

Discussion on
“Demographic Patterns and Household
Saving in China”

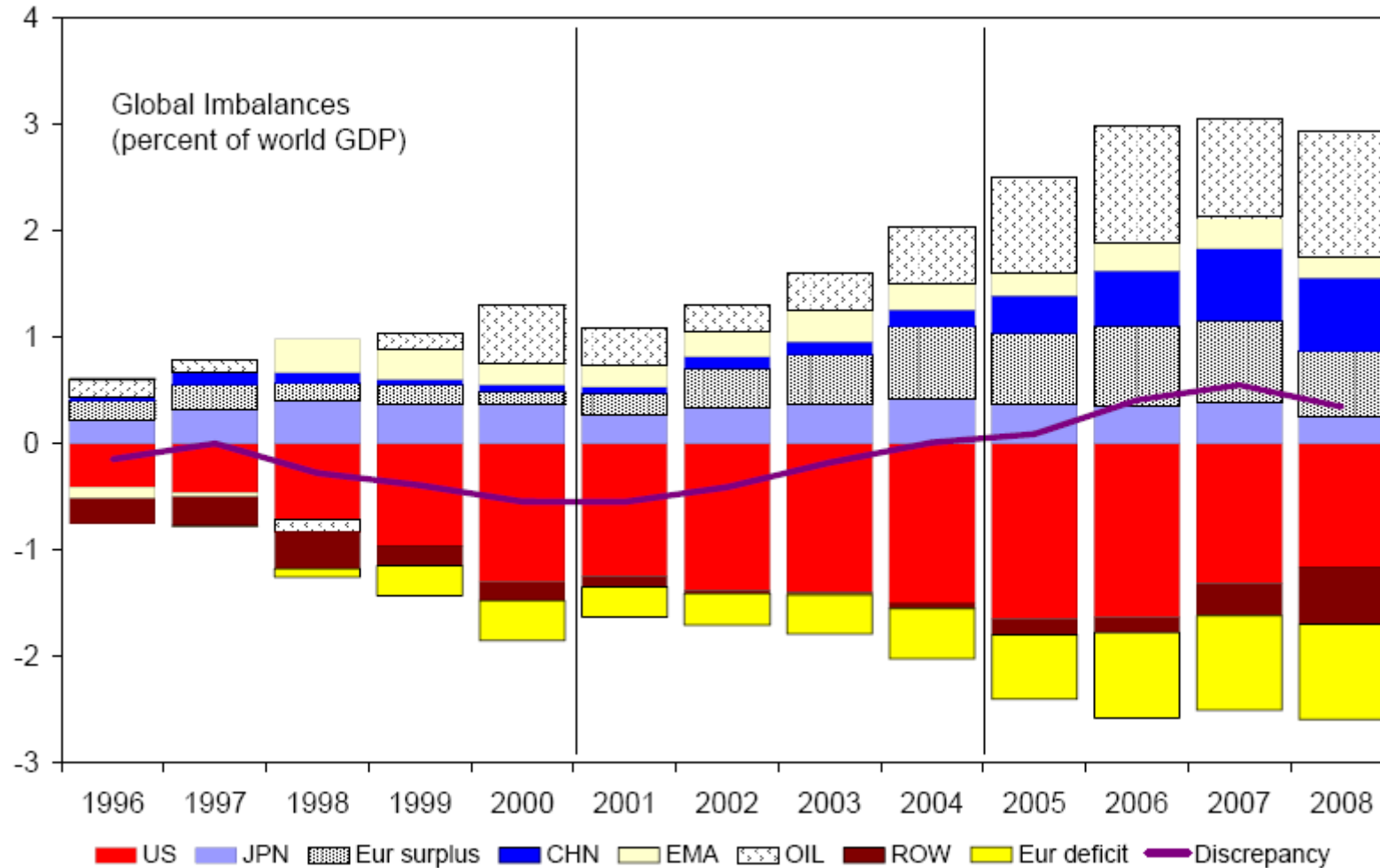
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Outline

