Economic Contributions of IT Outsourcing: An Industry-Level Analysis

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Background: IT Outsourcing

Definition

- Purchase of IT services such as systems design/development/management, hardware/facilities management, and data processing services from third-party vendors

IT outsourcing on the rise

- Worldwide spending in IT outsourcing will rise from $191 billion in 2004 to $267 billion by 2009 (Gartner Group, 2005)
- Growth of offshore outsourcing

Reasons for IT outsourcing (ITtoolbox, 2004)

- Cost savings (37.9%)
- Need for special skills/services/equipment (20.9%)
Value of IT Outsourcing?

- IT outsourcing can create value
  - Reduced costs, effective use of staff, access to advanced technologies (Rao, et al., 1996)
  - Vendors’ efficiency based on complementary core competences (Levina and Ross, 2003)

- However...
  - Hidden transaction costs associated with transition to and management of IT outsourcing (Aubert et al., 1998)
  - The quality of outsourced services may be lower (Gorg, et al., 2004)

Research Questions

- How can we conceptualize and measure IT outsourcing at the industry level?
- Has IT outsourcing made positive contributions to US industries?
- Are there any systematic differences between industries with respect to the use and economic impact of IT outsourcing?
Production Function Framework

- Industry production function

\[ output = f(\text{capital, labor, intermediate inputs}) \]

- IT capital
- non-IT capital

IT services
(non-IT outsourcing)

Data and Summary Statistics


- IT outsourcing: services purchased from the two IT services industries
  > Computer Systems Design and Related Services
  > Information and Data Processing Services

- On the average, a US industry spent \textit{US$2 billion per year} in IT outsourcing over the period

- There is huge variation in the spending in IT outsourcing (from $20 million to over $10 billion per year)

Contributions of IT Outsourcing: Full Sample

- IT outsourcing has made a positive and significant contribution to industry output growth in the U.S.
- For a dollar spent in IT outsourcing, an industry earned about $8 on the average.
Contributions of IT Outsourcing: Goods vs. Services Industries

- Services-producing industries use more IT outsourcing than goods-producing industries
- Contributions from IT outsourcing are greater in services-producing industries

Output Contribution Comparison

- IT capital
- Non-IT capital
- Labor
- IT outsourcing
- Other intermediate inputs