



Discussion on “The International Propagation of News Shock” by Beaudry, Dupaigne and Portier

Ippei Fujiwara
Bank of Japan

8th Annual BoF/CEPR Conference: “Expectations and Business Cycle Dynamics,” November 1-2, 2007

Views expressed in this paper are those of the author and do not necessarily reflect the official views of the BOJ.

Plan of Talk



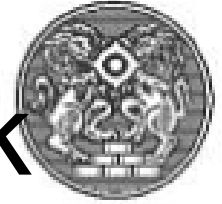
- Summary
- Comments
- Conclusion



Summary

- Results from the VAR with long-run restriction show that a stock market innovation in country A, that does not affect TFP in the short-run but explain much of TFP in the long-run, can create a boom both in countries A and B.
- A news shock only in the large country (a similar shock as explained above) can produce both “National Business Cycle” and “International Business Cycle.”

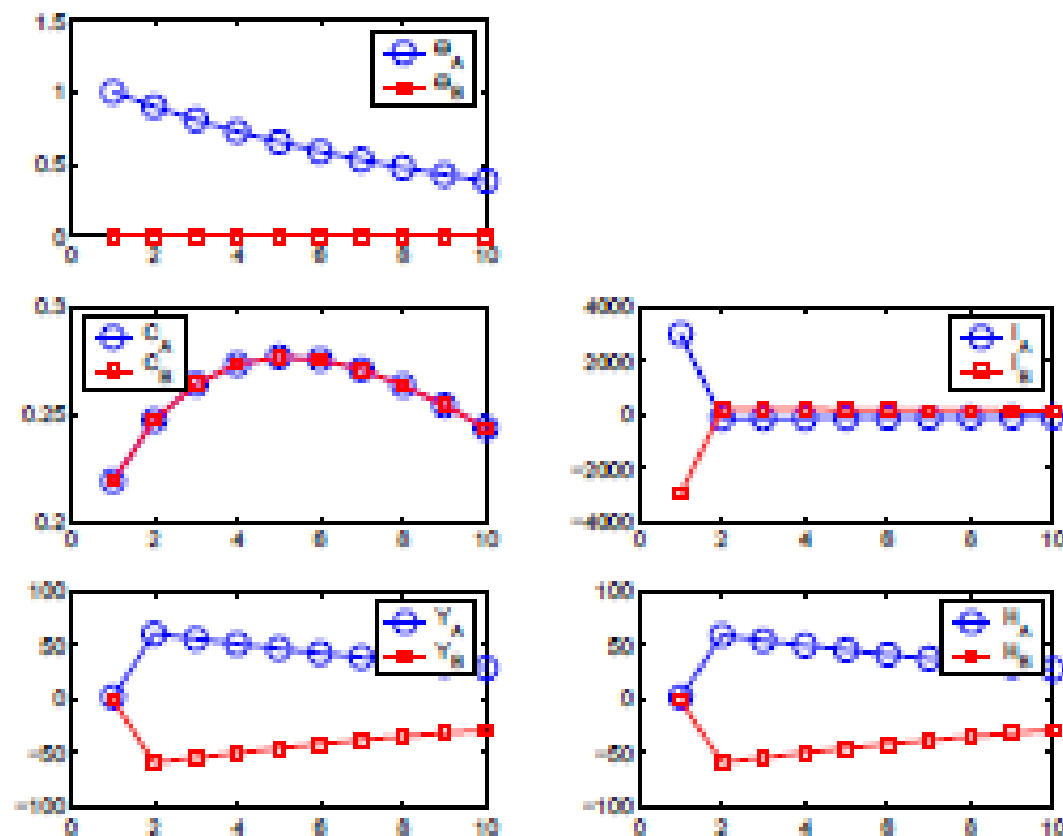
Standard Technology Shock



- Under the complete market, marginal utility equalization stemming from complete risk sharing results in the same consumption level in symmetric countries.
- Country with higher technology work hard and invest more reflecting initial higher real wage and rate of return on capital. Namely, planner allocates more resources to the productive country.
- This results in the failure of the international business cycle as in Figure 15.



