Discussion of

Global Production with Export Platforms

by Felix Tintelnot

Oleg Itskhoki
Princeton University

NBER ITI Summer Institute
Boston, July 2013

Introduction

- Question:

  — Where should firms locate production in a global economy?

Introduction

- Question:

  — Where should firms locate production in a global economy?

- Different from the question in HMY (2004) and IMO (2009):

  — Which firms should do FDI versus export?

Introduction

- Question:

  — Where should firms locate production in a global economy?

- Different from the question in HMY (2004) and IMO (2009):

  — Which firms should do FDI versus export?

- Closely related to ARRY (2013)

  — abstract from proximity-concentration trade-off and focus on specialization between innovation and production

  — This paper shuts down specialization and reintroduces proximity-concentration trade-off

Introduction

- Question:

  — Where should firms locate production in a global economy?

- Different from the question in HMY (2004) and IMO (2009):

  — Which firms should do FDI versus export?

- Closely related to ARRY (2013)

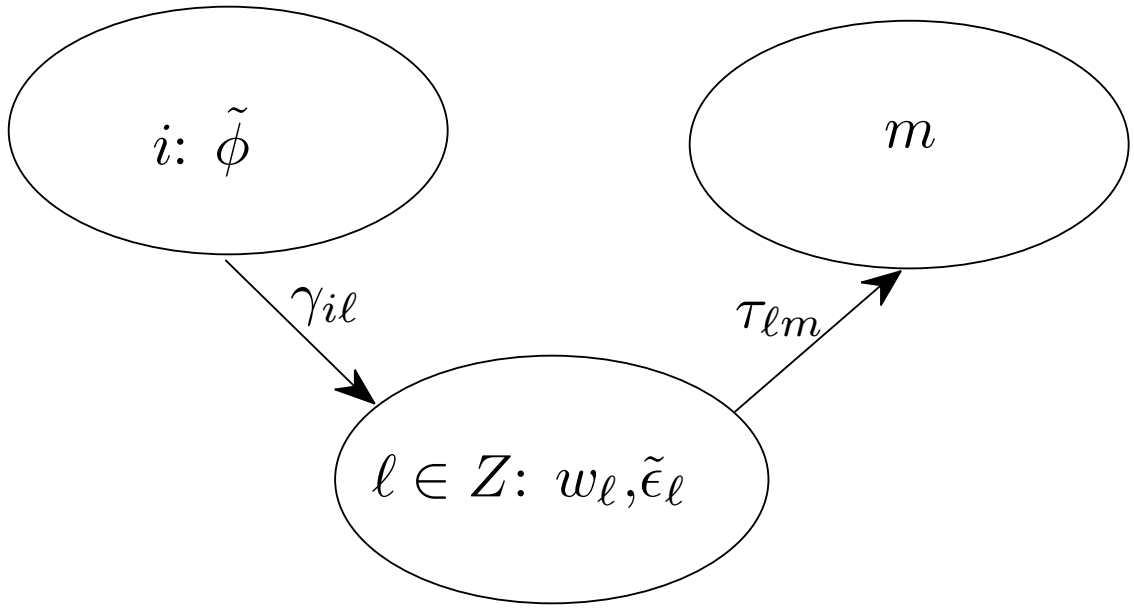
  — abstract from proximity-concentration trade-off and focus on specialization between innovation and production

  — This paper shuts down specialization and reintroduces proximity-concentration trade-off

