Foreign Competition and Domestic Innovation

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Overview

• Impact of globalization on domestic firms:
  – Increased competition at home
  – Outsourcing / offshoring capabilities
  – Increased market opportunities overseas

• This talk:
  – Theoretical predictions
  – Empirical findings
Effects on Domestic Innovation: Theory

• Increased competition at home:
  – (-) squeeze profits and cause downsizing
  – (+) encourage innovation as a path to “escape competition”

• Outsourcing / offshoring:
  – (+) reallocate resources from production to innovation
  – (-) increase distance between R&D and production
  – (-) decrease need for cost-saving technologies
The Rise of China
Empirical Investigation

• Measure the *overall* effects of Chinese import growth on large U.S. firms’ innovative activities
  – Key outcome variable: change in firm patenting
  – Key explanatory variable: change in Chinese industry import penetration

• Potential confounding factors:
  – Changing demand in domestic markets
  – Global technological trends

Useful Facts

• U.S. manufacturing is a locus of U.S. innovation
  – Less than 1/10 of U.S. employment
  – More than 2/3 of U.S. R&D spending
  – More than 3/4 of U.S. corporate patents

• Computer and chemical sectors experienced distinct trends between 1991 and 2007
  – Computers and electronics experienced huge increase in patenting and import exposure
  – Chemicals experienced decline in patenting and no change in import exposure

Key Findings

• Within sectors, industries facing more import competition show decline in patenting

• Trade-exposed U.S. industries also see reduced sales, employment, profits, and R&D spending, suggesting that they downscale both production and innovation

• Effects most negative in initially less profitable, more indebted firms

Additional Evidence

• Evidence from Canada (Kueng Li & Yang 2016)
  – More trade-exposed Canadian industries have more exits
  – Surviving firms in more trade-exposed industries experience a strong decline in process innovations

• Evidence from Europe (Bloom Draca & Van Reenen 2015)
  – More trade-exposed European industries are subject to higher rates of plant shutdown and lower overall employment growth
  – Surviving firms in more trade-exposed industries patent more and expand investment in IT