- Background and literature
- Summary of the paper
- Comments and suggestions

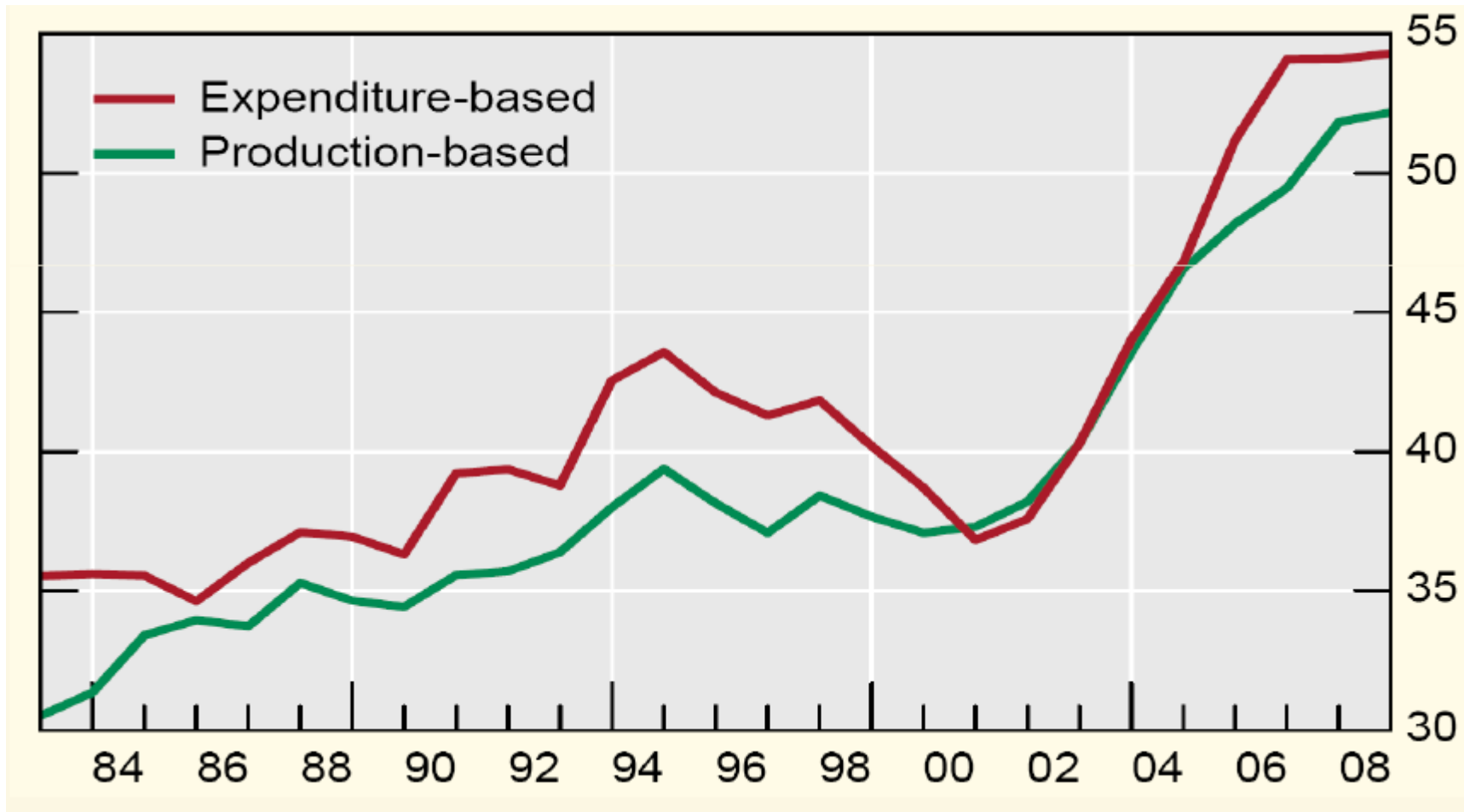
Global imbalances 1996-2008

An evolving story



