# Fear and Offshoring: Imports *and* Exports of Services

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JOB PROSPECTS

# Pain From Free Trade Spurs Second Thoughts

## *Mr. Blinder's Shift Spotlights Warnings Of Deeper Downside*

By DAVID WESSEL
And BOB DAVIS

For decades, Alan S. Blinder—Princeton University economist, former Federal Reserve Board vice chairman and perennial adviser to Democratic presidential candidates—argued, along with most economists, that free trade enriches the U.S. and its trading partners, despite the harm it does to some workers. "Like 99% of economists since the days of Adam Smith, I am a free trader down to my toes," he wrote back in 2001.

*Alan S. Blinder*

Politicians heeded this advice and, with occasional dissents, steadily dismantled barriers to trade. Yet today Mr. Blinder has changed his message—

### Most Vulnerable

Selected occupations ranked by Princeton economist Alan Blinder as "highly offshorable":

| Occupation | Number of U.S. workers |
|---|---|
| Computer programmers | 389,090 |
| Data entry keyers | 296,700 |
| Actuaries | 15,770 |
| Film and video editors | 15,200 |
| Mathematicians | 2,930 |
| Medical transcriptionists | 90,380 |
| Interpreters and translators | 21,930 |
| Economists | 12,470 |
| Graphic designers | 178,530 |
| Bookkeeping, accounting and auditing clerks | 1,815,340 |
| Microbiologists | 15,250 |
| Financial analysts | 180,910 |

big iceberg," Mr. Blinder says.

The critique comes as public skepticism about allowing an unfettered flow of goods, services, people and money across borders is intensifying, including some Republicans as well as many Democrats. (See related article on page A6). The rethinking is helping

*Please turn to page A14*

# Overview

- Considerable interest in potential impact of trade in services

- Data infrastructure is unsatisfactory

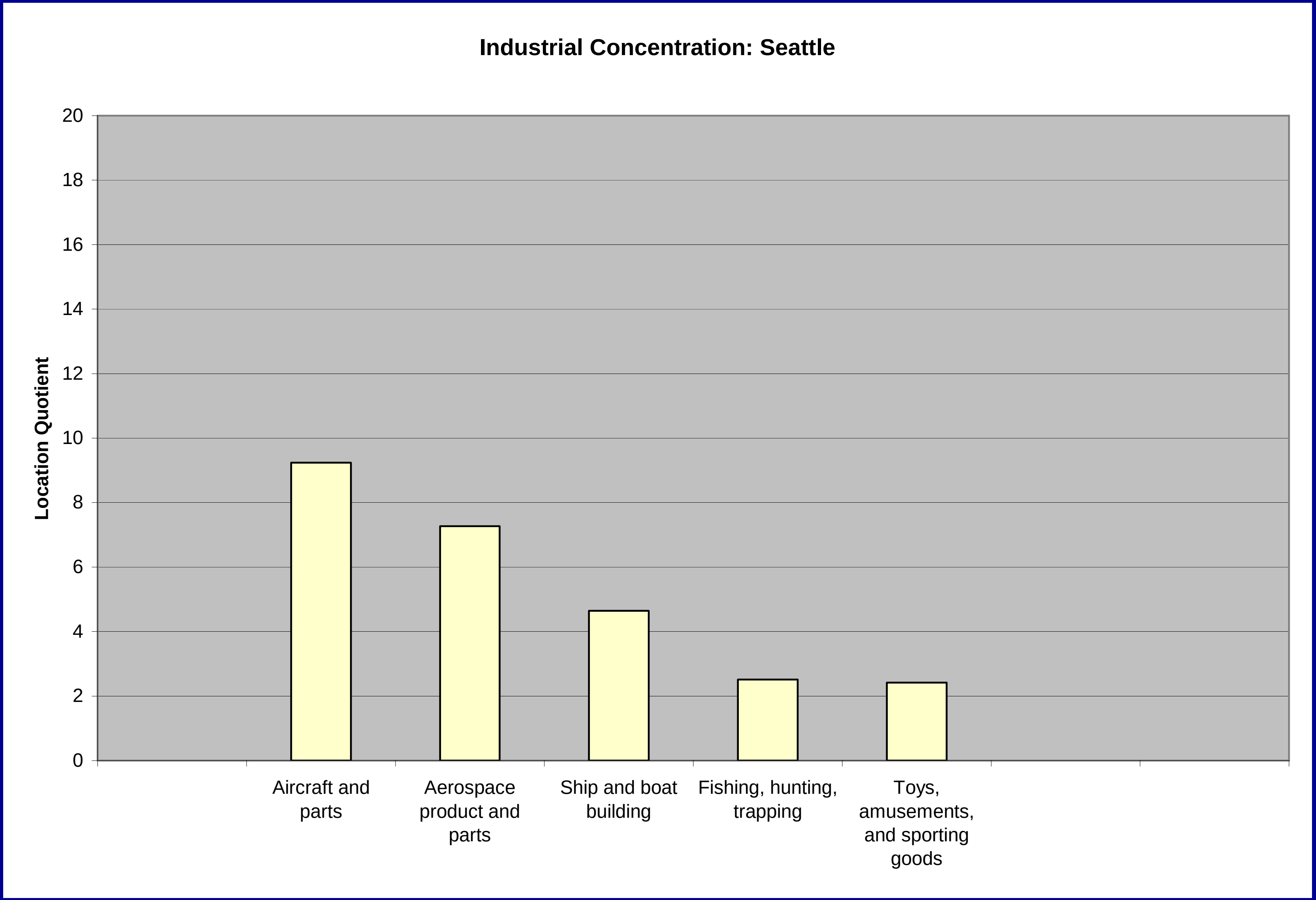
- In this talk:
  - Describe new methodology to identify tradable services
  - Examine direct evidence of trade in services
  - Relate to existing empirical research on impact of trade on manufacturing
  - Examine impact to date on labor market outcomes

