition from communism differed from that of Eastern Europe and Russia
  - China's approach to communism was always going to be different from Europe: Mao centered the Revolution on the peasant, not the proletariat
  - China pursued a gradual transition involving the simultaneous process of regime transformation alongside economic development
  - This was followed by a later stage where macroeconomic policies were gradually recentralized, and institutions were restructured

## Steel production and planned allocation, 1978–1995

- Up till 1984 allocations to the government increased in line with production
- After 1984, quantities allocated leveled off and incremental output was channeled to the market
- In early 1990s quantities allocated declined, and the economy grew out of central planning



# Modern China in the World Economy I

- China's integration into the world economy has had profound and long-lasting effects, both on China and elsewhere
  - As an integral part of the East Asian production network—but with low value-added—China became the site of final assembly
  - China's entry into the WTO further accelerated its saving-investment imbalance vis-à-vis the rest of the world
  - More recent launch of Belt and Road Initiative for infrastructure-led integration with Asia and Europe



China's restructuring has relied heavily on the flow of finance from abroad into free economic zones



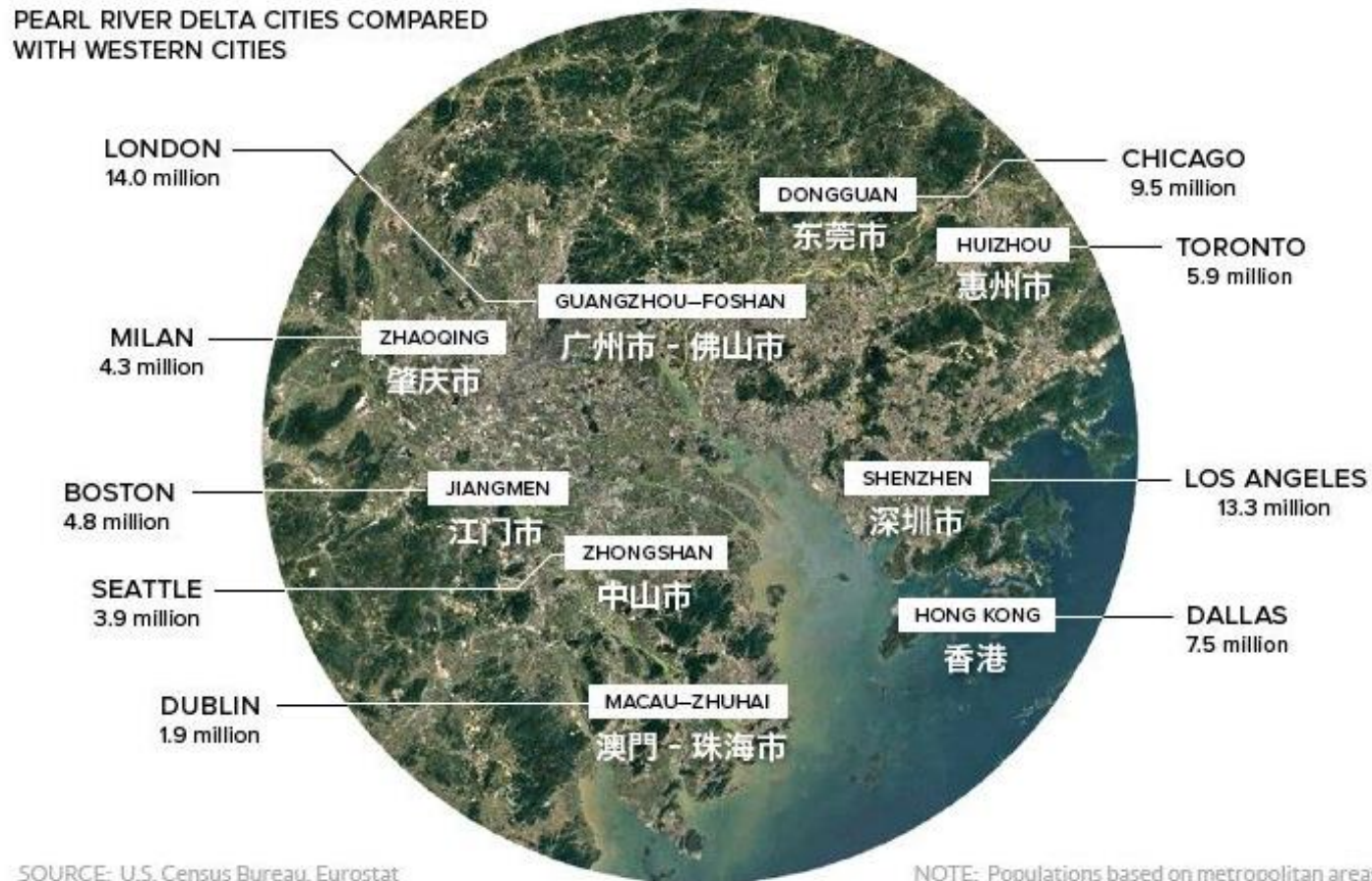
Source: <https://youtu.be/jgAIM3EY6l8>





## Some little-known Pearl River Delta cities are comparable in size to major global cities

PEARL RIVER DELTA CITIES COMPARED  
WITH WESTERN CITIES

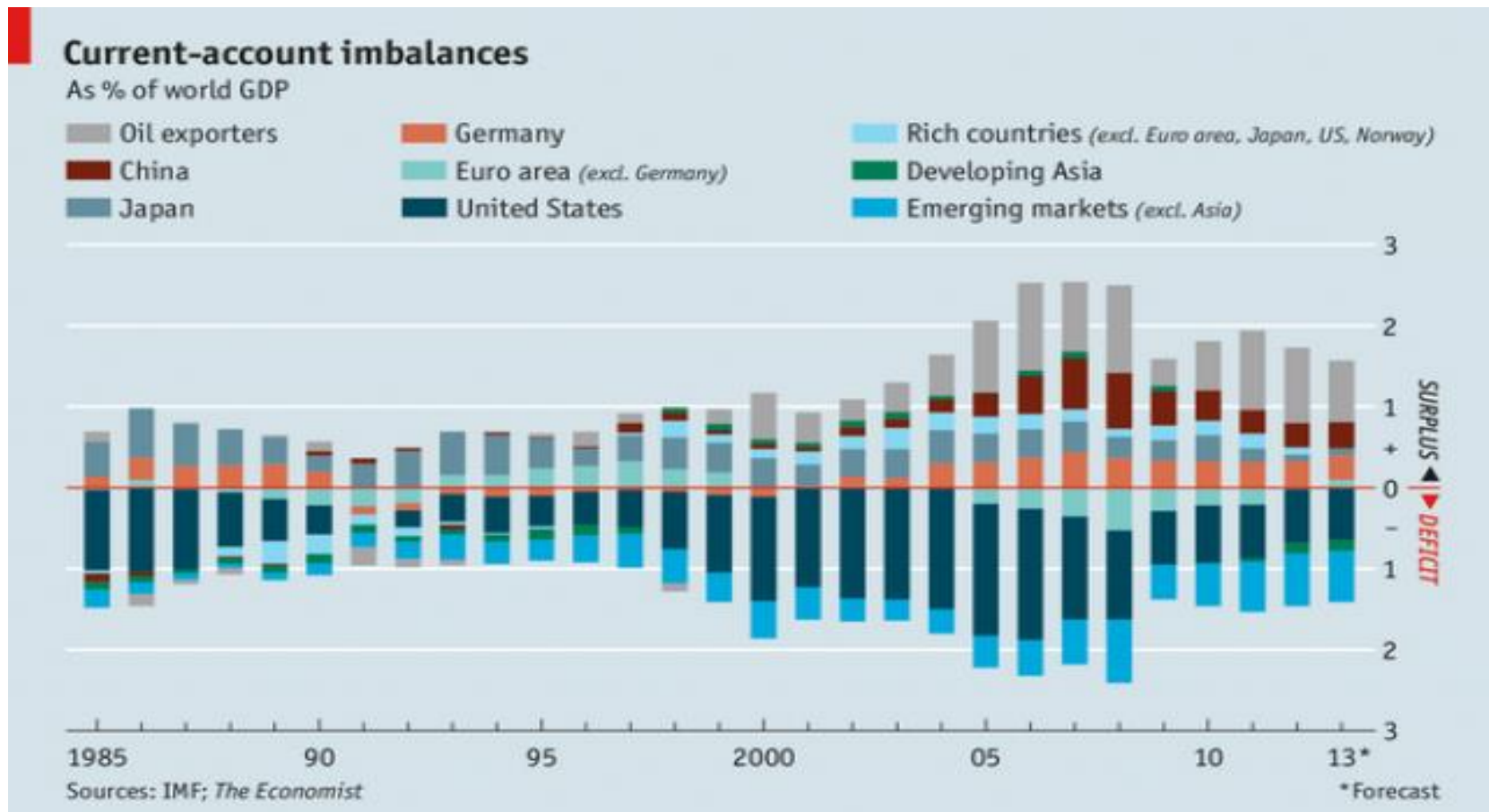


SOURCE: U.S. Census Bureau, Eurostat

NOTE: Populations based on metropolitan areas

# Modern China in the World Economy II

- Between 2001 and 2008, China built up massive current account surpluses

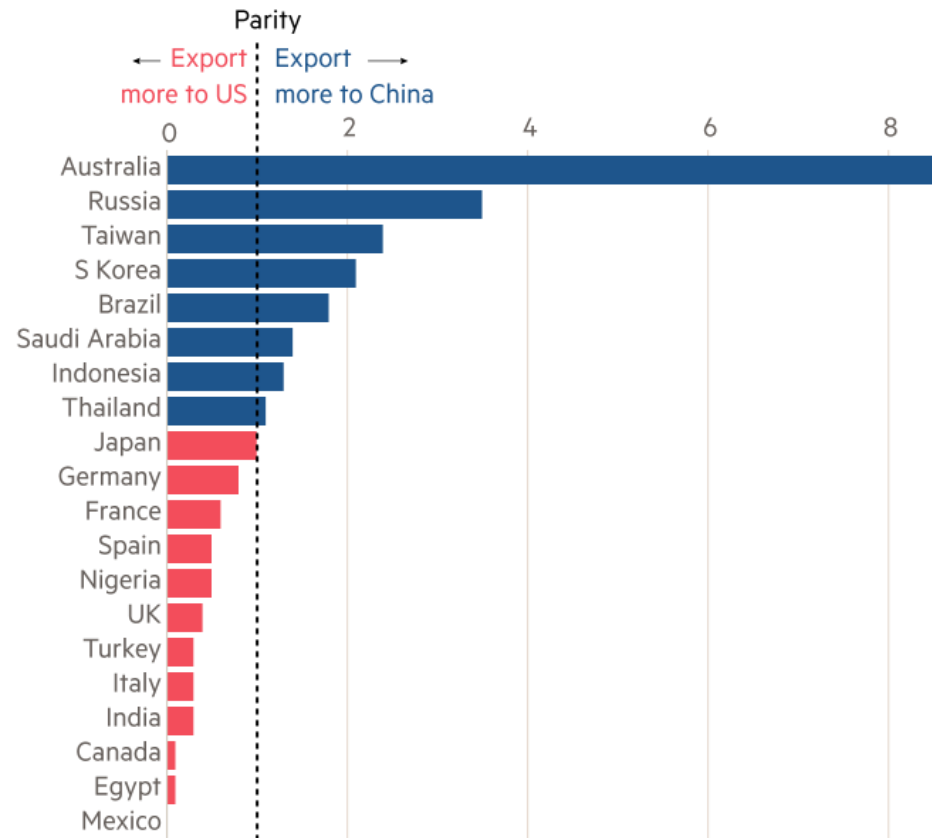


## Ratio of exports to China vs United States by largest 20 economies, 2017

- Major commodity exporters worldwide now depend more on exports to China than the U.S.
