

Trade, Jobs, and Worker Welfare

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The views expressed in this presentation are those of the authors and do not necessarily reflect the position of the Federal Reserve Board or the Federal Reserve System.

Overview (1)

- **What?** Better understand how trade shocks affect workers.

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- **What?** Better understand how trade shocks affect workers.
- **Why?** Clear existing evidence on effects. . .
However, so far, two (i) **separate approaches** to analyze the impact of trade shocks on local labor markets
 1. **Reduced form econometric analysis** → transparent and credible identification of causal impact on labor market outcomes,
 2. **Structural estimation** → inference about mobility frictions, welfare and counterfactuals,both (ii) **focus on wage differentials** as main driver of mobility.

Overview (2)

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 1. Reduced form evidence of causal effect of exports on *residual wages, employment, number of different occupations and job turnover rates*,
 2. Develop dynamic GE model of labor mobility in which labor markets differ in wages and number of *job opportunities*,
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- **What has been done?**
 - ▶ Reduced form: ADH (2013, 2015, ...), ADHS (2015), go to → <http://chinashock.info/papers/> McLaren and Hakobyan (2016), Dix-Carneiro and Kovak (2015, 2017, 2019), ...
 - ▶ Structural models: ACM (2010), Dix-Carneiro (2014), Artuç and McLaren (2015), Traiberman (2019), **CDP (forthcoming)**

Overview (3)

- **How is this different?**

1. New evidence of causal effect of export shocks in Brazil on labor market outcomes including *worker churning*,
2. Dynamic GE model of labor mobility (CDP, *forthcoming*) and trade with endogenous number job opportunities:
 - ▶ New mobility driver: # job opportunities in local labor markets
 - ▶ Sufficient statistic: effects of trade shocks embedded in gross flows
3. Estimating equation → Exploit shift-share designs (Bertik instruments) to estimate structural parameters
 - ▶ Adao, Arkolakis, and Esposito (2019)

Overview (3)

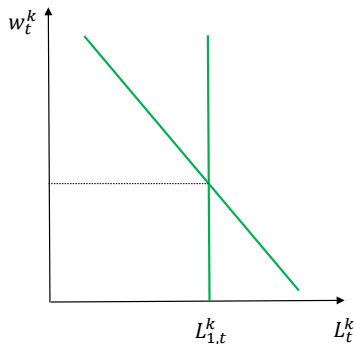
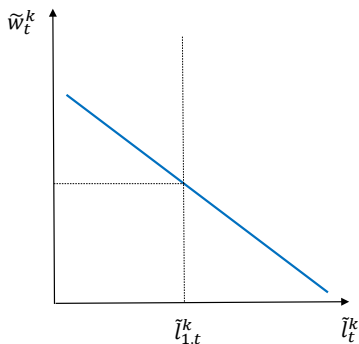
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- Very nice and ambitious paper with a great contribution!

