

# Discussion of Fujiwara, Otsu, and Saito, “The Global Impact of Chinese Growth”

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# Outline

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- I feel strong sympathy for this paper's way of analysis.
- This paper could be a good starting point which shows the way to go further.
- What I will do in next 20 mins is to...
  - Summarize the paper.
  - Provide my comments, questions, and discussions for future research.

# Main questions of the paper

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## Main questions of the paper

- **Question:** What is the welfare consequence of the emergence of fast-growing China on the global economy?
- Is the Chinese opening-up policy since 1978 (“Reform and Opening-up policy”) good or bad for China as well as the rest of the world (ROW) in terms of welfare?
- The question requires a dynamic economic model which can describe market-interaction of China with the ROW, depict structural changes in China, and calculate nations’ welfare quantitatively.



# The Model

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- International real business cycle (IRBC) model of Backus et al (1994, BKK).
- Two-country (region) model with China and the ROW.
- Each country is endowed with households, firms, and government.
- Multi goods: final goods is produced from two countries' intermediate goods with **time-varying home bias**.
- Only intermediate goods are traded internationally under terms of trade fluctuations.
- Complete international financial markets trading state-contingent claims.
- **Technology shocks** to intermediate goods production.

# Moments to match

- Three observations of Chinese economy
  1. **Sudden opening**: just after 1978, the ratio of trade volume to GDP jumps from 0.1 % to 0.4 %.
  2. **Rapid growth**: the annual growth rate of per capita GDP hikes from 2.5 % before 1978 to 8.0 % after 1978 on average.
  3. **Balanced trade**: trade is balanced almost at the entire period.

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  3. **Balanced trade**: trade is balanced almost at the entire period.
- The paper calibrates unobserved exogenous shocks to match these facts roughly.
  1. **Supply shocks**: TFP to Chinese GDP growth
  2. **Demand shocks**: Time-varying home bias in final goods production to a measure of openness.
  3. **No risk sharing shocks**: Import tariffs to balanced trade restriction.

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- 1. **Positive income shock to Chinese economy:** Chinese demand for ROW goods rises. ROW works more.
- 2. **Ex post transfer payment due to risk-sharing:** Part of Chinese income effect leaks to the ROW as a positive wealth effect. ROW consumes more and works less. A fall in MPK depresses ROW investment.
- 3. **Chinese TOT deterioration**
  - Substitution effect: less demand for ROW goods. ROW works less
  - HLM-income effect to ROW: more demand for ROW goods. ROW works more.

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  - Substitution effect: less demand for ROW goods. ROW works less
  - HLM-income effect to ROW: more demand for ROW goods. ROW works more.
- In the standard IRBC model, the second effect is dominant.  $\Rightarrow$  ROW welfare improving. Negative factor comovement puzzle (see, Baxter 1995, Handbook of International Economics)

# Role of trade balance restriction

- Ex post transfer of insurance contracts is prohibited.
- Small propagation of Chinese shocks to ROW.
- Subtle effect on the ROW welfare.



# Main results from simulation exercises under balanced trade restriction

- Sudden opening of the Chinese economy leads to significant welfare improvement in China and subtle welfare impact on the ROW.
- Fast growth in China leads to significant welfare improvement in both China and the ROW.

⇒ "Reform and Opening-up" policy after 1978 could be good for the ROW if it is accompanied by fast productivity growth of China.

## Results from counterfactual experiments

- Eliminating trade balance restriction counterfactually.
- In this case, "Reform and Opening-up" policy under fast Chinese growth is welfare-improving for China but welfare-deteriorating against the ROW!

⇒ Balanced trade restriction helps the ROW!

# My comments, questions, and discussions

- Data
- Model
- Future research

## A comment on the data

- Figure 2 reports “Chinese GDP per EAP .... linearly detrended with the average growth rate of the ROW GDP per EAP.”
- Does this mean that Chinese GDP shares a common (stochastic) trend with ROW GDP?
- But detrended GDP still seems to have a “trend” after 1978.
- Is a stationary complete market model such as BKK suitable for describing this non-stationary data?
- Or better to have a more sophisticated detrending method allowing for a regime shift?

⇒ Need more researches for the sources of Chinese take-off.

## Question on the model I: IRFs

- Baxter (1995) shows in a stylized one-good IRBC model a negative correlation of labor and investment across countries (i.e., factor comovement puzzle). She discusses that this counterfactual feature of the IRBC is even extended to BKK two-good model.
- It seems to me that the IRFs to a idiosyncratic technology shock reported in figure 12 do not reveal this important but counterfactual theoretical implication nevertheless this is a close version of BKK.
- Why not factor comovement puzzle observed in this model?
- Different calibration from BKK? If so, the results are robust to small perturbations?

## Question on the model II: asset market structure

- The paper explains the IRFs without balanced trade restriction by saying “borrowing” and “lending” of Chinese economy.
- The model, however, is with complete international asset markets in which the households buy or sell state-contingent securities to diversify away their idiosyncratic risks at the beginning of their programming.
- All that occurs ex post is just transfer payments in fulfillment of a contingent-claims contract.
- Hence, there is no change in any countries' indebtedness by changing their net foreign asset positions or the distribution of the world wealth.
- Is this model with incomplete financial markets?

## Discussion for future research

- This paper identifies the role of “Reform and Opening-up Policy” as a negative demand shock to Chinese intermediate goods.
- Simply, could this be a realistic identification or interpretation of this historical event in China?
- I think this identification would be fine as a first step to capture the macroeconomic effect of the policy.
- This shock, however, might contain any other more structural events after 1978, like Solow residuals.

## Discussion for future research

- For example, they could be potentially ...
  1. Classical Heckscher-Ohlin type trade-creating effects (i.e., China exports a labor intensive goods and imports capital intensive goods)?
  2. Effects of foreign direct investment?
  3. Effects of the recent emergence of Chinese saving in (incomplete) international financial markets, which has been financing US current account deficits? Consequence to the global wealth distribution and the recent global liquidity crisis?
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**Thank you!**