- Many of these economies are also, predictably, those in East Asia

Eight of the world's 20 largest economies\* export more to China than to the US

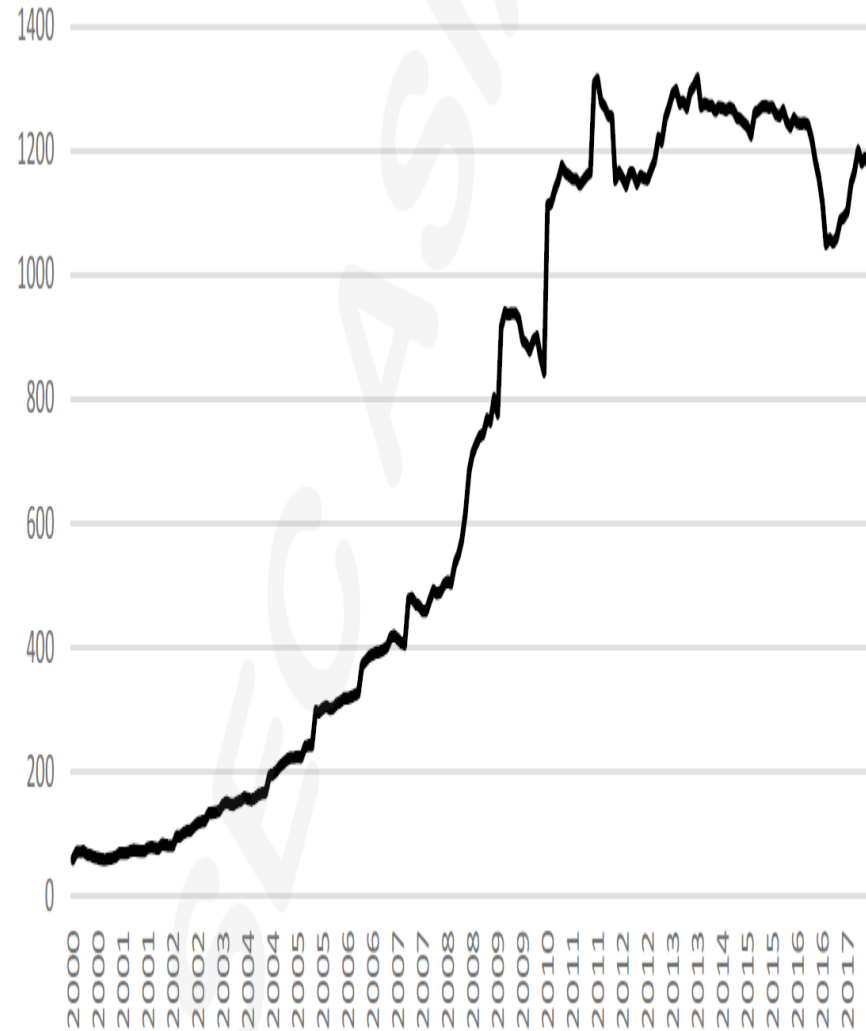
Exports to China over exports to the US, 2017 (ratio)



Source: IMF and national statistics for Taiwan \*largest economies at PPP  
© FT

## China's holdings of U.S. portfolio securities, 2000–17

- China's buildup of financial holdings in U.S. securities are a natural counterpart to its large bilateral trade deficit
- These include public and private short- and long-term portfolio securities, but not cross-border FDI

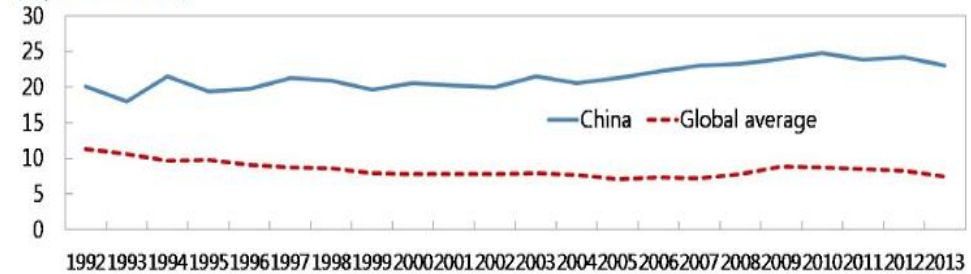


## China's saving patterns have diverged the most in terms of household saving

- Household saving is substantially higher than the rest of the world, while corporate and government saving is more comparable
- Household saving has nevertheless fallen in recent times, in tandem with increases in household debt