# Highlights

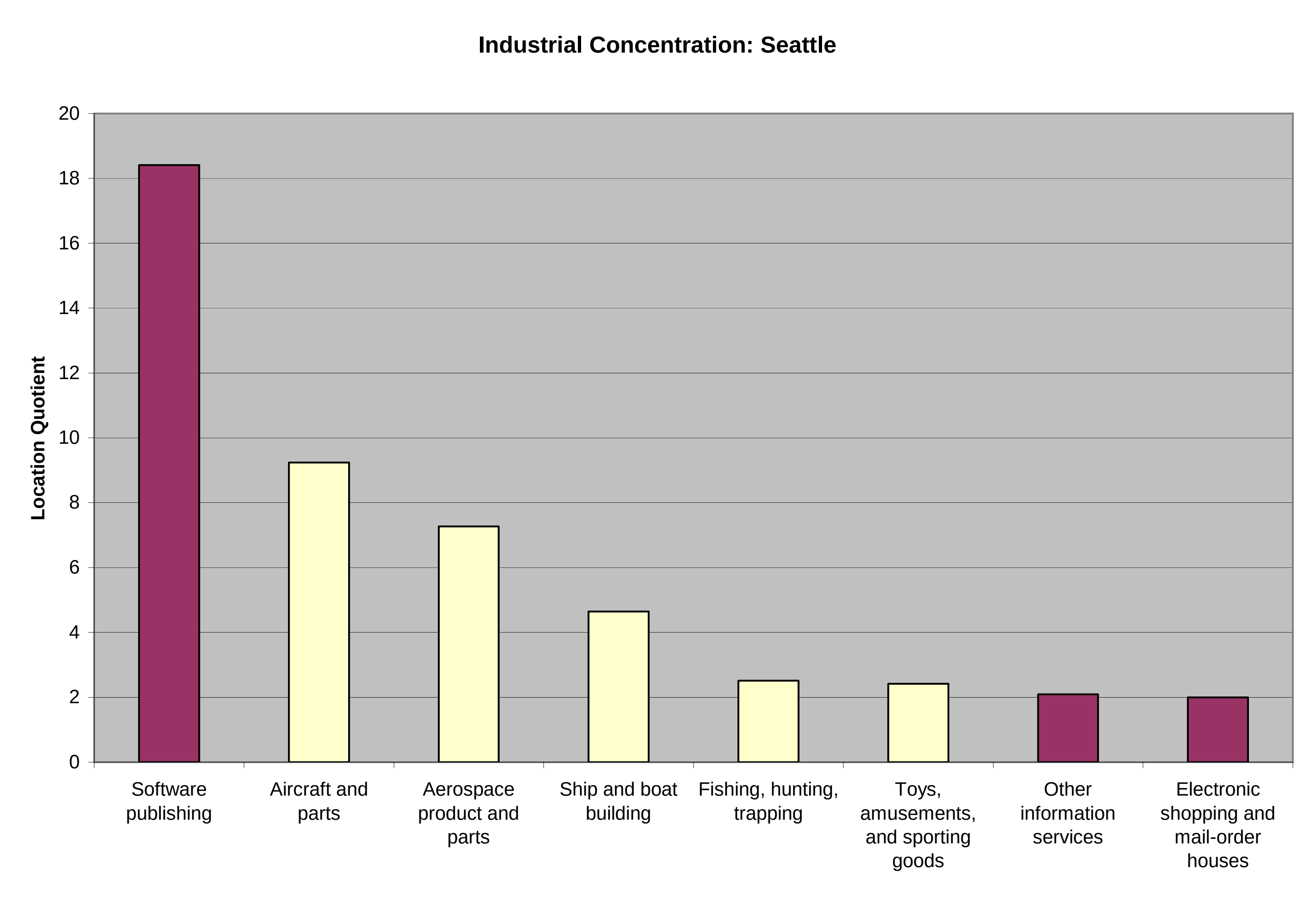
- Many service activities are tradable
  - More employment exposed to trade in services than in manufacturing
- Tradable services appear consistent with U.S. comparative advantage
  - Tradable services employ high-skill, high-wage workers
- Trade in services has not yet had a measurable impact on U.S. labor market
  - Little evidence of net employment or wage effects

