Shifting Ground of NAICS: North American Industry Classification System

St. Louis Federal Reserve
Beyond the Numbers
November 10, 2022

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The slides can be found at https://tinyurl.com/NAICSBTN22
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Links to informative educational material
What is it?

What is NAICS and Who creates North American Industry Classification System
Why Industry Classification?

History

- “Industry” as economic concept
  - Not classification - groupings
- 1939 Standard Industry Classification (SIC) adopted
- 1959 first use of SIC in Economic Census
- 1997 first version of NAICS

Usage

Trends and Comparisons

- Census- Economic Census (1954-)
- BEA- Gross Domestic Product (in/out tables) (GNP 1934-)
- BLS- Producer Price Index (inflation) (WPI 1891-1978, PPI [SIC]- 1945)
- Census- County Business Patterns (1986-)
North American Industry Classification System: NAICS

pronounced nākes, like snakes 🍊

- Standardize taxonomy used by Federal statistical agencies
- Classifying business establishments
- For the purpose of collecting, analyzing, and publishing statistical data
- Related to the U.S. business economy.
What is an Establishment?

**Food Store Supply Chain**

**PRODUCTION**
- Agriculture - 11
- Orange groves - 11131
- Fishing - 11411

**PROCESSING**
- Manufacturing - 31
  - Frozen food - 31141
  - Seafood - 31171

**AGGREGATION/DISTRIBUTION**
- Transportation - 48
  - Trucking, local - 48411
  - Warehousing - 493

**MARKETS/CONSUMERS**
- Retail - 44
  - Grocery - 44511
  - Grocery delivery - 49221
Four principles of \textit{NAICS}

1. NAICS is erected on a production-oriented conceptual framework. This means that producing units that use the same or similar production processes are grouped together in NAICS.

2. NAICS gives special attention to developing production-oriented classifications for (a) new and emerging industries, (b) service industries in general, and (c) industries engaged in the production of advanced technologies.

3. Time series continuity is maintained to the extent possible.

4. The system strives for compatibility with the two-digit level of the International Standard Industrial Classification of All Economic Activities (ISIC Rev. 4) of the United Nations.
### North American Industry Classification System (NAICS) Hierarchical Structure

<table>
<thead>
<tr>
<th>Level</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sector *</td>
<td>31</td>
<td>Manufacturing</td>
</tr>
<tr>
<td>Subsector *</td>
<td>315</td>
<td>Apparel Manufacturing</td>
</tr>
<tr>
<td>Industry Group *</td>
<td>3152</td>
<td>Cut and Sew Apparel Manufacturing</td>
</tr>
<tr>
<td>Industry</td>
<td>31525</td>
<td>Cut and Sew Apparel Manufacturing (except contractors)</td>
</tr>
<tr>
<td>U.S. Industry</td>
<td>315250</td>
<td>Cut and Sew Apparel Manufacturing (except contractors)</td>
</tr>
</tbody>
</table>

* Mexico & Canada Compatible
## 315250 Cut and Sew Apparel Manufacturing (except Contractors)

Cross-References. Establishments primarily engaged in--
- Cutting and/or sewing materials owned by others for apparel--are classified in Industry 315210, Cut and Sew Apparel Contractors;
- Knitting apparel or knitting fabric and manufacturing apparel--are classified in Industry 315120, Apparel Knitting Mills;
- Manufacturing fur and leather mittens and gloves--are classified in Industry 315990, Apparel Accessories and Other Apparel Manufacturing;
- Dyeing and dressing furs--are classified in Industry 316110, Leather and Hide Tanning and Finishing; and
- Manufacturing cloth diapers--are classified in U.S. Industry 314999, All Other Miscellaneous Textile Product Mills.