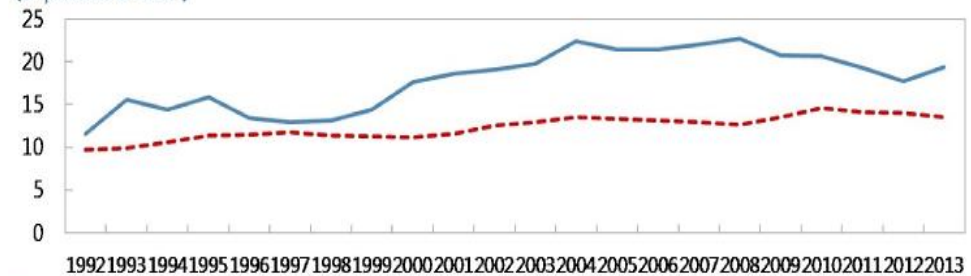
### Household Saving

(in percent of GDP)



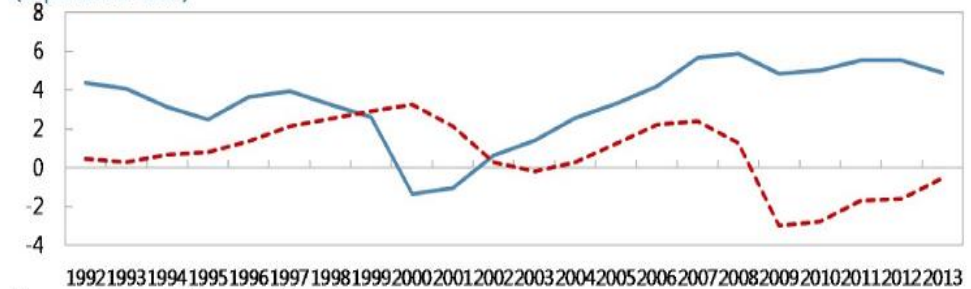
### Corporate Saving

(in percent of GDP)



### Government Saving

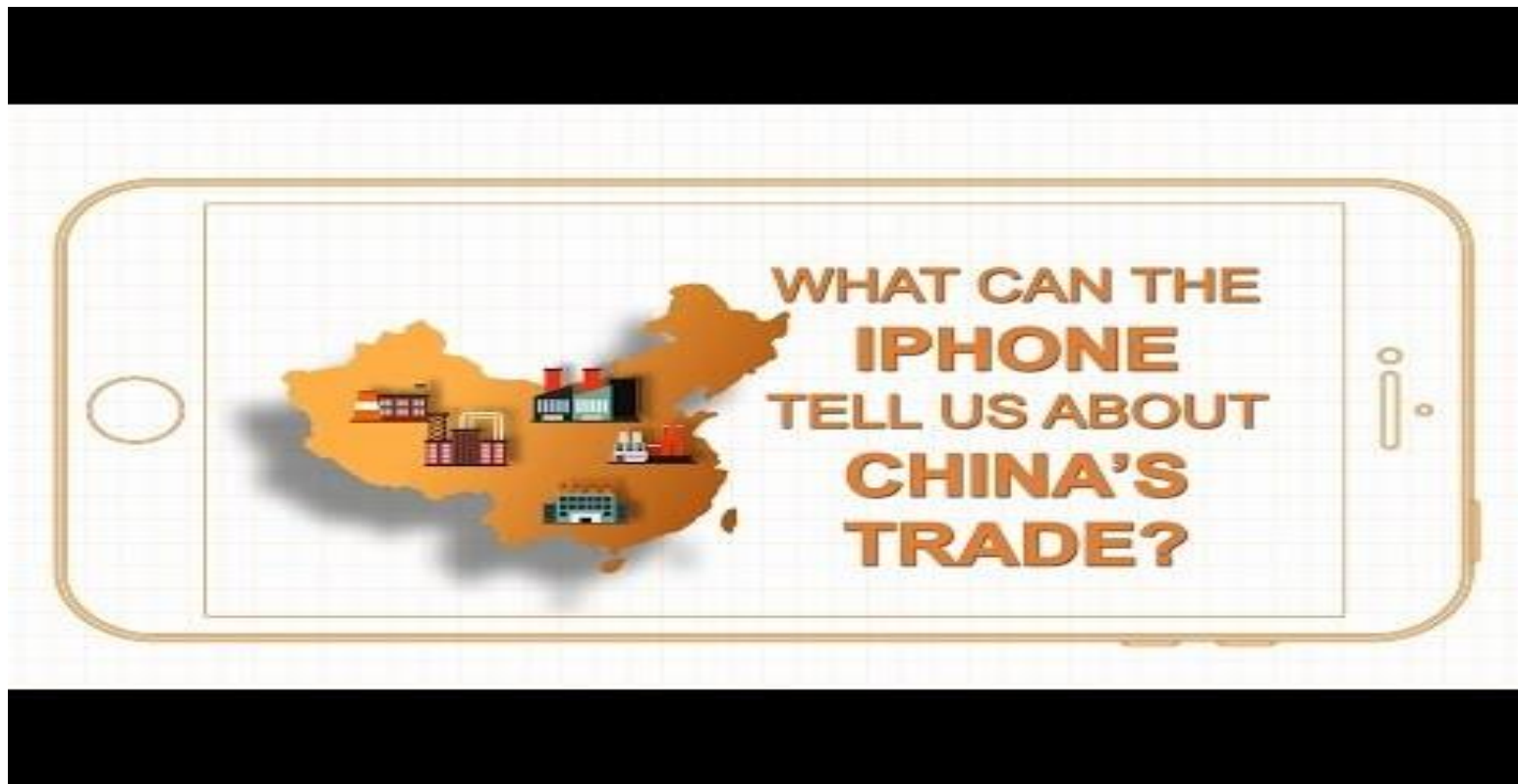
(in percent of GDP)



Sources: CEIC and Chen et al (2017).

