

Structural Changes: Technology, Trade and Territories

Eve Caroli

(PSL-Paris-Dauphine University, LEDa-LEGOS and IZA)

DARES Conference on
Polarization(s) and Labour Markets, Paris, June 19th, 2018

3 papers

- **Ariell Reshef (AR):** The March of the Techies: Technology, Trade, and Job Polarization in France 1994-2007
 - **Clément Malgouyres (CM):** The Impact of Chinese Import Competition on the Local Structure of Employment and Wages: Evidence from France
 - **Hâle Utar (HU):** International Trade and Job Polarization: Evidence at the Worker Level
- **What have we learnt about job polarization?**

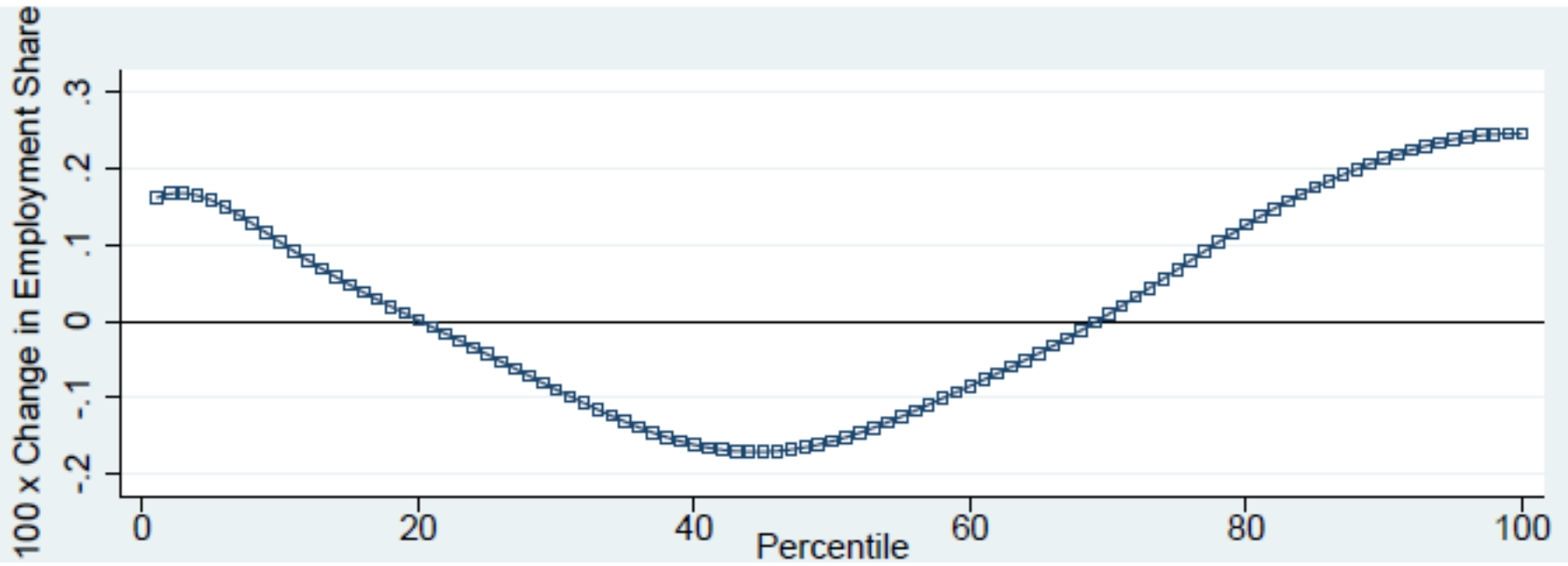
Evidence of Job polarization

- In recent years there has been some job polarization in Denmark and in France
- What is job polarization?

