The great trade collapse of 2008-2009: an inventory adjustment?

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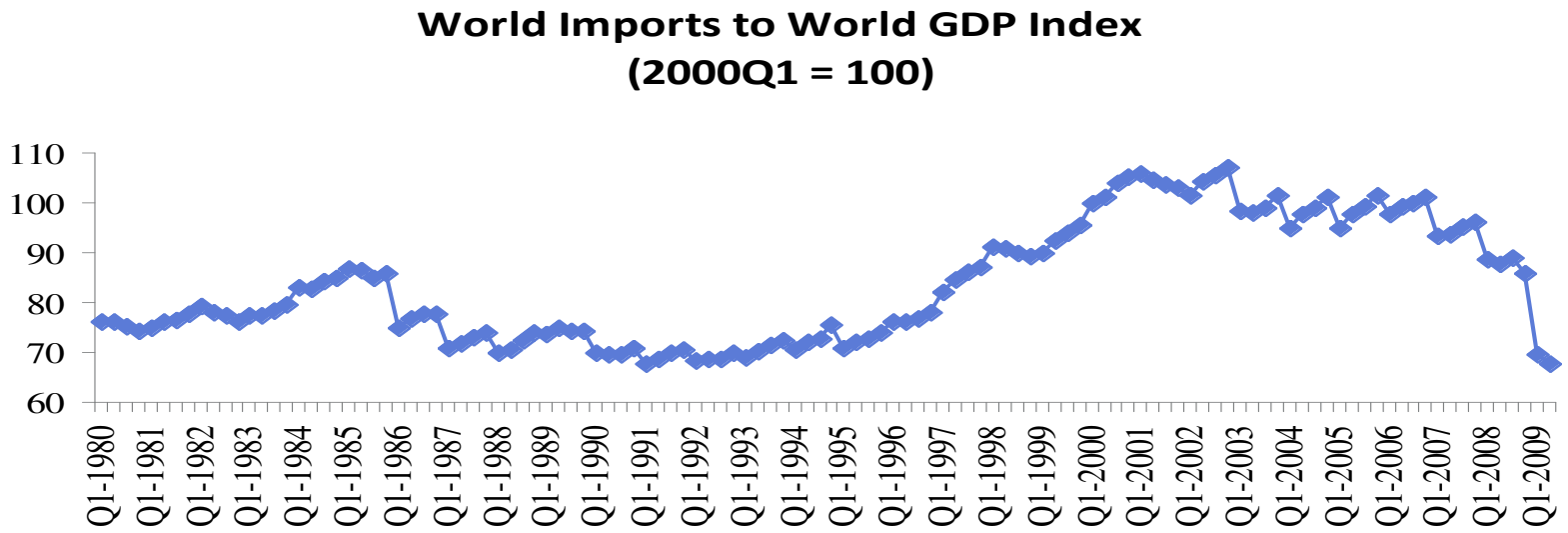
The great trade collapse!

Why did trade fall so much more than GDP?

Given the global recession, a drop in global trade is unsurprising. The question is: Why was it so big? The chapter by Caroline Freund shows that during the four large, postwar recessions (1975, 1982, 1991, and 2001) world trade dropped 4.8 times more than GDP (also see Freund 2009).

This time the drop was far, far larger. From an historical perspective (Figure 8), the drop is astonishing. The figure shows the trade-to-GDP ratio rising steeply in the late 1990s, before stagnating in the new century, right up to the great trade collapse in 2008.