# Modern China in the World Economy III

- China benefits less from its participation in production networks than casual inspection of the data might suggest



Source: <https://youtu.be/Ro8A2ZSThxE>



## Apple iPhone 3G's major components and cost drivers

- Even accepting Foxconn as a Chinese input (it is a Taiwanese company with facilities in China), China's assembly cost accounts for \$6.50 (3.6%) of total, comparable to shipping costs
- Yet China's iPhone trade surplus is recorded as about 73%, instead of 3.6%, in 2009

| Manufacturer                     | Component                               | Cost            |
|----------------------------------|---|-----------------|
| Toshiba (Japan)                  | Flash Memory                            | \$24            |
|                                  | Display Module                          | \$19.25         |
|                                  | Touch Screen                            | \$16.00         |
| Samsung (Korea)                  | Application Processor                   | \$14.46         |
|                                  | SDRAM-Mobile DDR                        | \$8.50          |
| Infineon (Germany)               | Baseband                                | \$13.00         |
|                                  | Camera Module                           | \$9.55          |
|                                  | RF Transceiver                          | \$2.80          |
|                                  | GPS Receiver                            | \$2.25          |
|                                  | Power IC RF Function                    | \$1.25          |
| Broadcom (USA)                   | Bluetooth/FM/WLAN                       | \$5.95          |
| Numonyx (USA)                    | Memory MCP                              | \$3.65          |
| Murata (Japan)                   | FEM                                     | \$1.35          |
| Dialog Semiconductor (Germany)   | Power IC Application Processor Function | \$1.30          |
| Cirrus Logic (USA)               | Audio Codec                             | \$1.15          |
| <b>Rest of Bill of Materials</b> |   | <b>\$48.00</b>  |
| <b>Total Bill of Materials</b>   |   | <b>\$172.46</b> |
| <b>Manufacturing costs</b>       |   | <b>\$6.50</b>   |
| <b>Grand Total</b>               |   | <b>\$178.96</b> |

# Modern China in the World Economy IV

- China's exports are in (relatively) low value-added manufacturing goods, and imports significant raw materials

| Exports   | Value<br>(USD billion) | Share of Total<br>(%) |
|---|------------------------|-----------------------|
| Electrical, electronic equipment                      | 553.2                  | 26.4%                 |
| Machinery, nuclear reactors, boilers, etc.            | 343.8                  | 16.4%                 |
| Furniture, lighting, signs, prefabricated buildings   | 87.5                   | 4.2%                  |
| Articles of apparel, accessories, knit or crochet     | 74.4                   | 3.5%                  |
| Articles of apparel, accessories, not knit or crochet | 72.1                   | 3.4%                  |

| Imports   | Value<br>(USD billion) | Share of Total<br>(%) |
|---|------------------------|-----------------------|
| Electrical, electronic equipment                  | 412.9                  | 26.0%                 |
| Mineral fuels, oils, distillation products, etc.  | 176.5                  | 11.1%                 |
| Machinery, nuclear reactors, boilers, etc.        | 147.7                  | 9.3%                  |
| Ores, slag and ash                                | 94.5                   | 5.9%                  |
| Optical, photo, technical, medical, etc equipment | 92.7                   | 5.8%                  |

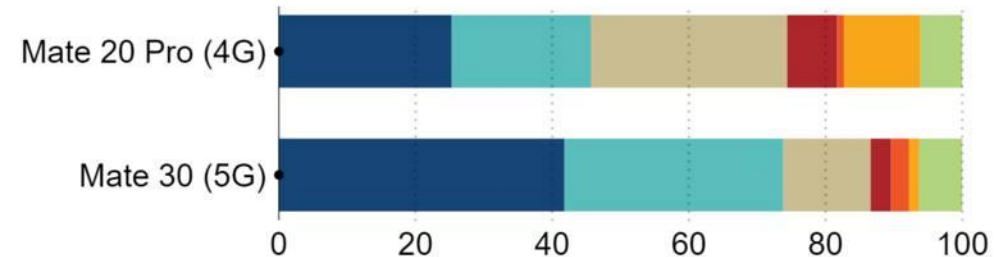
## Huawei Mate30 smartphone major suppliers

- The 2019 trade war and 2020 COVID-19 supply chain disruption has led to increased concentration of domestic sources of Chinese equipment manufacturing
- The latest Huawei phone is around 90% reliant on parts from NE Asia (compared to 70% previously)

### Huawei smartphone component supplier share

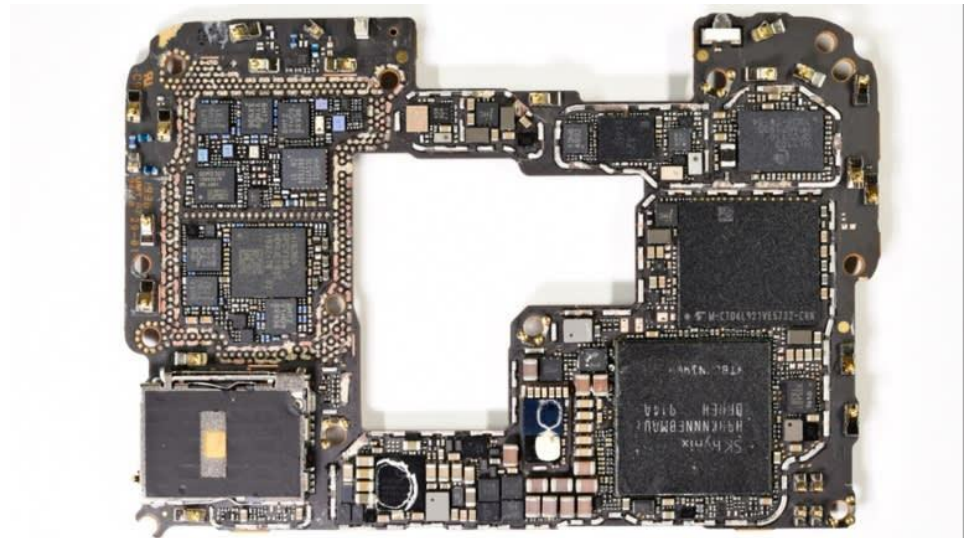
(in percent)