Definition of job polarization

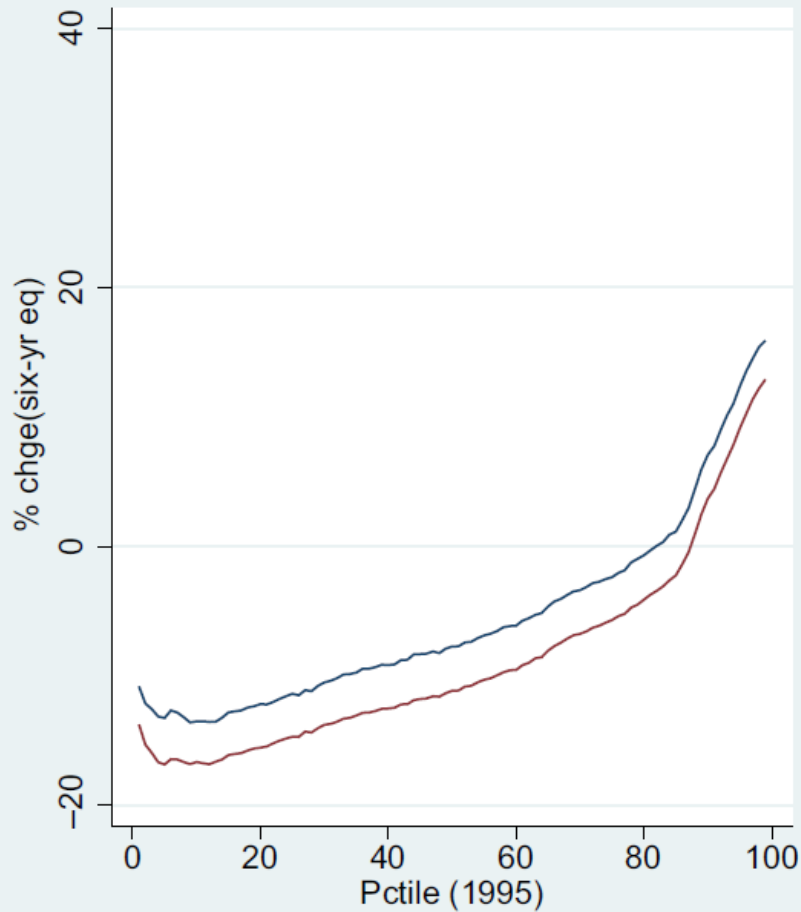
- Literature: growth in the shares of high-wage and low-wage jobs at the expense of middle-wage jobs.
- Clear job polarization in Denmark
- In France: no so clear
 - By percentile of the wage distribution: only separately for manufacturing
 - By occupational rank: yes

Denmark

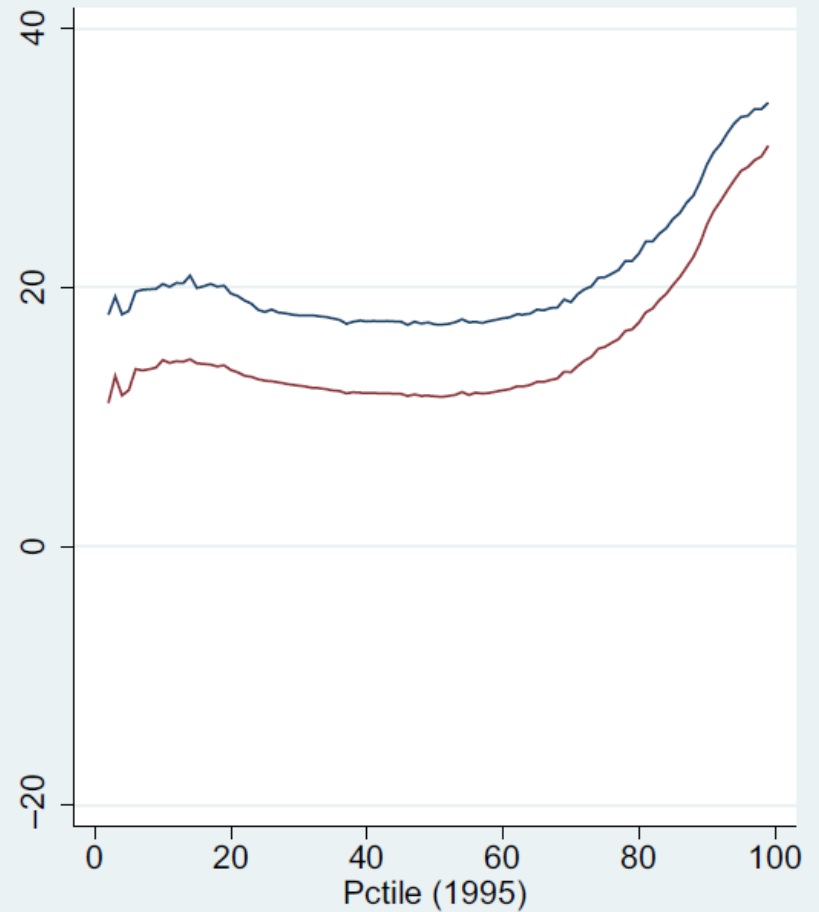


France (1)