# “Tradable” Services

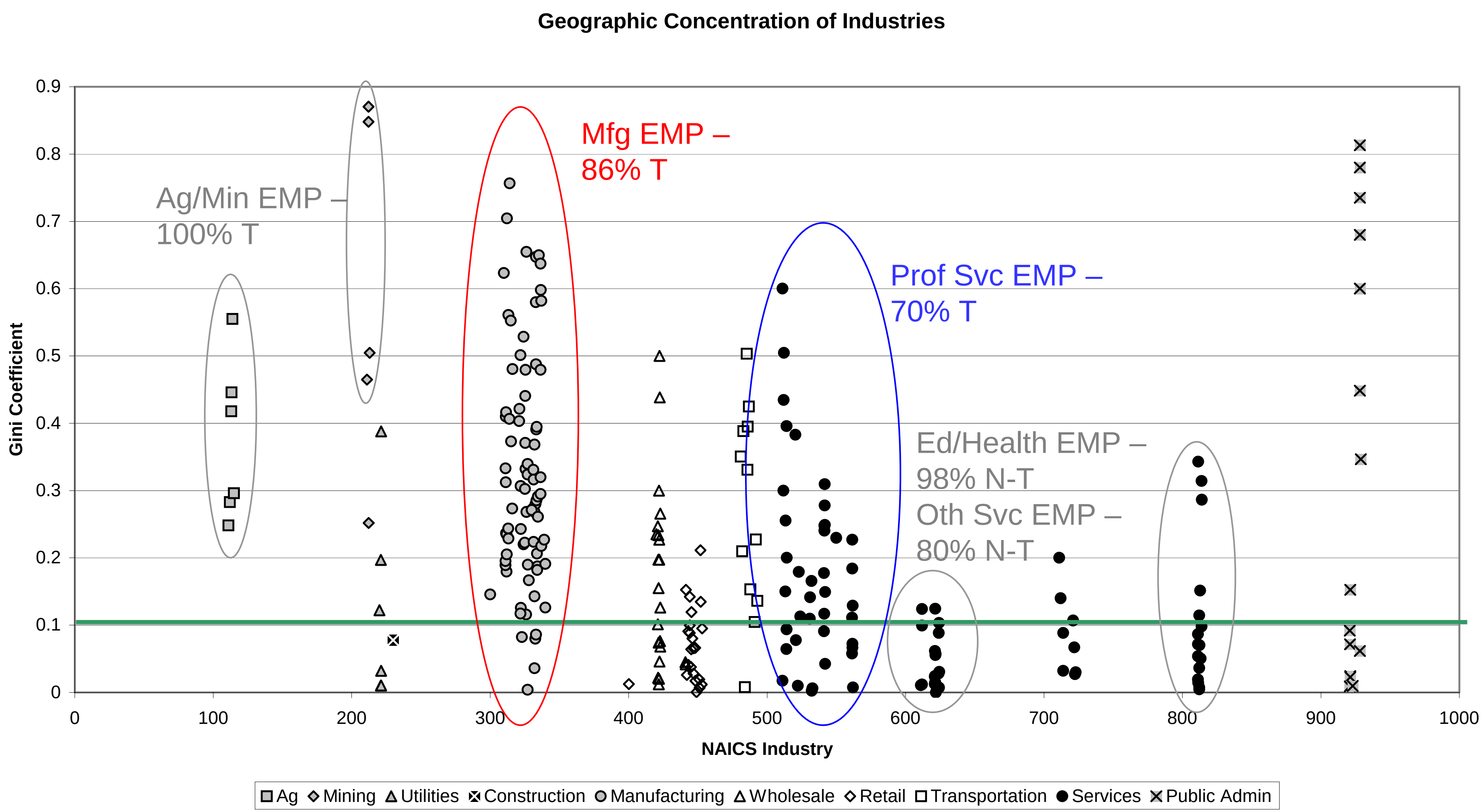
# Empirical Approach: Economic Geography



