Labour Unions and Unemployment in a Globalized Economy

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Reseach question

Does globalisation increase unemployment in unionised countries?

- **Migration**
  Wages in unionised countries are higher ⇒ expected wages equalize at a higher level of unemployment
- **Firm relocation**
  Production in unionised countries is more expensive ⇒ firms will relocate and increase unemployment
- **Trade**
  Production in unionised countries is more expensive ⇒ local good will be subsituted with cheap imports, unemployment will increase

But: What if a country is open in all three dimensions?

Outline

Previous literature

- **Migration**
  increases unemployment (Harris and Todaro, 1970), it depends (Schmidt et al., 1994), decreases unemployment (Ortega, 2000)
- **Firm relocation**
  increases unemployment, but also the real wage (Skaksen and Sørensen, 2001), decreases unemployment and wages (Eckel and Egger, 2009)
- **Trade**
  H-O trade increases unemployment (Davidson et al., 1999), increases unemployment and weakens labour unions (Gaston and Nelson, 2004), Intra-industry trade increases unemployment (Helpman and Itskhoki, 2010)
- **All three effects**
  Globalisation decreases unemployment: search unemployment (Epifani and Gancia, 2005), efficiency wages (Suedekum, 2005)

Ingridients of the model

- **Core-periphery model (Krugman, 1991)**
  workers are mobile, trade is costly, the number if firms in each region is endogenous
- **Blanchard and Giavazzi, 2003**
  Unemployment caused by positive and employment dependent reservation wages, collective bargaining by labour unions, efficient bargaining

The formal set-up

Goods market

- Dixit-Stiglitz monopolistic competition with 2 countries, 2 sectors, 1 production factor (labour)
- No of firms normalized to one worldwide

Labour market

- $(1-d)$ - fraction working in agriculture
  - immobile and evenly distributed among countries
  - labour supply inelastic (no unemployment)
- d - fraction working in industry
  - mobile, λ - fraction living in the home country
  - labour supply elasstic due to unemployment benefits:
    - employed (e) receive wage w and pay a fixed social security contribution PB
    - unemployed receive $\frac{ePB}{1-e}$

Bargaining

Wages, employment and production determined through **collective bargaining**

$$\max_{w,p,p*} S = \beta \log((w - PB - \frac{ePB}{1-e})l) + (1-\beta)\log \pi$$

where:

- β - bargaining power of the unions
- l - employment per firm and $y + ty^* = l$
- $\pi = py(p) + p^* y^*(p^*) - w(y(p) + ty^*(p))$ - firms profit

Bargaining

$$\max_{w,p,p*} S = \beta \log \left((w - PB - \frac{ePB}{1-e}) \left(y(p) + y^*(p^*) \right) \right) + (1-\beta) \log \pi$$

results in

$$w = (1+\beta\mu)\frac{PB}{1-e}$$

$$p = (1+\mu)\frac{PB}{1-e}$$

$$p* = tp$$

Equilibrium with trade

Supply = demand

$$y + ty^* = \left(\frac{\alpha I}{P_I}\right)\left(\frac{p}{P_I}\right)^{-\sigma} + +t\left(\frac{\alpha I^*}{P_I^*}\right)\left(\frac{tp}{P_I^*}\right)^{-\sigma}$$

Labour supply = labour demand

$$e\lambda = n(y + ty^*)$$

Globalised equilibrium

Left to determine :

- fraction of firms in each location
- fraction of workers in each location

Two scenarios:

- firms react immidiately and workers gradually
  $\frac{\pi}{P} = \frac{\pi^*}{P^*}$ and $\dot{\lambda} = f\left(\frac{w}{P} - \frac{w^*}{P^*}\right)$
- workers react immidiately and firms gradually
  $\frac{w}{P} = \frac{w^*}{P^*}$ and $\dot{n} = g(\frac{\pi}{P} - \frac{\pi^*}{P^*})$

Firms first

The relocation of one worker has two effects on unemployment and thus on the real wage[1]:

- the new worker increases labour supply which ceteris paribus increases unemployment
- the new worker increases local demand and will thus immidiately attracts new firms which increases labour demand and decreases unemployment

The relative strength of these two effects depends on transport costs

[1] Note that if countries are the same with respect to their labour market regulations, differences in real wages are caused only by differences in employment.

Firms first

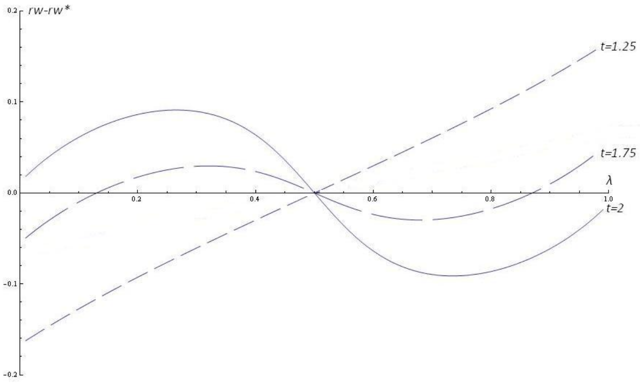

Figure : The difference in expected real wages for different distributions of industrial workers