China's high and rising saving rate

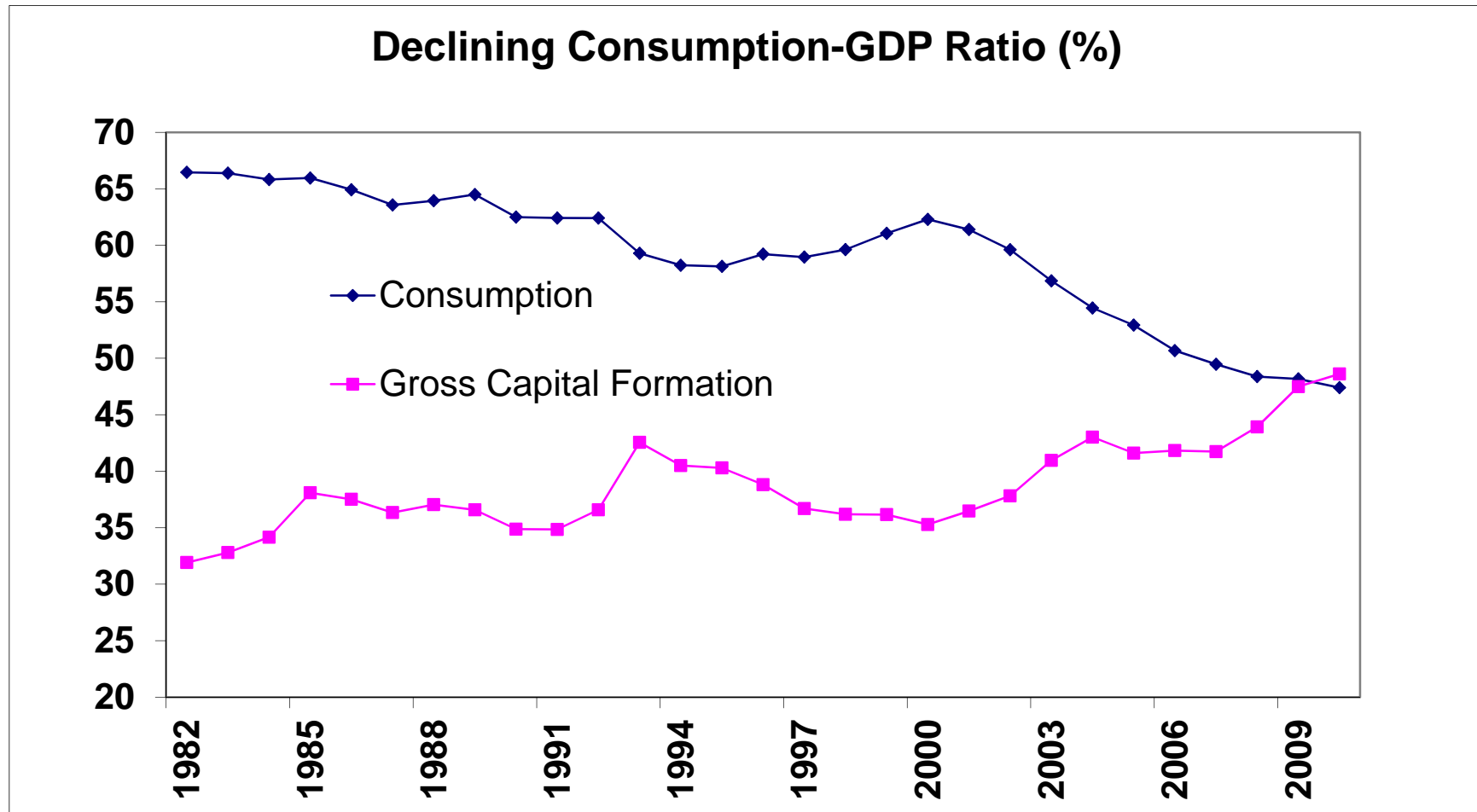
(% of GDP)



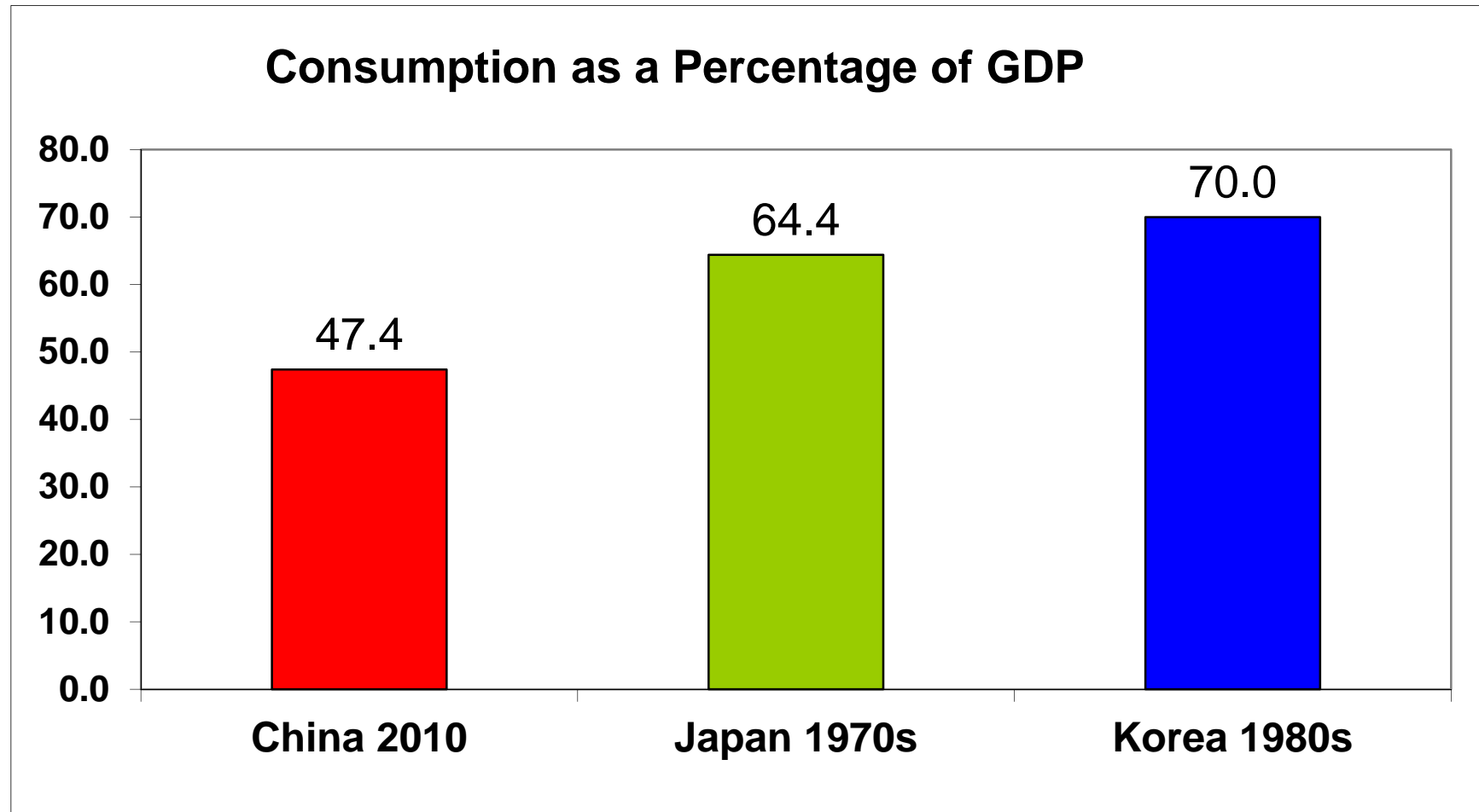
It is important to understand why China save so much!

