SOURCES OF CHINA'S HIGH-SUSTAINABLE GROWTH, PART II

Getting the Incentives Right – the SOE Reform

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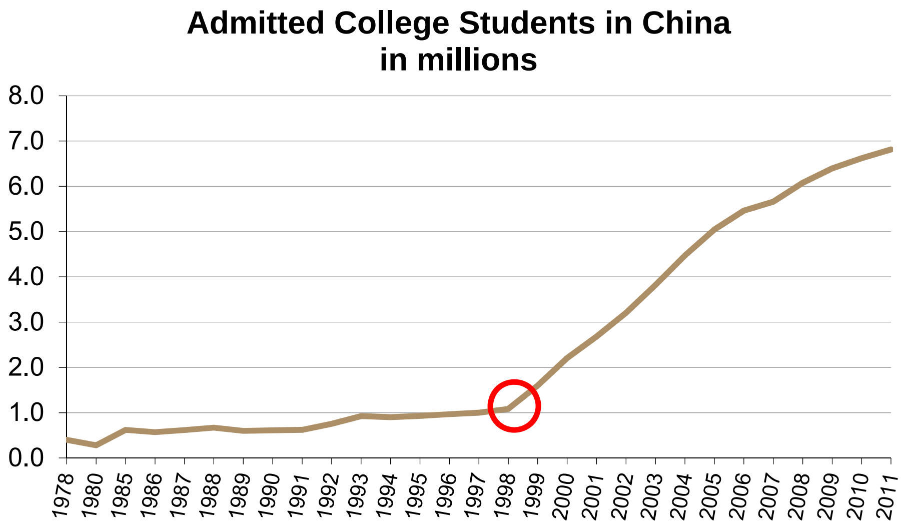
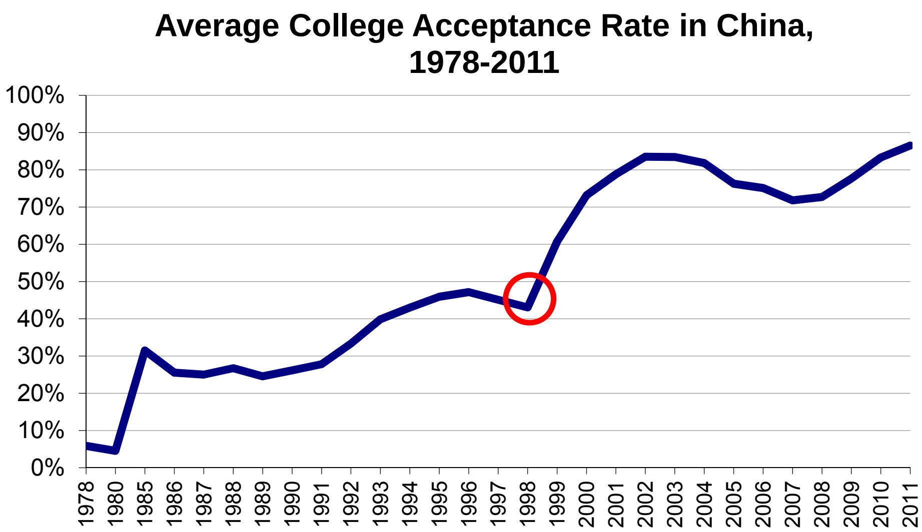
What’s happening

- Starting from this session, I will insert a segment called “what’s happening” at the beginning of the class
- Partly to wait for those who have to travel far from other side of the campus
- Partly to let you be aware of some important developments in current China, which our regular reading materials don’t cover

College bubble in China?



source: author's own calculation and National Bureau of Statistics of

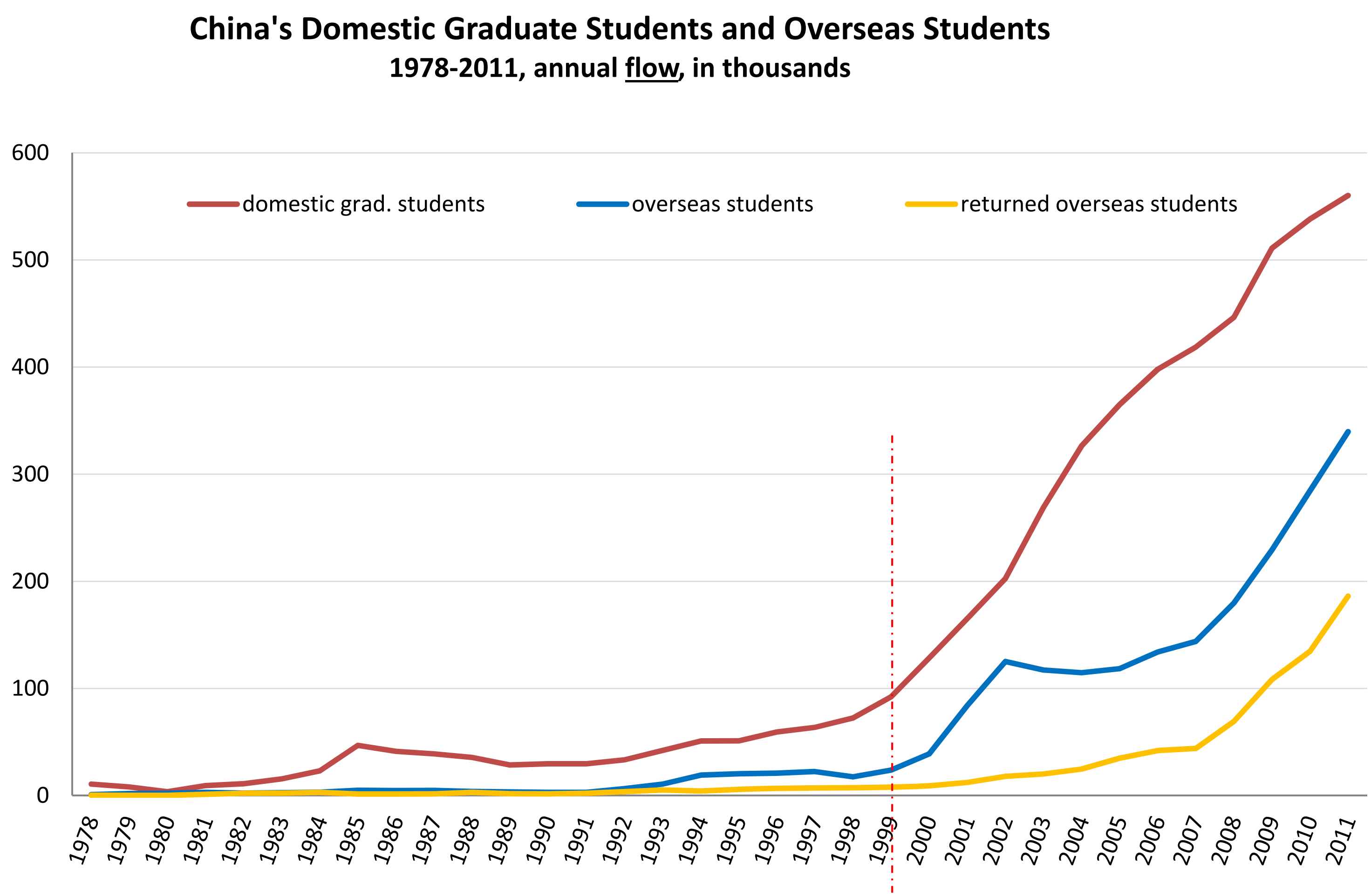


source: author's own calculation and NBS

Note: colleges include both 4-year and 2-year colleges

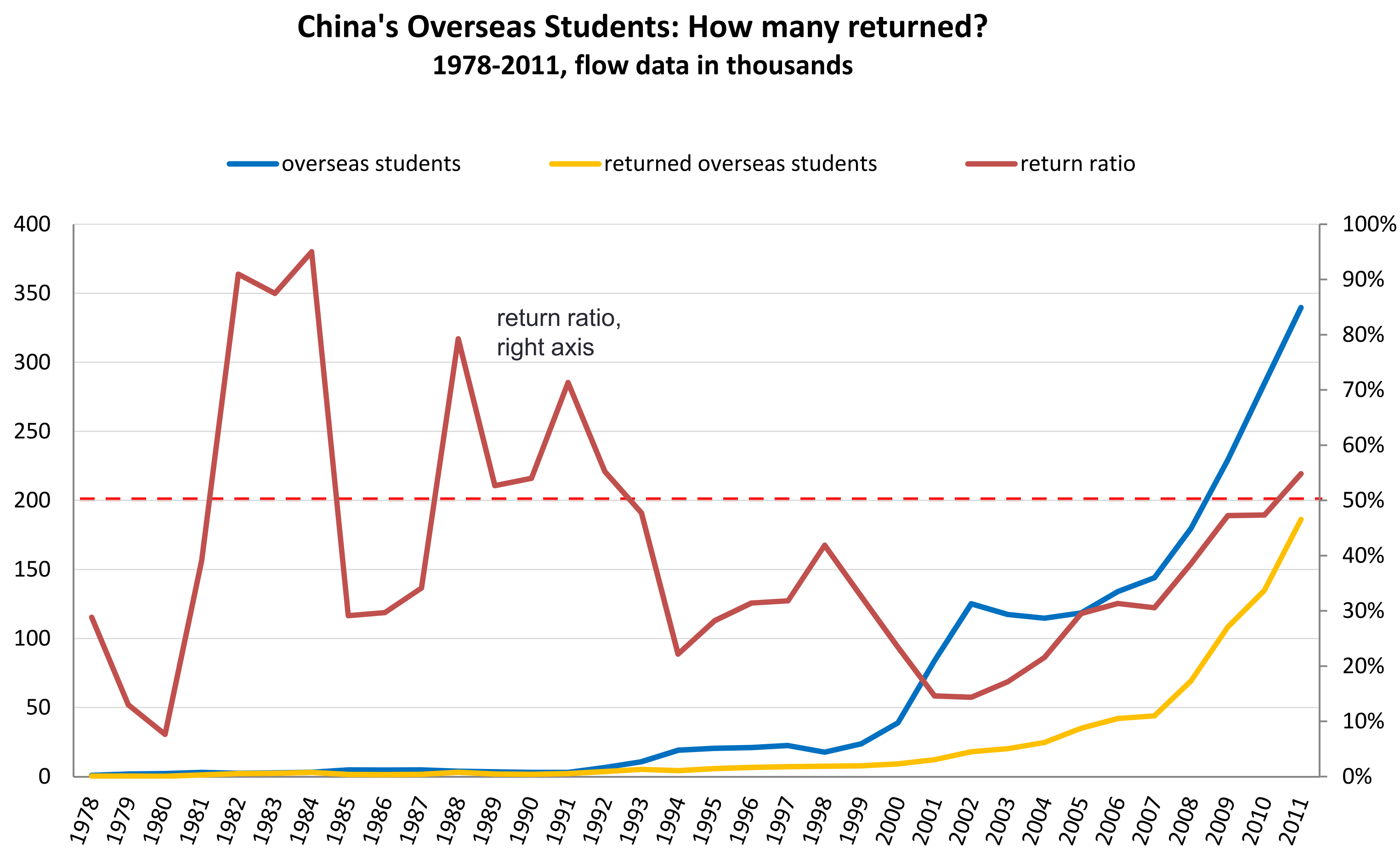
This is what a career fair for college grads looks like

More go to graduate schools and overseas



Source: Deng (2013) and NBS

More returned to China after Great Recession



Source: Deng (2013) and NBS

College bubble or human capital reserve?