<table>
<thead>
<tr>
<th>2012 NAICS</th>
<th>2017 NAICS</th>
<th>2022 NAICS</th>
<th>Corresponding Index Entries</th>
</tr>
</thead>
<tbody>
<tr>
<td>315280</td>
<td>315280</td>
<td>315250</td>
<td>Apparel, fur (except apparel contractors), manufacturing</td>
</tr>
<tr>
<td>315220</td>
<td>315220</td>
<td>315250</td>
<td>Aprons, work (except leather, waterproof), men's and boys', cut and sewn from purchased fabric (except apparel contractors)</td>
</tr>
<tr>
<td>315240</td>
<td>315240</td>
<td>315250</td>
<td>Aprons, work (except waterproof, leather), women's and girls', cut and sewn from purchased fabric (except apparel contractors)</td>
</tr>
<tr>
<td>315220</td>
<td>315220</td>
<td>315250</td>
<td>Athletic clothing, men's, boys' and unisex (i.e., sized without regard to gender), cut and sewn from purchased fabric (except apparel contractors)</td>
</tr>
<tr>
<td>315240</td>
<td>315240</td>
<td>315250</td>
<td>Athletic clothing, women's and girls', cut and sewn from purchased fabric (except apparel contractors)</td>
</tr>
<tr>
<td>315280</td>
<td>315280</td>
<td>315250</td>
<td>Athletic uniforms, team, cut and sewn from purchased fabric (except apparel contractors)</td>
</tr>
<tr>
<td>315220</td>
<td>315220</td>
<td>315250</td>
<td>Bakers' service apparel, washable, men's and boys', cut and sewn from purchased fabric (except apparel contractors)</td>
</tr>
</tbody>
</table>
Different NAICS in Supply Chain

**PRODUCTION**
- Agriculture - 11
- Orange groves - 11131
- Fishing - 11411

**PROCESSING**
- Manufacturing - 31
  - Frozen food - 31141
  - Seafood - 31171

**AGGREGATION/DISTRIBUTION**
- Transportation - 48
  - Trucking, local - 48411
  - Warehousing - 493

**MARKETS/CONSUMERS**
- Retail - 44
  - Grocery - 44511
  - Grocery delivery - 49221
24 NAICS Sectors

11 Agriculture, Forestry, Fishing and Hunting
21 Mining
22 Utilities
23 Construction
31-33 Manufacturing
42 Wholesale Trade
44-45 Retail Trade
48-49 Transportation and Warehousing
51 Information
52 Finance and Insurance
53 Real Estate and Rental and Leasing
54 Professional, Scientific, and Technical Services
55 Management of Companies and Enterprises
56 Administrative and Support and Waste Management and Remediation Services
61 Education Services
62 Health Care and Social Assistance
71 Arts, Entertainment, and Recreation
72 Accommodation and Food Services
81 Other Services (except Public Administration)
92 Public Administration
Advice

➔ When looking up an Industry
  ◆ Find the right NAICS Code
  ◆ Confirm there will not be a better code
    Look at US Industry for details, 6 digits

➔ When looking for industry statistics
  ◆ NAICS is the standard code NOT the data
  ◆ Who collects it?
  ◆ Read Methodology of how NAICS is collected and aggregated.
  ◆ What level of aggregation?
  ◆ What level of geography is available?
    Small geographies will not have data at 6 digit
  ◆ Try FRED before Data.gov

Census only data on data.census.gov
Who oversees NAICS?

Office of Management and Budget (OMB)’s Office of Information and Regulatory Affairs (OIRA) gives responsibility to Economic Classification Policy Committee (ECPC)

- Representatives from Census, BEA, BLS, and others as needed
- With Mexico's INEGI and Statistics Canada to negotiated harmonization
- Revision every 5 years
Do you want a new NAICS Code?

**Process**
- Federal Register (FR) notice soliciting proposals
- ECPC review of proposals and trilateral negotiation
- FR notice containing OMB final decisions
- NAICS United States available on NAICS Website
- 2022 revision started in 2019

**Considerations**
- Be of appropriate size - for privacy
- Ability of government agencies to classify, collect, and publish data
- Applied by agencies within their normal processing operations for cost saving
- Take into account the cost of making the changes
- Activities of similar producing units cannot be separated (see NAPCS)

Talk to someone in the ECPC with your ideas.
Proposals for changes to NAICS

a) Specific detail about the economic activities to be covered by the proposed industry, especially its production processes, specialized labor skills, and any unique materials used.

b) Specific indication of the relationship of the proposed industry to existing NAICS United States six-digit industries.

c) Documentation of the size and importance of the proposed industry in the United States.

d) Information about the proposed industry in Canada and Mexico, if available.
NEWS: Death notice for SIC

February 26, 2020 OMB ask for permission to kill the Standard Industrial Classification (SIC).

With 86 FR No. 242 72277, December 21, 2021 SIC will be eliminated effective immediately.


Long live the North American Industry Classification System (NAICS).