Figure 15: Typical BKK Model, Response to a Local Technology Shock



News Shock



- Anticipation about future higher technology potentially has two effects: (1) higher wealth effects by becoming richer, and (2) higher substitution effects from future higher returns.
- Usually, (1) dominates. Therefore, consumption and leisure rise and labor inputs and investment fall as in Figure 16.
- This is what Barro and King (QJE1984) conclude



Figure 16: Typical BKK Model, Response to a Global Technology News

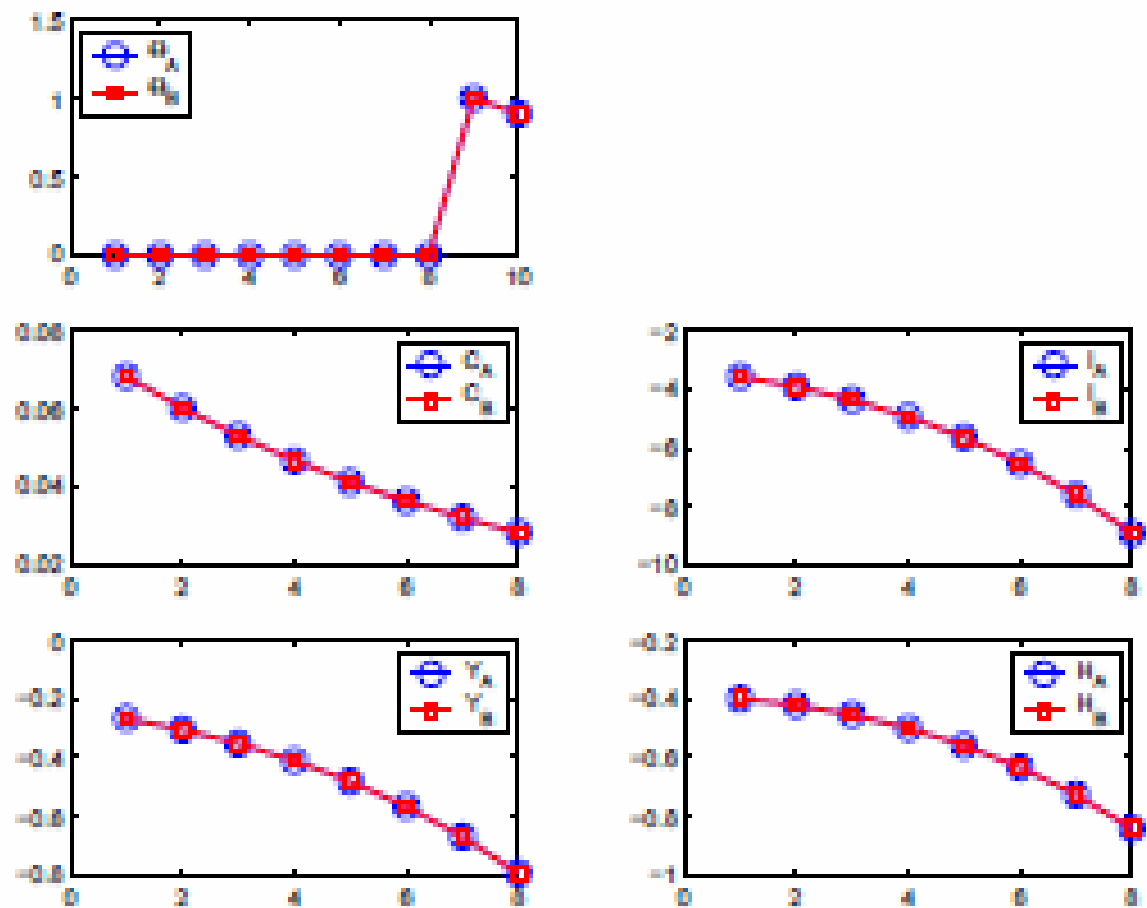
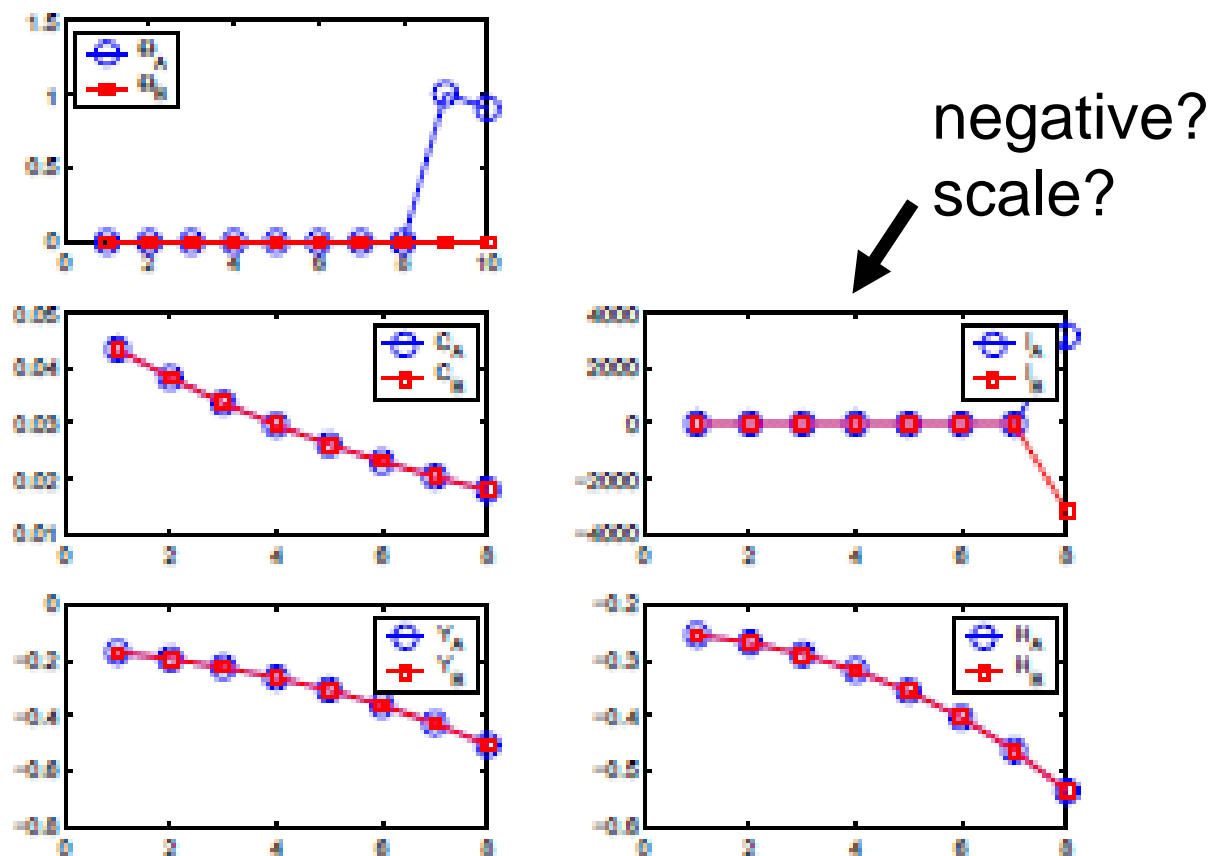