Employment growth by wage percentile
(as predicted by occupational change)



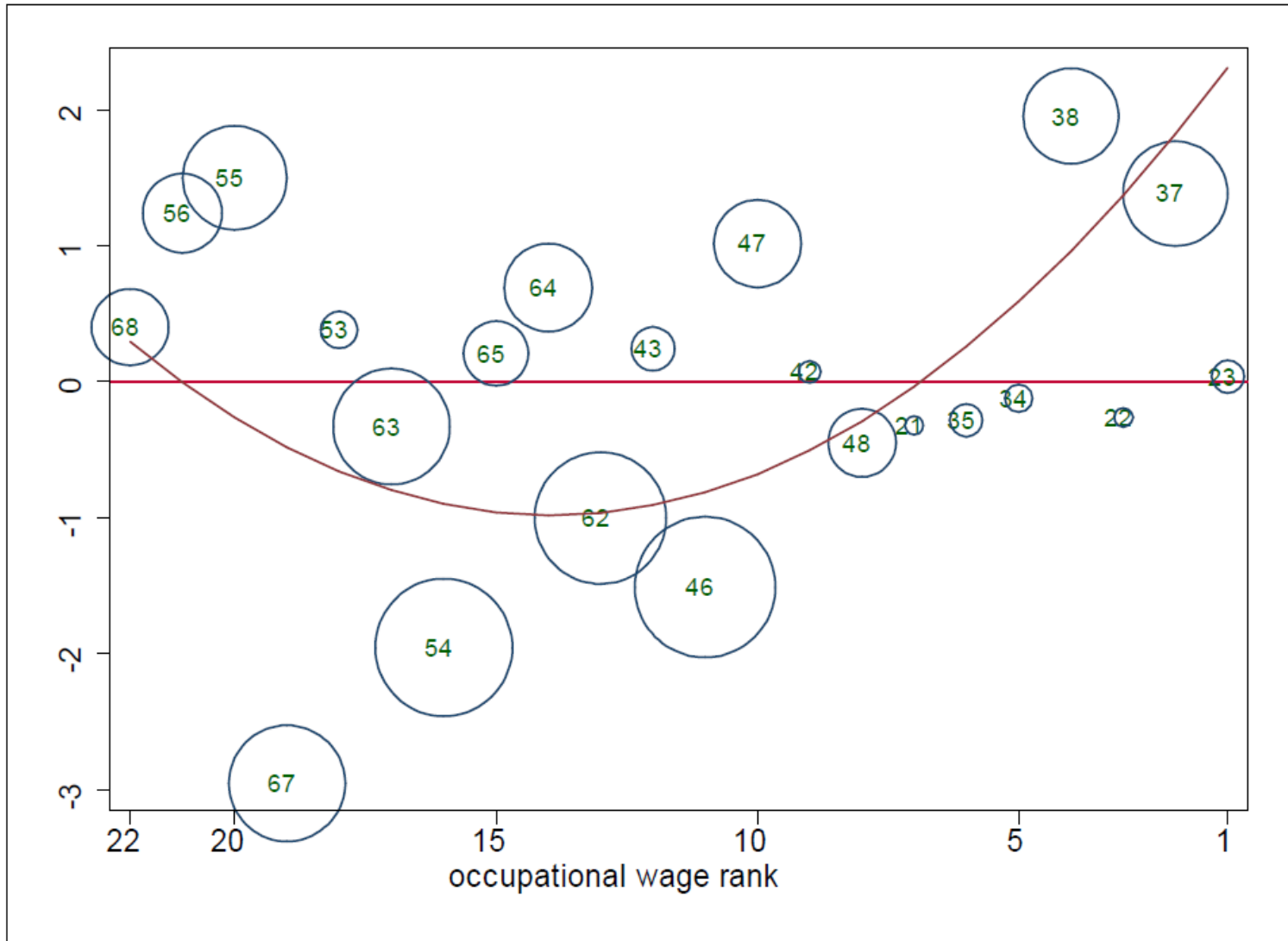
— Jobs, mfg — Hours, mfg



— Jobs, non-traded — Hours, non-traded

France (2)