Thank you Economic Classification Policy Committee (ECPC)
NAICS functions

Who uses NAICS: Statistical and Nonstatistical

The slides can be found at https://tinyurl.com/NAICSBTN22
Statistical Indicators

**County Business Patterns** (ZIP, Congressional District, MA, Islands, State, United States)

**Advance Monthly Sales for Retail and Food Services (MARTS)**

**Longitudinal Employer-Household Dynamics (LEHD)**

New **Small Business Pulse (SBP)**

New **Business Formation Statistics (BFS)**

New **Annual Business Survey (ABS)**

**Annual Survey of Manufactures (ASM)**

**Quarterly Financial Report (QFR)**

**Business Dynamics Statistics (BDS)**

**Quarterly Services Survey (QSS)**

**Nonemployer Statistics (NES)**

**Producer Price Index (PPI)**

**Employment (BLS)**

**Industry at a Glance (BLS)**

**Tax Stats (IRS)**

**GDP by Industry (BEA)**

**Job Patterns for Minorities and Woman (EEOC)**

**Economic Census**

All Census Programs
Economic Census

New NAICS introduced - Every five years with years ending in 2 and 7

- **Legal Basis** Title 13, United States Code (U.S.C.), Section 9, 131, 224, and 225.
  - Copies retained in respondents’ files are immune from legal process.

Census, not a survey - All Business

- Administrative records - Social Security & IRS, NOT Nonemployer Establishments

Core data (Geographic) National, state, metro, county, place, and ZIP Code levels

- Number of establishments
- Value of sales, receipts, revenue, shipments, or business done
- Annual payroll
- Number of employees

- **Economic Census** NOT Census of Population and Housing
Selected Industries That Contributed to the U.S. Gig Economy: 2019

<table>
<thead>
<tr>
<th>2017 NAICS Industry</th>
<th>Receipts ($1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxi and Limousine Service</td>
<td>$31,177,778</td>
</tr>
<tr>
<td>Couriers and Messengers</td>
<td>$7,281,790</td>
</tr>
<tr>
<td>Real Estate Property Managers</td>
<td>$15,133,204</td>
</tr>
<tr>
<td>Janitorial Services</td>
<td>$16,568,347</td>
</tr>
<tr>
<td>Landscaping Services</td>
<td>$13,439,333</td>
</tr>
<tr>
<td>Child Day Care Services</td>
<td>$9,448,847</td>
</tr>
<tr>
<td>Traveler Accommodation</td>
<td>$3,474,333</td>
</tr>
<tr>
<td>Special Food Services</td>
<td>$6,567,380</td>
</tr>
<tr>
<td>Other Personal and Household Goods Repair and Maintenance</td>
<td>$4,462,389</td>
</tr>
<tr>
<td>Pet Care (except Veterinary) Services</td>
<td>$2,493,274</td>
</tr>
</tbody>
</table>
### GDP by Industry

**From BEA**

<table>
<thead>
<tr>
<th>Line</th>
<th>Industry</th>
<th>2020</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gross domestic product</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Private industries</td>
<td>87.4</td>
<td>86.5</td>
<td>87.3</td>
<td>87.4</td>
<td>87.7</td>
<td>87.9</td>
<td>88.2</td>
<td>88.3</td>
<td>88.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Agriculture, forestry, fishing, and hunting</td>
<td>0.8</td>
<td>0.7</td>
<td>0.7</td>
<td>0.8</td>
<td>0.8</td>
<td>0.9</td>
<td>0.9</td>
<td>1.1</td>
<td>1.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>Farms</td>
<td>0.6</td>
<td>0.5</td>
<td>0.5</td>
<td>0.6</td>
<td>0.6</td>
<td>0.7</td>
<td>0.8</td>
<td>0.7</td>
<td>0.9</td>
<td>1.0</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5</td>
<td>Forestry, fishing, and related activities</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Mining</td>
<td>1.1</td>
<td>0.7</td>
<td>0.9</td>
<td>1.0</td>
<td>1.3</td>
<td>1.3</td>
<td>1.5</td>
<td>1.6</td>
<td>1.7</td>
<td>2.1</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7</td>
<td>Oil and gas extraction</td>
<td>0.7</td>
<td>0.3</td>
<td>0.5</td>
<td>0.6</td>
<td>0.9</td>
<td>0.9</td>
<td>1.0</td>
<td>1.2</td>
<td>1.3</td>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Mining, except oil and gas</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Support activities for mining</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
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<tr>
<td>10</td>
<td>Utilities</td>
<td>1.5</td>
<td>1.7</td>
<td>1.6</td>
<td>1.6</td>
<td>1.7</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
<td>1.8</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>11</td>
<td>Construction</td>
<td>4.3</td>
<td>4.3</td>
<td>4.2</td>
<td>4.2</td>
<td>4.2</td>
<td>4.1</td>
<td>4.0</td>
<td>4.0</td>
<td>3.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12</td>
<td>Manufacturing</td>
<td>10.8</td>
<td>10.5</td>
<td>10.7</td>
<td>10.6</td>
<td>10.7</td>
<td>10.7</td>
<td>10.6</td>
<td>10.9</td>
<td>11.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Durable goods</td>
<td>6.1</td>
<td>5.8</td>
<td>6.2</td>
<td>6.1</td>
<td>6.1</td>
<td>6.0</td>
<td>5.9</td>
<td>6.0</td>
<td>6.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FRED: 39,850 NAICS