# Empirical Approach: Economic Geography

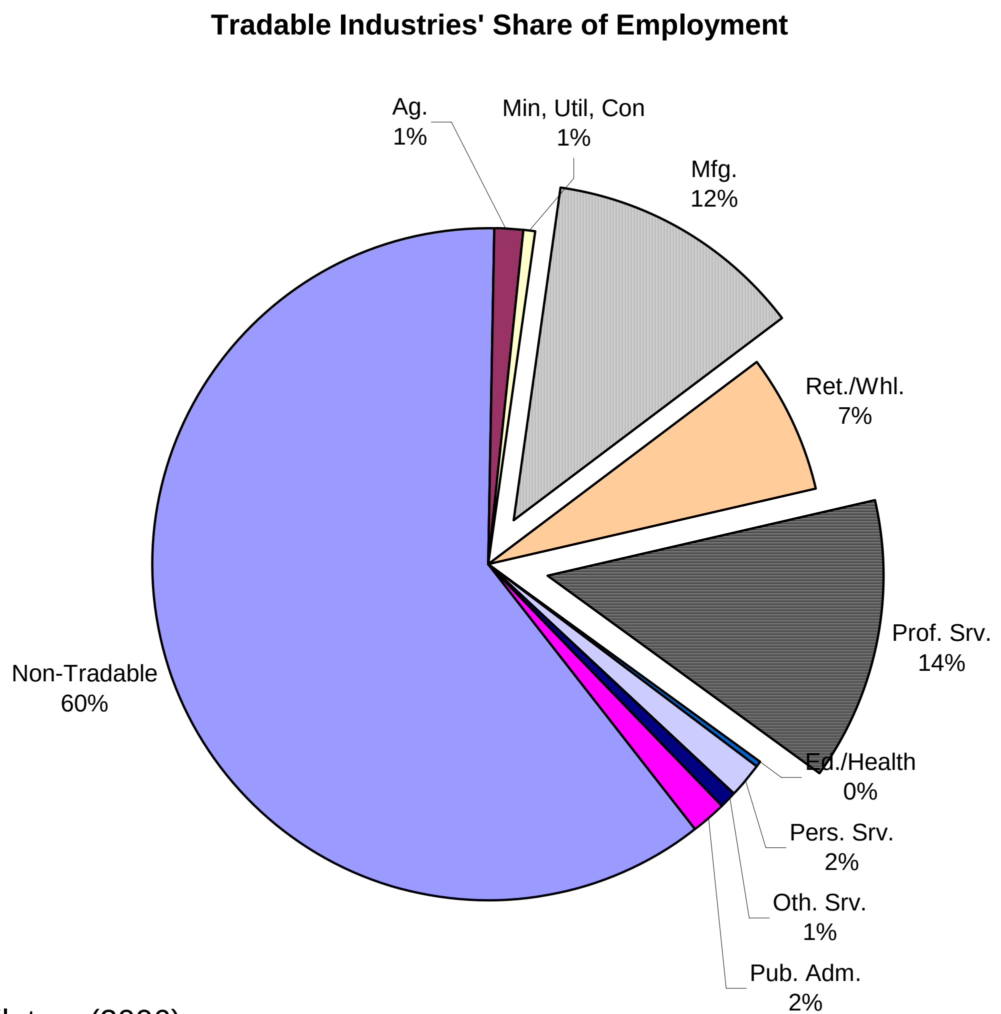


# Geographic Concentration of Industries in PUMS data




Source: Jensen and Kletzer (2006)

# Employment Shares in Tradable Industries




Source: Jensen and Kletzer (2006)

# Education, Earnings, and Skill in Tradable Services

Workers in tradable service industries have higher education levels:

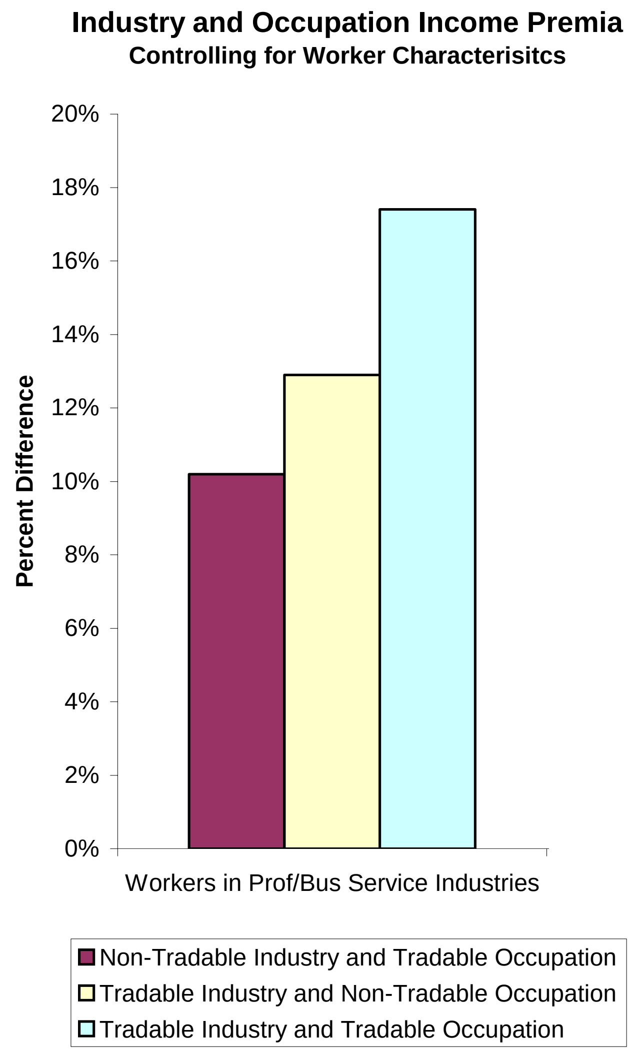
Tradable Manufacturing:

| | |
|---|---|
| College Degree | 19.6% |
| Advanced Degree | 5.6% |

Tradable Services:

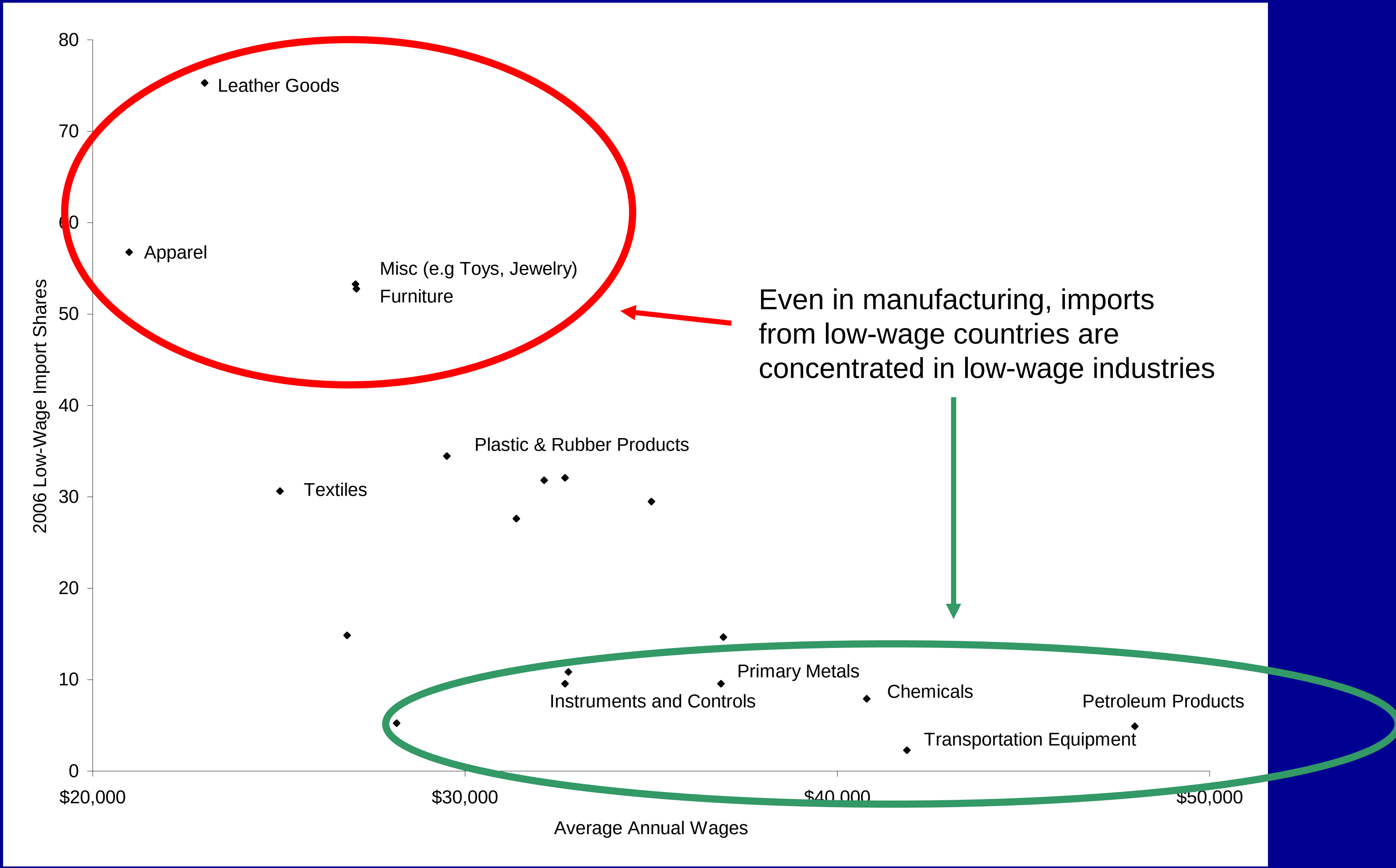
| | |
|---|---|
| College Degree | 42.2% |
| Advanced Degree | 14.1% |

Tradable services tend to be in sectors with relatively high wages…




Source: Jensen and Kletzer (2006)

# Low-Wage Imports in Manufacturing




Source: Author’s calculations using import data from the Census Bureau; wage data from BLS