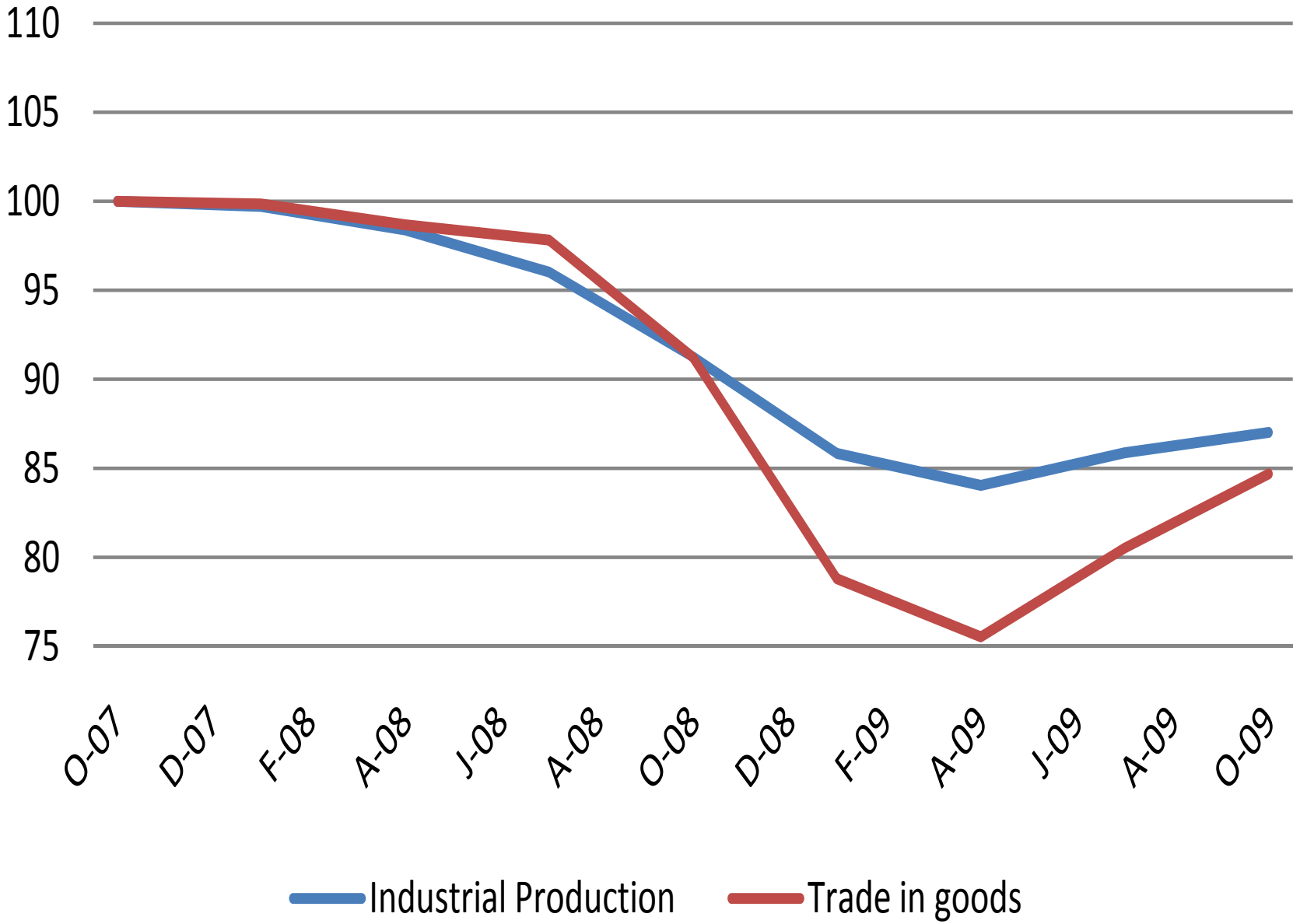
Figure 8. World trade to world GDP ratio, 1980Q1 to 2009Q2



The great trade collapse?

- Normalizing trade (mostly manufacturing) with GDP (mostly non tradable) is not very informative
- If normalize by industrial production..