- Consumption grows strongly, at 8% annually; but GDP grows even faster, averaging 10%; consumption/GDP falls from 47% to 36% in 15 years;
- High growth is mostly driven by even faster investment; investment/GDP rises from 37% to 47%; yet high investment more than financed by even higher saving.
- Hence big current account surpluses, China swings from a net debtor of 10% of GDP to a creditor of 40% of GDP within one decade.

Historical comparison



Cross-Country comparison

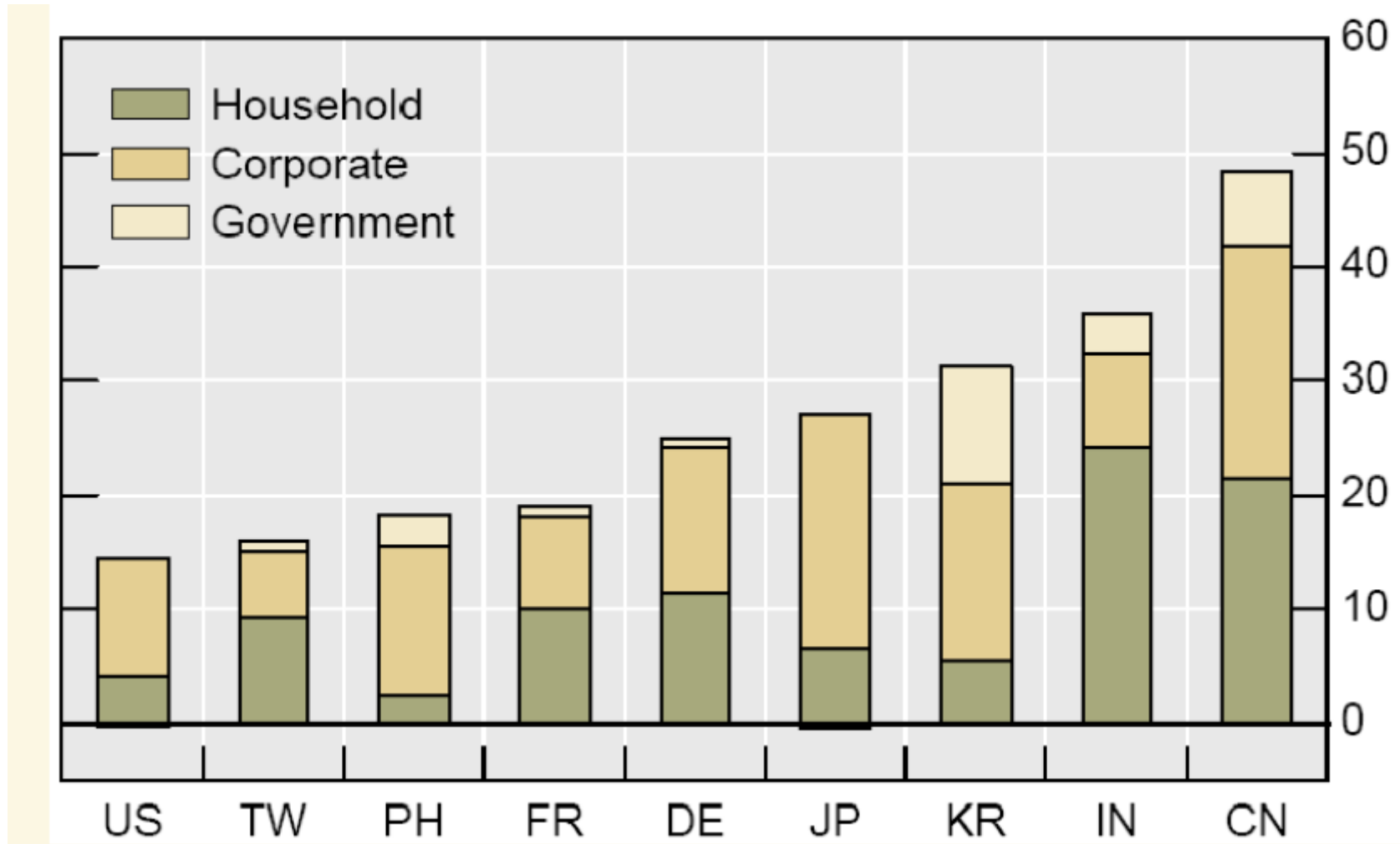