- The college bubble dramatically increased the supply of college students and put a great pressure on China's labor market to absorb the new grads
- Yet, the development level of China requires more blue-collar workers than white-collar ones --- resulting in a serious *structural* labor shortage
- More and more students choose to hide in graduate schools or find other ways to increase their return on higher education → such as getting gilded overseas
- But some observers argue this early buildup of human capital reserve will actually put China into a more advantageous position, when China needs to upgrade itself into the next phase of development. Then, China will stand ready to utilize this huge reserve of highly skilled labor force and possibly rechart China into an innovation-driven economy

Continue on

China's SOE Reforms

What working at SOEs was like…

- The job inside SOE was called by Chinese vividly: ”iron bowl” (or 铁饭碗, in Chinese). The position was permanent – once you get hired, you don’t get fired, and you’re most likely to stay and retire from the *same* SOE.

break the “iron bowl”

What working at SOEs was like…

- The wage among SOE workers didn't vary much. Although it used to be much lower than private sectors (not today, more to be discussed later), the job was very secure and respected.

- The same problem applies to SOE managers, except that he/she was paid slightly higher.

- Most people spent their working time reading newspaper and drinking tea (喝茶看报) – they were not really motivated to work harder.

SOEs without Social Functions

- SOEs, before market reform, also had assumed all kinds of social functions:
  - healthcare
  - childcare
  - schooling
  - pension
  - sports and entertainment (worker's club)
  - even public bathing facilities

- The diversion from major focus dragged down SOEs' productivity significantly

SOEs without Social Functions

- The SOE reform shifted most of social functions to the market and to the government

- **The logic** is that once social functions were stripped off, SOEs can't find excuse for continuous bad performance

- But public/government expenditure has not really made up for the gap where SOEs left, especially in healthcare → Chinese are paying huge bills out of their own pockets

- *This is one of the main reasons that China's saving rate has stayed very high, even today*. So in order to have a lower saving rate, it's essential to have an adequate social security and healthcare system – a reform area with top priority, ongoing.

The Logic of Reform

China's Money-Losing SOEs, 1990-1998 (in 100 millions Yuan)

Year	% of SOEs	Total Loss for Money-Losing SOEs	Total SOE Profits
1990	30.3%	932.6	491.5
1991	28.0%	925.9	744.5
1992	22.7%	756.8	955.2
1993	29.8%	479.4	1,667.3
1994	32.6%	624.5	1,608.0
1995	33.3%	802.1	1,470.2
1996	37.5%	1,127.0	876.6
1997	43.9%	1,420.0	539.8
1998	47.4%	1,960.2	-78.0

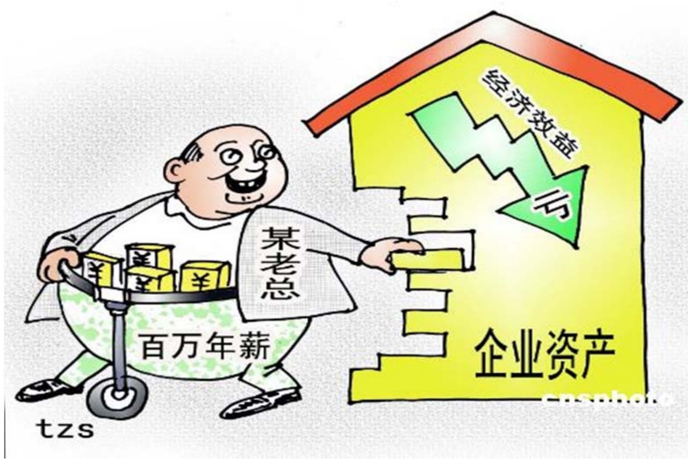
Source: Wu Jinglian & Fiscal Stat. Yearbook, various years.

The Fundamental Problems of SOEs

- Problem in managerial incentives → shading managers

- Problem in worker's incentives → shading workers

- **Common ownership and the ambiguous property rights** (产权不明晰) → asset stealing, misuse and diversions



- **Soft budget constraint** (SBC, 预算软约束) between SOEs, governments, and banks → moral hazard (道德风险) → excessive investments and countless bailouts

- **Conflict of interests**: state and governments act as both *"players"* and *"referees"* → monopolies, favoritism and one major source of corruptions

In the left cartoon, top executives at SOEs shift state assets into their pockets

An example of *soft budget constraint (SBC)*

- Before reform, SOEs regularly lost money. If budget constraint were “hard”, then the government could have stopped funding the loss-making SOEs and let them go bankrupt. Otherwise, government will face a worsening budget condition and may be forced to run budget deficits
- But since SOEs shared many social functions, letting go the SOEs will likely generate unemployment and social instability.
- Knowing government won’t let them go under, SOEs game the government and have no incentives for real change
- Under such system design, the budget constraint is not really strict or effective, so the name “soft” budget constraint.

An example of *soft budget constraint (SBC)*

- SBC is a common problem in all former socialist countries. The root cause is the common ownership with the state, and the resulting unclearly defined property rights.

- However, SBC is also not uncommon in developed countries. Can you offer an example?

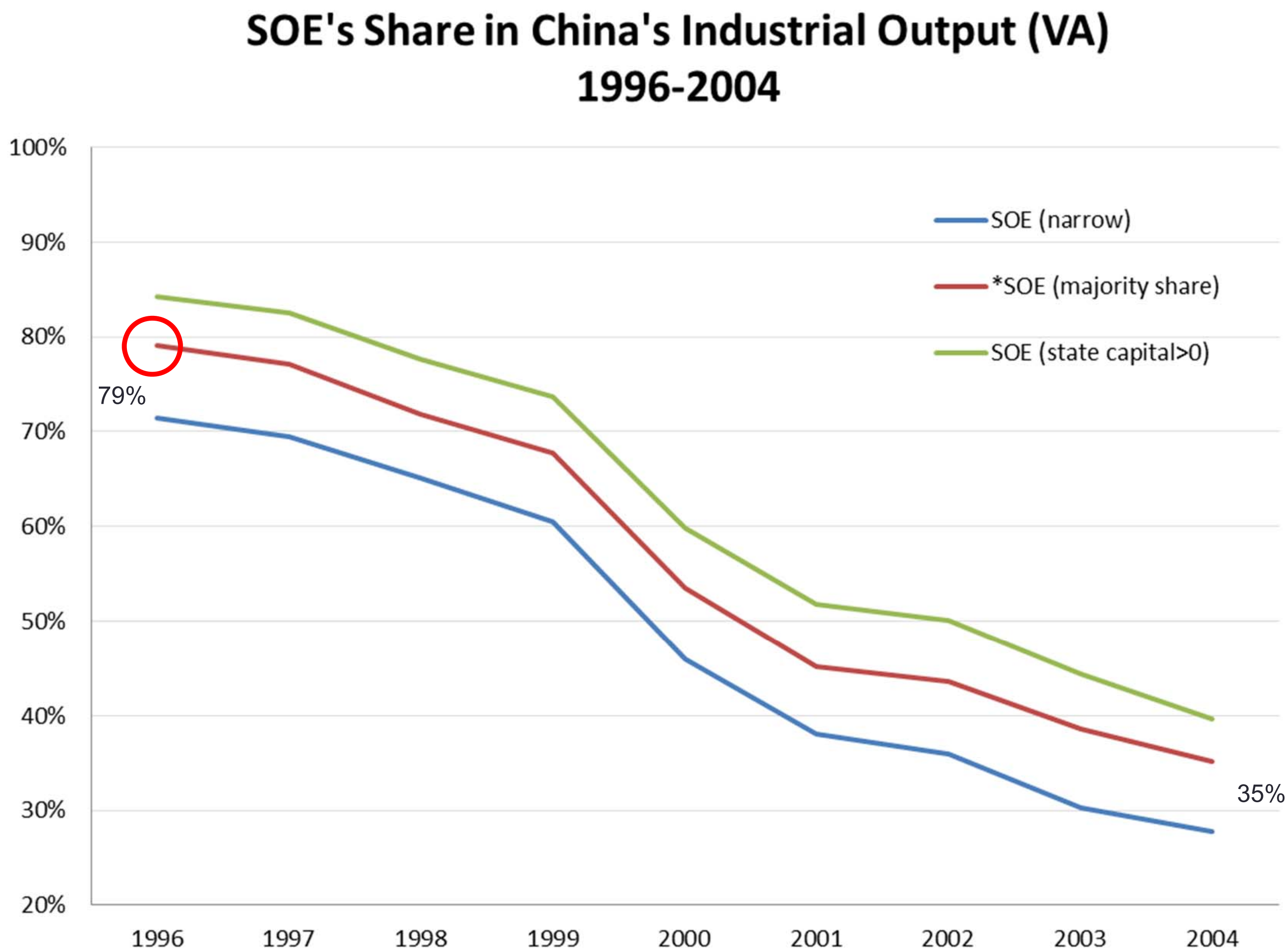
An example of *moral hazard problem*

- There are many causes for moral hazard problem
  - Unclearly defined property rights
  - High monitoring cost
  - High enforcement cost
  - High social cost - too big to fail
- A good example is excessive risk taking of investment banks before the financial crisis hit. Investment banks have become so big that it often dwarfs a country's GDP
- Knowing that their collapse will trigger a larger crash of the economy, and government will likely bail them out, traders inside these banks take on many risky investments.
- When these investments fail, government find no other choice but to bail the banks out
- Similar dynamics exist in China, but for slightly different reasons