Search Results
Displaying 18797 series for naics.

North American Industry Classification System

Refine your search:

Concepts

- Search Concepts

Industrial Production (12089)
Manufacturing (102258)
Production (13691)
Hours (3629)
Employment (33796)
Output (2971)
Labor (2741)
Retail (2691)
Sales (2674)
Retail Trade (2668)

Relative Importance Weights (Contribution to the Total Industrial Production Index): Utilities: Renewables and Other Electric Power Generation (NAICS = 221114-8)
Percent, Monthly, Seasonally Adjusted
Jan 2001 to Jul 2022 (Oct 18)

The industrial production (IP) proportions (typically shown in the first column of the relevant tables in the C.17 release) are estimates of the industries' relative contributions to overall growth in the following year. For example, the relative...

Relative Importance Weights (Contribution to the Total Industrial Production Index): Manufacturing: Non-Durable Goods: Alkalies and Chlorine (NAICS = 32518ptL)
Percent, Monthly, Seasonally Adjusted
Jan 1972 to Jun 2022 (Oct 18)

The industrial production (IP) proportions (typically shown in the first column of the relevant tables in the C.17 release) are estimates of the industries' relative contributions to overall growth in the following year. For example, the relative...

Relative Importance Weights (Contribution to the Total Industrial Production Index): Manufacturing: Durable Goods: Miscellaneous Aluminum Materials (NAICS = 331315,8ptL)
Percent, Monthly, Seasonally Adjusted
Jan 1972 to Aug 2022 (Oct 18)
NAICS is the linchpin in *Industry Analysis*

**Directories**
- Business Competitors
- Market size (how many)
- Market share (dominate company)

**Financials**
- Ratio Analysis/comps
- Pro Forma Statements

**Field Searching**
- NAICS Field in most article indexing services
Business Competitors

Market Size (how many)

Results: 521 Companies Found

Exclude Inactive companies from results

Include U.S Companies

Industry NAICS codes

315280

Images from Mergent Intellect

Market Share (ranking)
# Financial Norms

## Income Statements

### FROM:

IRS’s Statistics of Income


### Receipts & Net Income
Government/Nonstatistical:
155 mentions in CFR

- OPM
  Federal Wage System

- OSHA
  Injury and Illness Regulations

- SBA
  What is a small business? 13 CFR 121

- Foreign Trade
  Military Exports
Who assigns NAICS to a company/firm?

self-assigned
NAICS interpretation

30% of IRS returns wrong

From person files a 1040 Schedule C (for business)

21% are errors, and 13.6% do not even include sector (2 digit)


29% of CO’s wrong

contracting officers helping to fill procurement form


AI solution and better training
Reflection

What questions do you have?

Advice:
If statistical agencies are different, compare the methodology
Know what NAICS Version is being used
03

2022 NAICS

Will not appear until 2024, as part of the Economic Census

The slides can be found at https://tinyurl.com/NAICSBTN22
# Changing NAICS

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 digit</td>
<td>Sectors</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>3 digit</td>
<td>Subsectors</td>
<td>96</td>
<td>100</td>
<td>99</td>
<td>99</td>
<td>99</td>
<td>96</td>
</tr>
<tr>
<td>4 digit</td>
<td>Industry Groups</td>
<td>313</td>
<td>318</td>
<td>313</td>
<td>312</td>
<td>311</td>
<td>308</td>
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<tr>
<td>5 digit</td>
<td>Industries</td>
<td>721</td>
<td>725</td>
<td>721</td>
<td>713</td>
<td>709</td>
<td>689</td>
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<td>6 digit</td>
<td>US Industries</td>
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<td>1179</td>
<td>1175</td>
<td>1065</td>
<td>1057</td>
<td>1012</td>
</tr>
</tbody>
</table>