China's exceptionally high saving rate

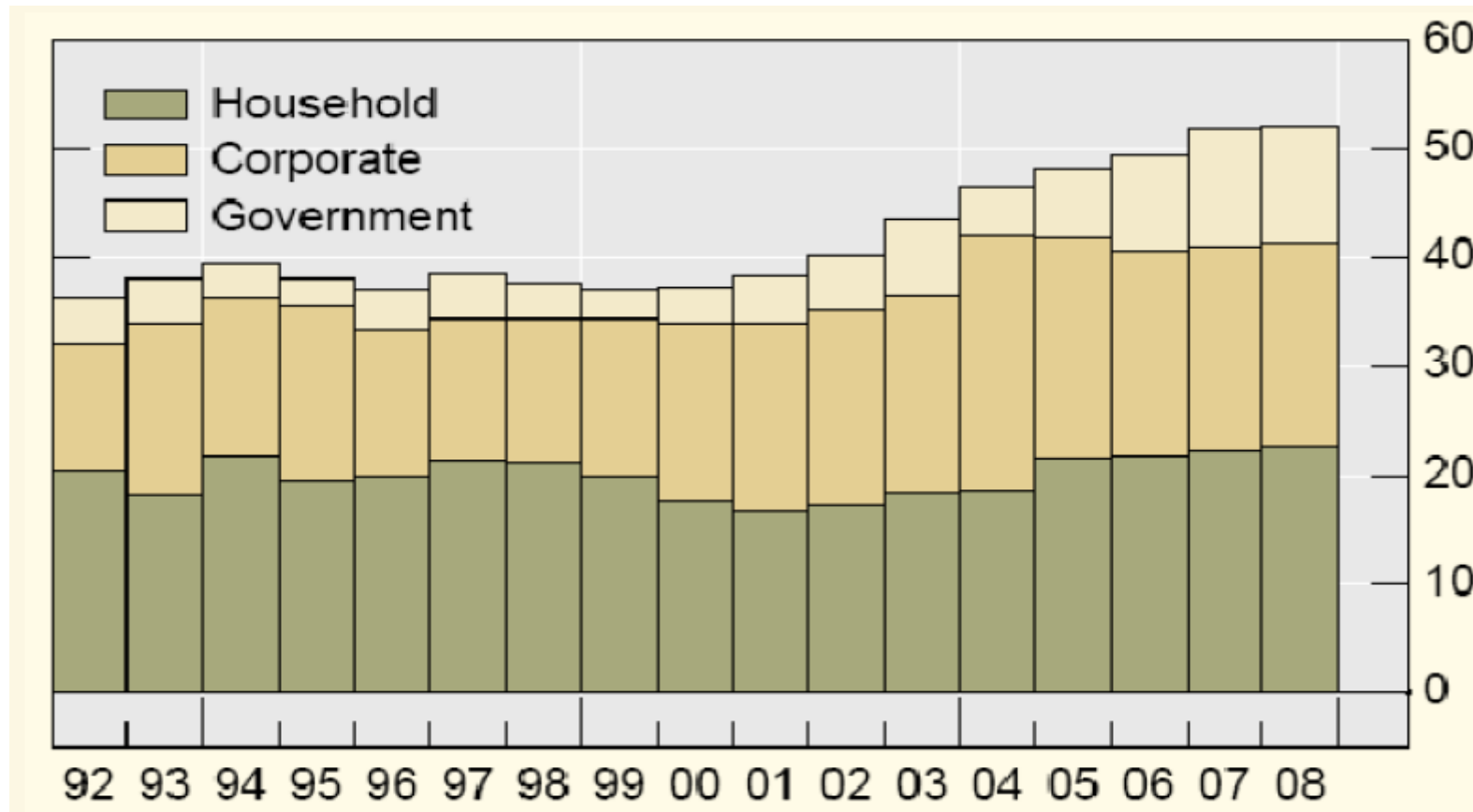
- China's saving rate has been high and rising
 - ✓ historically, relative to peers and model predictions
 - ✓ marginal propensity to save reaches 60% in the 2000s
- China has three high savers but each one by itself is not exceptional:
 - ✓ Household saving lower than India's
 - ✓ Corporate saving less than Japan's
 - ✓ Government saving below Korea's
- What makes China's aggregate saving rate exceptionally high is a combination of all three high savers