China's SOE reform experimented various strategies

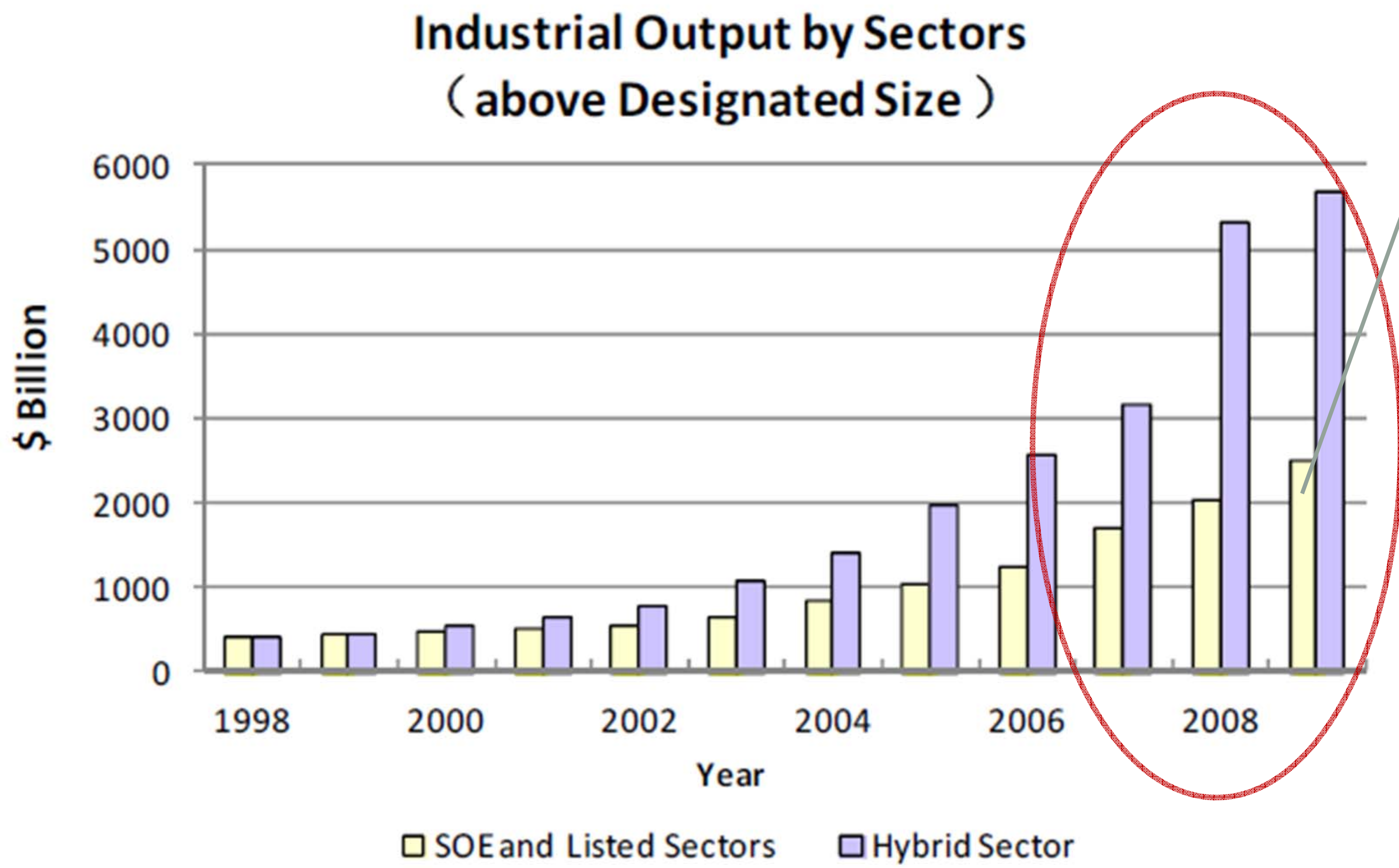
- Decentralization and allowing firms more autonomy (放权让利)
- Setting up contract between SOEs and government (承包经营)
- Corporatization (公司化) and Securitization (上市, 证券化)
- State Asset Management Companies (成立国家资产管理公司)
- Keeping the largest SOEs, letting go the smaller ones （抓大放小）
- Remaining in "strategically important" sectors, retreating from other sectors （产业战略转移）
- Reshuffling state assets, allowing stronger players to acquire and merge with weaker players （兼并重组）

What has been achieved?



Source: Deng (2012) and NBS

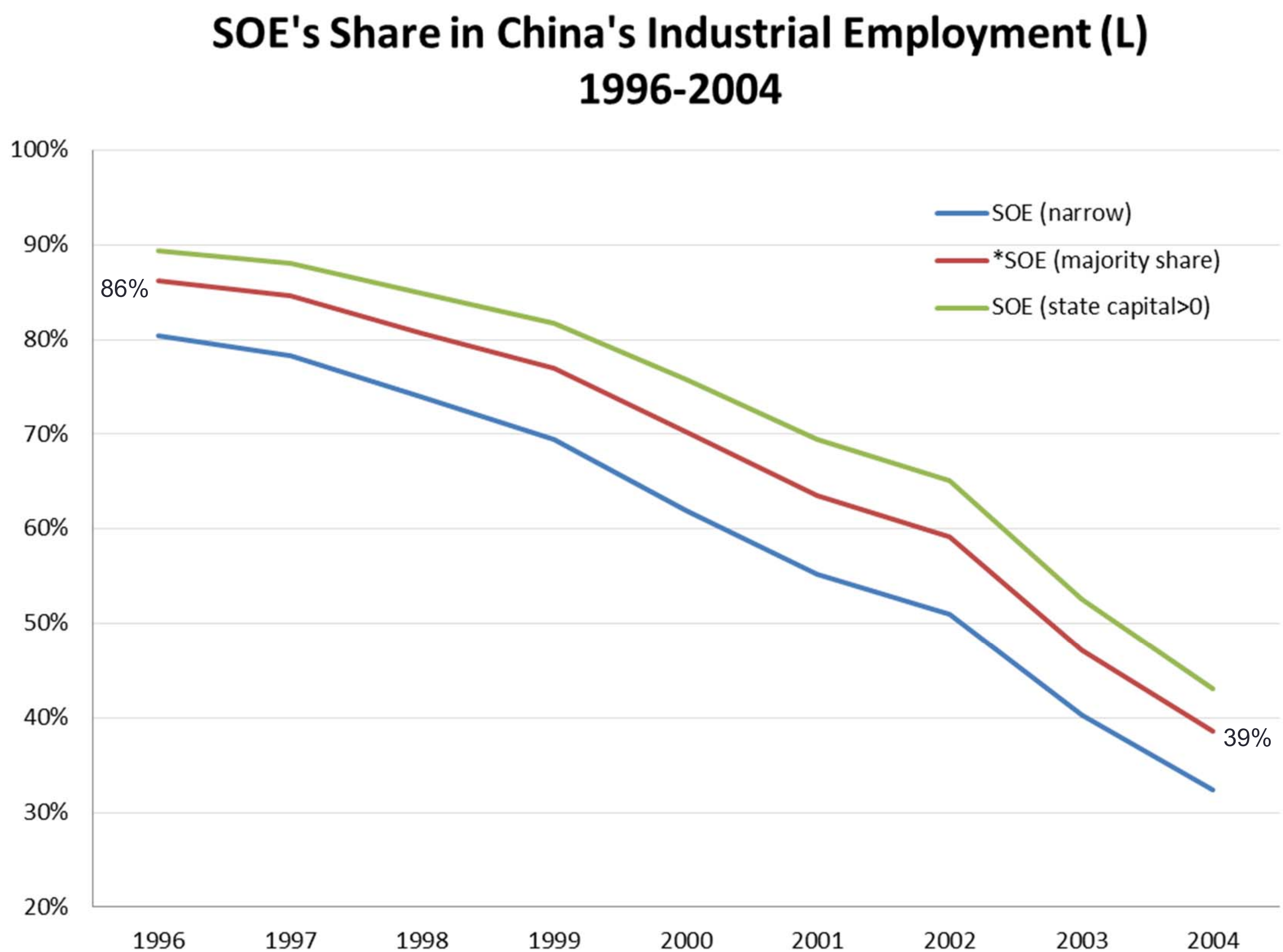
More recent data shows similar picture…



Official calculation shows **26%** for 2010, incl. both state-owned & state-controlled.

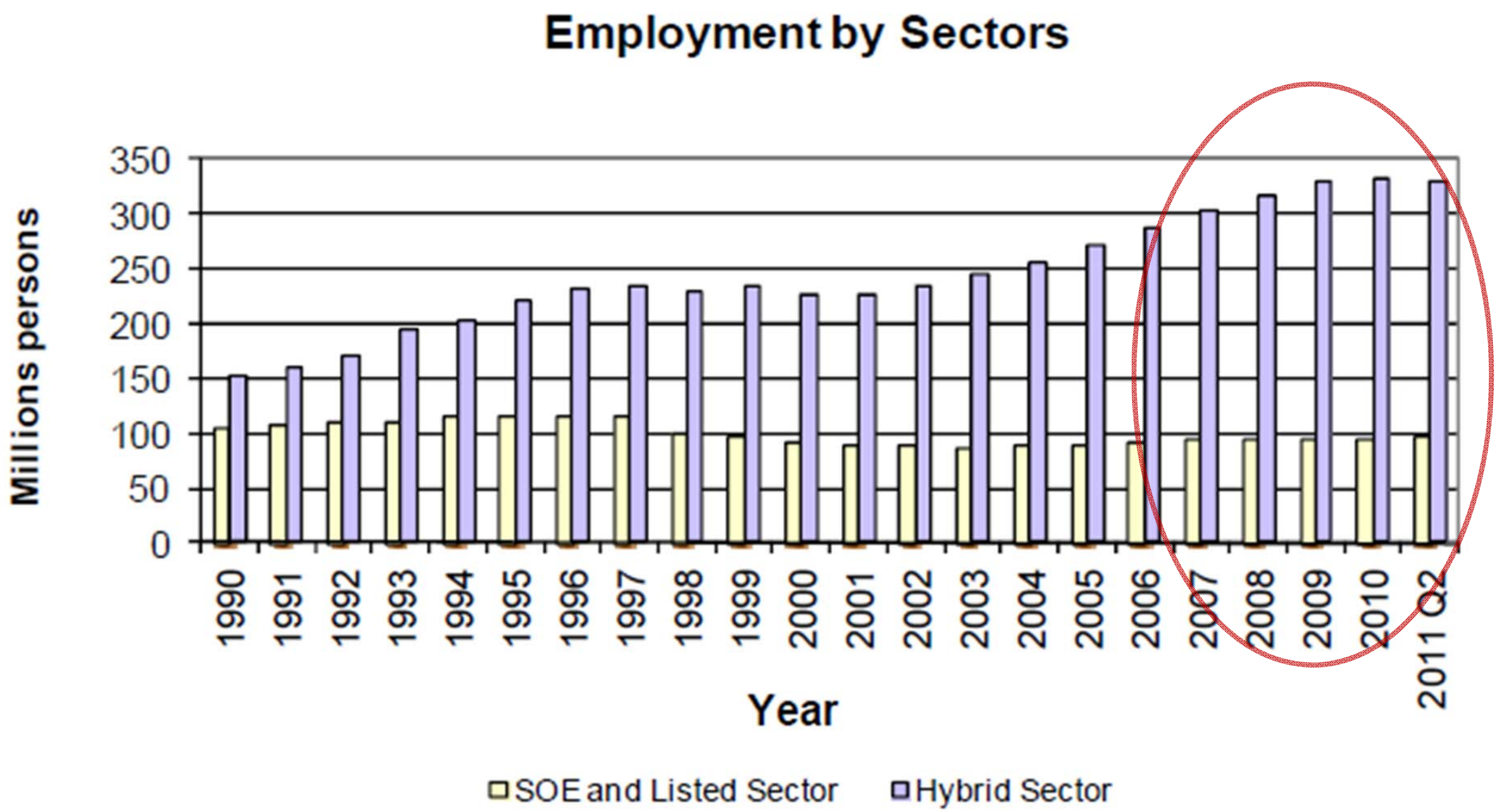
Hybrid - Incl. all sectors other than SOEs and public listed,

