Discussion
"Who Creates New Firms When Opportunities Arise?"

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What is this paper about?

I. Introduction

Entrepreneurship plays a critical role in aggregate job creation, with new businesses responsible for the majority of new employment in the economy (Decker et al. (2014); Haltiwanger et al. (2013b)). Of course, entrepreneurship and the creation of new firms is a multi-faceted phenomenon. Some types of entrepreneurship can be described as Schumpeterian, in which talented individuals personally create new technologies or products that facilitate a creative destruction process in the economy disrupting existing organizations. Other types of entrepreneurship would better be described as Kirznerian, in which alert individuals identify the existence of new and exogenous investment opportunities created by changing market conditions, and take advantage of them by forming new businesses (Kirzner (1973, 1985)).

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(Definitely a causal treatment effect.)

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This Paper's Model: Definitely Kirznerian!

This Paper's Empirics: I am not sure!?!

What does this paper do?

- Theory: modified static Lucas (1978) model to show that
  - Local commodity price $\Uparrow$: employment $\Uparrow$ and new firm creation $\Uparrow$ in nontradables
  - Employment and firm creation $\Uparrow$ smaller if small skilled population or high costs of entrepreneurship

- Methods: global commodity price shocks + agricultural endowments in Brazil

- Municipal Results
  - Top 10% commodity price $\Uparrow$: +2.9% income, +4.1% employment, +3.7% firm entry in nontradables

- Individual Results
  - Top 10% commodity price $\Uparrow$: +10% entrepreneurship of under-30s, ≈ 0 for older
  - Strongest for young with generalist & managerial skills
  - Particularly if many other young, skilled and if good access to finance

What do we already know from previous contributions?

- Benguria et al (2018) use similar Brazilian data (not just agriculture)
  - Commodity prices ⇑: domestic demand ⇑ (wealth channel) especially for nonexporters, but unskilled wages ⇑ (cost channel)
  - Dynamic 3-sector model and macro-style calibration
- Allcott & Keniston (2017) use comparable data on US oil & gas booms
  - Oil & gas prices ⇑: local wages ⇑ and manufacturing sector ⇑ due to upstream and locally-traded subsectors
- Faber & Gaubert (2016) use tourism shocks with presence of white sand and archaeological ruins across Mexican coastline
  - +10% in local tourism: +2.5% employment, +4% municipal GDP, +3% manufacturing entry
- Adelino et al (2017) use local demand shocks to US manufacturing
  - 2-year income growth ⇑: +1.5% job creation in nontradables
  - Almost entirely driven by startups rather than existing young or old firms

Focus on the novel contributions

- New exciting findings are contained in Section VI and VII
  - Up to page 23 it feels just like a combination of existing methods and data
  - 2 main sections get fewer than 10 pages compared to 5 pages on Section V
  - Provide theoretical guidance for novel empirical findings!
  - Dedicate more space to novel empirical analysis!

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- That said, Section V is still very interesting ...
  - ... but I did not understand what was done better here compared to what other papers have already done.
  - Bartik-style methodology is the same, so is Brazilian data better than US data?
  - Hard to understand if and why there are any differences in magnitude of responses compared to previous contributions

Persistence

- Static model
  - By definition, any shock is a persistent shock in theory
  - Adelino et al (2017) and many others use the **secular** decline of manufacturing
  - But Benguria et al (2018) highlight price cycles, use dynamic model, and H-P filter

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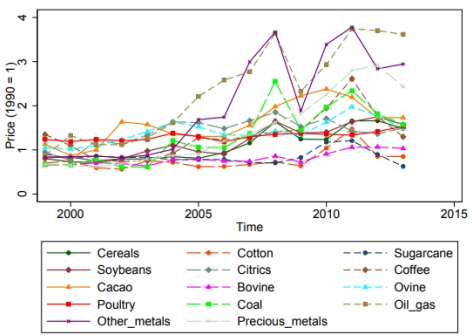
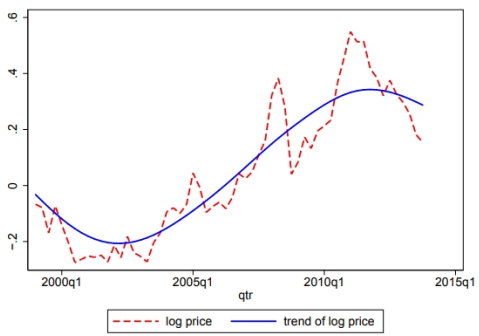
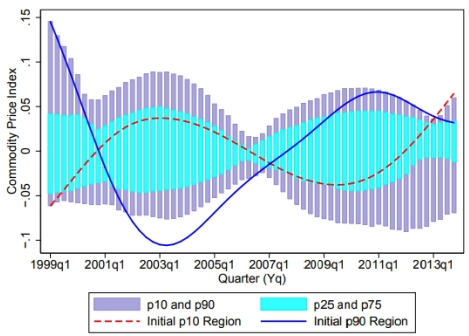