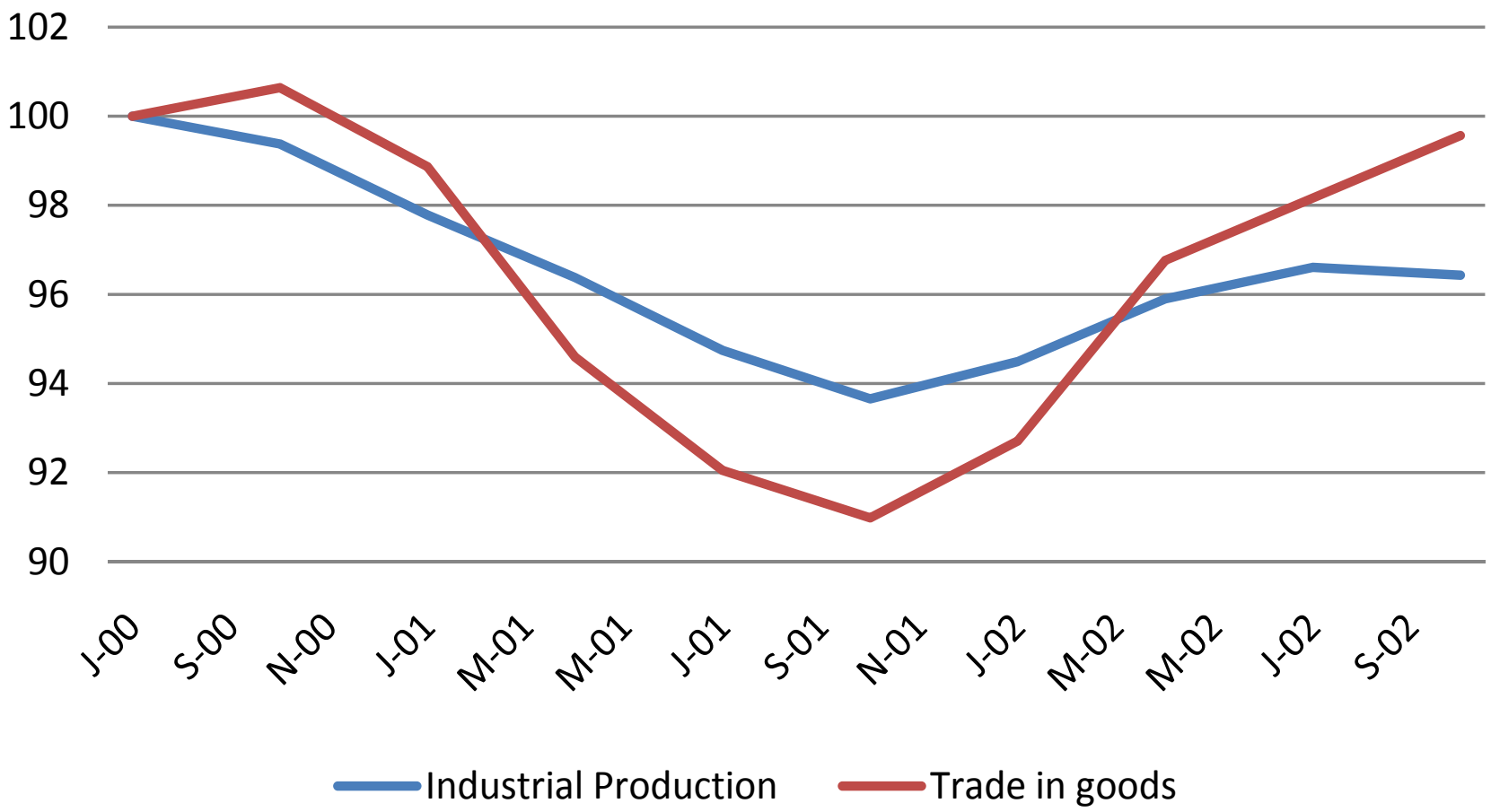
The great trade collapse?



The great trade collapse?

- Given the (very large) drop in industrial production, the drop in trade is not so astonishing..
- nor atypical..

The great trade collapse?



- Trade and the production in US in the 2001 recession

The contributions

- Show that, given the size of recession in manufacturing, the collapse in trade is not extraordinary

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- Still aim to explain why trade falls more than industrial production
- Role of inventories adjustment

A stripped down model

- A two sector PE economy of distributors, facing final demands D, D^*, carrying inventories I, I^*, and making orders Y, Y^*

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	D	I	Y	I/D	D^*	I^*	I^*/D^*	Y^*(Trade)
P1	100	50	100	0.5	30	30	1	30
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		50				30		