Source: Allen, F. et al. (2012)



Source: Deng (2012) and NBS

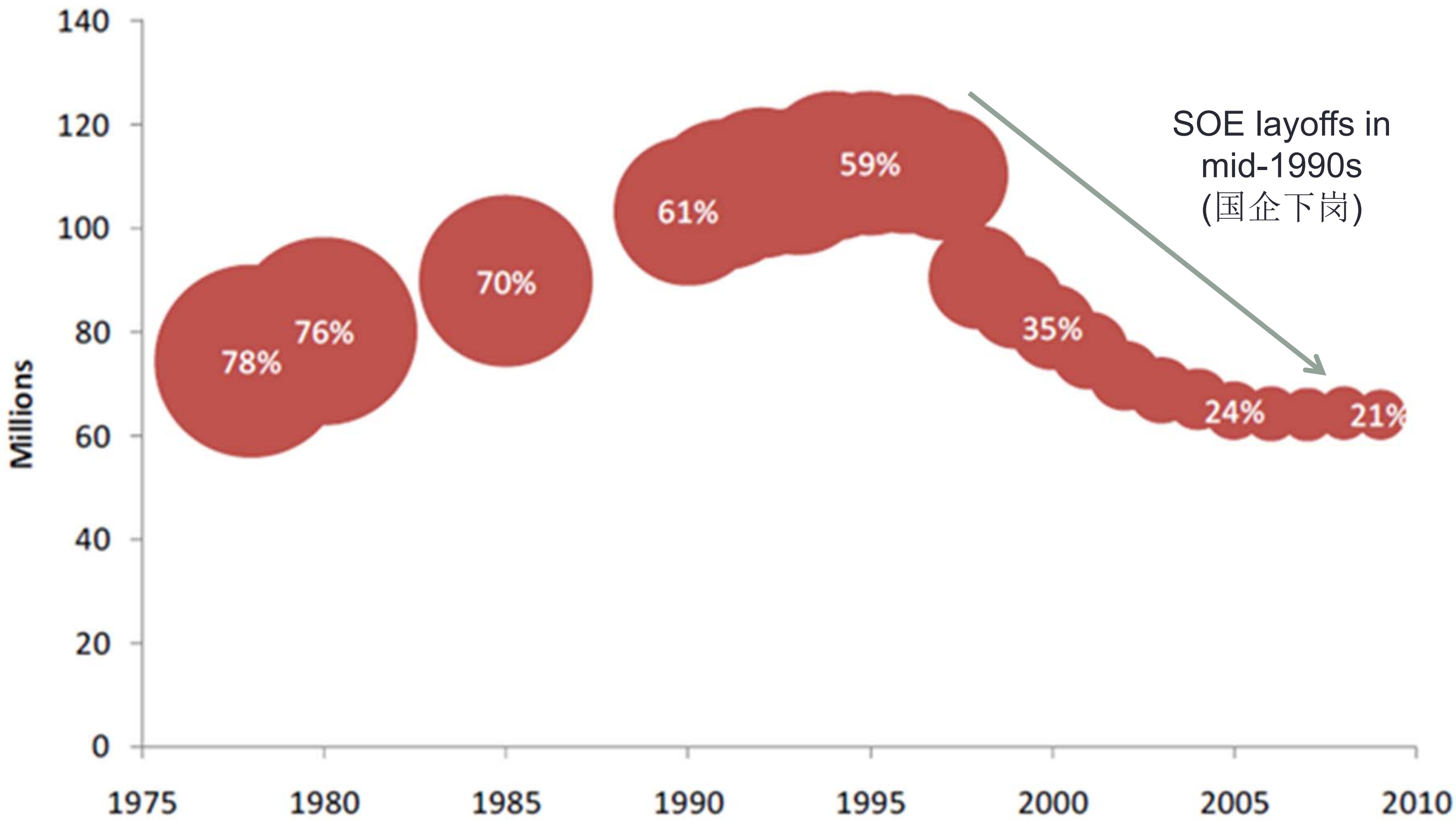
SOE's employment share has further declined in recent years…now around **20%**



Hybrid - Incl. all sectors other than SOEs and public listed,

Source: Allen, F. et al. (2012)

Employment Level and Share of SOEs, 1978-2009



Source: National Bureau of Statistics of China.

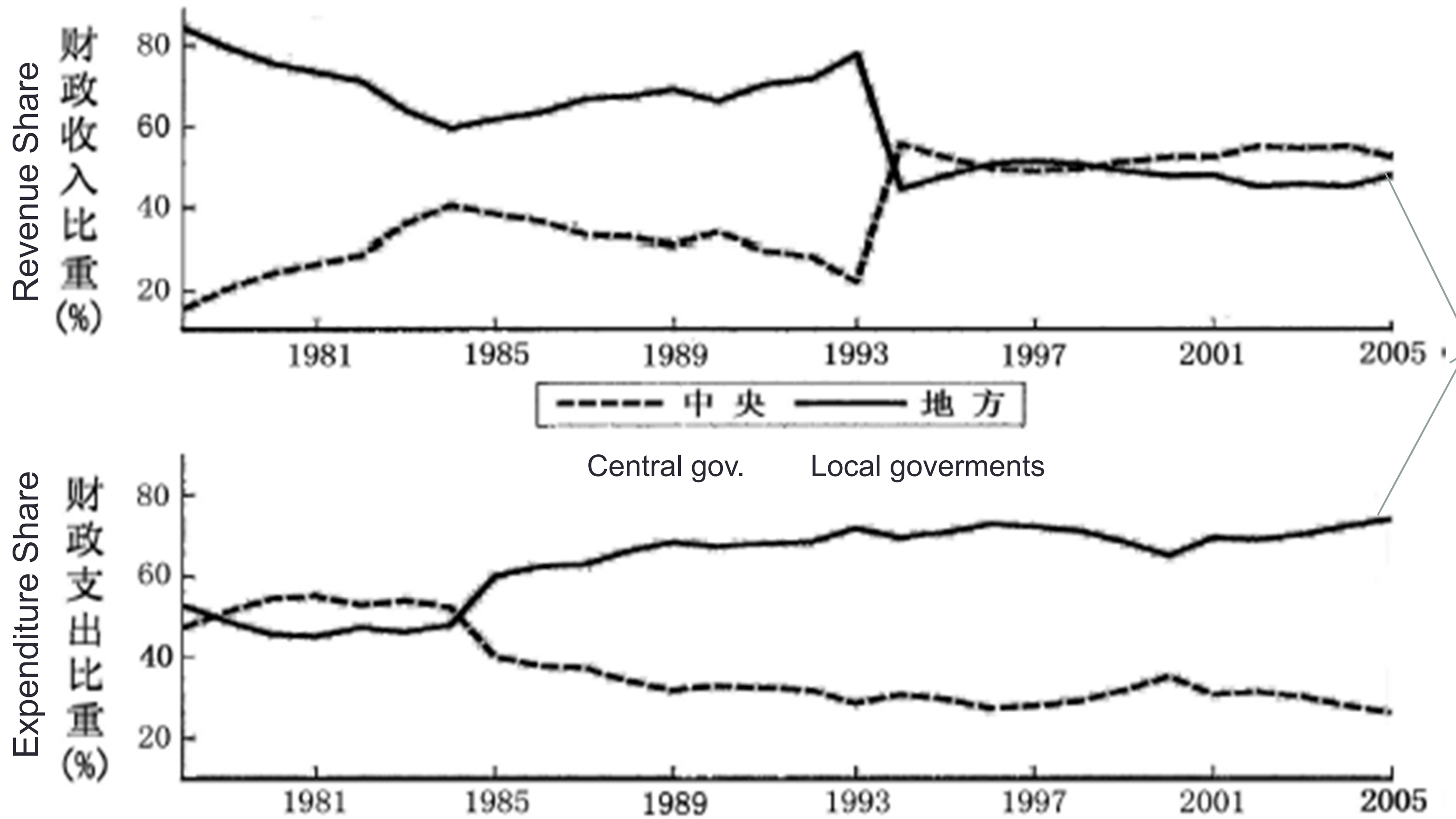
"Privatization" in China: "Federalist" Style

- The 1994 fiscal reform dramatically altered the structure of government financing in China
  - Central government got a much larger share on tax revenue than before
  - Local (provincial) governments got a smaller share on tax revenue than before, yet they faced a much larger share on expenditure (e.g., education and healthcare)

- The consequence: central government and local governments faced quite different incentives towards privatizing SOEs:
  - Local governments wanted to privatize money-losing local SOEs quite eagerly as they were draining government budget
  - The now much "richer" central government wanted to keep most central-government-controlled mega-size SOEs alive – these eventually evolved into the so-called "state-champions"

- Another implication: to finance their spending, local governments have to find other ways to make up for the structural deficits

Government financing structure: central vs. local



For example, In 2005, local governments faced almost 25% structural deficit

Source: Jun Zhang, et al. (2008) Note: dashed lines are for central government; solid lines are for local governments

The layoffs resulting from SOE reform were absorbed into fast growing private sectors