Figure 2: Change in employment shares 1994–2007, whole economy

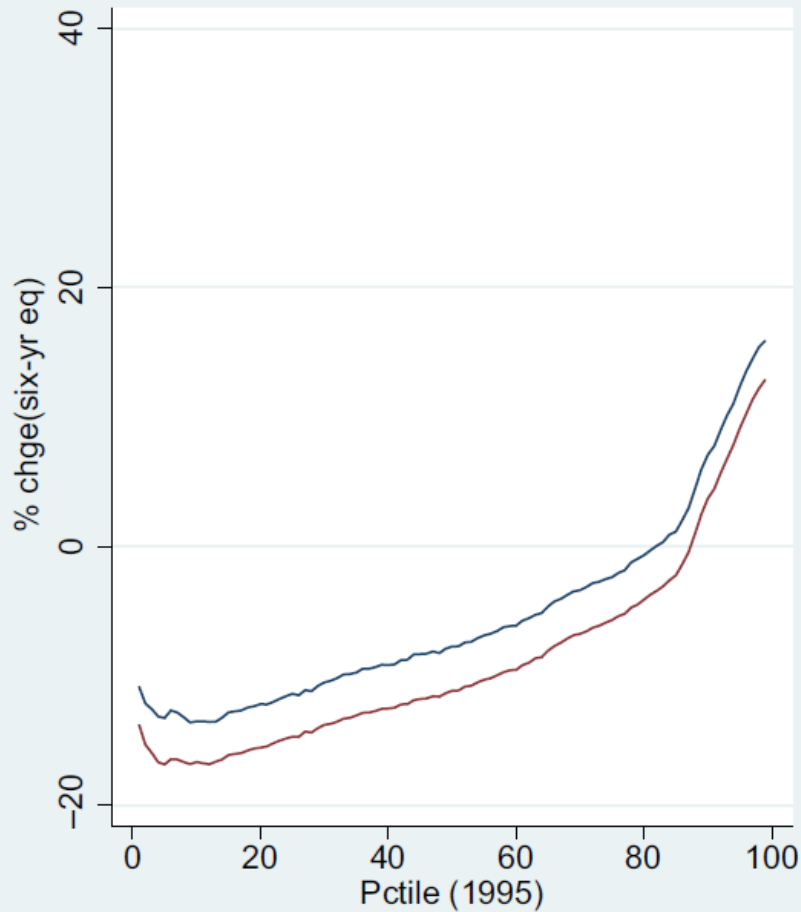


Occupation vs wage based polarisation

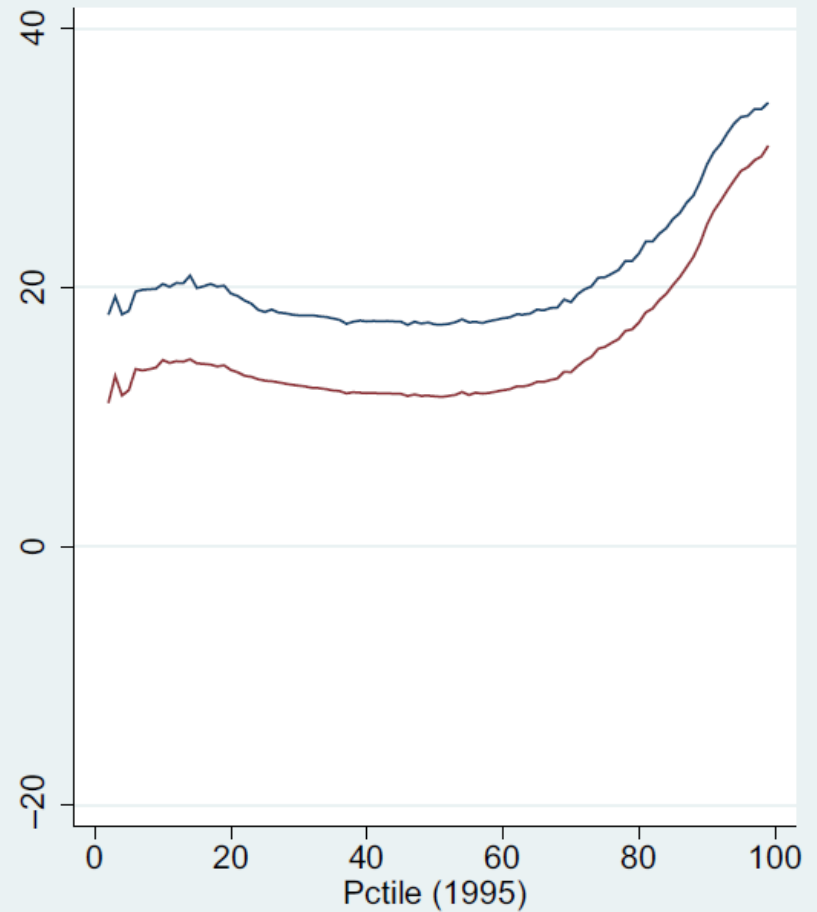
- What is the right way of defining job polarization?
 - High-wage vs low-wage jobs
 - High-skill vs low-skill jobs
- Both are correlated but not perfectly
 - Not the same results
 - Because each occupation combines labor from different wage percentiles (see CM)