Firms first

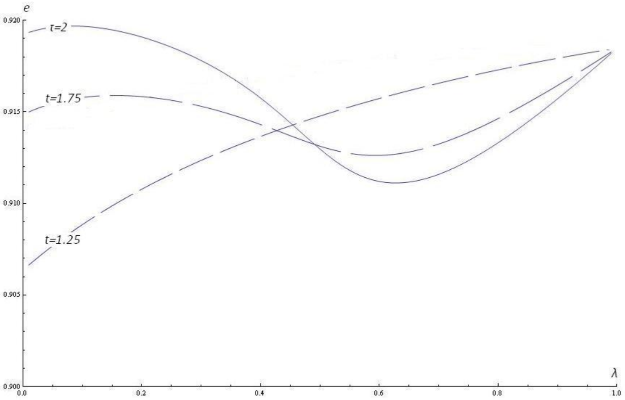

Figure : Employment in the home country for different distributions of industrial workers

Migration first

A relocation of one firm to the home country will have the following two effects:

- It increases the competition for home-country consumers thereby decreasing profits there
- It increases labour demand and through increased employment attracts workers. This increases local demand and profits

The relative strength of these two effects depends on transport costs

Migration first

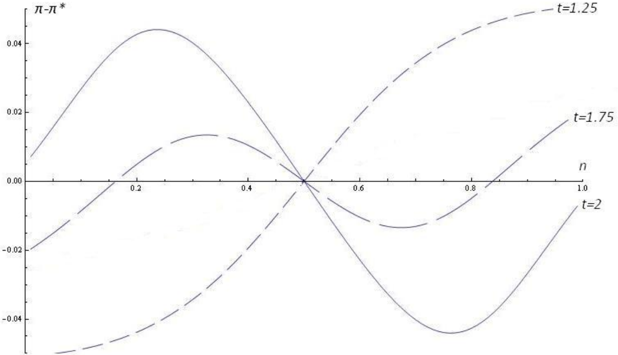

Figure : Profit differential for different interational distributions of firms

Migration first

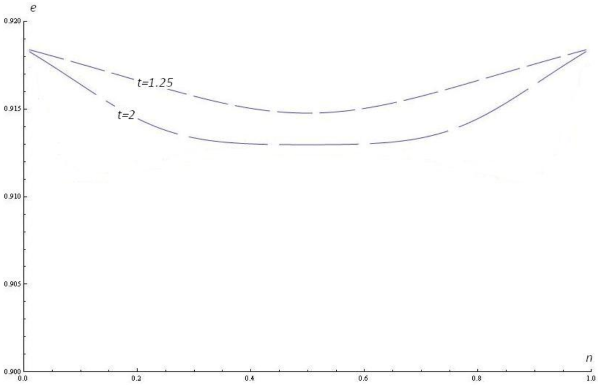

Figure : Employment in the home country for different interntional distributions of firms

Assymetric labour unions

In the short run higher bargaining power of unions:

- increases wages
- decreases profit

The long run effect depends on the relative adjustment speeds of firms and workers

Firms first

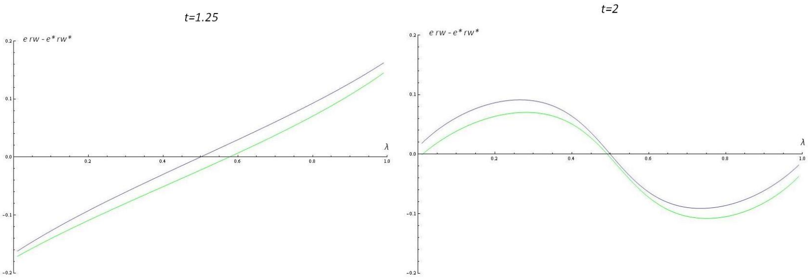

Figure : The difference in expected real wages for different distributions of industrial workers(blue:$\beta = \beta^* = 0.3$, green: β=0.3, $\beta^* = 0$)

Migration first

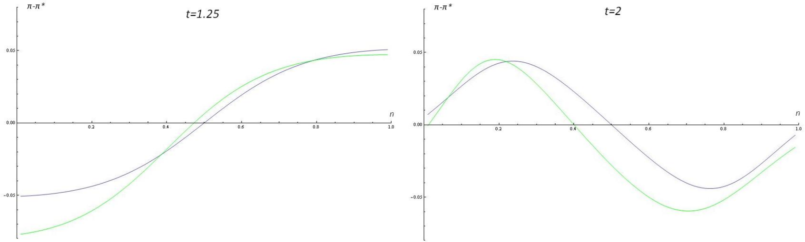

Figure : Profit differential for different interational distributions of firms(blue:$\beta = \beta^* = 0.3$, green: β=0.3, $\beta^* = 0$)

Conclusions

1. To asses the effects of globalisation on unemployment one must look at all channels through which globalisation influences the labour market
2. In integrated economies

- Immigration decreases long-run unemployment if trade is sufficiently free
- Countries with strong labour unions may have lower unemployment, if they were large prior to integration
- If workers migrate faster than firms even smaller countries can attract economic activity if they have stronger unions