Note Consolidation in 2022
## Changes in 2022

<table>
<thead>
<tr>
<th>Sector</th>
<th>Description</th>
<th>2022 Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Mining, Quarrying, and Oil and Gas</td>
<td>6</td>
</tr>
<tr>
<td>31</td>
<td>Food &amp; Textile Manufacturing</td>
<td>5</td>
</tr>
<tr>
<td>32</td>
<td>Materials Manufacturing</td>
<td>4</td>
</tr>
<tr>
<td>33</td>
<td>Finished Product Manufacturing</td>
<td>11</td>
</tr>
<tr>
<td>42</td>
<td>Wholesale Trade</td>
<td>3</td>
</tr>
<tr>
<td>44</td>
<td>Retailers</td>
<td>38</td>
</tr>
<tr>
<td>45</td>
<td>Retailers</td>
<td>74</td>
</tr>
<tr>
<td>51</td>
<td>Information</td>
<td>41</td>
</tr>
<tr>
<td>52</td>
<td>Finance and Insurance</td>
<td>9</td>
</tr>
<tr>
<td>81</td>
<td>Other Services (except Public Adm)</td>
<td>2</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>title change, no content change</td>
<td></td>
</tr>
<tr>
<td>185</td>
<td>new US code for 2022 NAICS</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>re-used code, content change</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>re-used code, content change at lower level with insignificant impact</td>
<td></td>
</tr>
</tbody>
</table>

**New 2022 NAICS Codes with change indicators**
Mining – 21 Sector

### 2022
1. 21214 surface coal
2. 212115 underground
3. 212220 gold & silver
4. 212290 other metal ore
5. 21232 Kaolin, clay...
6. 212339 Other Nonmetallic Mineral
7. 21239 Other Nonmetallic Mineral Quarrying

### 2017
1. 212111 bituminous & 212113 anthracite
2. 212112 bituminous & 212113 anthracite
3. 212221 gold & 212221 silver
4. 212222 uranium & 212299 all other metals
5. 212324 Kaolin & 212325 Clay, ceramic,...
6. Potash, Phosphate, other chem, all other nonmetallic mineral mining
# Manufacturing – 31 & 32 Sectors

## 2022

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>315120</td>
<td>Apparel Knitting Mills</td>
</tr>
<tr>
<td>315250</td>
<td>Cut &amp; Sew Apparel</td>
</tr>
<tr>
<td>315990</td>
<td>Other Leather &amp; Allied</td>
</tr>
<tr>
<td>321215</td>
<td>Engineered Wood</td>
</tr>
<tr>
<td>322120</td>
<td>Paper Mills</td>
</tr>
<tr>
<td>R 325314</td>
<td>Fertilizer</td>
</tr>
<tr>
<td>325315</td>
<td>Compost</td>
</tr>
</tbody>
</table>

## 2017

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>31511</td>
<td>Hosiery &amp; Socks</td>
</tr>
<tr>
<td>31519</td>
<td>Other Apparel Knitting</td>
</tr>
<tr>
<td>31522</td>
<td>Men’s &amp; Boy’s Cut &amp; Sew Apparel</td>
</tr>
<tr>
<td>31524</td>
<td>Woman’s, Girl’s, &amp; Infant’s Cut</td>
</tr>
<tr>
<td>31526</td>
<td>Other Cut &amp; Sew Apparel</td>
</tr>
<tr>
<td>316992</td>
<td>Women’s Handbag &amp; Purse</td>
</tr>
<tr>
<td>316998</td>
<td>All other Leather Good &amp; Allied Product</td>
</tr>
<tr>
<td>321213</td>
<td>Engineered Wood Member</td>
</tr>
<tr>
<td>322121</td>
<td>Paper [except Newsprint]</td>
</tr>
<tr>
<td>R 325314</td>
<td>Fertilizer &amp; Compost</td>
</tr>
</tbody>
</table>


Manufacturing – 33 Sector

2022

333248 All Other Industrial
333310 Commercial & Services Industry Mach
333996 All Other Misc
334610 Reproduction Magnetic & Optical Media

2017

333244 Printing Machinery & 333249 Other Industrial
333314 Optical & 333316 Photographic & 333318 Other Commercial & Services Industry Machinery
333997 Scale & Balance & 333999 All Other Misc General
334613 Blank Magnetic Recording Media & 334614 Software & Other PreRecorded CD, Tape, & Record
Manufacturing – 33 Sector

2022

335131 Electric Lighting
335132 Commercial Industrial & Institutional
335139 Electric Lamp Bulbs & Other
33591 Battery
33611 Auto & Light Duty Motor Vehicles
337126 Household Furniture (except Wood & Upholstered)