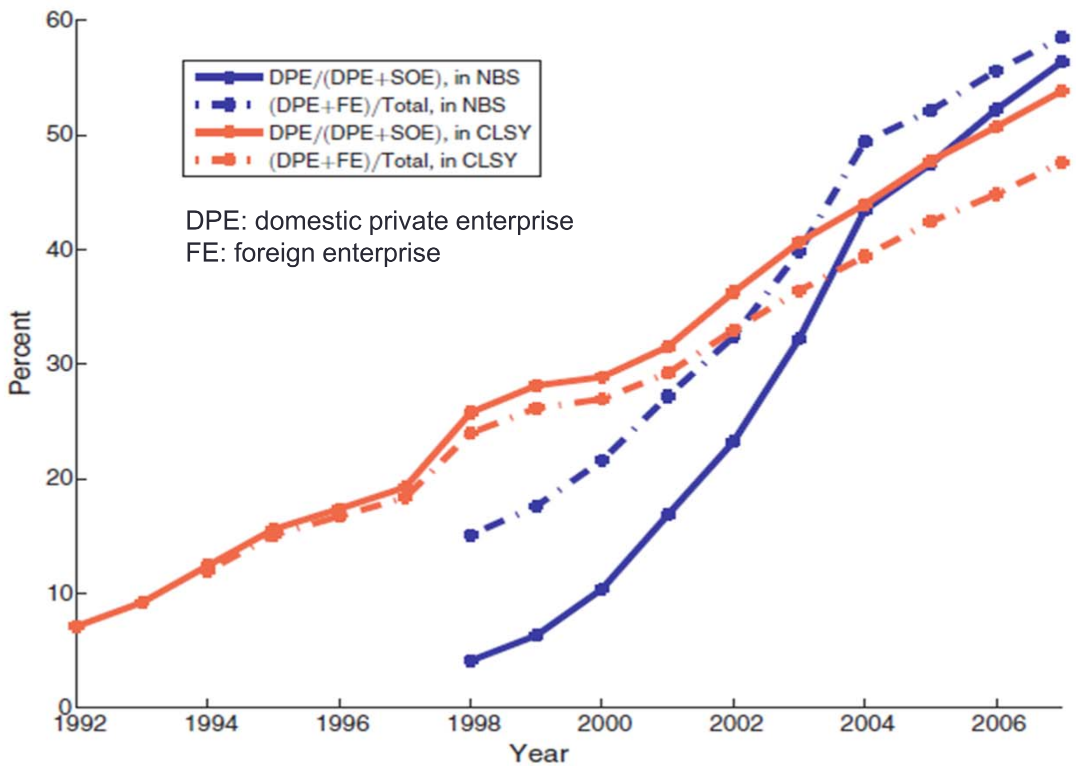


FIGURE 2. PRIVATE EMPLOYMENT SHARE

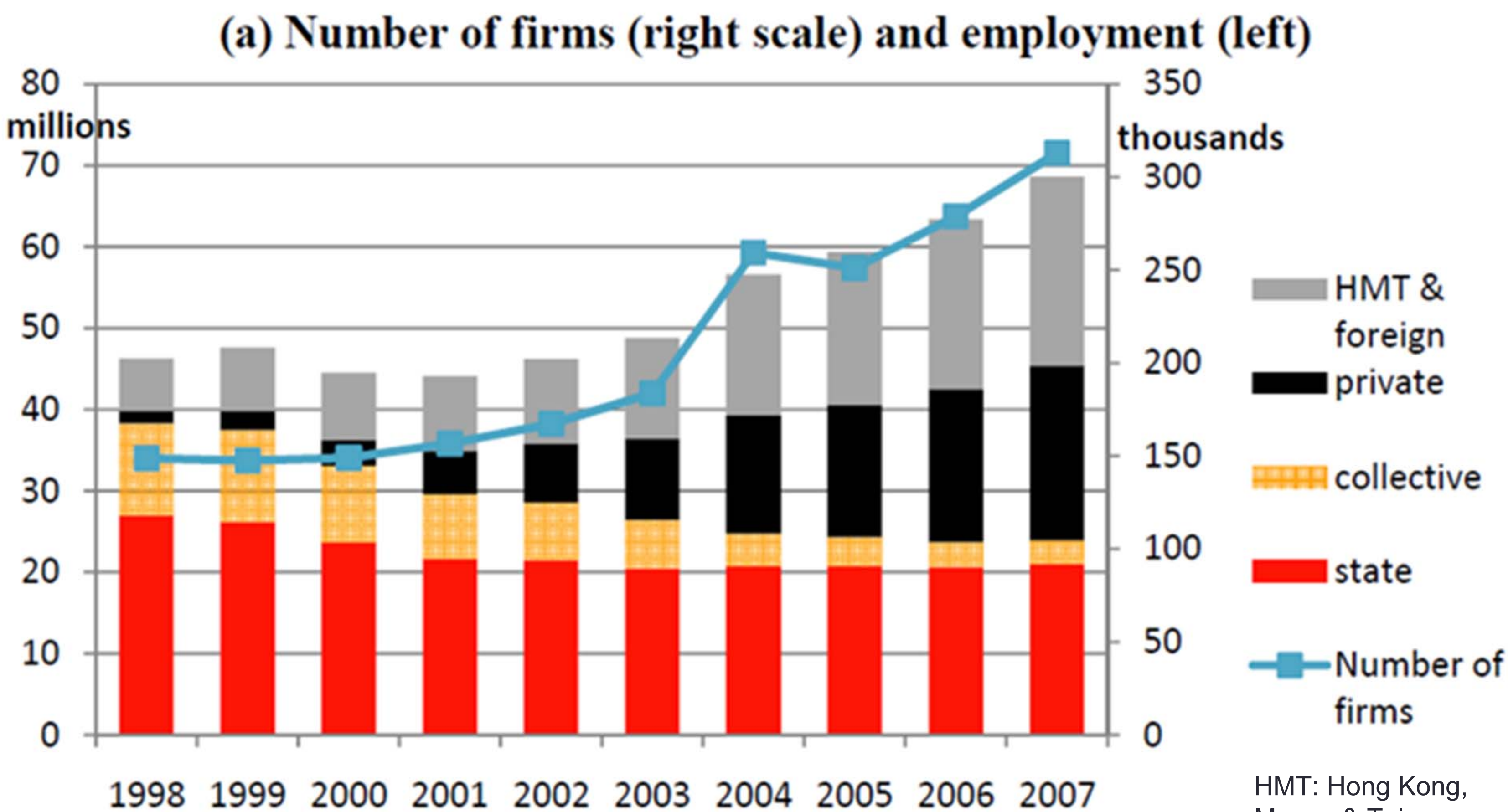
Notes: The figure shows, first, the DPE share of employment as a share of SOE + DPE employment in manufacturing (NBS 1998–2007) and in the urban sector (CLSY 1992–2007). Second, it plots DPE + FE employment as a share of total employment in manufacturing (NBS 1998–2007) and in the urban sector (CLSY 1992–2007).

Source: CSY and CLSY, various issues.

Less money-losing SOEs…but still

Still more than 20% of SOEs are losing money today

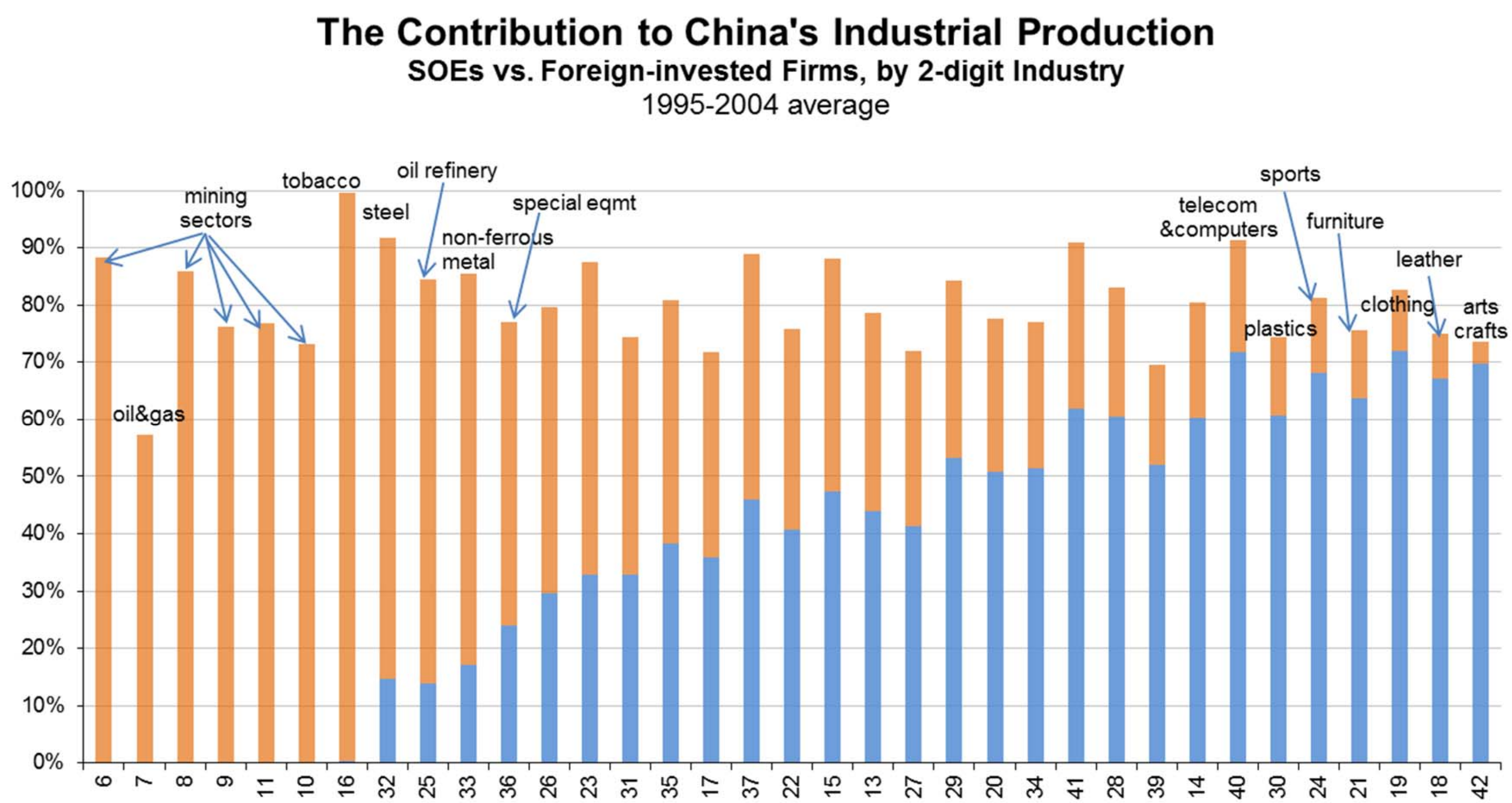
"Tri-polar" Ownership Structure Formed



HMT: Hong Kong, Macau & Taiwan

Source: Brandt and Zhang (2010)

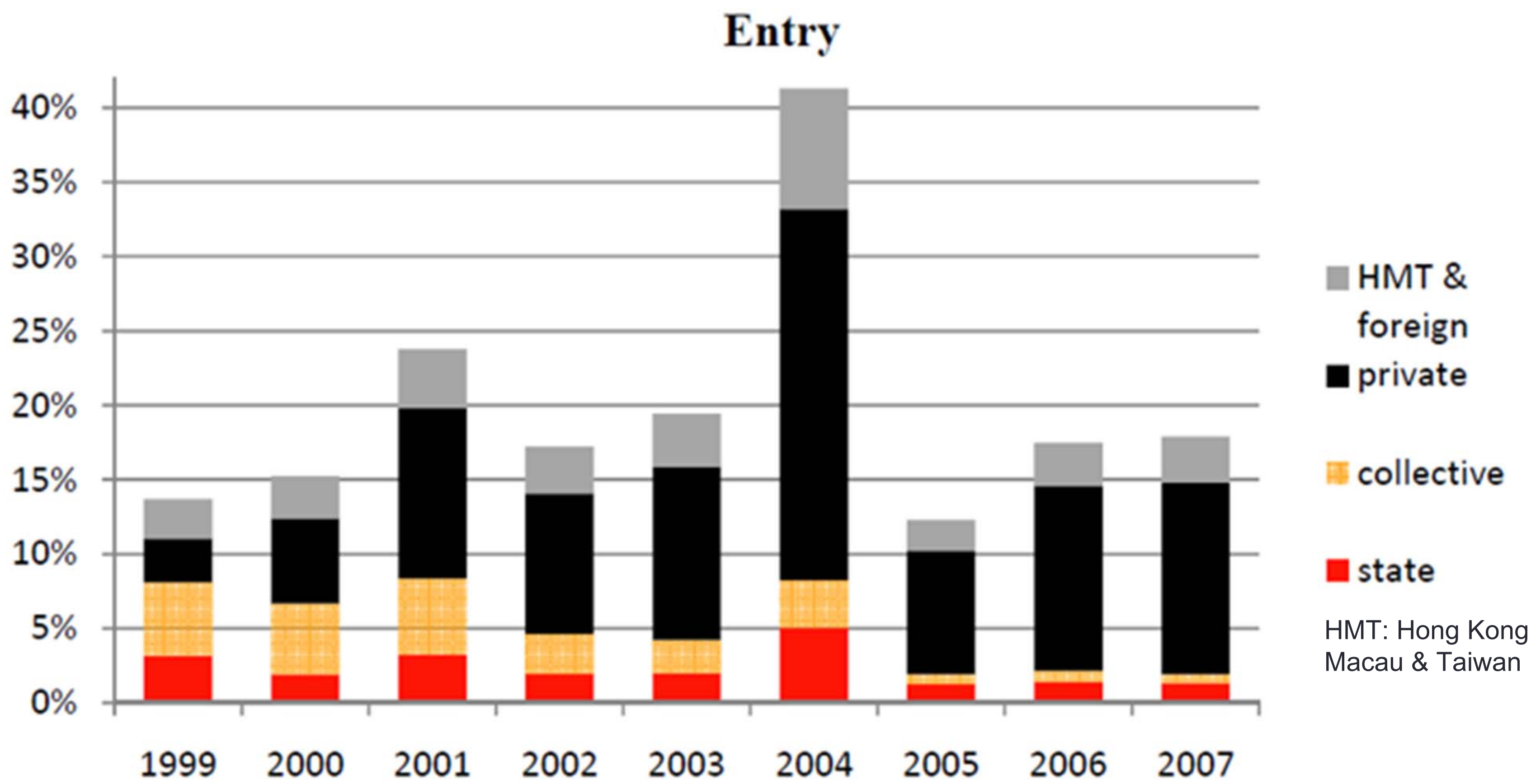
Where have all the SOEs gone?



