

Discussion of “Microeconomic Uncertainty, International Trade and Aggregate Fluctuations”

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Background

- The dispersion of many macro series is countercyclical
 - ▶ TFP growth/levels, price changes, sales growth, employment growth
- The dominant view is that this dispersion is evidence that shocks are more dispersed in recessions (2nd moment shocks)
 - ▶ Bloom (2009), Bloom et al. (2013), Arellano et al (2012), Bachmann and Bayer (2012), Gilchrest et al. (2012)
- Alternative view: dispersion arises **endogenously** in response to a first moment shock
 - ▶ Bachmann and Moscarini (2012), Berger and Vavra (2014), Decker et al. (2014)

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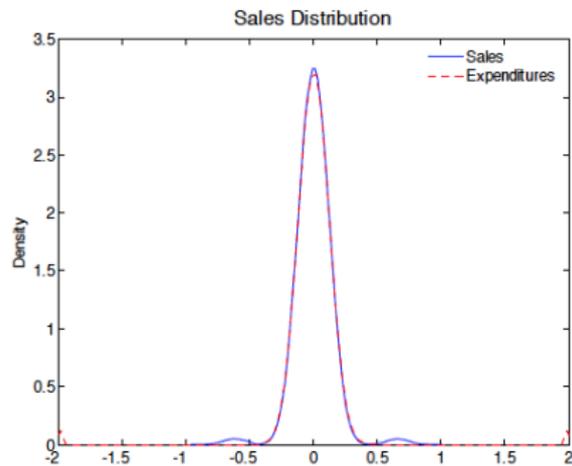
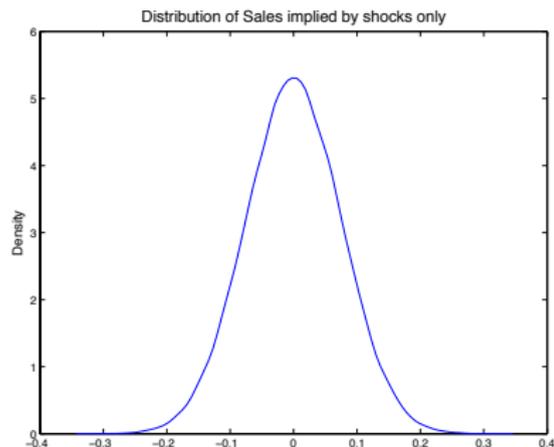
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Roadmap

- Briefly review the core theoretical results of the paper
- Focus on how first and second moment shocks effect the standard deviation of sales growth of home producers
 - ▶ $\ln(\text{sales}(i)) = p_H(i)y_H(i) + p_H^*(i)y_H^*(i)$
 - ▶ This measure of dispersion is closest to what is in Bloom's manufacturing uncertainty database
 - ▶ The model results don't strongly rely on the negative preference shock (as they do for variance in expenditures)
- Discuss corroborating empirical evidence
- Some final thoughts

How trade impacts the dispersion of sales growth



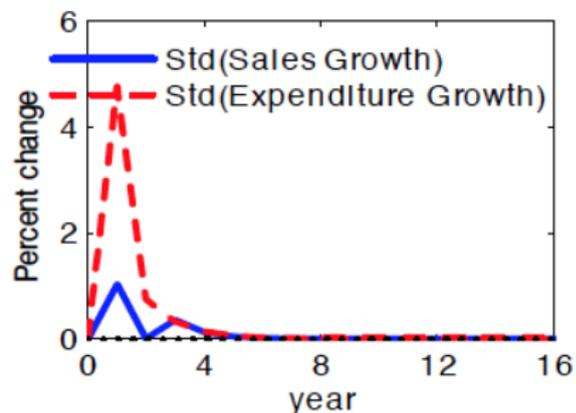
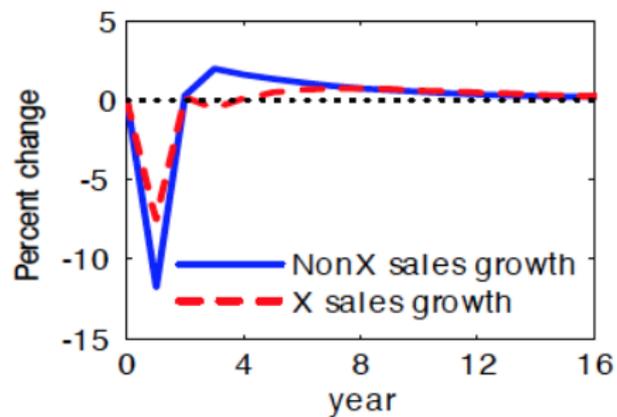
- In response to shocks, exporter status changes which effects the dispersion of shipments:

- ▶ $\mathcal{G}_{stoppers} < \mathcal{G}_{continuing, nonX} < \mathcal{G}_{continuing, X} < \mathcal{G}_{starters}$

Effect of a negative productivity shock

- There is a negative productivity shock in the home country
- First, keep export status fixed (intensive margin)
- Home goods become more expensive raising costs for home producers
- Exporting option \Rightarrow effect of the shock is not symmetric:
 - ▶ Sales growth for non-exporters falls by more than for exporters since export sales don't change much
 - ▶ This causes an increase in the dispersion of sales growth

Intensive margin effect



Extensive margin

- Composition of exporters/non-exporters also changes in response to a negative productivity shock
- Since exporting is like capital, firms reallocate investment from producing for the home market to producing for the foreign market
 - ▶ There is an increase in starters: home producers who start exporting (increases dispersion)
 - ▶ There is a reduction in stoppers: home exporters who stop exporting (lowers dispersion)
- On net, there is net entry into exporting so dispersion rises
- A -5% TFP shock implies a 2.5% increase in sales dispersion
 - ▶ Quantitatively relevant?