New Mechanisms

Endogenous number of jobs within labor markets: Consider labor market k

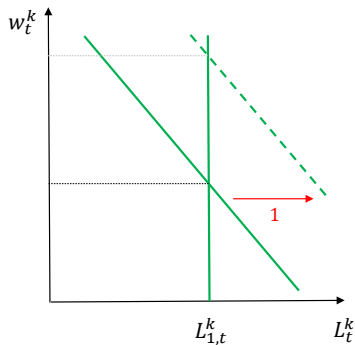
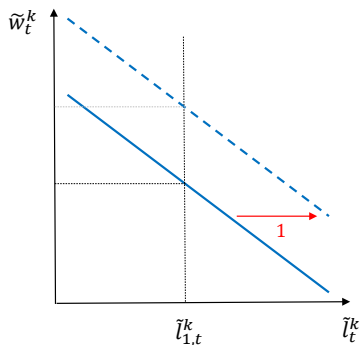
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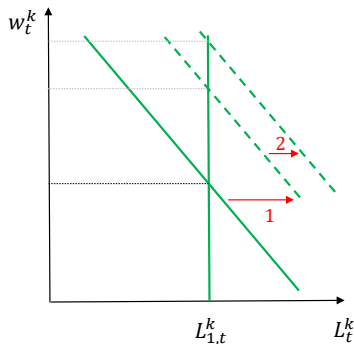
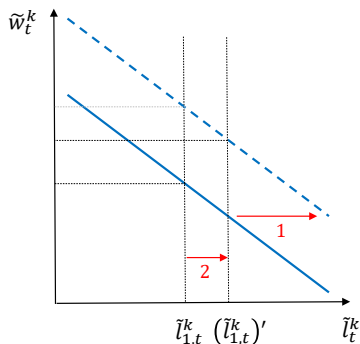
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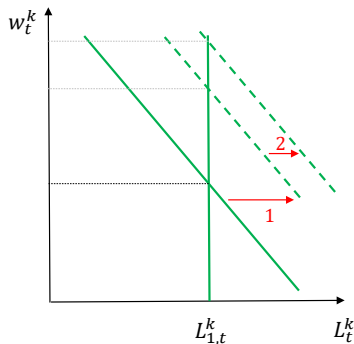
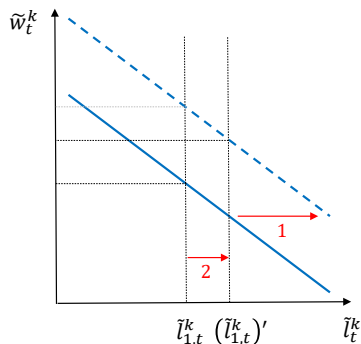
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1. + export shock (1) with O_t^k fixed
2. O_t^k expands (2) in response to greater demand (love for variety)
3. Key! $N_t^k = \rho O_t^k \implies$ Jobs to sample from and $L_{t+1}^k \uparrow$ by def. of m_t^{lk}



Comment 1/3

Evidence on main mechanism: number of tasks

- Reduced form evidence: really increase in job opportunities?
 - ▶ Classification of occupations as measure of number of different jobs → fixed
 - ▶ However, evidence shows increase in internal churning. . .
 - ▶ **Maybe data on investment could help**
- Very relevant to justify key assumed relationship $N_t^k = \rho O_t^k$
- Moreover, adjustments in N are costly and take time. . . here are instantaneous
 - ▶ **Exploit in the data, but simplify in the model. . . again, maybe investments**
- **Is this mechanism evident in the data?**

Comment 2/3

Identification of $\tilde{\sigma}$ and ρ

- **Key new parameter:** $\tilde{\sigma}$ → provide more intuition on variation used for identification
 - ▶ Impact of wages and job opportunities on welfare given a policy change summarized by switching probabilities → First: estimate probabilities
 - $\mu_{0,t}^k$: probability of staying in the same job
 - $\mu_{1,t}^k$: probability of switching jobs in same labor market
 - Identification tightly linked to labor churning → any issues?
 - ▶ Any relationship to parameters shaping economies of scale in spatial models?
- **What about ρ** → Does this affect welfare results in any way? How?

Comment 3/3

Difference from literature with search and matching frictions

- Margins of adjustment: income affected through **unemployment/labor force participation** rather than wages
 - ▶ ADH (2013, 2015), Kim and Vogel (2018), ...
 - ▶ ABL (2019) → job opportunities
- Only briefly mentioned, but...
 - ▶ Davidson, Martin and Matusz (1999); Coşar, Guner and Tybout (2016); Pessoa (2018)...
 - ▶ **Kim and Vogel (2018); Carrère, Robert-Nicoud and Grujovic (2019)**
- Main difference: homogeneous workers... but more than that
 - ▶ Given total labor in a local labor market → technology to transform into labor efficiency units
 - ▶ Curvature on additional margin... here $\tilde{l}_t^k = L_t^k (O_t^k)^{\frac{1}{\sigma-1}}$
- **Why is this margin more appealing than unemployment?**

Conclusion

- Great paper! → On the spot regarding new research agenda...
 - ▶ Understand margins of adjustment
 - ▶ Related to how **firms** respond to trade shocks
- Very ambitious paper... sure it will make a great publication!