# Business Service Exporters

## Business Service Exporters

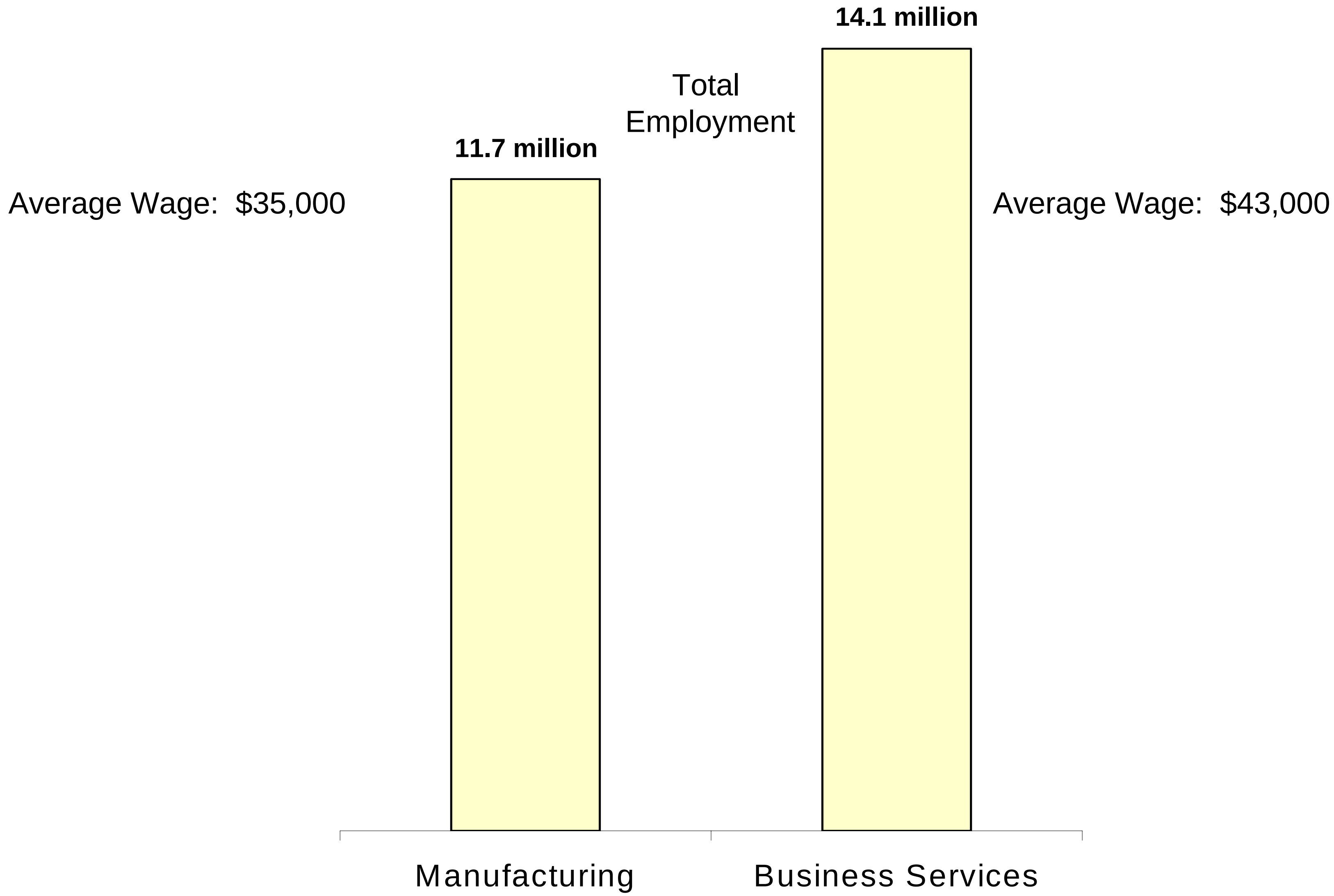
- Select 2-digit NAICS industries in the Census of Services include question on exports

- Information (51)
  - Software, newspaper, periodical book publishers
  - Motion picture and sound recording industries
  - Broadcasting, internet, ISP and telecommunications

- Professional and Technical (54)
  - Legal, accounting, architectural, engineering, consulting, marketing, and scientific

- Admin Support (56)
  - Administrative, temporary help, telemarketing and collection
  - Facilities management, security, janitorial, and landscaping