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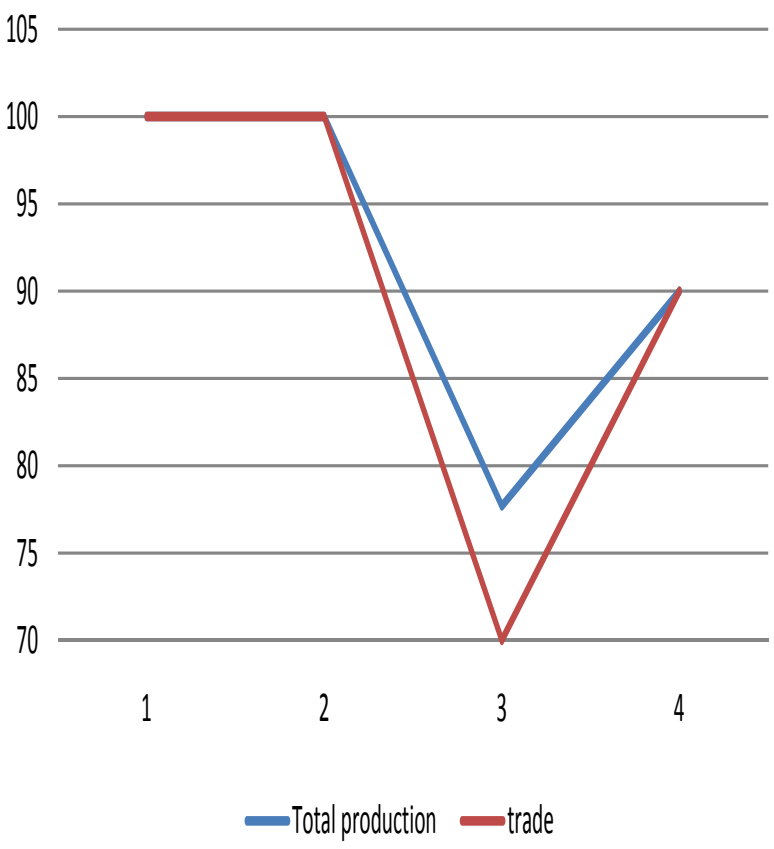
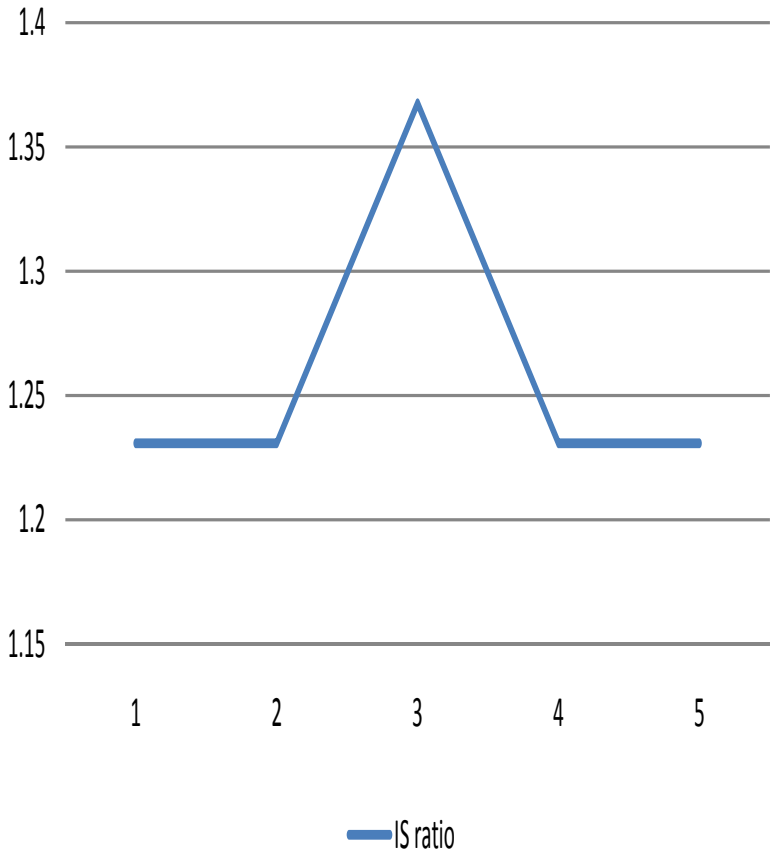
Stabilization	90	45	90	0.5	27	27	1	27

Model's result





- Results quantitatively consistent with evidence with reasonable IS ratios

Key elements

- Inventories make the fall in production larger than the fall in final demand (amplification)
- Foreign inventories larger than domestic ones make fall in trade (foreign production) larger than domestic (trade decline) and make it rebound more

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- Foreign inventories larger than domestic ones make fall in trade (foreign production) larger than domestic (trade decline) and make it rebound more
- In some sense inventories $\simeq$ investment. The model makes trade more "complementary" with them, makes trade behave more like investment (Engel and Wang, 2009)