■ China ■ Japan ■ South Korea ■ Europe  
■ Taiwan ■ U.S. ■ Others



*By value; excluding displays*

*Source: Fomalhaut Techno Solutions*



# Modern China in the World Economy V

- China's WTO entry has had profound effects on the rest of the world
  - WTO entry in 2001 has been termed the "China Shock"
  - Stagnation/declines in real incomes for low-skilled workers in **advanced** economies
    - Rise of populist sentiment due to real/perceived loss of opportunities for middle-class life
  - Increased competition faced by low-skilled workers in **developing** economies
    - China's scale and continued prevalence of poverty in rural areas implies continued competition
  - Increased demand for raw material exports from **commodity-exporting** economies

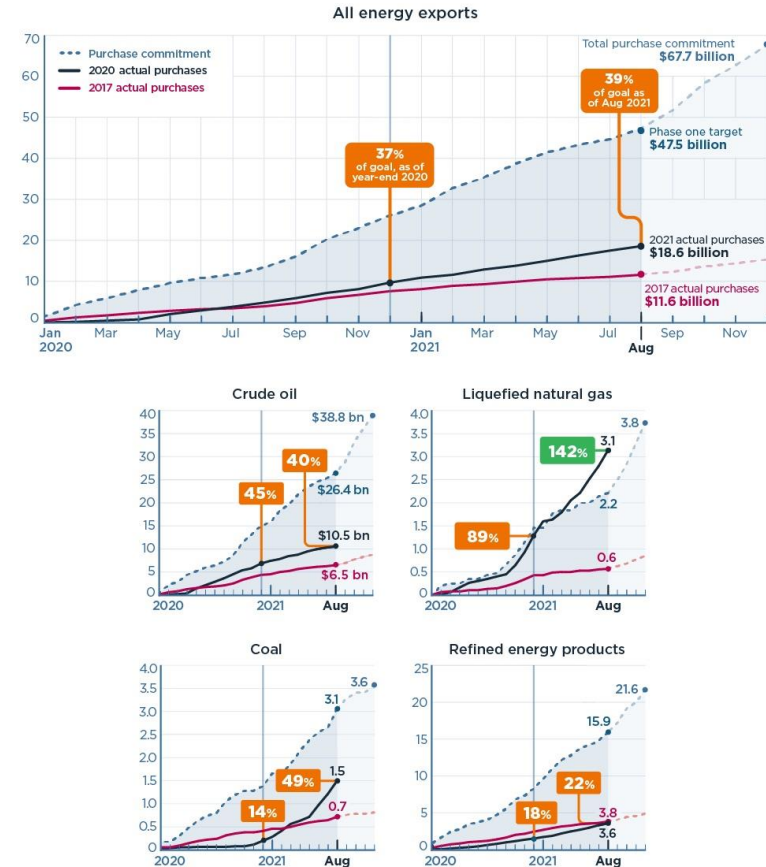
## Chinese purchases of U.S. goods covered in Phase 1 deal

- China's total imports of covered products fell short of commitments by \$73.2 bn (-42%)
- U.S. total exports of covered products fell short of commitments by \$65 bn (-41%)
- This was partially because of COVID-19, but 2021 purchases remain below targets too (\$9.8 bn to \$14.4 bn)

Figure 4

### US energy exports to China remain well below the unrealistic phase one targets

US energy exports to China covered by the phase one deal, billions USD



**Note:** Data refer to end of month cumulative totals. Data for the '2017 actual purchases' series is repeated for comparison purposes. Numbers may not sum to total due to rounding. Prorating the 2020 and 2021 year-end targets to a monthly basis is for illustrative purposes only. Nothing in the text of the agreement indicates China must meet anything other than the year-end targets. Monthly purchase commitments are seasonally adjusted based on 2017 data. See appendix for methodology for estimating monthly purchase commitments by product.

**Sources:** Constructed by the author with US export data from US Bureau of the Census. Product categories set out in Annex 6.1 of Economic and Trade Agreement between the United States of America and the People's Republic of China.



