Business Dynamics of Globally Engaged Firms

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Disclaimer
Any opinions and conclusions expressed herein are those of the authors and do not necessarily represent the views of the U.S. Census Bureau. All results have been reviewed to ensure that no confidential information is disclosed.
Business Dynamics Statistics

**Figure 1.** Shares of Employment, Job Creation, and Destruction by Broad Firm (Average), Size and Age Classes: Annual Average Rates, 1992–2005

Source: Haltiwanger, Jarmin, Miranda (2013)
Business Dynamics Statistics: Background

- BDS (https://www.census.gov/ces/dataproducts/bds/)
  - Provides annual measures of business dynamics (such as job creation and destruction, establishment births and deaths, and firm startups and shutdowns) for the economy and aggregated by establishment and firm characteristics.

- Joint project between Research & Methodology and Economic Programs
  - Currently available: 1976-2014

- Selected research output
  - Decker, Haltiwanger, Miranda (2014; 2016); Haltiwanger, Jarmin, Miranda (2013); Fort, Haltiwanger, Jarmin, Miranda (2013)
Broad Motivating Questions

• Outsized role of globally engaged firms in the U.S. economy

• Labor market consequences of globalization
  • Import competition: Autor, Dorn, Hanson (2013), Pierce & Schott (2016), Bernard, Jensen, Schott (2006)
Business Dynamics Statistics of Globally Engaged Firms

• **BDS-Exporting** Firms
  – Export merchandise transactions-firm linked microdata (LFTTD)

• **BDS-Importing** Firms
  – Import merchandise transactions-firm linked microdata (LFTTD)

• **BDS-Multinational** Firms
  – Identify multinational firms using BEA surveys (Multinational Crosswalk)
The Business Dynamics Statistics of U.S. Goods Trading Firms

• Microdata links
  • Confidential linked firm-trade transactions microdata (LFTTD)
    • Improve upon previous research output (Bernard, Jensen, Schott, 2009)

• Data outputs
  • LFTTD: Accessible through the U.S. Federal Statistical Research Data Center network (currently available: 1992-2014)
  • Planned public use BDS of U.S. Trading Firms
    • Tabulations
    • Visualizations
Merchandise Trade Transaction-Firm Match

1. Import and Non-Canadian Export Transactions
2. Canadian Export Transactions
3. Canadian Export Transactions
4. LFTTD
5. Name
6. EIN
7. Business Register
8. LFTTD
9. Firm ID
10. Longitudinal Business Database
11. After various aggregations
12. BDS of Trading Firms
MNC-Firm Match

BE-10/BE-11
EIN, Name, Address

BE-12/BE-15

Business Register

Multinational Crosswalk

Multinational Crosswalk
Firm ID

Longitudinal Business Database

After various aggregations

BDS of Multinationals
### Proposed Statistics:

- Counts (total, entrants, exiters)
  - Firms
  - Establishments
  - Employment

- Job creation
  - Births
  - Incumbents

- Job destruction
  - Deaths
  - Incumbents

### Proposed Tables:

- Economy-wide
  - Firm age
  - Firm size
  - Sector
  - State

**By Exporter, Importer, Multinational**
Selected Statistics for Goods Exporters

All calculations based on beta version; Revisions expected.
Share of Firms and Employment
Average 2001-2011
Share of Exporting Firms
By Firm Size, Average 2001 - 2011
Percent of Exporting Establishments
By SIC, Average 2001-2011

- Ag-For-Fish: 0.006
- Mining: 0.034
- Construction: 0.005
- Manufacturing: 0.187
- TCU: 0.036
- Wholesale: 0.167
- Retail: 0.015
- FIRE: 0.008
- Services: 0.010
Gross Job Creation and Destruction
By Exporting Status and Firm Age, Average 2001-2011
Net Job Creation
By Exporting Status, Manufacturing

Net Job Creation Rate in the Manufacturing Sector
By Exporting Status (1992-2011)
Important Challenges

• Representativeness
  – Unmatched transactions
  – Improve coverage of low-value merchandise traders

• Identification of all traders
  – Trade in services
Composition of U.S. Labor Force, 2012

- Business Services: 24%
- Personal Services: 27%
- Wholesale trade: 4%
- Retail trade: 11%
- Transportation and warehousing: 3%
- Government: 16%
- Manufacturing: 8%
- Construction: 4%
- Mining: 1%
- Agriculture: 2%
- Utilities: 0%
- Agriculture: 2%
- Mining: 1%
- Wholesale trade: 4%
- Retail trade: 11%
- Transportation and warehousing: 3%
- Government: 16%
- Manufacturing: 8%
- Construction: 4%
- Mining: 1%
- Utilities: 0%
- Agriculture: 2%

Source: 2012 Economic Census and Census of Governments
Service Sector: Overview

- Service sector historically relatively poorly measured
  - Historically under-classified
  - No measure of capital stock
  - No measure similar to production/non-production workers
470 6-digit NAICS codes
28,000 workers/industry

Capital and skill measures at establishment level

FY 2009 $17.8M
$60/establishment

10,000 HS categories
$38M at Census
$10M at DHS

Transportation and warehousing 3%
Retail trade 12%
Wholesale trade 5%
Manufacturing 10%
Construction 5%
Utilities 0%
Mining & Ag. 1%
State and Local Government 12%
Federal Government 2%

Business Services 25%
Personal Services 25%


325 6-digit NAICS Codes
208,000 workers/industry

No measures of inputs at establishment level

FY 2009 $39.9M
$9/establishment

47 Services categories
$14M at BEA

United States Census Bureau
U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov
Trade in Services: Coverage

• Service sector trade relatively poorly measured
  – 10,000 HS codes vs. 47 service trade categories
  – Administrative system (transaction) vs. survey collection (firm)
  – Higher exemption levels
    • Cut-off for goods transactions: $2,500
    • Cut-off for trade in services reporting: If total transactions in any of the categories exceeded $2 million for receipts or $1 million for payments, the U.S. person is required to provide detailed information by type of service and by country.
Trade in Services: Collection System

• Multiple collection systems for services trade data
  – BEA Trade in Services (2006 – on-going)
    • Firm level, measure of service activity traded, imports and exports
  – Economic Census (1992 – on-going)
    • Select industries, establishment level, industry exporting, no imports
    • Enterprise level exporting and importing
Trade in Services: Collaborative Efforts

- Joint BEA-Census project to investigate feasibility of combining various measures of services trade to incorporate in BDS-Exporting Firms and BDS-Importing Firms
  - BEA trade in services surveys 2007
  - Economic Census 2007
  - Company Organization Survey (2006 special supplement)
Trade in Services: Suggestions

• Collect capital data for service industries at establishment level in Economic Census
• Collect exempt/non-exempt break-outs of employment at establishment level in Economic Census
• Collect imports and exports of services at establishment level across all industries in Economic Census
• Explore expanded coordination between BEA and Census on trade in services collection
Representativeness

• Unmatched transactions
  – Probabilistic matching methods being explored

• Coverage of “Small” Traders
  – Low value transactions are not covered in customs records
    • Potential collaborators: Small package courier companies (e.g. FedEx, UPS)
    • Variables to be collected: mailing addresses (domestic and foreign)
Questions for FESAC

• How to improve representativeness?
  – Unmatched transactions
  – Improve coverage of low-value merchandise traders

• How to improve identification of all traders?
  – Using existing trade in services data
  – Future trade in services data collection efforts