Source: Deng (2012)

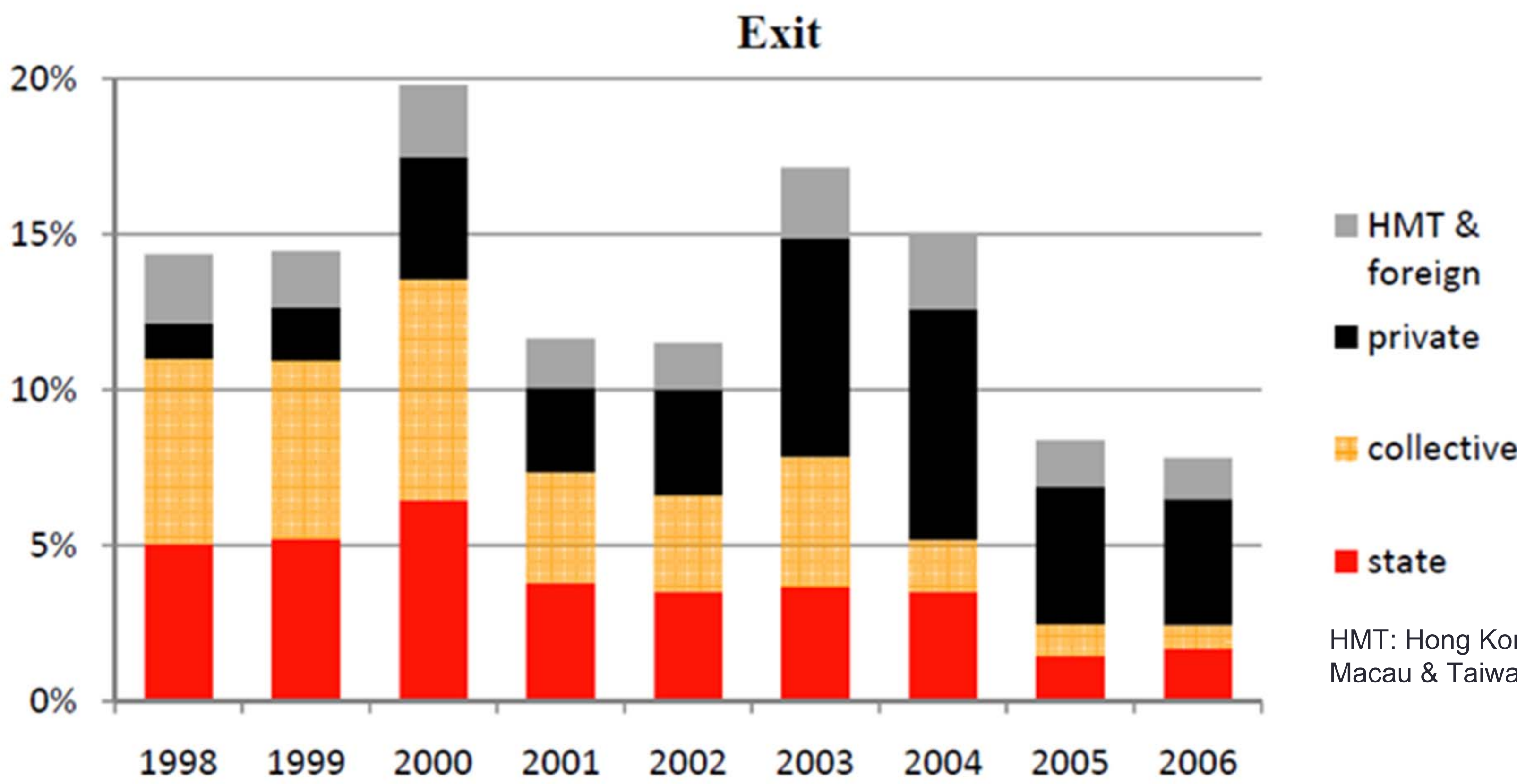
➔ **Unlike Japan and S. Korea, China has stayed remarkably open to foreign direct investments…**

Entry and exit --- key driver for robust growth



Source: Brandt and Zhang (2010)

Entry and exit --- key driver for robust growth



HMT: Hong Kong, Macau & Taiwan

Source: Brandt and Zhang (2010)

China's Economic Structure Today

- SOEs retreated and only remain in:
  - Energy and natural resources sectors, including oil & gas, mining, metals;
  - Utilities: water, electricity, phone, etc.
  - Public goods sector: e.g., railway
  - Defense sectors: ships, aeronautics (air planes), and astronautics

- The manufacturing sector is very vibrant and dynamic, with lots of foreign players and competition is abundant

- Yet, state still has monopoly in financial sector – all major Chinese banks are either state-owned or state-controlled

Private companies have been trying in vain
to break the monopoly held by SOEs

What's lacking?

More profitable, but still *least profitable*

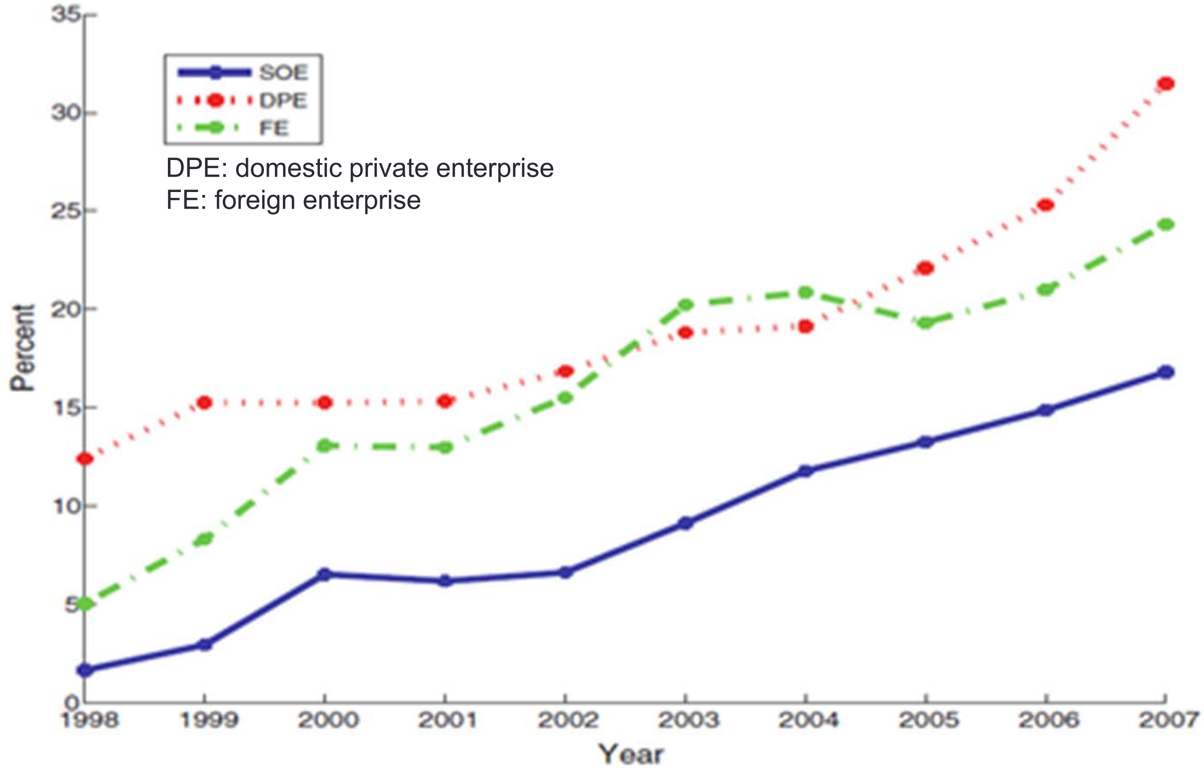
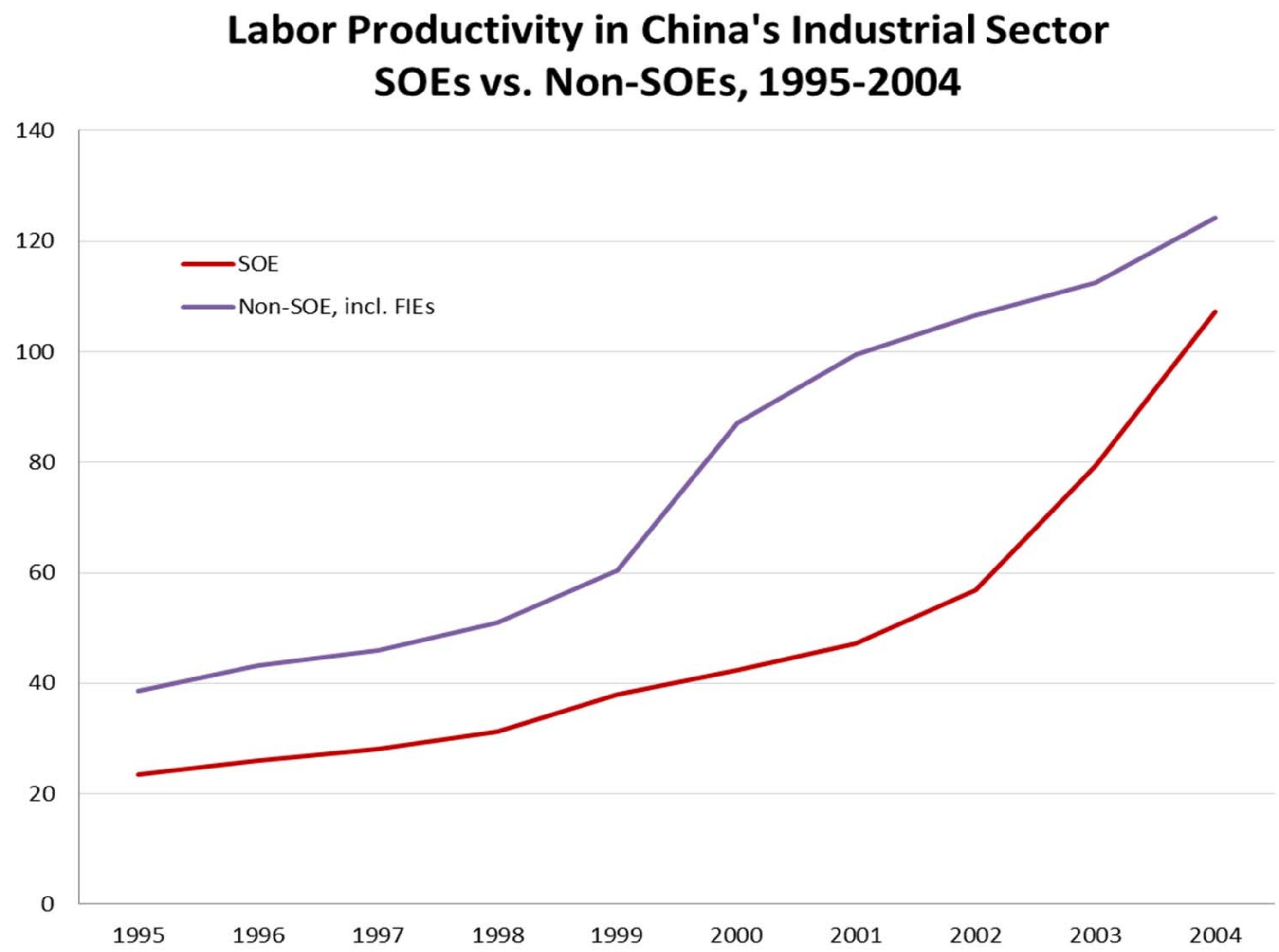