France – wage percentile

Employment growth by wage percentile
(as predicted by occupational change)



— Jobs, mfg — Hours, mfg



— Jobs, non-traded — Hours, non-traded

France – occupational rank

Figure 4: Change in employment shares 1994-2007, Manufacturing

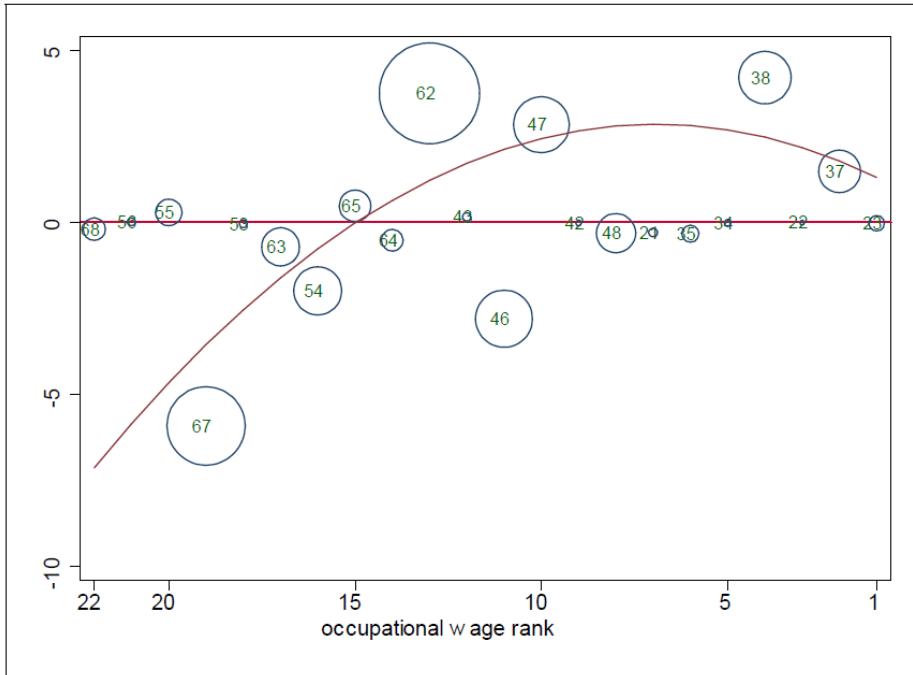
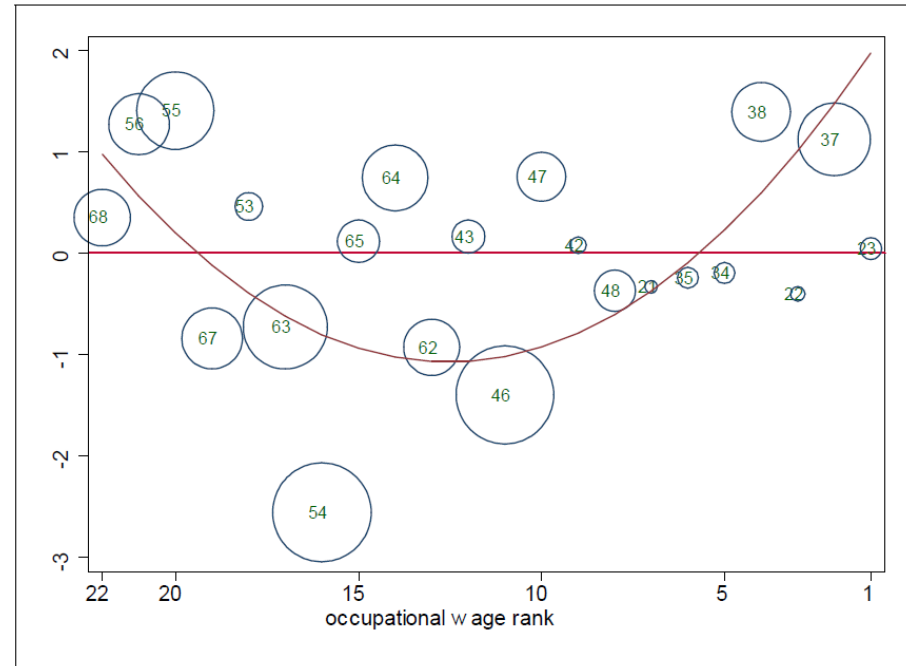