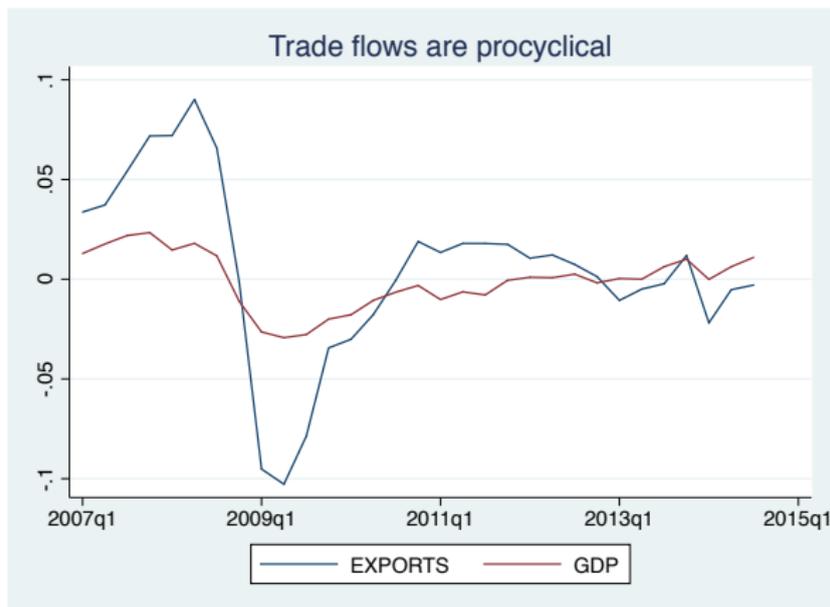
Effect of a second moment shock

- Consider a shock which temporarily increases σ_ε
 - ▶ This increases increase the dispersion of possible productivity draws (duh!)
- We know from static trade models (e.g. Melitz):
 - ▶ sales are increasing and convex in productivity: possibility of selling to a world market increases the return to being very productive
- So generically, exports will rise a lot in response in response to an uncertainty shock
- In fact, even more striking:
 - ▶ Small fraction of home producers export a lot (increasing exports)
 - ▶ Their labor demand rages home wages crowding out less productive exporters causing a fall in exporters
- By contrast, output doesn't change much (actually decreases a little)

Second moment shocks

- Increase in second moment shocks:
 - ▶ big increase in dispersion
 - ▶ big increase in exports
 - ▶ not much on output
- If second moment shocks are countercyclical, model implies exports should increase during recessions

Second moment shocks



- Nice observation
- Seems robust since exporting option seems to often convexify sales in trade models
- Caveat: a little unfair to second moment shocks since exports also rise on impact to a negative home productivity shock

Empirical evidence

- Use Bloom's uncertainty database
- Dispersion in sales growth across 450+ manufacturing industries
- 4 digit level
- 1989-2009
- Idea:
 - ▶ related changes in sales volatility with measures of international reallocations ($\Delta RER, \Delta NX$)

Time-series evidence

Empirical specification: $\log sales_{j,t} = \beta X_t + \delta t + \varepsilon_{j,t}$

- includes sector fixed effects

Table 2: Industry-level Dispersion and Aggregate Reallocation (1989 - 2011)

	GDP Growth	ΔRER	ΔNet Exports	All 3
GDP Growth	-0.005***	.	.	-0.005***
	0.002	.	.	0.002
ΔRER	.	0.265**	.	0.247**
	.	0.113	.	0.113
ΔNet Exports	.		1.296***	0.841*
	.		0.512	0.486
R^2	0.61	0.61	0.61	0.61
Observations	5088	5088	5088	5088

Note: *, **, and *** denote significance at 10, 5, and 1 percent levels, respectively. Standard errors are below each coefficient and are clustered by industry.

Time-series evidence

- Results are statistically significant
- Are they economic significant?
- I re-ran results after standardizing ΔRER and ΔNX
 - ▶ New coefficients: 0.0052 & 0.0040 respectively
 - ▶ Standard deviation of uncertainty measure is 0.25
 - ▶ So these variables explain 4% of a std increase in sales dispersion?
 - ▶ Big?
- Auto evidence more compelling

Conclusion

- Really interesting paper: throws some cold water on second moment shocks
- I liked the mechanism: result that second moment shocks primarily reflect trade flows seems robust
- Not entirely convinced of quantitative relevance but empirical results are definitely consistent with the theory
- Would be interesting to investigate interaction between uncertainty shocks and durables/capital goods
 - ▶ subject to fixed costs and large portion of trade
- Large scope for using international context to investigate source of countercyclical dispersion
 - ▶ bigger shocks?
 - ▶ endogenous response to first moment shocks?
- Thanks!