The effects of services offshoring at home

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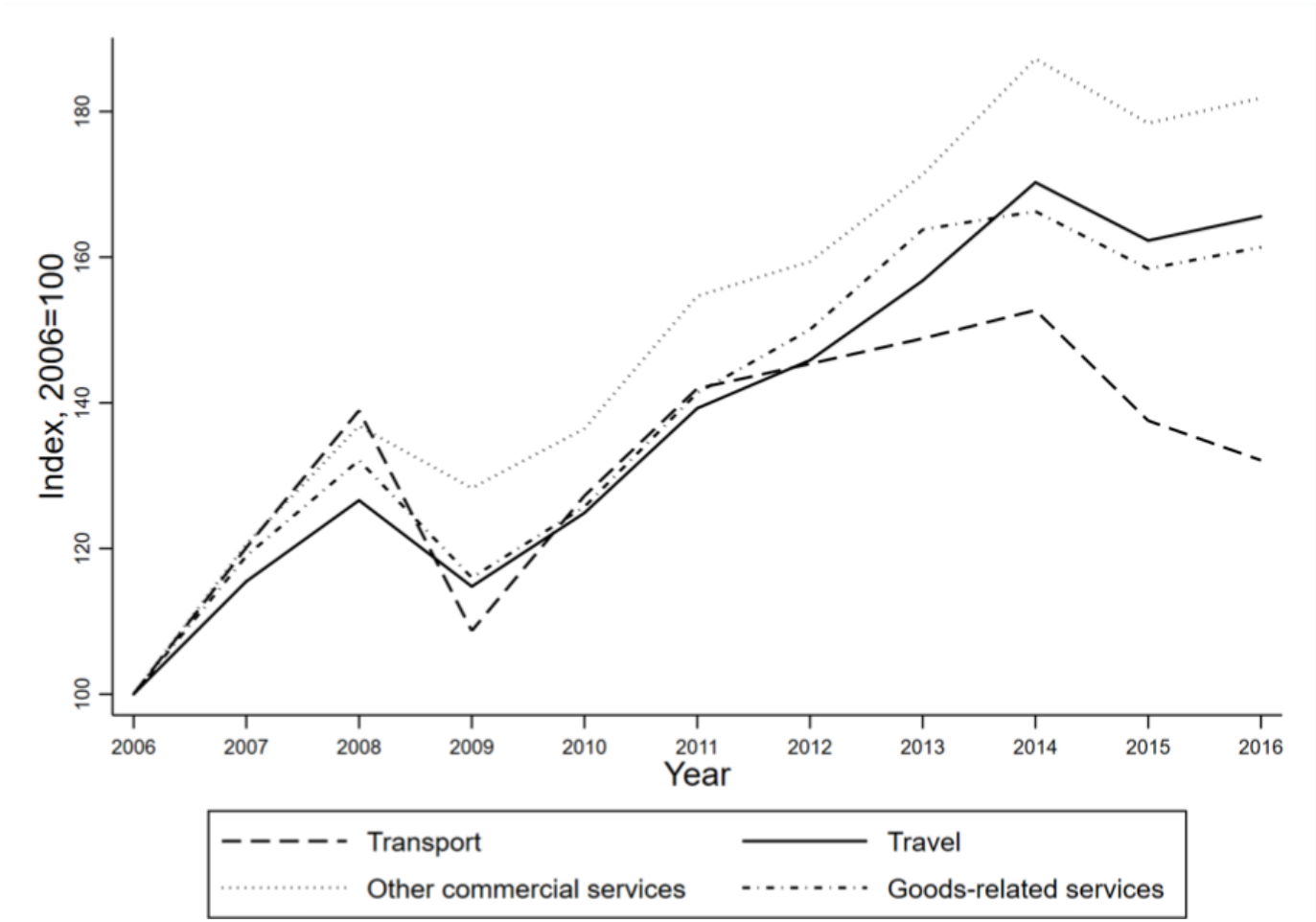
Figure B.5: **Trade in commercial services 2006-2016**



- Trade in services is increasingly important on the world scale
- Current political discourse about gains/losses from trade/offshoring

Research questions

Domestic labor market effects of service offshoring

- what are the aggregate of services offshoring on local labor markets, i.e. employment, wages, and productivity?
- are there distributional effects?