Composition of saving, by country

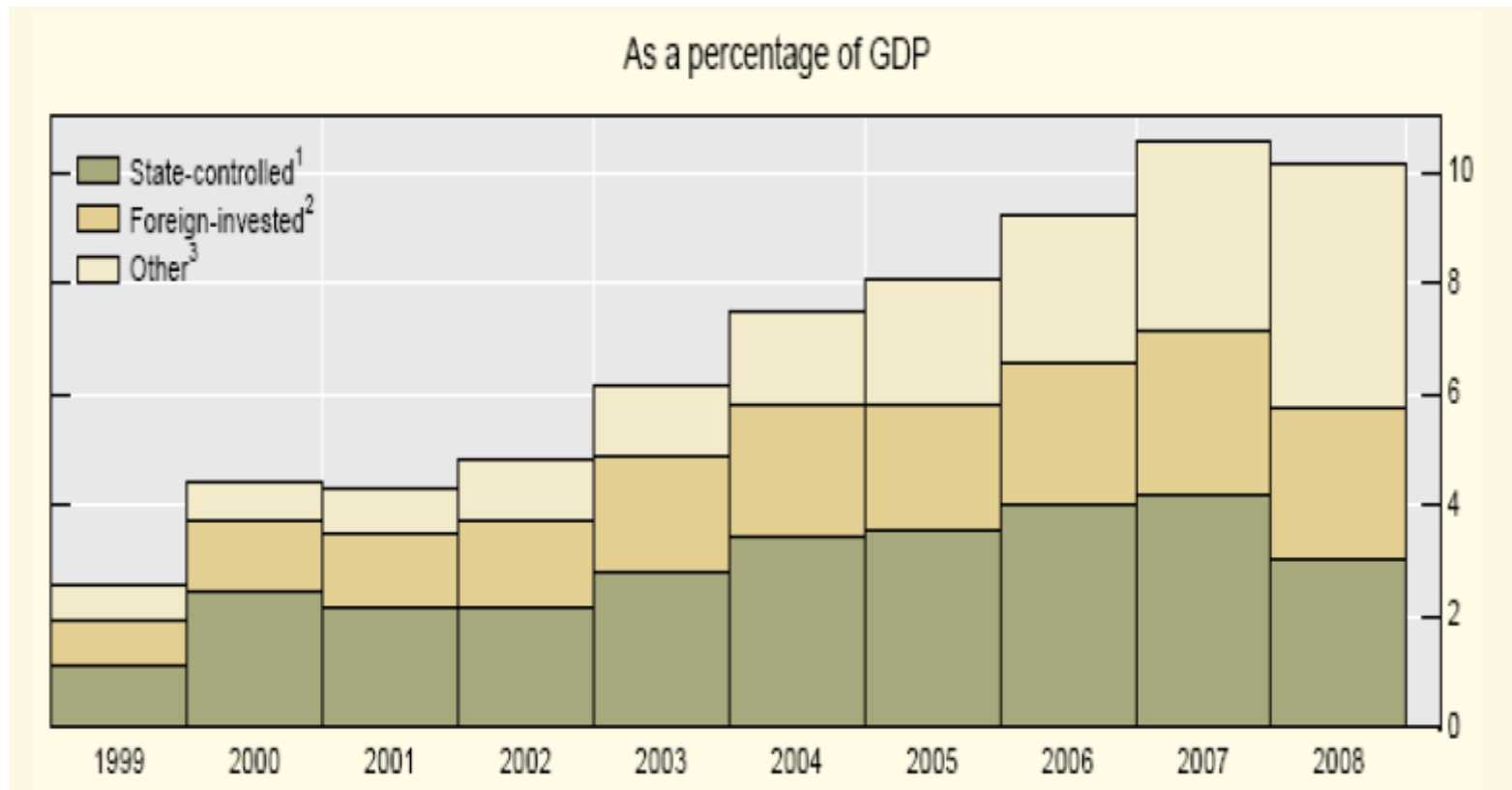
(2005-07 average; % of GDP)