Figure 3: Change in employment shares 1994-2007, Nonmanufacturing



Occupation vs wage based polarisation

- What is the right way of defining job polarization?
 - High-wage vs low-wage jobs
 - High-skill vs low-skill jobs
- Both are correlated but not perfectly
 - Not the same results
 - Because each occupation combines labor from different wage percentiles (see CM)

Towards a clarification

- **Some confusion**
 - CM uses an approach that emphasizes employment changes along the wage distribution
 - AR uses an occupation-based definition of job polarization
 - HU uses the wage-based approach in his descriptives and an occupation-based approach in the econometric analysis.

- **For a uniform approach, based on wages**
 - Routine and non-routine low-skill occupations are not affected in the same way.
 - Welfare consequences of job polarization go through wages.

The Mechanics of Job polarization

Technical Change and Globalization

It involves both technical change and globalization

- Chinese imports induce job polarization both in France and in Denmark.
- They come up as a first-order explanation in DK.
- In FR : more mixed
 - Trade (not only Chinese imports) also plays a role - in manufacturing only : in particular exports induce job polarization. Why???
 - Techies plays some role: some polarization in the manufacturing sector (although driven only by drivers)

The tale of polarization

■ Technical change

- Substitute for routine tasks and complement for cognitive tasks
- Routine tasks concentrated in the middle of the wage distribution
- Some mid-wage workers move upward. Others move downward

■ Globalization

- Import competition hits traded goods that are typically mid-wage intensive.
- Crowding out of workers in mid-wage jobs. Transit to low-wage/high-wage jobs.

How does it work?

- AR: within vs between firms. Only part of the story.
 - What about entry? Polarization of new firms?
 - What about workers?
 - Upward & downward transitions of employed workers within and across firms (HU)
 - What about non-employed workers? New opportunities for low-paid earners?
- Which level of analysis
 - Worker (HU)? Firm (AR)? Local (CM)?
 - To be combined to get an overall picture of the mechanics of polarization.

Technical Change vs Trade

- Are these two independent explanations?
- If technical change generates high-return opportunities in high value-added segments of the market...
 - Mid-wage intensive goods are offshored
 - Low-income countries take over: globalization increases
- If so...
 - Technical change generates globalization
 - There is a common shock to demand in all high-income countries which threatens the identification strategy... (CM + HU)

Why should we care about Job polarization?

- Increase in wage inequality in some parts of the distribution (CM, HU)

- Social polarization?
 - Decay of the middle class.
 - OECD: improvement in living conditions of the upper part of the income distribution.
 - Increasing social polarization? Political polarization?

What can we do?

- Play defense?
 - Protectionism: to be combined with a no-tech society...
 - Prevent transitions: not what DK did
 - More upward than downward transitions \Rightarrow net positive effect
- Enhance upward mobility
 - Education: key to upward mobility in DK.
 - Continuous training

Thank you for your attention.