Figure 17: Typical BKK Model, Response to a Local Technology News





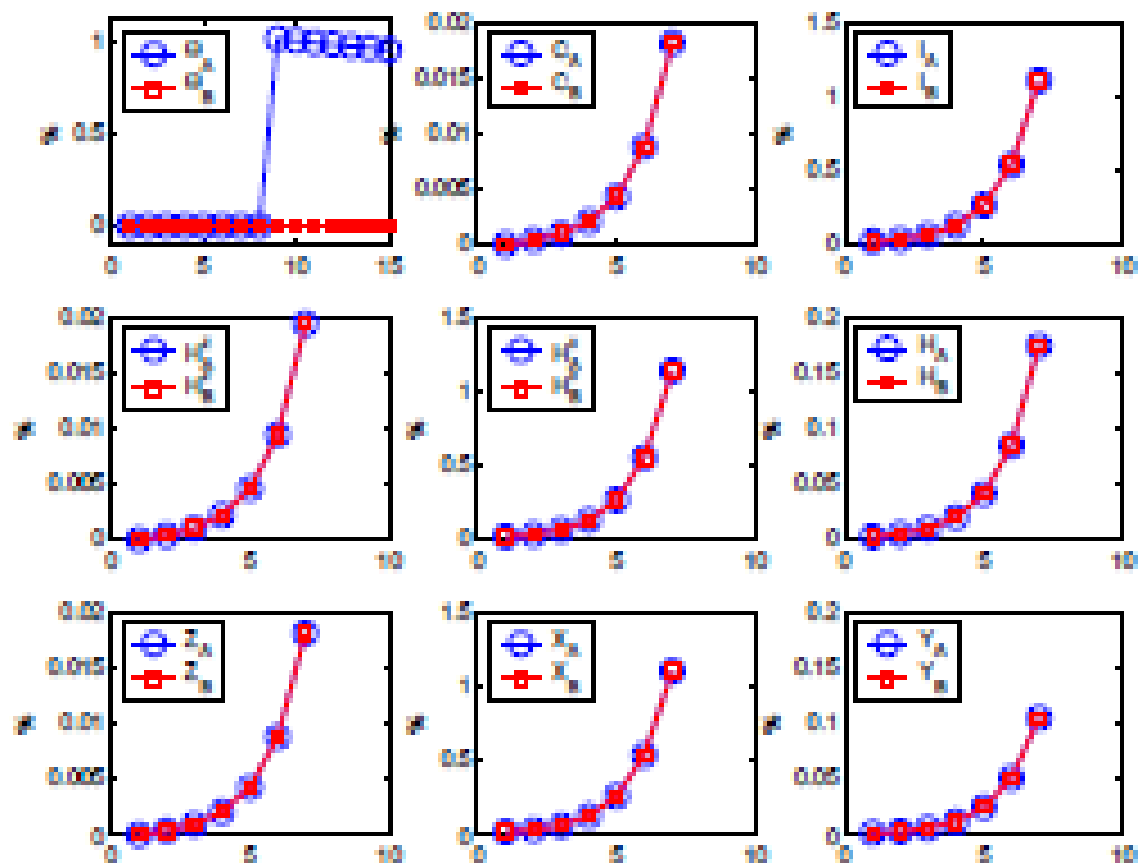
- The seminal research by Beaudry and Portier (JME2004) produces the comovements in consumption, labor and investment by introducing multi-sectoral investment adjustment cost as in P. 28.