# Modern China in the World Economy VI

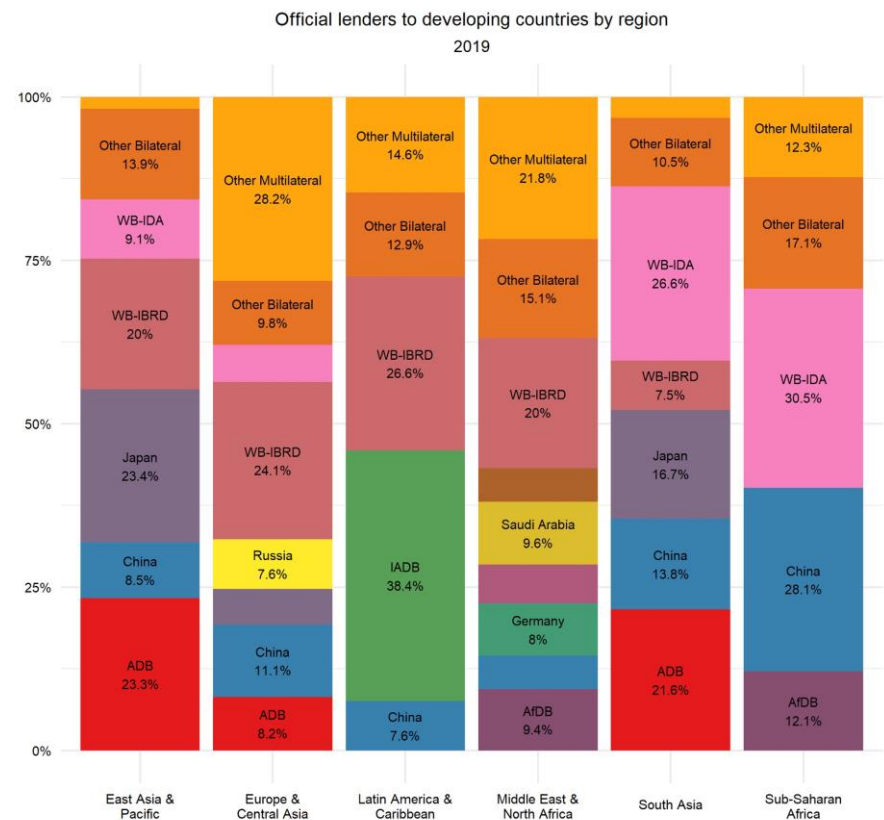
- The Belt and Road Initiative has significant development implications for target countries, both good and bad



Source: <https://youtu.be/EvXROXilpvQ>

# Modern China in the World Economy VII

- China's BRI could potentially further advance China's global integration, but results have been mixed thus far



Lenders: All bilateral and multilateral lenders.  
Borrowers: All developing countries with data available.  
Public and publicly guaranteed external debt stock.  
Source: World Bank, IDS 2021.

## Modern China in the World Economy VIII

- China is now looking to shape global economic relationships in its own image

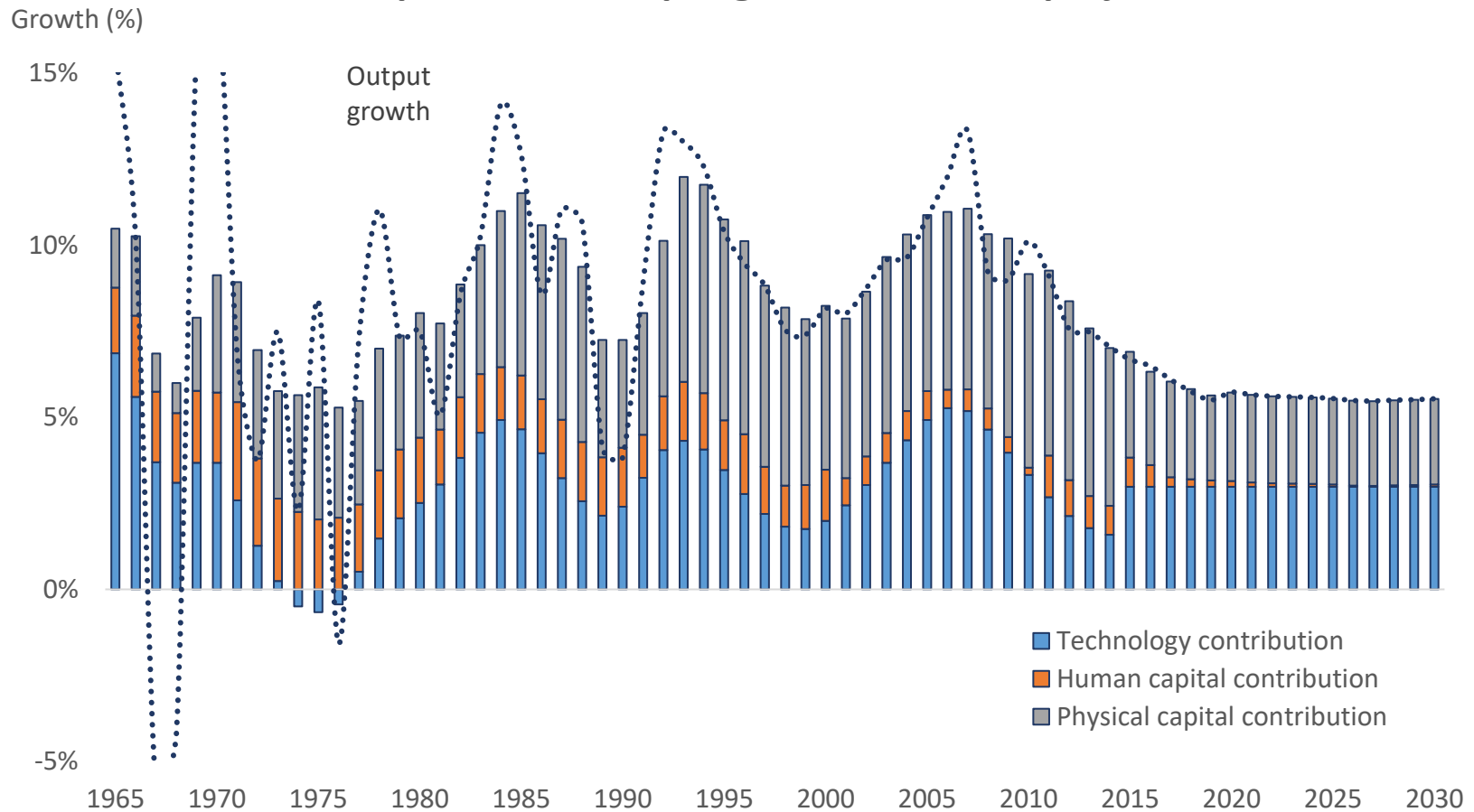


Source: <https://www.youtube.com/watch?v=SZ2ge5VxVNw>



# The Future Chinese Economy I

## Decomposition of output growth, baseline projection



Source: Authors' calculations, from Barro & Lee (2015, 2016), IIASA (2010), ILO (2014), UN (2013, 2015), World Bank (2017)

