

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

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

IT capital non-IT capital

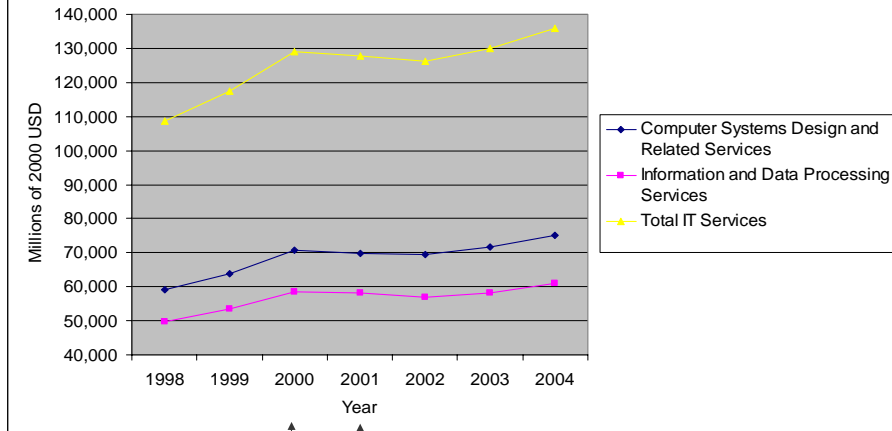
IT services
 (IT outsourcing)

non-IT services
 intermediate inputs

Data and Summary Statistics

- ◆ New data for 61 U.S. private industries from US Bureau of Economic Analysis for the 1998-2004 period
- ◆ **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 *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)

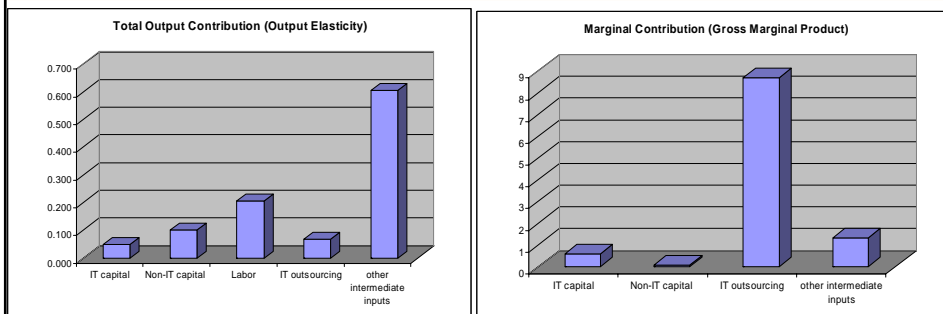
IT Outsourcing Trend (1998-2004)



↑ Y2K
↑ Dot com crash
911 terrorist attack

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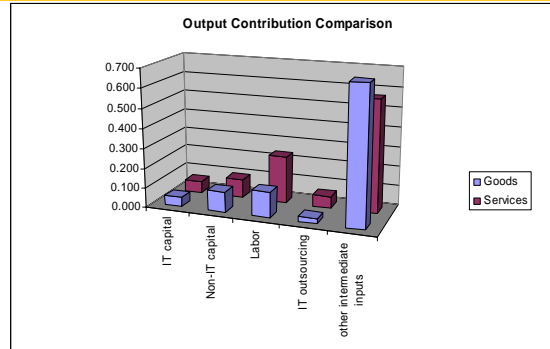
Contributions of IT Outsourcing: Full Sample



- ◆ 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.

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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