$$Y=(a*c^{\sigma}+b*x^{\sigma})^{1/\sigma}$$

- By enhancing the complementarity between consumption and investment (labor), comovements materialize.
- Figure 18 shows the perfect correlation between two countries since there is no direct asymmetric effects on implicit factor (relative) prices with the news shock.



Figure 18: Example CES Model, Response to a Local Technology News





Comments

- VAR with long-run restriction
- More intuition on the synchronization
- Consumption correlation puzzle
- DSGE model's empirical relevance
- News shock, level or growth?
- Are the stock price movements stemming from news shock?
- Relevance to recent work by Jaimovich and Rebelo (2007)



Consumption Correlation Puzzle



Literatures on IRBC

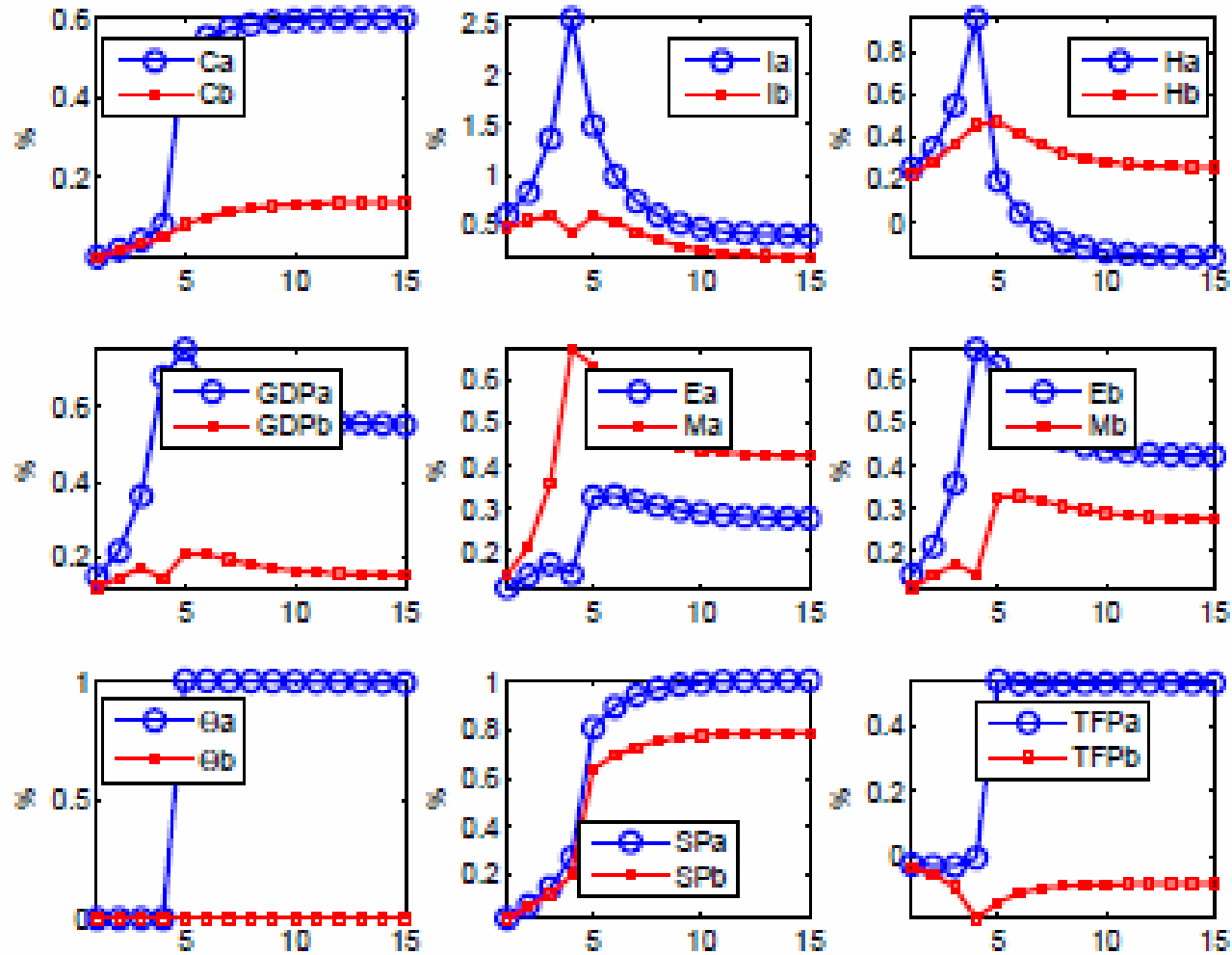
- Backus, Kehoe and Kydland (JPE1992)
- Baxter and Crucini (IER1995) and Kollman (JIE1996): incomplete market (bond only)
- Backus, Kehoe and Kydland (AER1994): terms of trade
- Stockman and Tesar (AER1995): real exchange rate (tradables and non-tradables)
- Kehoe and Perri (Econometrica2002): endogenous incomplete market (recursive contracts)



