February 4, 2011

Offshoring of Tasks and Flexible Employment: Relationships at the Firm Level

E. Tomiura, B. Ito & R. Wakasugi

Motivations

- Global→ L demand elastic (e.g. Rodrik, Slaughter)

- Globalization = Import → Offshoring

  Unskilled → Skilled service tasks (e.g. Feenstra)

- Workers heterogeneous

  Non-regular workers = flexible/insecure, elastic

  unskilled, low-wage

Japanese labor market

- Traditionally, life-time employment system

  L Adjusted mainly through non-regular workers

  Regular vs. Non-regular gap drastic

- Dispatched workers for production prohibited

  → Deregulated in 2004

  Non-regular L expand

  Political debate on re-regulation

Purpose of this paper

- Evaluate the impact of offshoring on the employment flexibility/insecurity (regular %).
- Separate possible deregulation effects.

- Link the unique task-specific offshoring survey data with firm-level statistics.

  →Identify which task is especially related with non-regular employment.

Data description

- Offshoring survey by RIETI
  - Sent to all large/medium-sized firms
  - All manufacturing industries covered
  - Offshore/Domestic sourcing at 2000/2005
- Link with legal mandatory corporate statistics

Disaggregation of offshored tasks

- Production
- R&D
- Info services (e.g. software programming)
- Professional services
  (e.g. legal, financial, accounting)
- Customer supports (e.g. call center operation)
- Other tasks

Descriptive statistics

- Offshoring

  Limited but increasing (16% → 21%)

  Service offshoring inactive (<2%)

  Domestic sourcing of production >1/2

- Regular L % declining (88% → 83%)

→ Need to control for firm characteristics

Empirical specifications

(Previous year)

$$\frac{L_{jt}^{R}}{L_{jt}} = \alpha_1 OFF_{j,t-1} + \beta_1 DOM_{j,t-1} + Z_{j,t-1}\gamma_1 + IND \cdot \delta_1 + \mu_{1j} + \eta_{1jt}$$

Sourcing DUM

Firm characteristics

Unobserved firm-specific effect

$$\frac{L_{jt}^{R}}{L_{jt}} = \sum_s \alpha_3^s OFF_{sj,t-1} + \sum_s \beta_3^s DOM_{sj,t-1} + Z_{j,t-1}\gamma_3 + IND \cdot \delta_3$$

$$+ \theta_0 After + \theta_1 After * PRODDom_{j,t-1} + \theta_2 After * PRODOff_{j,t-1}$$

$$+ \mu_{3j} + \eta_{3jt}$$

Before/After DUM (interacted with production sourcing)

Estimation results on offshoring

- Offshoring firms depend significantly ***less*** on regular full-time workers.

- Offshoring of ***professional services*** has a strong negative impact.

- Significance of ***production*** offshoring lost, once the institutional change considered.

Results on other variables

- FDI → Non-regular L
- Export → Regular L but NOT significant

- K/L, Firm size → Reg. L
- Owned more by parent → Non-reg. L

- R&D, Volatility, Foreign own, Computer Net (insignificant in our sample)

Concluding remarks

- Offshoring significantly related with flexible/insecure employment even after firm characteristics controlled for.
- Impacts vary across tasks. Important to separate globalization effect from domestic institutional effect.
- Measuring magnitudes remains for future.