# The Future Chinese Economy II

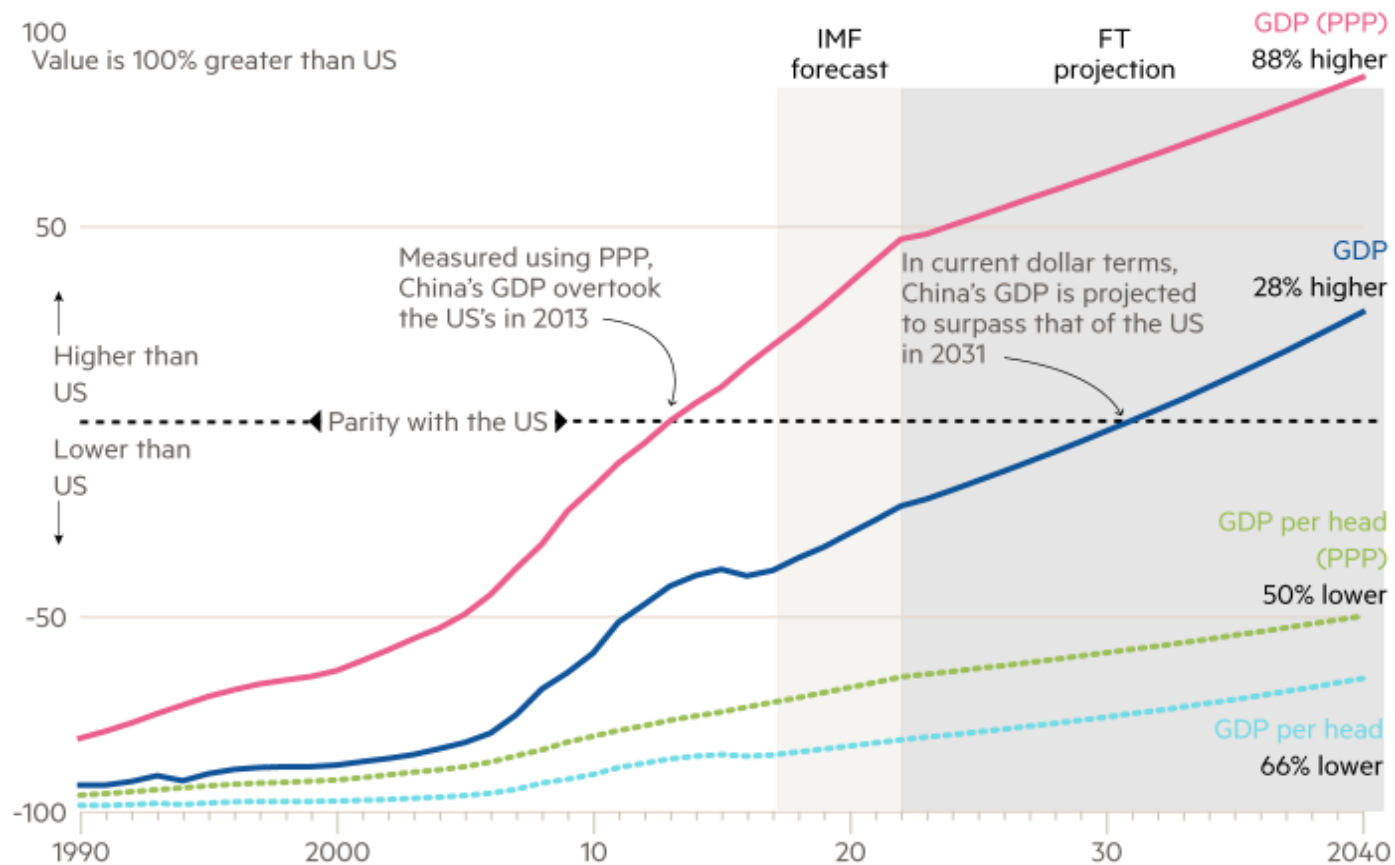
- Challenges to the China's Economic Future

1. Rapid demographic slowdown will lead to sharp contraction in labor force before country is high income
2. Cheap labor no longer available after Lewis Turning Point
3. Dissaving from aging population and aged-related expenditures lower saving available for investment
4. Debt burden may be exacerbated by financial liberalization, with need for managed debt-equity swaps
5. Internationalization of the RMB requires capital account liberalization, with attendant risks
6. Productivity gains based on reallocation largely exhausted, with need to innovate technology
7. Avoiding the Thucydides Trap

# The Future Chinese Economy III

## China's GDP and GDP per head

Percentage difference to US GDP at current dollars and PPP dollars



Source: IMF

© FT

# Lecture 2b

## *Case Study of Chinese Development*



## Case: China's New New Normal

- What is the “Chinese Dream”? How does it differ from the American Dream?
- What are some unique elements of the modern Chinese economy that may pose challenges for the economy's future growth prospects?
  - What elements are hard constraints imposed by factors/resources?
  - What aspects are “softer” constraints imposed by institutions/ideology and culture?
- How will China escape (can China escape?) from the middle-income trap?
- Will China and the U.S. resolve their tensions in the future?