Spillover effects of services offshoring

- are non-offshoring firms benefiting from being located in the same labor market as the offshoring firms?

Contributions

- *Data*
  - Sample: census of large firms (250+ employees) + representative sample of medium and small firms (1-249 employees)
  - Countries/Time: England, Wales and Scotland/99-12
  - Information on firms$'$ ID, characteristics and trade in services
  - Local labor market definition: British Travel To Working Areas (areas where 75% of the population live and work)

- *Methodology*
  - Exploit different exposure to service offshoring over time across sector and local areas to assess average impacts
  - *Regression at the quantile* to disentangle heterogeneous effects
  - *Bartik instrument* (imports of services in other high income countries) to control for endogeneity:
    - capture pattern of trade in services
    - uncorrelated with British sector-local area shocks

Major findings

Average effects

- Positive average effect of services offshoring on local labour markets in terms of employment, average wages and productivity
- Manufacturing sectors with higher elasticities of employment and average wages to services offshoring than the service sectors

Spillover effects

- both offshoring and non-offshoring firms have positive elasticities of employment and wages to services offshoring

Heterogeneous effects

- larger firms have higher elasticities of employment w.r.t. offshoring
- high-wage firms also have a higher wage elasticity w.r.t. offshoring
- high-productivity firms benefit more from services offshoring in terms of wages and employment

A theory of skill-biased services offshoring?

This paper:

- Workers with a high level of education have relatively higher wage elasticity to services offshoring
- Main prediction: As communication costs fall, services offshoring increases and triggers rise in the average skill (college) premium *within* local labor markets
- Mechanism: Offshoring leads to significant cost savings and increase in revenues (Halpern et al, 15)

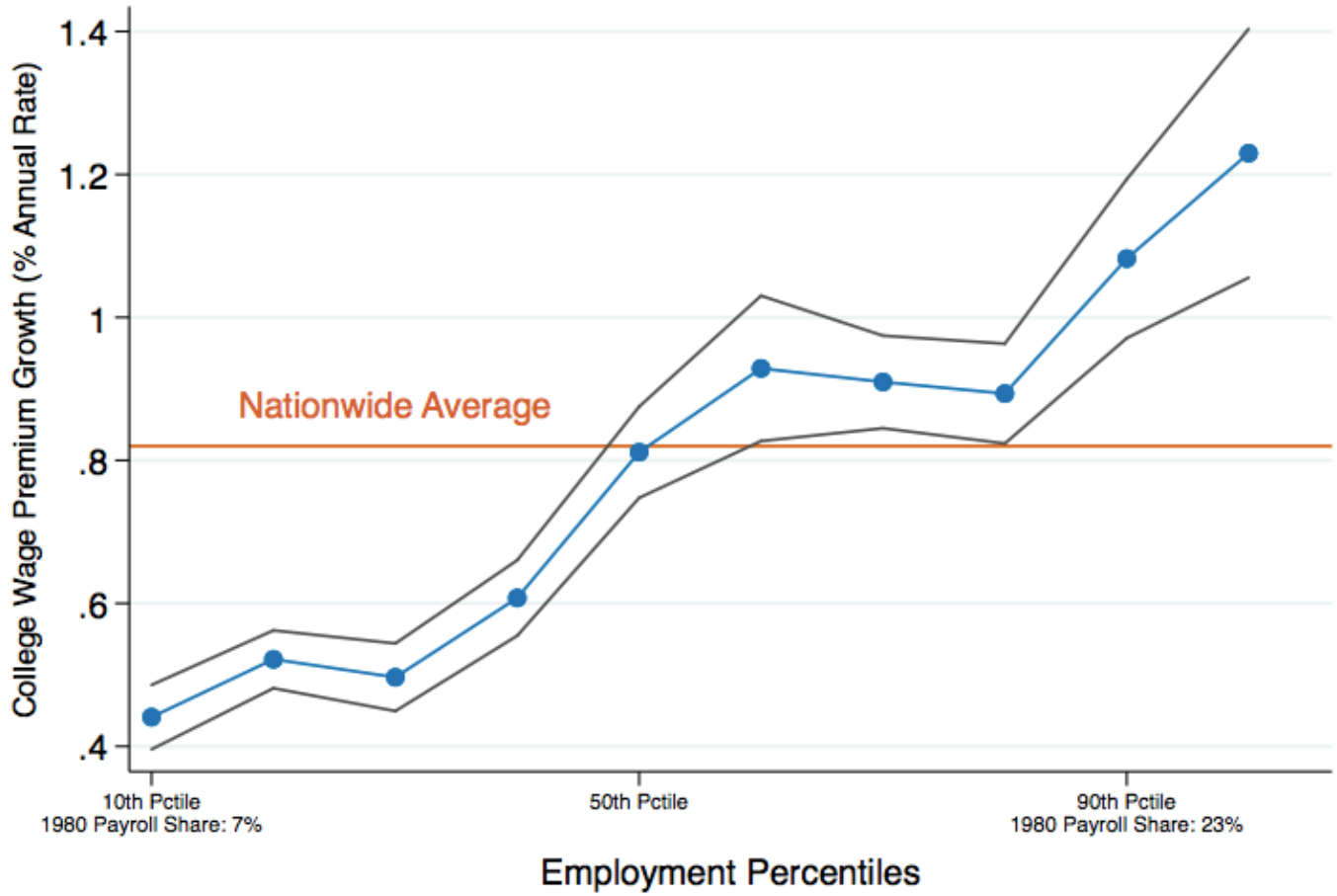
A theory of skill-biased services offshoring?