- Very elegant solution to a complex problem

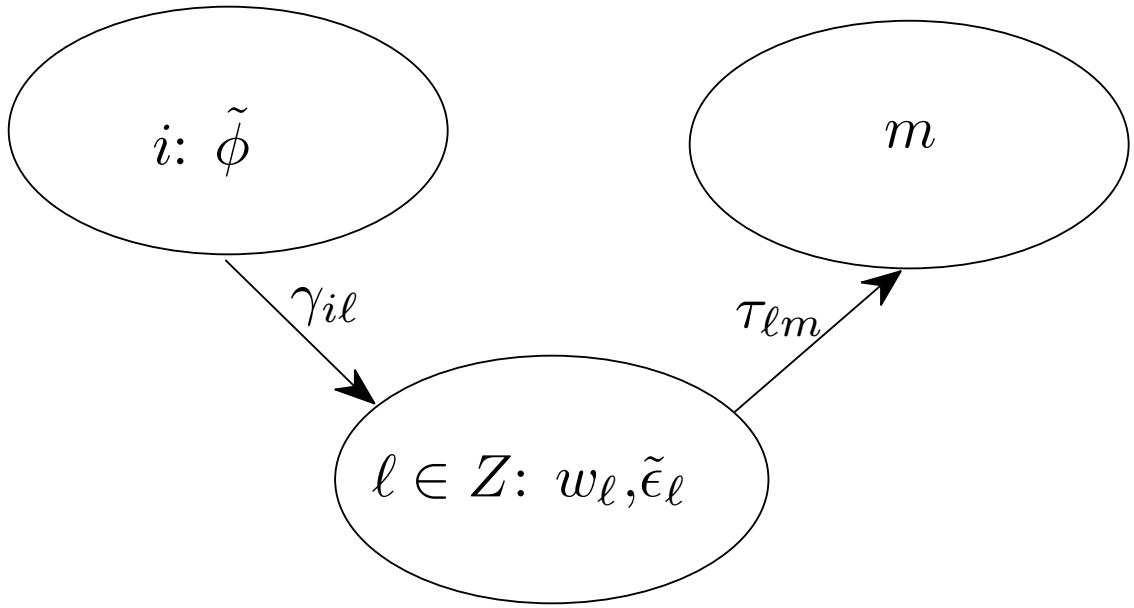
Setup I

- **Stage 2**: once set of locations Z is sunk ($\sim$ARRY)



Setup I

- **Stage 2**: once set of locations Z is sunk ($\sim$ARRY)



- **New**: continuum of products per firm (EK at the firm level):

$$\tilde{c}^i_{\ell m} \sim \frac{\gamma_{i\ell} w_\ell \tau_{\ell m}}{\tilde{\varepsilon}_\ell} \qquad \Rightarrow \qquad p_m(\phi; Z) = \frac{\sigma}{\sigma - 1} \frac{\tilde{c}^i_m(Z)}{\phi},$$

$$\tilde{\mu}^i_{\ell m}(Z) \sim \left(\frac{\tilde{\varepsilon}_\ell}{\gamma_{i\ell} w_\ell \tau_{\ell m}} \right)^\theta \qquad \text{for} \quad \ell \in Z$$

Setup II

- **Stage 1**: choice of production locations Z

$$Z^i(\eta;\phi) = \arg\max_Z \left\{ \sum_m \pi_m(\phi; Z) - \sum_{\ell \in Z} \eta_\ell w_\ell \right\}$$

Computationally intensive set search problem

Setup II

- **Stage 1**: choice of production locations Z

$$Z^i(\eta;\phi) = \arg\max_{Z} \left\{ \sum_m \pi_m(\phi; Z) - \sum_{\ell \in Z} \eta_\ell w_\ell \right\}$$

Computationally intensive set search problem

- **Assumptions**:
  1. No endogenous entry (*cf.* ARRY)
     — finite draws (∼EKS, 2013) versus LLN plus fixed costs
  2. No fixed cost of exporting
  3. No production complementarities between firm's products
  4. No market power of the firm

Exercises

1. Partial equilibrium location choice of German firms:
   - Identification:
     - Conditional on Z, distribution of sales determines $\{\gamma_{i\ell} w_\ell \tau_{\ell m}\}$
     - The choice of Z identifies the distribution of $\{\eta_i w_\ell\}$
   - Fit:
     - What does a good fit of location choice mean: η versus $\gamma_{i\ell}$?
     - What is the explanatory power of the model: role of $\gamma_{i\ell}$ & ϕ?
     - Contrast with alternatives (e.g., no fixed costs)

Exercises

1. Partial equilibrium location choice of German firms:
   - Identification:
     - Conditional on Z, distribution of sales determines $\{\gamma_{i\ell} w_\ell \tau_{\ell m}\}$
     - The choice of Z identifies the distribution of $\{\eta_i w_\ell\}$
   - Fit:
     - What does a good fit of location choice mean: η versus $\gamma_{i\ell}$?
     - What is the explanatory power of the model: role of $\gamma_{i\ell}$ & ϕ?
     - Contrast with alternatives (e.g., no fixed costs)

2. General equilibrium calibration of platform sales:
   - Moments:
     - expenditure share by country pair, $\xi_{\ell m}$
     - platform production, $\kappa_{i\ell}$
   - Targets: $\gamma_{i\ell}$, $\tau_{\ell m}$ and $\eta_{i\ell}$
   - What is the link between the two exercises? Are we getting different answers? Where do fixed costs have a bite?

Conclusion

- Very elegant solution to a methodological challenge
- Already provides interesting insights into conceptual issues
- I foresee a lot of fruitful applications of this methodology