# Exporting in Manufacturing and Business Services




Source: Author's calculations from 2002 Economic Census;
Manufacturing (NAICS Industries 31-33), Business Services (NAICS Industries 51, 54, 56)

# Exporting Across Service Industries

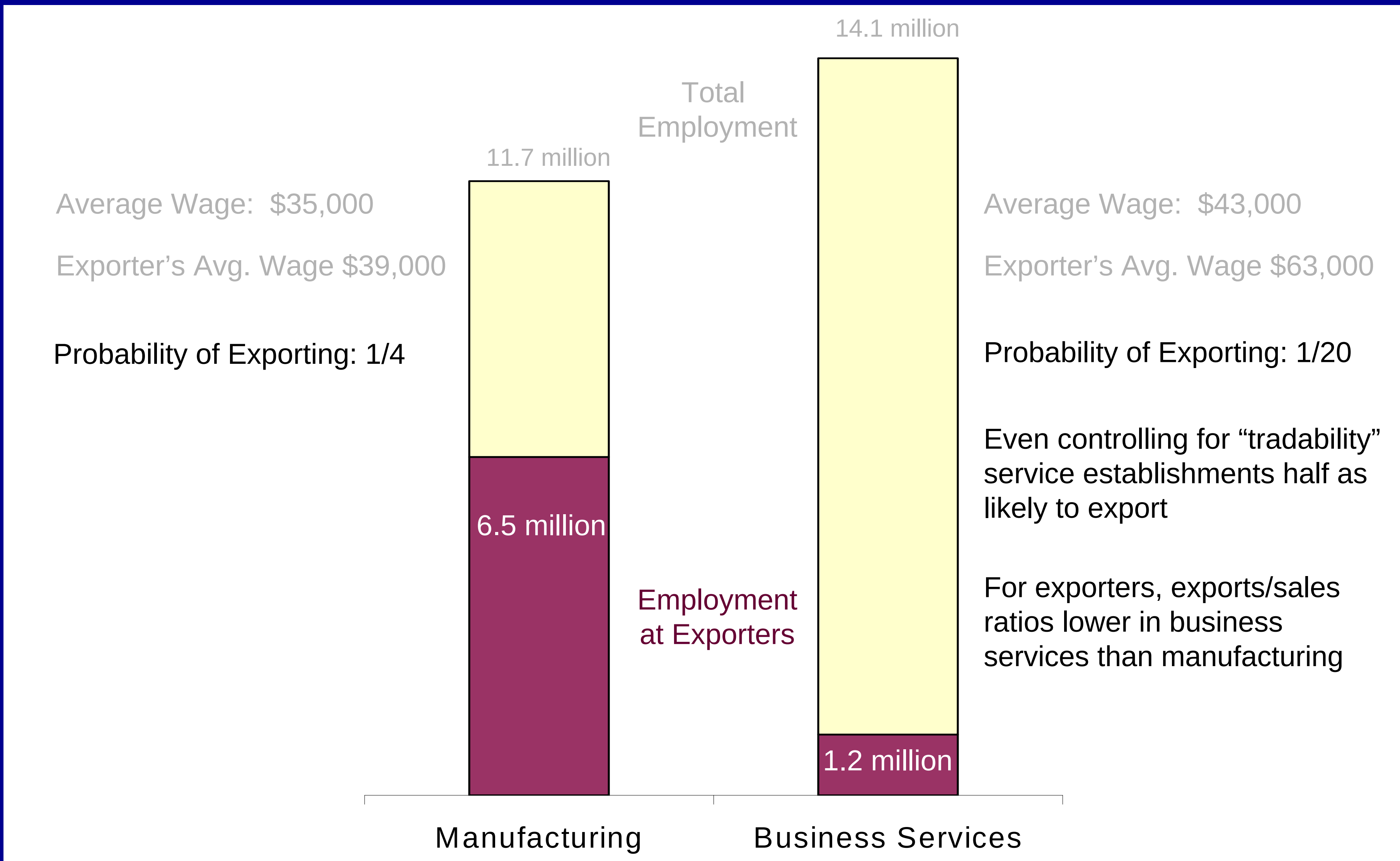
| Business Services (NAICS 51, 54, 56) | | | | |
|---|---|---|---|---|
| N=125 | Exports/Sales | Share Exporters | Geo. Concentration | Labor Productivity |
| Share Exporters | 0.55479<br><.0001 | | | |
| Geo. Concentration | 0.43616<br><.0001 | 0.52284<br><.0001 | | |
| Labor Productivity | 0.37735<br><.0001 | 0.49168<br><.0001 | 0.48887<br><.0001 | |
| Average Wage | 0.37415<br><.0001 | 0.44083<br><.0001 | 0.44902<br><.0001 | 0.74043<br><.0001 |