2017

335121 Residential Electric Lighting Fixtures
335122 Commercial Industrial & Institutional Electric Lighting Fixtures
33511 Electric Lamp Bulbs and Parts & 335129 Other Lighting Equipment
335911 Storage Battery & 335912 Primary Battery
336111 Automobile & 336112 Light Trucks & Utility Vehicles
337125 Metal Household Furniture & 337125 Household furniture (except wood & Metal)
Wholesale – 42 Sector

2022

42435 Clothing & Clothing Accessories
R 425120 Wholesale Trade Agents & Brokers

2017

424320 Men’s and Boy’s Clothing and Furnishing &
424330 Women’s and Children’s, and Infants clothing and
Assoc
425111 Business to Business Electronic Markets
<table>
<thead>
<tr>
<th>2022 NAICS Code</th>
<th>2022 NAICS Title</th>
<th>2017 NAICS Code</th>
<th>2017 NAICS Title</th>
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</thead>
<tbody>
<tr>
<td>459210</td>
<td>Book Retailers and News Dealers</td>
<td>451211</td>
<td>Book Stores</td>
</tr>
<tr>
<td>459210</td>
<td>Book Retailers and News Dealers</td>
<td>Pt 451212</td>
<td>News Dealers and Newsstands</td>
</tr>
<tr>
<td>459210</td>
<td>Book Retailers and News Dealers</td>
<td>Pt 454110</td>
<td>Electronic Shopping and Mail-Order Houses</td>
</tr>
<tr>
<td>513130</td>
<td>Book Publishers</td>
<td>511130</td>
<td>Book Publishers</td>
</tr>
<tr>
<td>513130</td>
<td>Book Publishers</td>
<td>Pt 519130</td>
<td>Internet Publishing and Broadcasting and Web Search Portals - Internet book publishers</td>
</tr>
<tr>
<td>Other Retail – 44 &amp; 45 Sectors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2022</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>445132 Vending Machines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>458110 Clothing &amp; Clothing Accessories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>459930 Manufactured (Mobile) Home Dealers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>459991 Tobacco, Electric Cigarette, &amp; Other Smoking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2017</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45421 Vending Machines Operators</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men’s, Women’s, Children’s, Family Clothing Stores &amp; Clothing accessories &amp; Other Clothing Stores &amp; Electronic Shopping &amp; Mail-Order Houses &amp; Other Direct Selling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45393 Manufactured (Mobile) Home Dealers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>453991 Tobacco Stores</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Publishing – 513 Subsector

2022

513110 Newspaper
513120 Periodical
  513130 Book
513140 Directory & Mailing Lists
513191 Greeting Cards
513199 All Other Publishing
513210 Software

2017

51111 Newspaper Publishers & Pt 51913 Internet Newspaper
51112 Periodical & Pt 51913 Internet Periodicals
  51113 Books & Pt 51913 Internet Books
51114 Directory & Mailing Lists & Pt 51913 Internet Directory and Mailing Lists
511191 Greeting Cards & Pt 51913 Internet Greeting Cards
513199 All Other Publishing & Pt 51913 Internet All Other Publishing
51121 Software Publishing
Broadcasting & Content Providers - 516 Subsector

2022
- 516110 Radio
- 516120 Television
- 516210 Media Streaming Distribution Services, Social Networks, and Other Media Networks & Content providers

2017
- 515112 Radio Stations
- Pt 515120 Television Broadcasting
- 515111 Radio Networks & 51521 Cable & Other Subscription Programming & 51911 News Syndicates & Pt 51512 Television Networks & Pt Internet Broadcasting
# Telecommunications – 517 Subsector

<table>
<thead>
<tr>
<th>2022</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>517111 Wired Carriers</td>
<td>517311 Wired Telecommunications Carriers</td>
</tr>
<tr>
<td>517112 Wireless Carriers</td>
<td>Pt. 517312 Wireless Carriers except Agents</td>
</tr>
<tr>
<td>517121 Telecom Resellers</td>
<td>Pt 517911 Telecommunications Resellers except Agents</td>
</tr>
<tr>
<td>517122 Agents For Wireless</td>
<td>Pt 517312 Wireless Agents &amp; Pt 517911 Resellers except</td>
</tr>
<tr>
<td>517810 All Other</td>
<td>Agents</td>
</tr>
<tr>
<td></td>
<td>517919 All Other Telecommunications</td>
</tr>
</tbody>
</table>
**Web Search Portals, Libraries, Archives, Others Information Services – 519 Subsector**

