

The Impact of Trade on Employment, Welfare and Income Distribution in Unionized General Oligopolistic Equilibrium

Daniel Etzel

University of Bayreuth

Hartmut Egger

University of Bayreuth

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Motivation

Relevance of the topic

- Distributional and employment effects of international trade are major concern of general public and policy makers
- Labor unions are often seen as part of the problem

Labor unions in the literature

- Existing models consider rent-sharing at the firm- or industry-level and primarily look at welfare effects of trade
- Due to partial equilibrium nature of most studies, (almost) no discussion about aggregate employment effect or distributional consequences

Contribution of this paper

Novel modeling approach

- Introducing labor unions into Neary's GOLE framework with sectors differing in productivities
- Aggregate unemployment as all sectors unionized
- Productivity differences generate sector-specific profits
- Rent-sharing generates sector-specific wages

Issues addressed

- Simultaneous discussion of distributional and employment effects of trade
- Distinction between inter-group effects (profits versus wages) and intra-group effects (among firm owners, among workers)
- Focus on income distribution across sectors!

Related literature

The GOLE framework

- Neary (2003)
 - + theoretically tractable model of general oligopolistic equilibrium (GOLE)
 - + no labor market imperfection
- Bastos and Kreickemeier (2009)
 - + introduce labor unions
 - + but only in part of the sectors (hence employment exogenous)
 - + no discussion on inter-sectoral income inequality

Labor unions in PE model

- Sørensen (1993), Huizinga (1993), Naylor (1998, 1999), Lommerud et al. (2003)

Assumptions

General setup

- Two countries (Home and Foreign)
- Continuum of imperfectly competitive industries with mass 1 (indexed by $z \in [0, 1]$)
- Firms have market power in their own industry but are small economy-wide

Unions and the labor market

- Workers are homogeneous and perfectly mobile across firms and sectors
- Firm-level monopoly unions, representing all workers in a firm
- "Right-to-manage": Rent maximizing unions set wages, firms choose employment (two-stage game)

Measures of income inequality

Inter-group inequality

- Ratio of average profits and average wages
 - + $n \rightarrow \infty$: firms have no market power and hence the ratio approaches zero
 - + Otherwise, the ratio is strictly positive and may exceed one if both the unemployment compensation and the number of firms are not too high
- Higher unemployment benefits lower the profit-wage ratio

Intra-group inequality among firm owners

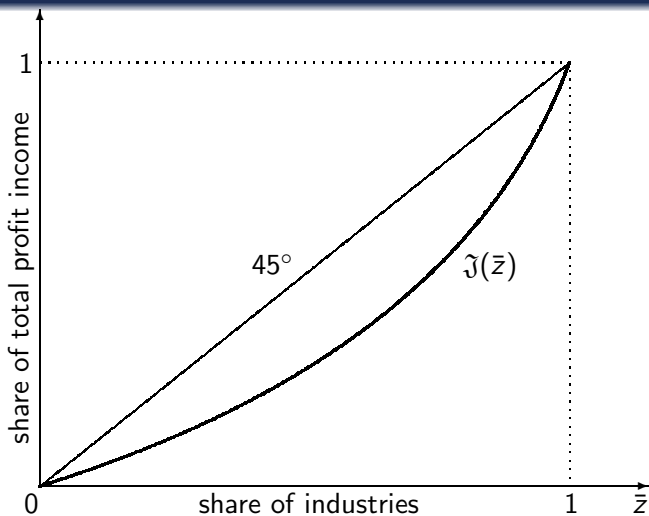


Figure: The Lorenz curve for profit income

Intra-group inequality among workers

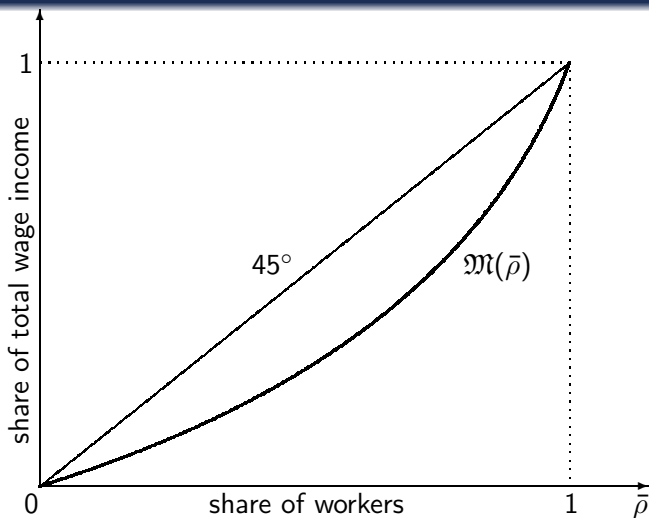


Figure: The Lorenz curve for wage income

Autarky vs. Free Trade

Assumptions

- Countries are identical in all respects
- No transport costs or other barriers to international trade
- Goods markets are fully integrated
- Labor markets remain internationally segmented and workers are immobile across countries

Basic effects

- Trade lowers wage claims of unions and hence stimulates employment and welfare
- Profit effects are ambiguous
 - + More competition lowers profits
 - + Lower wage claims raise profits
 - + Second effect dominates if n small

Distributional effects of trade

Inter-group inequality

- Effect in general ambiguous and depends on the size of n
 - + If competition in the closed economy is strong, firm owners will lose relative to production workers
 - + If competition in the closed economy is weak, firm owners will gain relative to production workers

Intra-group inequality

- Trade does not affect income inequality among firm owners
- Trade lowers income inequality among production workers.
 - + Trade reduces wages in all sectors
 - + But: wage compression due to unemployment benefits

Industry-level unions

Main findings

- Unions set higher wages
- Lower output, higher unemployment and higher welfare costs
- Income inequality
 - + Inter-group inequality is lower
 - + Intra-group inequality among firm owners remains unaffected
 - + Intra-group inequality among workers is more pronounced

Conclusion

Most important insights

- Trade lowers wages and stimulates employment
- Firm owners may benefit from free trade if their market power in autarky is sufficiently high
- Trade may increase or decrease inter-group inequality between firm owners and production workers depending on the market power of firms
- Trade reduces income inequality among production workers but leaves income inequality among firm owners unaffected
 - + Consistent with empirical observation that inter-sectoral inequality becomes less important factor of general income inequality (Faggio, Salvanes and Van Reenen, 2007)