Alternative story:

- Offshorable tasks (e.g. call centers, customer services, mechanical turks) less skill-intensive than the other tasks
- Countries differ by their comparative advantage in tasks production
- As communication costs fall, countries specialize in their comparative advantageous task
- Given the differential skill-intensity of the two task production, these effects combine to raise the skill premium in some labor market and depress it in the others

Winners and losers across US labor markets (Eckert, 19)

Figure 1: Skill Premium Growth Across Commuting Zones 1980-2010



Does services offshoring hamper in-house innovation?

Alternative story:

- Offshoring changes importing firms$'$ incentives to invest in innovation:
  - with better access to foreign inputs, importing firms use cheaper imported inputs as a substitute for self-made inputs, and thus have less incentive to develop their own in-house varieties
- Chinese firms facing input tariff cuts during 01-06 reduced their R&D
- Prediction: Offshoring triggers *improvements* in the average value of the firm, *decline* in average productivity over time

Productivity decline due to offshoring in China (Lu, 19)

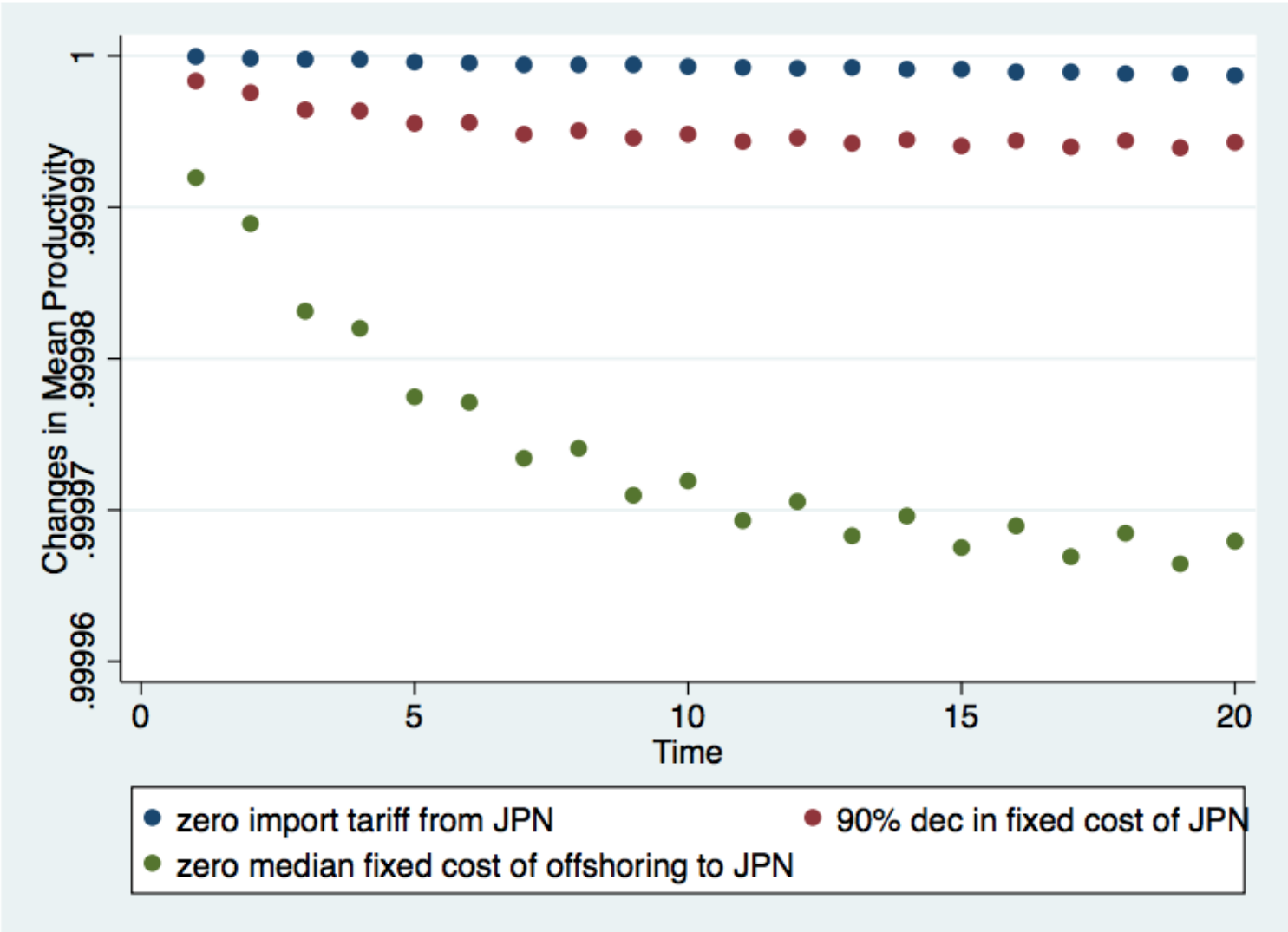


Figure 3: Productivity Trajectory for 20 years

Bartik instruments: limitations