<table>
<thead>
<tr>
<th>2022</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>519</td>
<td>Pt 519 News syndicates and Internet publishing &amp; Broadcasting</td>
</tr>
<tr>
<td>519210 Libraries &amp; Archives</td>
<td>51912 Libraries &amp; Archives</td>
</tr>
<tr>
<td>519290 Web Search Portals and All Other Information Services</td>
<td>Pt 519130 Web Search Portals &amp; 51919 All Other Information Services</td>
</tr>
<tr>
<td>2022</td>
<td>2017</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>522180 Savings Institutions &amp; Other Depository Credit Intermediation</td>
<td>52212 Savings Institutions &amp; 52219 Other Depository Credit Intermediation</td>
</tr>
<tr>
<td>533399 International, Secondary Market, &amp; All Other Nondepository Credit</td>
<td>522293 International Trade Financing &amp; 522294 Secondary Market Financing &amp; 522298 All Other Nondepository Credit Intermediation</td>
</tr>
<tr>
<td>523150 Investment Banking &amp; Securities Intermediation</td>
<td>52311 Investment Banking and Securities Dealing &amp; 523120 Securities Brokerage</td>
</tr>
<tr>
<td>523160 Commodity Contracts</td>
<td>52313 Commodity Contracts Dealing &amp; 523140 Commodity Contracts Brokerage</td>
</tr>
<tr>
<td>523940 Portfolio Management &amp; Investment Advice</td>
<td>52392 Portfolio Management &amp; 52393 Investment Advice</td>
</tr>
</tbody>
</table>
## Repair Services – 81 Sector

<table>
<thead>
<tr>
<th>2022</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>811114 Specialized Automotive Repair</td>
<td>811112 Auto Exhaust System &amp; 811113 Auto Transmission &amp; 811118 Other Automotive Mechanical &amp; Electrical Maint</td>
</tr>
<tr>
<td>811210 Electronic &amp; Precision equipment Repair &amp; Maintenance</td>
<td>811211 Consumer Electronics &amp; 811212 Computer and Office Machine &amp; 811213 Communications Equipment &amp; 811219 Other Electronic and Precision Equipment Repair and Maintenance</td>
</tr>
</tbody>
</table>
North American Product Classification System 2017 (NAPCS)

Hierarchical Structure

<table>
<thead>
<tr>
<th>Level</th>
<th>Digits</th>
<th>Aggregation level</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>Section</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>Subsection</td>
<td>61</td>
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<tr>
<td>3</td>
<td>5</td>
<td>Division</td>
<td>172</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
<td>Group</td>
<td>276</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>Subgroup</td>
<td>497</td>
</tr>
<tr>
<td>6</td>
<td>11</td>
<td>Trilateral product</td>
<td>1167</td>
</tr>
</tbody>
</table>

Example (library services)

<table>
<thead>
<tr>
<th>Code</th>
<th>Product title</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>Home entertainment, recreation and culture products, including household pets and related products</td>
</tr>
<tr>
<td>241</td>
<td>Home entertainment, recreation and culture products</td>
</tr>
<tr>
<td>24110</td>
<td>Other home entertainment, recreation and culture products</td>
</tr>
<tr>
<td>2411001</td>
<td>Other home entertainment, recreation and culture products</td>
</tr>
<tr>
<td>241100101</td>
<td>Gambling products</td>
</tr>
<tr>
<td>241100102</td>
<td>Leisure, recreational, and athletic instructional programs</td>
</tr>
<tr>
<td>241100103</td>
<td>Library and archive services</td>
</tr>
<tr>
<td>24110010301</td>
<td>Library and archive services</td>
</tr>
</tbody>
</table>
Think of the researchers whose careers are based in one industry, that just changed.

Who is doing the counting and assigning?

Where is my industry? Cannabis, ghost kitchens, etc.

There will be new peers and opportunities.

You will have to use NAPCS to learn about the car, SUV, van, and light truck market.

What do you mean there is no difference between Brick and Mortar and Online businesses?
What we can DO

- There will be new peers and opportunities for your company?
- Ask vendors how they will treat the changes
- Empathy for those data users having to deal with disruptions
  - Cost & time series
- Learn more about the NAPCS
- Learn more about changes in the 2022 Economic Census
- Provide insights, comments, and suggestions to the ECPC

Be ready when the questions start coming
Learn more About Government Data

The slides can be found at https://tinyurl.com/NAICSBTN22
"It is a capital mistake to theorize before one has data."