a) Individual Commodity Prices



b) Commodity Price Index



c) Regional Commodity Prices

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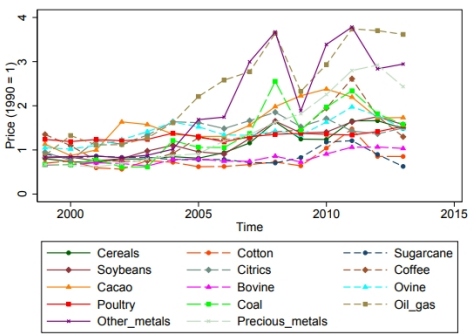

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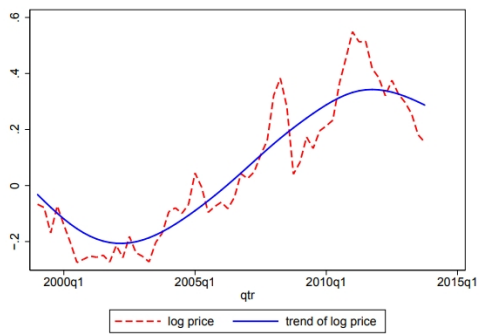

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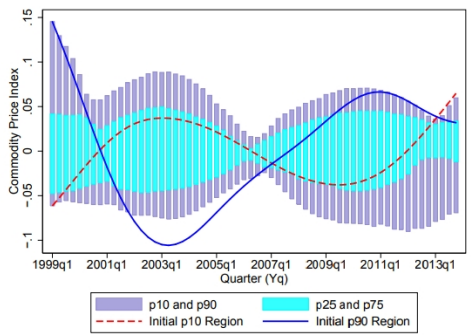

c) Regional Commodity Prices

- Use variation in persistence of shocks to explore municipality and individual response
  - In dynamic model, a transitory shock has little to no effect on firm creation
  - Dynamic model would also highlight the truly "equilibrating" force of entrepreneurs over time
  - Response time may vary across industries (and perhaps geographic regions) with different capital requirements or regulatory restrictions

Who are marginal entrepreneurs and what do they do?

- Paper convincingly shows that marginal entrepreneurs are different from standard entrepreneurs
  - Would be great to know what mechanism (skills, risk tolerance, opportunity costs) drives this difference
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- But do they do anything differently?
  - Do they choose different industries? Are they an equilibrating force? Or do they actually amplify local resource booms? Do they have less creative or less disruptive business ideas?
  - Or, more fundamentally, what do they actually do?

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- Disentangling different mechanisms
  - If more willing to take risks shouldn't we observe a risk-reward tradeoff? Faster growth, but higher failure rates?
  - What jobs do new entrepreneurs hold before they become entrepreneurs? Do young entrepreneurs have lower opportunity costs?

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- In fact, lack of migration of entrepreneurs is a key feature of the model
  - Unskilled labor is perfectly mobile, skilled labor is perfectly immobile
  - But actually the opposite is true in US data (Molloy et al JEP 2011): interstate migration rates are twice as large for skilled workers
  - Allowing for entrepreneurial mobility would yield testable predictions based on migration costs!

Bartik instruments

- Identification argument rests on one of two assumptions
  1. 1998 agricultural endowments are exogenous so composition of shares across areas provides a "diff-in-diff" style analysis, OR
  2. Prices are randomly assigned conditional on the shares (which could be endogenous) so with many industries the bias averages out in the limit (Borusyak et al 2018)

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- Assumption-dependent solutions and recommendations
  1. Use "Rotemberg weights" (Goldsmith-Pinkham et al 2018) to determine how sensitive parameter estimates are to each instrument (i.e., which industry endowments matter)
     - If only a few industries matter a lot in "Rotemberg weights", this could be cause for concern ... even for assumption 2 above!
  2. Adjust for correlated standard errors using code of Adão et al (2017)