Composition of China's gross national saving (% of GDP)



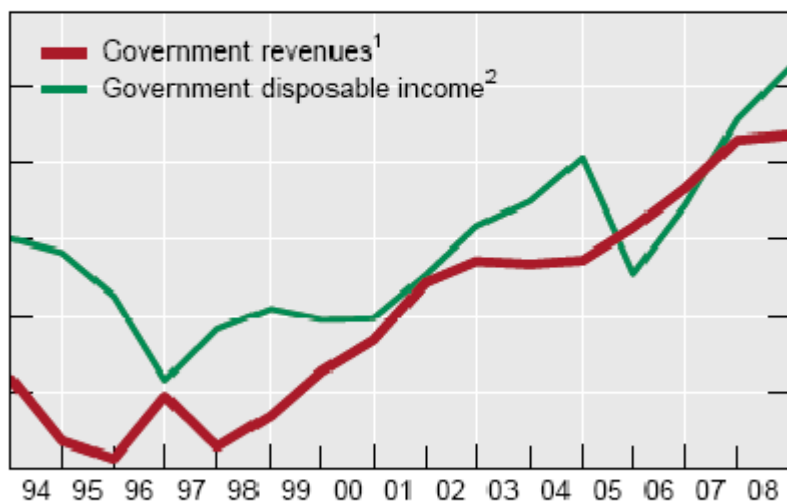
Corporate profit, by sector



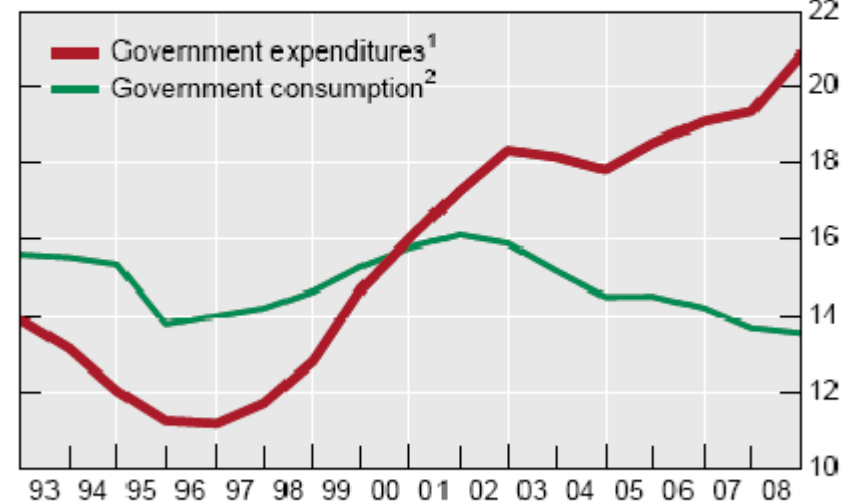
Rising gov't income but stable consumption (% of GDP)

Government revenue/income and expenditure/consumption in China
As a percentage of GDP

Revenues and disposable income



Expenditures and consumption



¹ Based on the fiscal and budgetary statistics, including both budgetary and extra-budgetary revenues and expenditure. ² Based on the flow-of-fund statistics.

Contribution of saving by sector

- The household sector is the largest saver but contributed less than one fifth of the rise in gross national saving in 2010;
- The government is the smallest saver but contributed most to higher saving — its saving more than doubled from below 5% of GDP in 1992 to 11% by 2008;
- Corporate saving also added to rising national saving but has taken a backseat in the 2000s when current account surplus surged;

Drivers behind China's high saving

- Industrialization
- Rural-urban labor migration
- Demographics
- Tough corporate restructuring (SOE reform in the 2000s)
- Far-reaching pension reforms
- The introduction of private home ownership
- Others: weak safety net, distortions and financial repression

Recent academic explanations on high saving and capital outflow in China

- Imbalance sex ratio (Wei and Zhang, JPE forthcoming)
- Domestic financial frictions (Song, Storesletten, and Zilibotti, AER 2011)

[twostory_highsaving.pptx](#)

What does this paper do?

- This paper investigates quantitatively how demographic changes to affect the evolution of household saving in China from 1955-2009.
- It is motivated by the fact that the timing of changes in household' saving behavior coincides with the beginnings of an equally dramatic demographic transition in China.