FIGURE 3. TOTAL PROFITS OVER NET VALUE OF FIXED ASSETS

Note: The figure plots the average ratio between total profits and the book value of fixed assets across firms of different ownership, in percent.

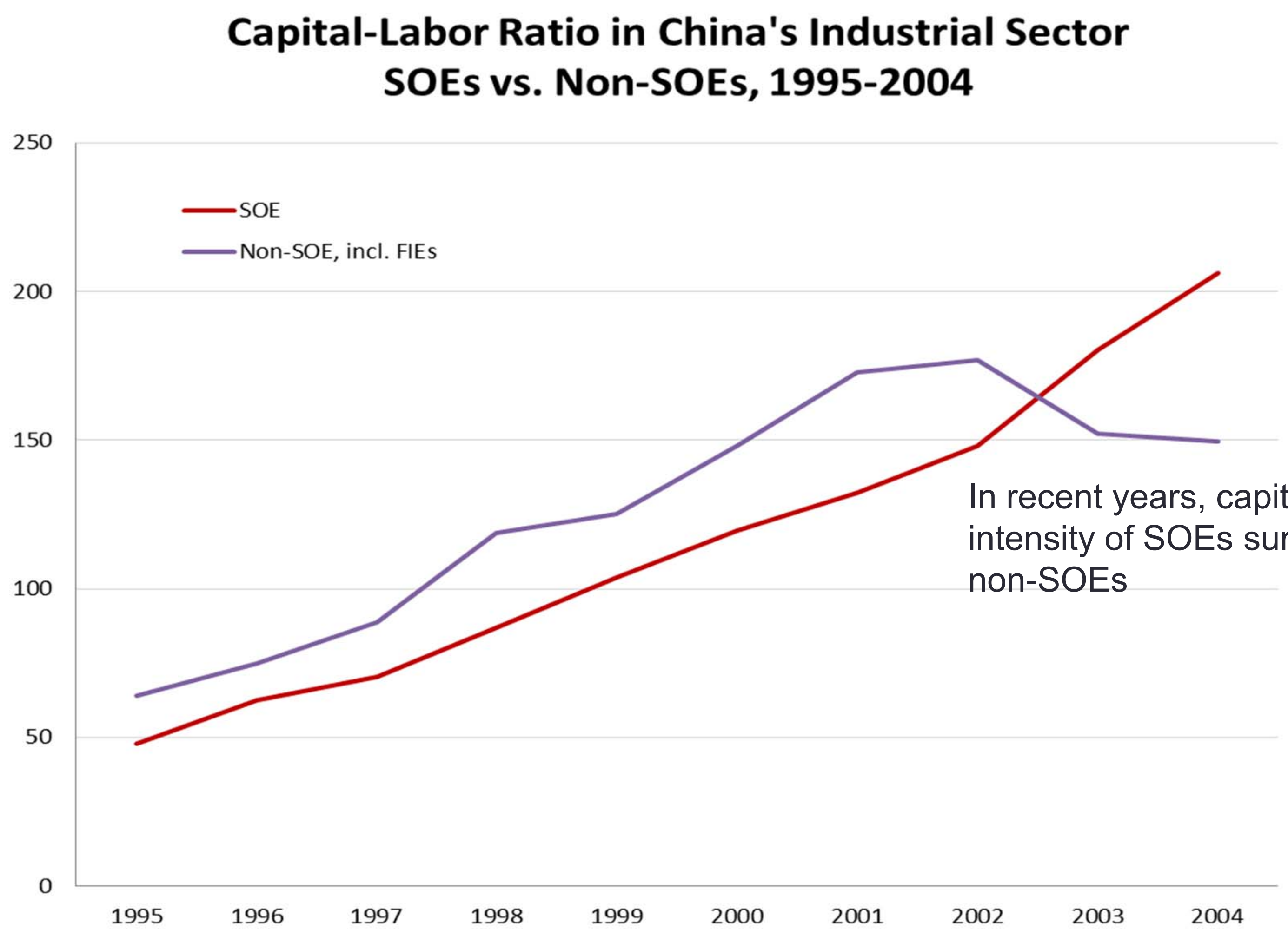
Source: Song, Storesletten, Zilibotti (2011)

Catching up quickly on productivity…



Note: FIE stands for foreign invested firms; Source: Deng (2012) and NBS

But mostly through heavy capital investment



In recent years, capital intensity of SOEs surpassed non-SOEs

Source: Deng (2012) and NBS

As capital intensity increases, SOE's wage also shot up…now even higher than foreign-invested firms

Source: Deng (2012) and NBS

A SOE employee is bragging to an employee from a private company, "Our salary is more than ten times of yours ".

So what's going on?

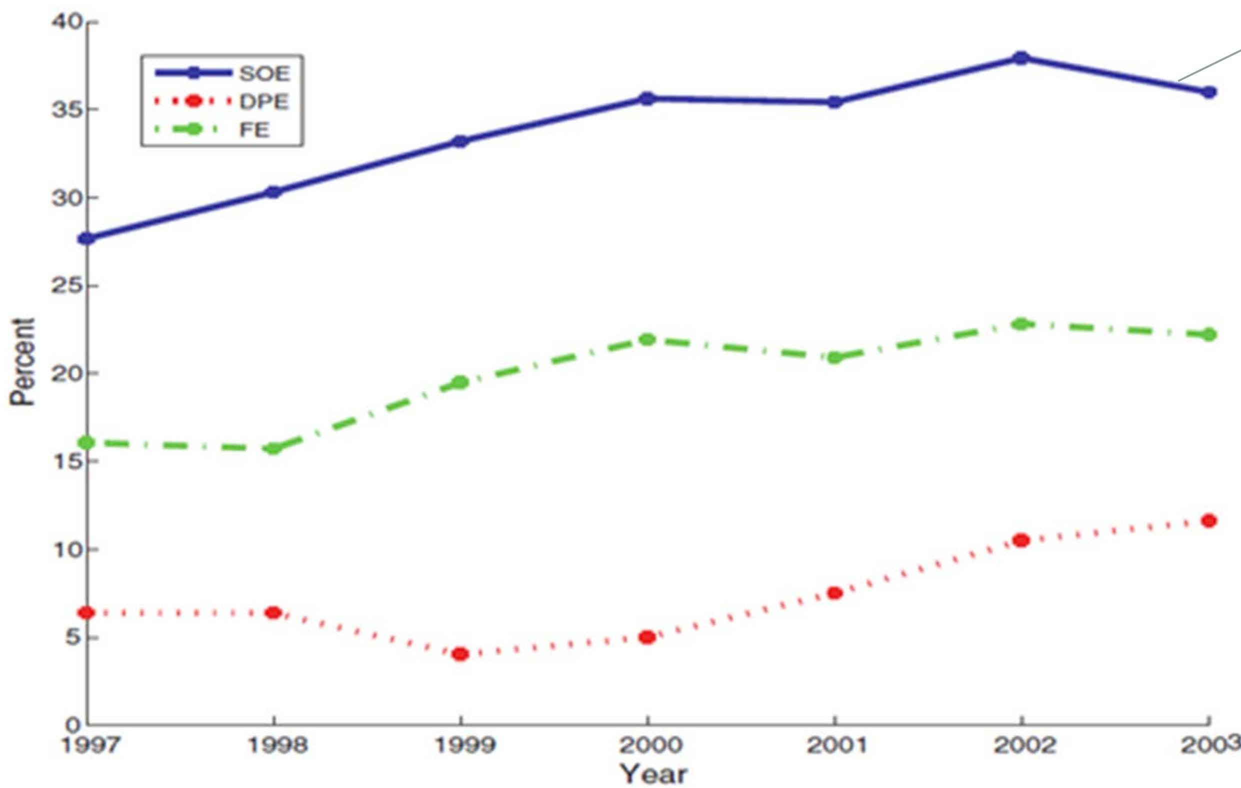
SOEs today have become more profitable and more productive because:

1. Small and medium money-losing SOEs were restructured, or let bankrupt

2. The remaining SOEs mostly retreated to natural resources sectors, which are capital-intensive by nature, and they also enjoy monopoly status, and are close to competition

3. The remaining big SOEs, mostly in heavy or capital-intensive industries, get their debt-financing relatively cheaply from state banks; this naturally leads to *substitution labor for capital (i.e., replacing labor with more capital investment)*

Bank System keeps SOEs humming…



used to be
even higher

FIGURE 4. SHARE OF INVESTMENT FINANCED BY BANK LOANS AND GOVERNMENT BUDGETS

Note: The figure plots the average share of investment financed by bank loans and government subsidies across firms of different ownership, in percent.