Sir Arthur Conan Doyle
Federal Government Information

**Executive Branch**
- Regulations
- Data, API
- Data, Statistics or Indicators
- Press releases or Trade press or Bulletin
- Handbooks or Fact Books
- Department’s Reports
- Industry Reports or Surveys or Review
- State of the Industry and Outlooks
- Geographic specific
- New Technology and direction

**Congressional Branch**
- Forthcoming laws
- Committee reports/prints
- Congressional Research Section
- Library of Congress, Reading Rooms
- Government Publishing Office

**Judicial Branch**
- Interpreting laws
- Courts, transcribes
- Courts, defendants
Data are not:
- Information Technology
- Digital Analytics
- Evidence
- Research
- Visualizations
- Ideas

Data are collected facts
"raw material"

How do you present data

- Graphs for time series
- Pie chart for comparison to the whole
- Bar charts showing the differences
- Common-size to per capita for story
TYPES OF DATA ANALYSIS

DESCRIPTIVE
Increase/decrease

PREDICTIVE
Estimates

DIAGNOSTIC
Relationships

PRESCRIPTIVE
Policy & Decision Making
What most people do

Google
"Employee Benefits" data site:.gov

Data.Gov
Inventory, has promise

Commercial
ICPSR- Great
Data Planet- Good
Wolfram Alpha- Science
Federal Data Sources: Social Science

- **Census**
  Demographics, Manufacturing, Retail, Wholesale, Construction, most other industries

- **Labor**
  Labor and price data

- **Companies**
  Publicly Traded Companies

- **Banking**
  Banking & economic conditions

- **Transportation**
  Ideal for tourism and comparisons

- **Telecommunications**
  Complaints, cable, mobile, broadcasting, broadband

- **Mortgage**

- **Education**
Federal Data Sources: Natural Science

**Agriculture**
Including *Fisheries* and *Forestry*

**Environment**
Including *Minerals* and *Energy*

**Health**
State sources will be better

**Weather**
Regional center better
Business of Government

Procurement

Sam.com

Assistance

Federal Grants and other Benefits

Public Finance

Spending

Taxes

Federal Budget Projections
We can get there together

FDLP Academy
Accidental Government Librarian
Census Academy for Business
BLS Training Videos
API University from OMB

Inter-university Consortium for Political and Social Research (ICPSR) repository
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>Knowing NAICS</td>
</tr>
<tr>
<td>2022</td>
<td>Data Sources for Librarian</td>
</tr>
<tr>
<td>2022</td>
<td>Free Business Sources for New England</td>
</tr>
<tr>
<td>2020</td>
<td>Public Domain vs. Open Access Data</td>
</tr>
<tr>
<td>2020</td>
<td>Business Sources from the Federal Government: Classic and New</td>
</tr>
<tr>
<td>2019</td>
<td>Industry Research Using the Economic Census</td>
</tr>
<tr>
<td>2019</td>
<td>Federal Data Strategies Webinar</td>
</tr>
<tr>
<td>2018</td>
<td>ZombieList Slides only</td>
</tr>
<tr>
<td>2017</td>
<td>Census Of Governments</td>
</tr>
<tr>
<td></td>
<td>July 2018, article: Government Data as Intellectual Property: Is Public Domain the Same as Open Access? Online Searcher, with Matthew Dames</td>
</tr>
</tbody>
</table>
Let’s discuss

boettcher@georgetown.edu

202 687-7495
Twitter: @jennywombat

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One Statistical Office in US: Why Not?

1. **Privacy:** The Privacy Act of 1974, Confidential Information Protection and Statistical Efficiency Act of 2002 (CIPSEA), and Statistical Policy Directive No. 1 (2014) require agencies to ensure that the collection and maintenance of citizens' data is accurate, confidential, and within legal restrictions. With different offices having access to those records, there would be less possibility of everything being leaked.

2. **Security:** Along the lines of fewer offices having access to data records. The more servers that hold the data, the safer it is. The times when an exchange of information is necessary laws and regulations among departments allow to protect access to data.

3. **Integrity:** The income you report to IRS might be different from what you report to the Census Bureau.

4. **Methodology:** Sometimes data must have a higher number of people questioned so the accuracy will be better; different methods of collection or sampling may be required.

5. **Popularity:** Anything being done by the government has a political dimension, especially funding for employees and for modernizing and updating technology, attractiveness of the research, and repetition of statistical programs by agencies.
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