- IRBC has been developed to avoid consumption correlation puzzle.
- Yet, it seems that important mechanism to have international business cycle is that country B can recognize the wealth effects through complete market.
- Figure 19 seems to show that consumption correlation puzzle becomes more severe than in the recent IRBC models.
 - important reactions are those until the shock materializes



Figure 19: Pigou Model, Response to a Technological News in Country A





- Similar to Backus, Kehoe and Kydland (AER1994), the Armington type aggregator is incorporated in the extended model, but consumption correlation seems to be strong only with this.
- VAR part is a very positive analysis. Hence, if the DSGE is compared to VAR, it seems that market should be more realistic, namely more incomplete.
- What if the asset market is very incomplete?



DSGE Model's Empirical Relevance

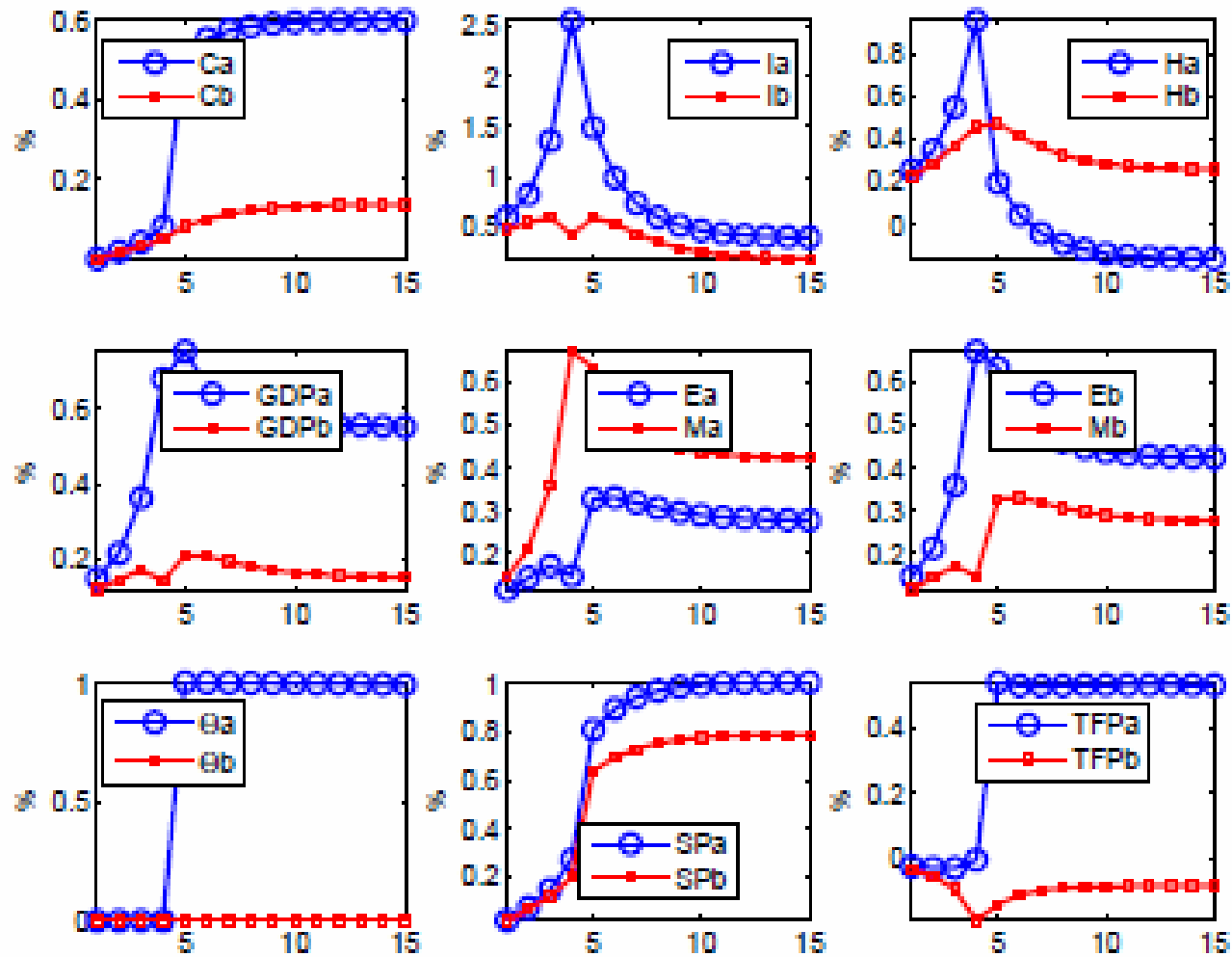
Empirical Relevance



- Although it is written that “This set of responses shares a lot with the estimated responses as obtained from the empirical analysis of section 1,” I do not know whether they are really empirically plausible.



Figure 19: Pigou Model, Response to a Technological News in Country A





News Shock, Level or Growth?

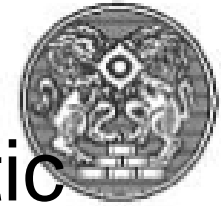
Literatures on News Shock



- Beaudry and Portier (JME2004): multisectoral adjustment cost
- Christiano, Motto and Rostagno (2006): habit and investment adjustment cost
- Jaimovich and Rebelo (2006): time-dependent GHH preference and investment adjustment cost
- Den Haan and Kaltenbrunner (2007): Search-Match
- Nakajima and Kobayashi (2007): Collateral Constraint
- All the tricks here are the variants of Beaudry and Portier (JET2007).



- It seems that in almost all literatures, expectation about future high level of rather than high growth rate of technology is assumed.
- Fujiwara (2007) shows that with the growth expectation, it is very difficult to produce comovements in Christiano Motto and Rostagno type model since the wealth effects become much stronger.



- Growth expectation seems more realistic than level expectation. Forecasters usually talk on the growth rate not the level itself.
- Kim (JEDC2003) shows the conditions for the equivalence between intertemporal and multisectoral adjustment costs.
- Can we still have comovements against growth expectation in Beaudry and Portier type model?
- VAR estimation seems to identify the growth expectation.



Are the Stock Price Movements Stemming from News Shock?

Veldkamp (AER2006)



- Market for information, namely the complementarity in information acquisition, can explain the occasional surges in price (frenzies).
- Is the identified news shock from VARs truly the news shock about the future technology?



Relevance to Recent Work by Jaimovich and Rebelo (2007)

News in Small Country



- Recent paper on similar topic by Jaimovich and Rebelo (2007) demonstrates that to produce comovements in small open economy is more difficult than in closed economy since the intertemporal substitution effects on labor supply through real interest rates are absent.
- Can or cannot a news shock only in the very small country produce the national business cycle in both VAR and DSGE models?



Conclusion

- This is a fantastic paper to show both the empirical evidences for the importance of the news shock on the international business cycle and the theoretical model for these empirical facts without relying on the world simultaneous shock.
- I have been thinking about writing a similar paper. I wish I could have written such a nice paper!