Source: Song, Storesletten, Zilibotti (2011)

SOEs got the lowest interest rate, yet their returns have been dismal…

Estimated interest rate by year and ownership—*intrate* = *intpay* / *debt*

	SOE (tot)	Coop	Private	HK-Macau-Taiwan	Foreign capital	Total
2001	2.46	4.94	4.84	2.89	2.98	4.13
2002	2.23	4.65	4.64	2.81	2.61	3.92
2003	2.67	5.38	4.61	2.59	2.28	3.93
2004	2.86	—	3.81	2.17	1.92	3.31
2005	2.61	10.46	4.57	2.29	2.38	3.93

Weighted ROA by aggregated ownership class

	SOE (tot)	Coop	Private	HK-Macau-Taiwan	Foreign capital	Total
2001–05	0.92	4.59	6.05	3.94	8.25	3.61
Memorandum items:						
2001–03	*0.77*	*4.50*	*5.46*	*3.91*	*6.55*	*2.95*
2004–05	*1.14*	*7.46*	*6.66*	*3.99*	*10.12*	*4.50*

Source:Ferri and Liu (2010)

So why banks are still doing it?

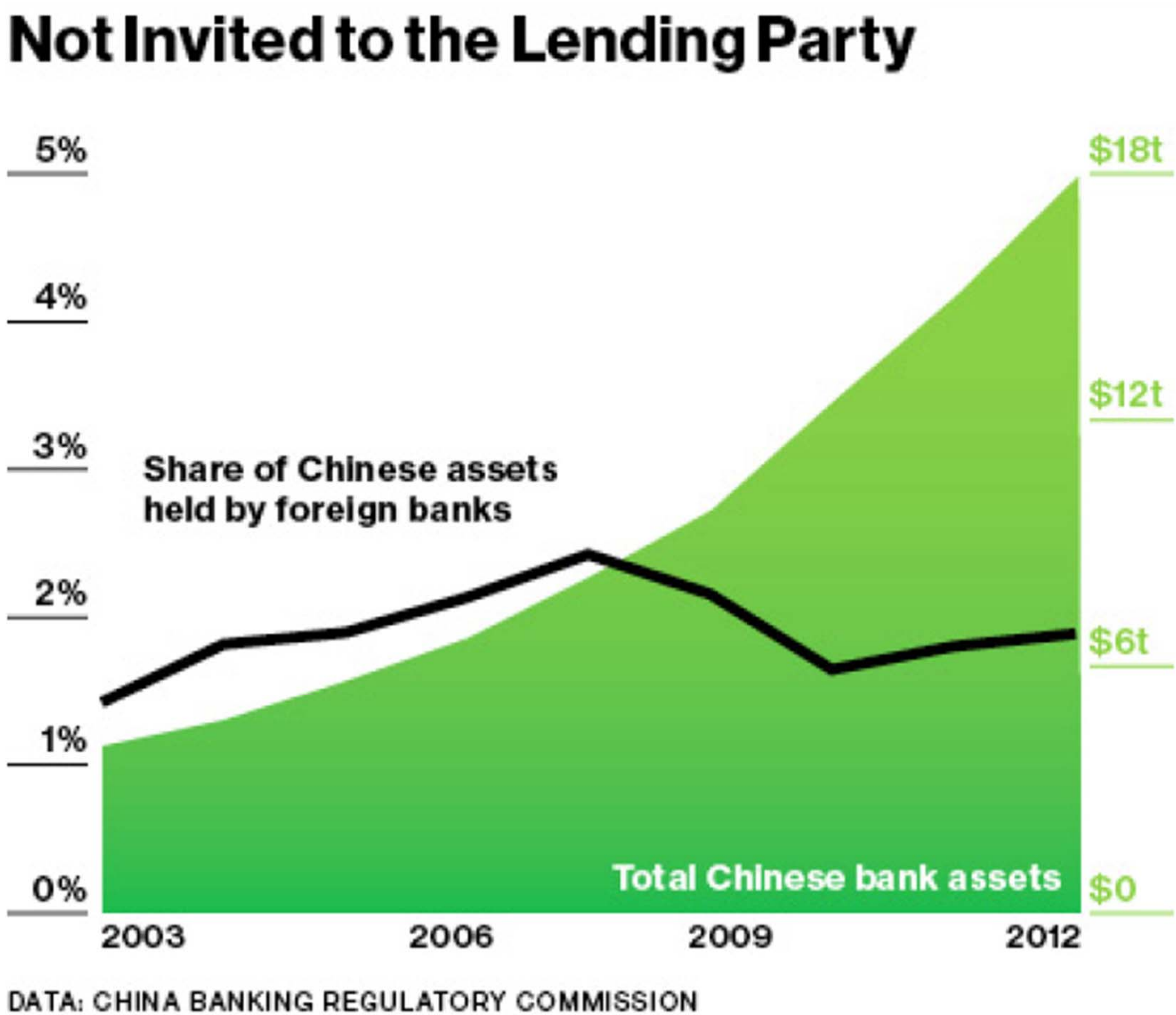
Market Share of Types of Banks in China

By total assets at the end of 2010

Type of Bank	Asset Value	Market Share
Policy Banks	7.652 trillion yuan	8.0%
Equitized Banks	46.894 trillion yuan	49.2%
City Commercial Banks	7.853 trillion yuan	8.2%
Rural Commercial Banks, Rural Cooperative Banks, and Rural Credit Cooperatives	10.658 trillion yuan	11.2%
Joint-stock Commercial Banks	14.904 trillion yuan	15.6%
Foreign Banks	1.742 trillion yuan	1.8%
Other	5.602 trillion yuan	5.9%

Source: Based on data in CBRC's *Annual Report 2010.*

≈75% in total are state-controlled


Not Invited to the Lending Party
5%
4%
3%
2%
1%
0%
$18t
$12t
$6t
$0
Share of Chinese assets held by foreign banks
Total Chinese bank assets
2003
2006
2009
2012
DATA: CHINA BANKING REGULATORY COMMISSION

Vulnerable SOE Profit: Is it for real?

- What will happen if banks were to charge SOEs the same interest rate of private firms, or foreign firms?

Percentage of SOE profits dented by applying their private enterprise interest rates

	Private enterprise interest rates		Foreign capital enterprise interest rates	
Year	Intpay method (*Intrate*)	Finco method (*Intrate1*)	Intpay method (*Intrate*)	Finco method (*Intrate1*)
2001–05	155.9	171.8	57.7	112.5
Memorandum items:				
2001–03	*221.7*	*214.8*	*91.3*	*134.2*
2004–05	*92.5*	*127.7*	*23.8*	*93.2*

Source:Ferri and Liu (2010)

➔ The number 155.9 (57.7) means if charged with interest rate of private (foreign) firms, **155.9% (57.7%) of current profits will be wiped out.**

Making Sense…

- If bank lending to SOEs is much less profitable, and sometimes even losing money, so in the long run, how can China’s state banks survive?

- Will these non-performing loans (NPLs) eventually come back to jeopodize the whole financial system?

- What’s the missing link?

Financial Repression in China

- The repression in Chinese context refers to:
  - Deposit rate is set by the state, and kept artificially low. Households lack of investment choices in keeping their savings from depreciating value
  - Private firms have difficulties in getting access to bank loans, or they have to pay much higher interest rate
  - Through capital control and monopoly in financial sector, state has almost unlimited power in allocating financial resources; and a large chunk of bank loans went to the least productive SOEs (both state-owned, and state controlled)
  - Essentially a hidden wealth transfer (or subsidy) from household to state sectors

Households earn poor return on their savings

With very limited choices, households have to put their money into banks, even facing a negative real interest rate.

Source: Deng (2011)

Stock investors fared no better…

➔ Among BRICs, China has the fastest economic growth, yet it has produced the lowest long-term return for stockholders.

How stock market and SOE reform are related?

- Some people are puzzled by the poor stock market return in China. Hasn't China been growing at 10% for many years? How come a fast growing economy did not reward investors?

- As mentioned earlier, securitization was one of the important SOE reform strategies. Its initial design was to raise capital for troubled SOEs, so that they can be recapitalized.

- Today, close to 80% of firms listed on Shanghai Stock Exchange are either state-owned or state-controlled. In other words, most firms on the Chinese Stock Exchange don't reflect the better part of Chinese growth story.

- Stock market serves another hidden channel to transfer investor's wealth to state sectors. It's highly speculative; short-term trading is rampant.

- Of course, stock return also depends on the entry point. When one enters the market at very expensive point, he tends to suffer poor return.

A Tale of Two Growth Stories

- Slowly growing SOEs get most bank loans
  - Banks get cheap financing from household savings as government regulates the interest rate, and makes it artificially low
  - The cheap financing that state-controlled banks draw from household savers enables banks to lend to SOEs at lower interest rate

  ➔ *Essentially households (not the banks) are subsidizing SOEs*

- Fast growing private sectors and foreign-invested sectors getting smaller share of bank loans at higher interest rate
  - But the profits generated are more than enough to offset the (potential) loss from loans to SOEs

  ➔ *In this sense, essentially private sectors are also subsidizing SOEs*

SOE Reform: Taking stock

✓	Problem in managerial incentives → shading managers
✓	Problem in worker's incentives → shading workers
✗	Common ownership and the ambiguous property rights → asset stealing, misuse and diversions
✗	Soft budget constraint (SBC) between SOEs, governments, and banks → shortage (Qian, 1994), excessive investments and countless bailouts
✗	Conflict of interests: state and governments act as both *"players"* and *"referees"* → monopolies, favoritism and corruptions

What's the way out…

- Really introducing competition into China's banking sector
  - Private-owned banks
  - Lower entry barriers for foreign banks
  - However, this does not mean to have loose or no regulations
- Market-determined interest rate (the current policy proposal) alone won't solve the problem
  - Without reforming bank ownership, banks are still subject to the problem of moral hazard and soft-budget-constraint
- Since SOEs have important social functions (such as keeping unemployment low), the speed of the next-wave SOE reform is a function of
  a) the speed of reform in the financial sector
  b) the speed of successfully building up an adequate social security system and healthcare system

Summary

- We can broadly describe China's reform and transition experience as *a process of gradually getting incentives right*, by rectifying the huge distortions in the socialist past.
- Getting the incentive right for farmers greatly raised rural labor productivity. In addition, there was productivity gain resulting from the surplus labor migration out of rural land *(MPL increases).*
- Before SOE reform, the rigid wage-setting inside SOEs gave workers little incentive to work harder. The lack of work mobility also prevented workers from finding jobs outside state sectors. As a result, workers regularly shirked (磨洋工) at workplace and productivity inside SOEs was very low.

Summary (cont.)

- The market reform introduced private competition, especially in China's manufacturing sector. This incentivized workers to work harder for better compensation, and worker's mobility also greatly improved. Most people now work for non-SOE firms, and they change jobs much more frequently than before.

- China's SOE reform significantly raised labor productivity and greatly improved economic structure of China, but left many deeper problems unsolved: SOEs still monopolize the so-called strategic sectors, and state also has tight grip on the financial sector.

- China's economic growth could be made even more robust if policy makers start to address these problems.

Next Time

- We will discuss how China’s opening to the world trade and foreign direct investments further transformed the Chinese economy