IT and the Global Labor Market

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Investigation

Role and value of IT in global economy
  Service sector
  Manufacturing

Is this value responsible for outsourcing?
Outline

• Value of IT in U.S. economy
  – Service sector
  – Manufacturing
• Value of IT in developing countries
• Discussion of outsourcing
Looking Back: Mid 90s

• IT is important to growth, but in context of a broader set of managerial decisions
• Productive IT applications had 3 characteristics
  – Tailored by sector and linked to performance levers
  – Built capabilities over time
  – Co-evolved with managerial innovation
Narrowly Tailored

• Eight performance levers
  – Substituting capital for labor
  – Deploying labor more efficiently
  – Reducing non-labor costs
  – Increasing labor efficiency
  – Increasing asset utilization
  – Selling new value added goods
  – Shifting to higher value added goods
  – Realizing more value from existing goods
Service Sector

• Retail
  – Examples
    • Warehouse and transportation management systems
  – Reduced nonlabor costs
  – Substitution of capital for labor
  – Realized more value from existing goods
  – Increased labor efficiency
Service Sector

• Banking
  – Examples
    • Credit scoring and underwriting software
    • Check imaging
    • Voice Response Units (VRUs)
  – Levers
    • Substituting capital for labor
    • Deploying labor more efficiently
    • Increasing asset utilization
Manufacturing

• Semiconductors
  – Examples
    • Electronic design automation
    • Process control systems
    • Process diagnostic tools
  – Levers
    • Selling of new value added goods
    • Increased labor efficiency
    • Increased asset utilization
Manufacturing

• Valve making
  – Computer numerically controlled (CNC) machines
    • Programmed by software
    • Leads to reduction in number of machines
  – Flexible manufacturing systems
    • Coordinates multiple CNC machines
    • Speeds up run time
Manufacturing (cont)

• Thus, competitive strategy of IT enabled U.S. firms has changed to producing customized products
Global Implications

- Outsourced services and goods
  - IT offers little comparative advantage
  - Domestic demand for IT has dropped
  - Comparative advantage in labor

- Demand still exists for specialized, expert services
Global Implications

• Same is true of manufacturing
  – US firms produce more specialized goods
  – Developing nations producing more batch commodities
Conclusion?

• Given 3.4 million IT jobs are projected to go offshore by 2015, how will we bridge digital divide here in US?
• How will we distribute those jobs among developing nations?