# Exporters Within Industries

| Business Services (NAICS 51, 54, 56) | | | |
|---|---|---|---|
| N=390,377 | | | |
| log(Employment) | 0.411 | 0.661 | -- |
| | (39.22) | (66.39) | -- |
| log(Sales) | 1.170 | 0.936 | 0.263 |
| | (100.4) | (82.19) | (44.79) |
| log(Average Wage) | 0.544 | 0.161 | 0.129 |
| | (88.42) | (30.95) | (24.64) |
| log(Labor Productivity) | 0.728 | 0.242 | 0.263 |
| | (105.72) | (41.48) | (44.79) |
| 6-digit NAICS Industry Controls | No | Yes | Yes |
| State Controls | No | Yes | Yes |
| Employment | No | No | Yes |

Source: Author's calculations using 2002 Census of Services data

# Exporting in Manufacturing and Business Services



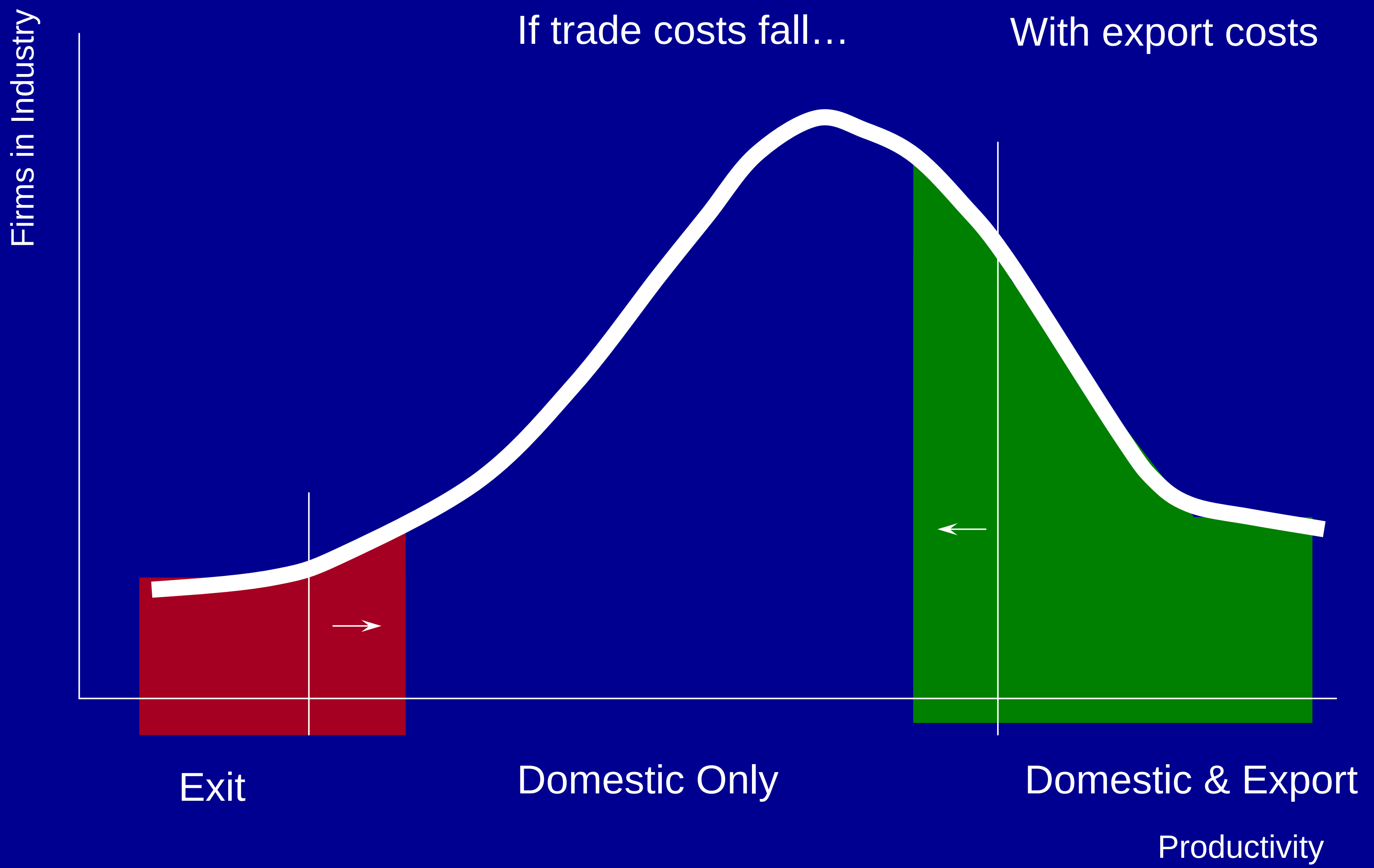

Source: Author's calculations from 2002 Economic Census;
Manufacturing (NAICS Industries 31-33), Business Services (NAICS Industries 51, 54, 56)

# Experience in Manufacturing

# Exporters and Exporting in Manufacturing

- Rare, larger, more capital intensive, more skill intensive, more productive, more likely to survive and grow
    - Bernard and Jensen (1995, 1999), Aw, Chung, Roberts (2000)
- Sunk costs to enter export market
    - Roberts and Tybout (1997), Bernard and Jensen (2004)
- High productivity before entry, little evidence of productivity growth from exporting
    - Clerides, Lach, and Tybout (1998), Bernard and Jensen (1999)

# Firms in International Trade



# Impact of Falling Trade Costs in Manufacturing

- When trade costs fall:
  - Low productivity producers exit
  - Relatively high productivity non-exporters start exporting
  - Existing (high productivity) exporters increase exports

- All of these increase aggregate productivity
  - In addition, producers in industries with falling trade costs have faster “in-house” productivity growth

- Comparative advantage both across and within industries

- No reason to expect this will play out any differently in services

Source: Bernard, Jensen and Schott (2006) *Journal of Monetary Economics*; Bernard, Jensen and Schott (2006) *Journal of International Economics*

# Impact to Date

# Employment and Wage Growth

| Labor Market Impact to Date | | |
|---|---|---|
| **Average Net Employment Change, Industries (1998-2004)** | | |
| | N | Mean |
| Ag, Min, Mfg -- Non-Tradable | 5 | -0.137 |
| Ag, Min, Mfg -- Tradable | 81 | -0.226 |
| Services -- Non-Tradable | 74 | 0.101 |
| Services -- Tradable | 52 | 0.129 |
| **Average Net Employment Change, Occupations (1999-2006)** | | |
| | N | Mean |
| Ag, Prod, Extract/Con -- Non-Tradable | 20 | 0.003 |
| Ag, Prod, Extract/Con -- Tradable | 56 | -0.183 |
| Services -- Non-Tradable | 117 | 0.048 |
| Services -- Tradable | 112 | 0.036 |
| **Average Median Wage Change, Occupations (1999-2006)** | | |
| | N | Mean |
| Ag, Prod, Extract/Con -- Non-Tradable | 20 | 0.175 |
| Ag, Prod, Extract/Con -- Tradable | 56 | 0.172 |
| Services -- Non-Tradable | 117 | 0.212 |
| Services -- Tradable | 110 | 0.244 |

## Worker Displacement

- In business service industries, job displacement rates in tradable industries are lower than non-tradable industries

- In business service occupations, job displacement rates in tradable occupations are not higher than non-tradable occupations

- Workers displaced from tradable service activities are more skilled and more likely to be re-employed
  - Some evidence of greater earnings loss, though from a 40% higher base

# “Fear” and Offshoring

- Many service activities are tradable
- However, do not expect that a large share of tradable service activities will move offshore
  - Tradable services are high-skill, high-wage and consistent with U.S. comparative advantage
- Suggestive evidence of impediments to service exports
  - Less service export activity than one would expect
- Increased trade in services (exports and imports) will increase productivity in U.S. and abroad

# Implications

- Collect more and better data
- Do not *fear* increased trade in services
  - Policy should work to remove existing impediments
- Facilitate and cushion adjustment
  - Expand TAA to cover service sector workers

# Thank You