- Locations assumed independent and spillover is limited within local labor market. How do you handle spatial spillovers across labor markets or any spatial correlation?

Firm-level productivity: measurement

- Productivity measure: firms$'$ gross value added at market prices. Why not gross value added per employee or firm-level TFP?
- What about correlation between input levels and the unobserved firm-specific productivity shock? Firms that have a large positive productivity shock may respond by using more inputs. Plain revenues per worker might overestimate firm-level productivity.
- What about firm selection due to exit/entry? See Levinsohn and Petrin (03)

Possible follow-ups

Services offshoring and firm concentration

- Employment elasticity: small firms (10^{th}pctile) $\sim$ 0.02%, large firm (90^{th}pctile) $\sim$ 0.06%
- $\Longrightarrow$: lower communication costs trigger employment concentration in larger firms
- Can services offshoring account for:
  - recent increase in *market concentration* (De Loecker et al., 18) ?
  - rise of *superstar firms* (Autor et al., 17)?

Services offshoring and firming-up inequality

- Wage elasticity: small firms (10^{th}pctile) $\sim$ -0.05%, large firm (90^{th}pctile) $\sim$ 0.06%
- $\Longrightarrow$: lower communication costs pushes up wage-inequality
- Can services offshoring explain:
  - recent increase in the portion of *firm-driven* wage-inequality (Bloom et al., 18) ?