Shadow Economy

Table A.1: Size and development of the shadow economy of 158 countries over the period 1991 to 2015 – Part II (2004–2015)

No.	Country	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	*Av. over years*
1	Albania	31.72	30.89	29.58	28.53	27.12	26.91	26.10	25.41	25.52	25.68	25.78	26.21	*32.72*
2	Algeria	27.76	24.93	24.44	24.21	24.07	25.90	25.89	27.37	26.94	25.98	25.74	23.98	*30.86*
3	Angola	46.81	43.84	41.23	37.13	35.26	36.25	36.54	36.49	36.60	35.92	34.53	35.25	*43.96*
4	Argentina	24.32	23.21	22.63	21.93	21.87	22.97	21.64	20.80	21.62	21.57	22.02	24.99	*24.14*
5	Armenia	43.57	41.03	41.38	39.47	35.39	41.04	40.14	38.46	35.52	34.56	34.78	35.96	*42.59*
6	Australia	12.11	12.25	11.66	9.32	8.96	9.39	9.14	8.87	9.83	9.95	8.89	8.10	*12.06*
7	Austria	8.72	8.86	8.34	7.69	7.78	9.65	9.07	8.47	8.40	8.68	8.39	9.01	*8.93*
8	Azerbaijan	52.45	50.01	48.02	45.32	43.70	44.82	44.20	43.71	43.30	42.26	42.15	43.66	*52.19*
9	Bahamas, The	29.23	27.92	27.50	27.37	30.82	37.73	37.77	38.57	37.62	39.51	38.92	38.55	*33.52*
10	Bahrain	17.64	17.54	18.12	18.79	18.16	20.33	20.30	21.01	21.11	20.03	19.21	16.63	*19.34*
11	Bangladesh	36.50	34.95	34.13	32.93	31.32	31.47	30.78	28.79	28.97	28.22	27.42	27.60	*33.59*
12	Belarus	46.72	46.77	44.64	42.10	38.69	39.70	38.17	33.03	32.29	34.07	34.12	32.37	*44.52*
13	Belgium	21.12	21.11	20.74	18.27	18.28	18.74	18.8	17.71	18.28	18.81	18.06	17.8	*20.57*
14	Belize	44.56	43.74	41.18	41.87	40.67	47.13	45.51	45.45	45.38	44.08	44.69	42.29	*46.83*
15	Benin	55.49	56.38	55.79	52.75	53.52	56.63	54.49	55.12	53.64	50.71	46.33	48.28	*53.66*
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  - Shadow economy is more nimble, unencumbered by bureaucratic restrictions
  - Suggests checking for interactions with red tape barriers and corruption
- But, more importantly, what does this mean for the individual-level results?

Smaller Model Issues

- Model is entirely focused on the municipality-level analysis
  - No predictions about novel empirical part of the paper
  - Generating predictions about entrepreneur age profile should not be difficult ...
  - ... and may yield additional testable predictions!

- But even existing Proposition 2 is not part of the municipality-level analysis
  - Response of firm entry depends on size of skilled (local) population and nonpecuniary costs of entrepreneurship
  - There are good measures or proxies for exactly those variables
  - Currently the paper only considers *spillover* effects in local human capital and age demographics in the individual response

- Proofs
  - Proof for Proposition 1 should be tighter, not just textual description
  - Proof for Proposition 2 in Appendix A is missing

Smaller Empirical Issues

- Local age demographics
  - " ... we find that individuals do take longer to acquire generalist and managerial skills in municipalities with older demographics."
  - What paper actually shows is that the entrepreneurial response is **more** pronounced in younger municipalities
  - Can you show direct evidence that older population prevents the acquisition of managerial skills?

- Show more on the negative treatment effects and firm closures
  - "... young are significantly less responsive to negative economic shocks ..."
  - Actually, they respond a lot by **not** becoming entrepreneurs in bad times.
  - But are they also more likely to close in bad times?

Closing Thoughts

- Paper addresses a fascinating question with important policy implications
  - Is entrepreneurship a disruptive or equilibrating force?
  - Which populations should we target to optimally encourage entrepreneurship? How should we do so?

- A few small changes and additions would make paper even better!
  - Amend the model and restructure the paper to speak more directly to novel parts of the analysis
  - Explore persistence, migration, entrepreneurial choices, and impact of marginal entrepreneurs