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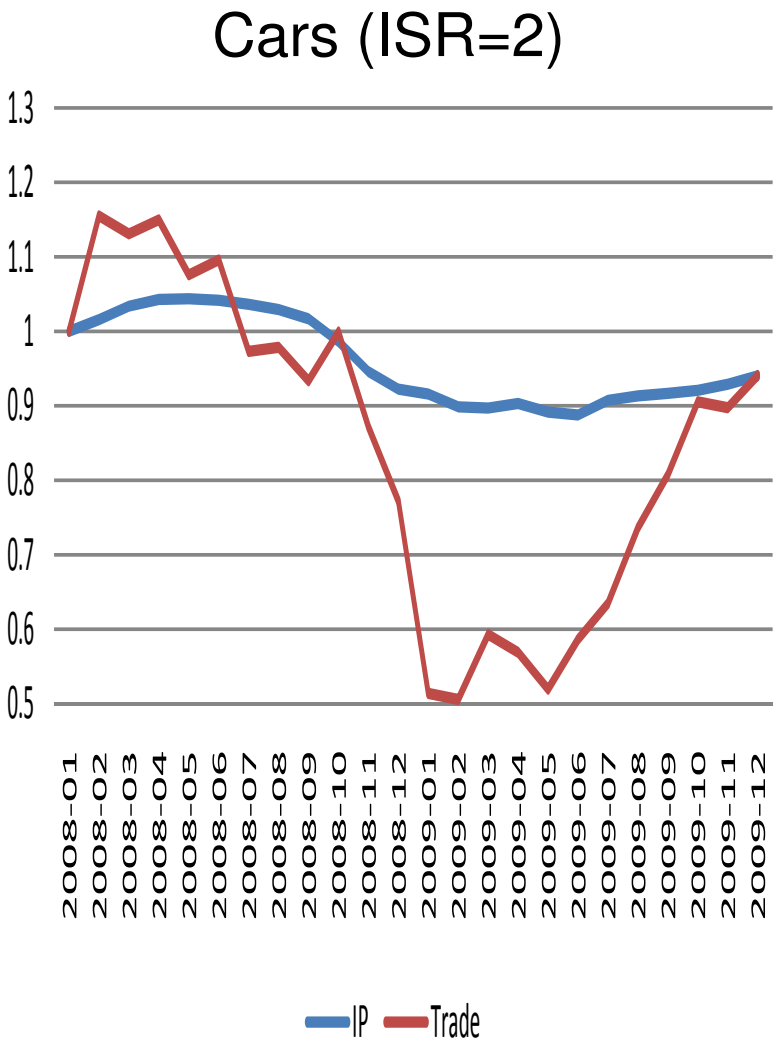
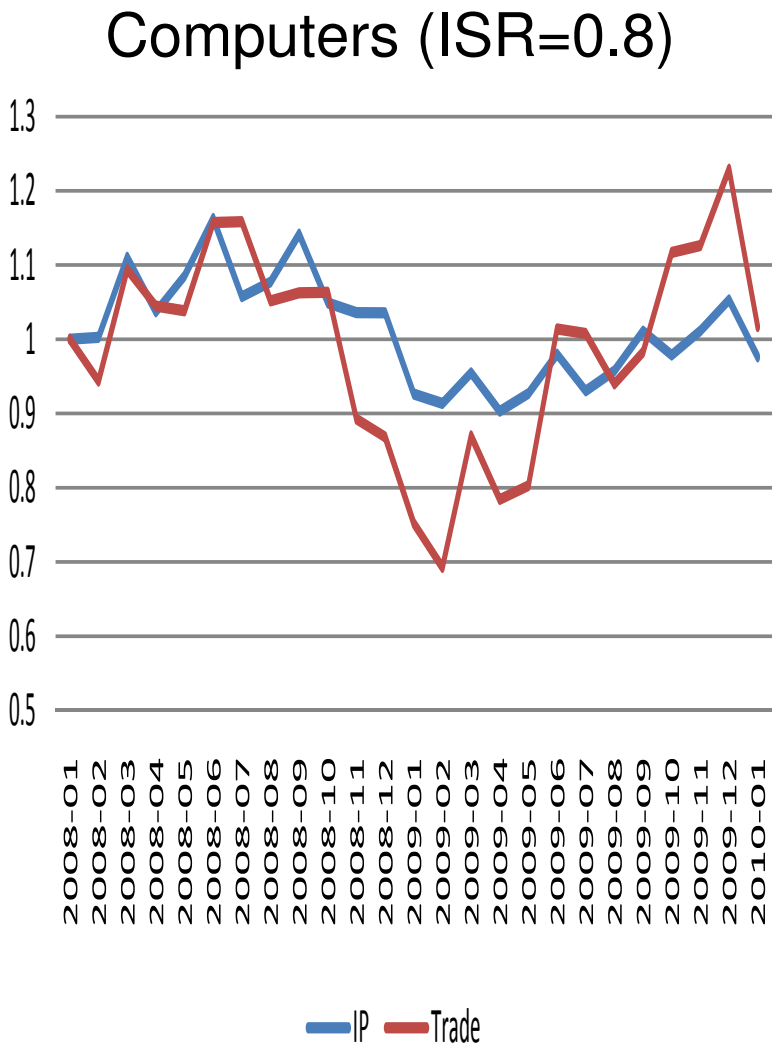
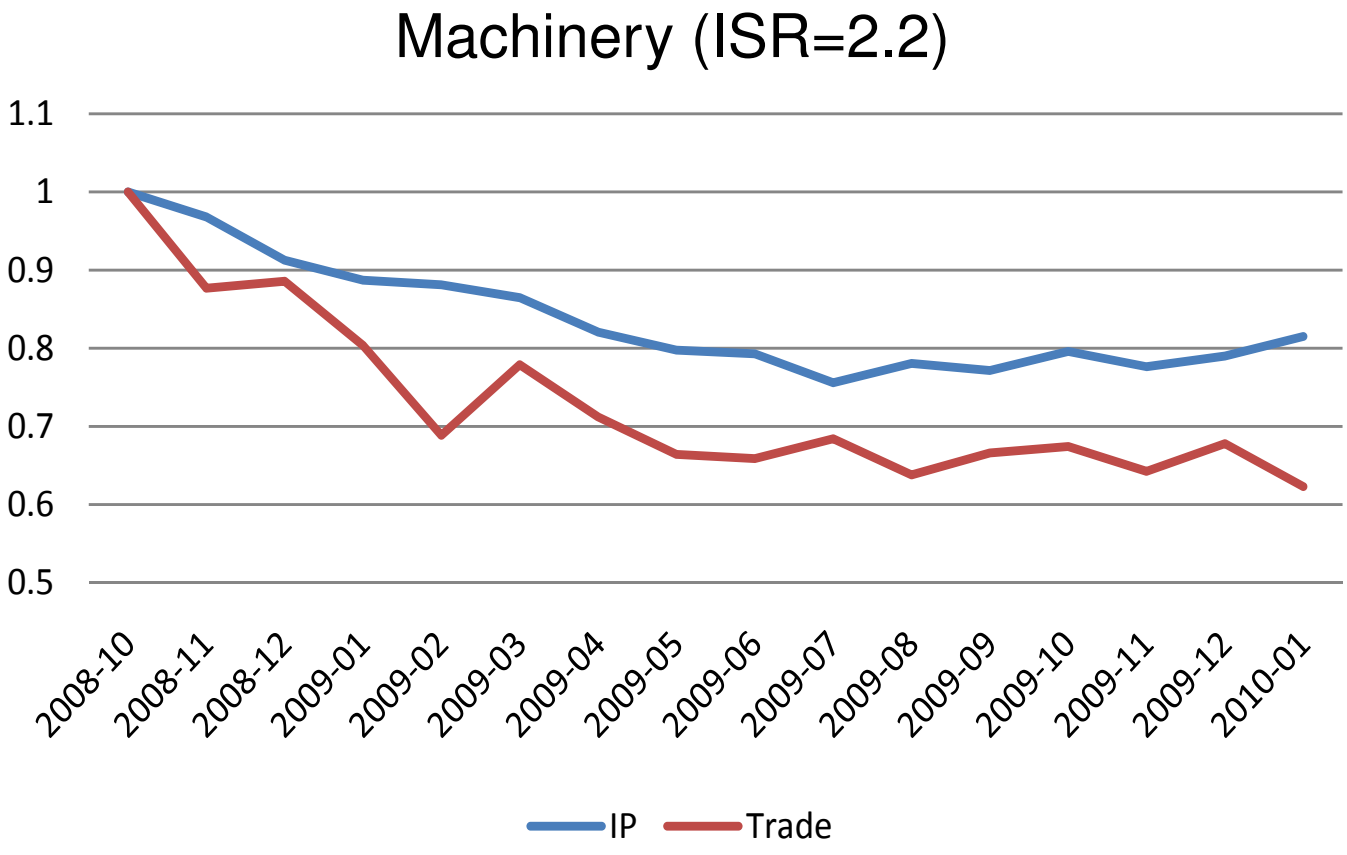
  - The differential between domestic and foreign inventories is larger (hard to measure, Chilean data suggest 2 but no US data)
  - The absolute inventory to sales ratio is larger

Favorable sectoral evidence





Less favorable sectoral evidence



- Obviously these are just examples
- More systematic sectoral evidence might help corroborate the story (problem is with inventory data)

Conclusions

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  - Develops a plausible (quantitatively) GE model for trade decline and rebound over the business cycle
- Suggestions
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  - Comparison model (no inventories) is a bit of a straw-man (no investment)
  - Modelling of the 2008-09 crisis (as a productivity shock) not consistent with data