Measuring the Digital Economy

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Components of the Digital Economy

• **E-business infrastructure:** the share of total economic infrastructure used to support electronic business processes and conduct electronic commerce.

• **E-business:** any process that a business organization conducts over computer-mediated networks.

• **E-commerce:** the value of goods and services sold over computer-mediated networks.
US Census Bureau’s E-Commerce Products

• Quarterly Retail E-Commerce Sales
  • First published in 1999
  • Presented as seasonally adjusted and not-seasonally adjusted series

• Annual E-Commerce Statistics
  • Covers manufacturing, retail, wholesale, and selected service industries
E-Commerce Sales as a Percent of Total Retail Sales

Source: Quarterly Retail E-Commerce Report.
E-Commerce in the US is growing but evolving at different rates in different sectors

E-Commerce Sales as a Percent of Total Sales
By Sector

Source: E-Stats Reports: Measuring the Electronic Economy.
E-Commerce Sales by Sector

Source: E-Stats Reports: Measuring the Electronic Economy.
Retail E-commerce

- The North American Industry Classification System (NAICS) separates retail business operations that conduct all business without a physical store
  - NAICS 454110: Electronic Shopping and Mail Order Houses
- Operations with both store and non-store transactions are classified as store retailers
  - No clean measure of total retail e-commerce sales
- Census Bureau developed a supplemental product to begin to address this problem
Supplemental Annual Retail E-commerce Table

2015 Electronic Shopping and Mail Sales by Product

<table>
<thead>
<tr>
<th>Product</th>
<th>Millions of Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Electronic Shopping and Mail-Order Houses</td>
<td></td>
</tr>
<tr>
<td>Motor vehicle and parts dealers</td>
<td></td>
</tr>
<tr>
<td>Furniture and home furnishings stores</td>
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<tr>
<td>Electronics and appliance stores</td>
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<tr>
<td>Building material and garden equipment and supplies</td>
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<tr>
<td>Food and beverage stores</td>
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<td>Health and personal care stores</td>
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<td>Gasoline stations</td>
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<tr>
<td>Clothing and clothing accessories stores</td>
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<tr>
<td>Sporting goods, hobby, book, and music stores</td>
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<tr>
<td>General merchandise stores</td>
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<tr>
<td>Miscellaneous store retailers</td>
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<tr>
<td>Nonstore retailers</td>
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</table>

Source: Sales for U.S. Electronic Shopping and Mail-Order Houses (NAICS 4541) – Total and E-commerce by Primary Business Activity (2011-2016)
Services E-Commerce: Clarifying questions to reduce suspected under-reporting

E-COMMERCE

E-commerce is the sale of goods and services where the buyer places an order, or the price and terms of the sale are negotiated, over an Internet, mobile device (M-Commerce), extranet, EDI network, electronic mail, or other comparable online system. Payment may or may not be made online.

A. Did this firm have any e-commerce revenue in 2016 or 2015?

☐ Yes

☐ No - Go to 9

B. What was the total e-commerce revenue in 2016 and 2015? . . . . . . .
Services E-Commerce

REVENUES FROM ELECTRONIC SOURCES

A. Did this firm have any revenues from customers entering orders directly on the firm’s websites or mobile applications in 2017?

☐ Yes
☐ No

B. Did this firm have any revenues from customers entering orders directly on third-party websites or mobile applications in 2017?

☐ Yes
☐ No

C. Did this firm have any revenues from customers entering orders via any other electronic systems (such as private networks, dedicated lines, kiosks, etc.) in 2017?

☐ Yes
☐ No

D. Of the total 2017 revenues reported in C, what was the dollar amount (or percentage) that was from the revenues identified in A-C above? Please provide an estimate if exact figures are not available.

<table>
<thead>
<tr>
<th>2017</th>
<th>2017</th>
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<td>$ Bil.</td>
<td>Mil.</td>
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<table>
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<th>Percent</th>
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<td>2501</td>
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</table>

United States Census Bureau
Economics and Statistics Administration
U.S. CENSUS BUREAU
census.gov
Measurement of the Gig Economy: Nonemployer Statistics Program

Source: Nonemployer Statistics, American FactFinder
Measurement of the Gig Economy: Nonemployer Statistics Program

Source: Nonemployer Statistics, American FactFinder
US Bureau of Labor Statistics
Digital Economy Data

- Quarterly Census of Employment and Wages
- Current Employment Statistics
- Producer Price Index
US Bureau of Labor Statistics

BLS Quarterly Census of Employment and Wages

- Number of establishments, employment, and total wages paid for each county, metropolitan area, state, and the nation by ownership (private and government – federal, state, local) and industry

- A census of all unemployment-insurance covered establishments collected each quarter, covering all industries, including:
  - Electronic Markets
  - Electronic shopping
  - Electronic auctions
US Bureau of Labor Statistics (BLS)

Current Employment Statistics

- Monthly data on employment, hours, and earnings for all employees and for production/nonsupervisory employees, by industry, for the nation, states, and metropolitan areas.

- Industry detail decreases as geographic areas get more local.

Industries include:
- Electronic markets and agents and brokers
- Electronic shopping
US Bureau of Labor Statistics (BLS)

Producer Price Index (PPI)

- A family of monthly price indexes
- Measures average change over time in selling prices received by domestic producers of goods and services.
- The PPI produces approximately 535 industry price indexes in combination with over 4,000 product line and product category sub-indexes, including:
  - Electronic and mail-order shopping