Model and key assumption

- A medium-scale of overlapping generation model with support for dependent children and transfer to retiree.
- Four age groups: below age 19, from age 20 to 49, from 50-63, after 63 (to 85)
- Partial equilibrium! Agent take the evolution over time of demographic structure, interest rate, and wage as given.

Demographic changes

- At the peak of China's baby-boom in the 1960s and 1970s, nearly half of the population was under 20 years old
- After the implement of government's one -child policy, fertility rates plummeted. Today, less than 25 percent of the population is under 20, and the age distribution will continue to skew older for the foreseeable future.

Major results

- The model can account for nearly all of the observed increase in the household saving rate.
- Holding wage and interest rate constant at their 1970 values, the demographic change variation alone is able to explain the low saving rate in the pre-reform and its rising during the post-reform period
- More than half of the rise in the saving rate generated by benchmark model is due to the changing of age distribution.

Three channels

- The decline in family size makes the households save more.
- The increase of working age group raises the aggregate saving rate.
- The projected future decline in the number of worker per retiree also encourages the household save more.

Comments and Suggestions

1. The model can capture the long-run trend in the household saving rate, but the model does less well in explaining the short run saving boom and recession, see figure 7.
2. This is an partial equilibrium model, so we don't know what mysterious factors behind the wage and interest rate to explain the short run saving puzzle. In particular, are the results sensitive to the construction of wage data? Also, will the partial equilibrium analysis over-estimate the importance of demographic changes in explaining saving rate?

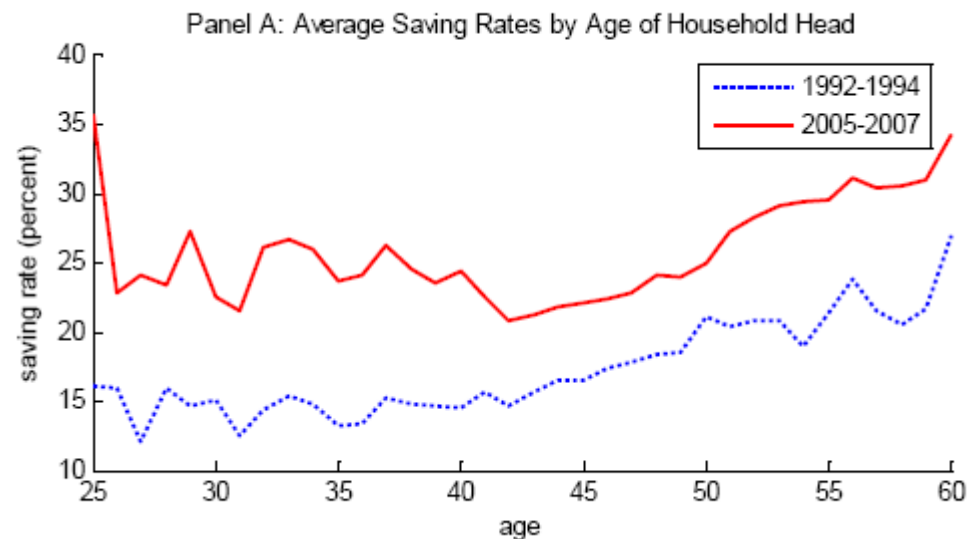
3. Shall we care more about what happen in the post-reform period, or the period after 2000? Chinese seems to live in a different world before reform and after reform. Explaining the difference in saving rate before and after economic reform is not the focus of literature or policy makers. So, I suggest to apply simply the model to explain the saving rate in post-reform period as comparison.

4. The aging of population (or baby boom in 1960s) seems to be common in OECD countries. The unique demographic pattern in China is the declining of family size due to the one-child policy. Therefore, the household saving rate is non-han province should be much lower than those in han provinces. In other words, we should expect some variations of saving rate in provincial level due to heterogeneous population policy. Any possible data or discussion.

5. Can demographic changes explain urban-rural difference?

Year	Urbanization rate	Urban to rural disposable income ratio	Urban household saving rate	Rural household saving rate	Average household saving rate
1990	26.4	2.2	15.3	14.8	15.0
1995	29.0	2.7	17.4	16.9	17.2
2000	36.2	2.8	20.4	25.9	22.5
2005	43.0	3.2	24.3	21.5	23.5
2009	46.6	3.3	28.6	22.5	27.0

6. Song and Yang (2010) and Chamon and Prasad (2010) among others documented a U-shaped saving pattern by age group. Can the model deliver similar results?



7. The model assumes that the labor share is high (0.6) in the pre-reform years and low (0.6-0.4) between the years of 1979 and 1988. How important is this assumption? In other words, if we assume a constant 0.5 labor share in both pre-reform and post-reform period, what will happen? Robustness check!