Created: Spring 2017

Updated: {If updates are made put the semester and year of that update}

Guide to Data Download and Organization for the Annual Manufacturing Scorecard with SAS

Table of Contents

[Getting Started 3](#_Toc474505069)

[BEA 4](#_Toc474505070)

[GDP\_Curr (GDP) 4](#_Toc474505071)

[SA5N (Income) 4](#_Toc474505072)

[SA6N (Total Compensation) 4](#_Toc474505073)

[SA25N (Employment) 5](#_Toc474505074)

[BLS 5](#_Toc474505075)

[CPI 5](#_Toc474505076)

[Census 5](#_Toc474505077)

[ACS5\_15001 (Educational Attainment) 5](#_Toc474505078)

[ACS5\_16010 (Labor and Population) 6](#_Toc474505079)

[ASM\_GAS\_Statistics (Manufacturing) 6](#_Toc474505080)

[ASM\_GAS\_Supplemental (Manufacturing) 7](#_Toc474505081)

[Commodity\_Flows (Commodity) 7](#_Toc474505082)

[Exports (Trade) 8](#_Toc474505083)

[Imports (Trade) 8](#_Toc474505084)

[Highway\_Exp (State and Local Highway) 8](#_Toc474505085)

[Popset (Population Estimate) 9](#_Toc474505086)

[Custom 9](#_Toc474505087)

[Demand Adaptability Index 9](#_Toc474505088)

[Income\_FOM 9](#_Toc474505089)

[DOT\_FHWA 9](#_Toc474505090)

[INFR\_INV (Federal Highway) 9](#_Toc474505091)

[Genworth 10](#_Toc474505092)

[Long\_term\_healthcare\_costs (Cost of Healthcare) 10](#_Toc474505093)

[KFF 10](#_Toc474505094)

[HealthCare\_Premiums (Health Care Premiums) 10](#_Toc474505095)

[NASI 11](#_Toc474505096)

[Workers\_Comp (Worker’s Compensation) 11](#_Toc474505097)

[NCES 11](#_Toc474505098)

[AA\_Grad\_Rates 11](#_Toc474505099)

[Rentention\_Rates 11](#_Toc474505100)

[Adult\_Education 11](#_Toc474505101)

[Grad Rates (High School Graduation Rates) 12](#_Toc474505102)

[8th Grade Math Score (Math Scores) 12](#_Toc474505103)

[NSF 12](#_Toc474505104)

[Res\_Dev\_Spending (Research and Development Spending) 12](#_Toc474505105)

[Public Plans Data 13](#_Toc474505106)

[Unfunded\_Liabilities (Pensions) 13](#_Toc474505107)

[S\_and\_P 13](#_Toc474505108)

[Bond\_Rating (Bonds) 13](#_Toc474505109)

[Tax\_Foundation 14](#_Toc474505110)

[Business\_Tax\_Climate (Tax and Business) 14](#_Toc474505111)

[USA\_Spending 14](#_Toc474505112)

[Fed\_Runds\_Exp (Federal Funds Expenditure) 14](#_Toc474505113)

[USPTO 14](#_Toc474505114)

[Patents (Number of Patents) 14](#_Toc474505115)

# Getting Started

**Step 1**: Sync the Manufacturing Scorecard folders to your PC (at minimum, you need `SAS\_Programs`, `SAS\_Shared\_Data`, and `Scorecard\_xxxx\_SAS` (from the previous year).

**Step 2**: Create a new folder inside of the Manufacturing Scorecard that follows the formatting from the previous year and include the current year.

**Step 3:** Copy the previous year’s `SAS\_Inputs` folder into the new scorecard.

**Step 4:** Continue on with the rest of the update procedure.

**A Couple Notes**:

1. **You need to be aware that not all elements of each topic spreadsheet will be available for download at the same time.** 
   1. **Data becomes available for the most recent year anytime between November and March. A column in “Checklist of Project Tasks” shows when you should expect the data to become available for download.**
   2. **If needed, you may have to email the contact for a few of the subjects in each topic – contacts needed for previous years will be given on the “Checklist of Project Tasks.”**

Data Collection with SAS Process

# BEA

## GDP\_Curr (GDP)

The raw data for manufacturing GDP can be found on the Bureau of Economic Analysis at <http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1&isuri=1&acrdn=1#reqid=70&step=1&isuri=1>

1. Choose the table GDP in current dollars under GROSS DOMESTIC PRODUCT (GDP) BY STATE
2. On the next page select NAICS (1998 forward) then click Next Step
3. Click All Industries, Next Step
4. On the next page click on United States, hold down the Shift key, scroll down in the Area box and click on Wyoming. Under Unit of Measure choose Levels.
5. For time period choose the most recent year available then click Next Step
6. The data will then appear. Above the table click Download, choose as an Excel. A file will immediately download, organizing into the correct heading order, and paste into Excel doc

## SA5N (Income)

The raw data for income can be found on the Bureau of Economic Analysis website <http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1#reqid=70&step=1&isuri=1>

1. Expand the section labeled Annual State Personal Income and Employment.

2. Choose Personal income and earnings by industry (table SA5N)

3. On the next page select NAICS (1998 forward) then click Next Step

4. On the next page click on United States, hold down the Shift key, scroll down in the Area box and click on Wyoming. Under Unit of Measure choose Levels. Under Statistic choose All Statistics. After these 3 steps click Next Step

5. For time period choose the most recent year available then click Next Step

6. The data will then appear. Above the table click Download choose as an Excel. A file will immediately download, organizing into the correct heading order, and paste into Excel doc

## SA6N (Total Compensation)

Raw data for compensation can be found: <http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1#reqid=70&step=1&isuri=1>

1. Expand the section labeled Annual State Personal Income and Employment.

2. Choose Compensation of Employees by Industry (SA6N)

3. On the next page select NAICS (1998 forward) then click Next Step

4. On the next page click on United States, hold down the Shift key, scroll down in the Area box and click on Wyoming. Under Unit of Measure choose Levels. Under Statistic choose All Statistics. After these 3 steps click Next Step

5. For time period choose the most recent year available then click Next Step

6. The data will then appear. Above the table click Download choose as an Excel. A file will immediately download, organizing into the correct heading order, and paste into Excel doc.

## SA25N (Employment)

Raw data for employment can be found: <http://www.bea.gov/iTable/iTable.cfm?reqid=70&step=1#reqid=70&step=1&isuri=1>

1. Expand the section labeled Annual State Personal Income and Employment.

2. Choose Total Full-Time and Part-Time Employment by Industry (SA625N)

3. On the next page select NAICS (1998 forward) then click Next Step

4. On the next page click on United States, hold down the Shift key, scroll down in the Area box and click on Wyoming. Under Unit of Measure choose Levels. Under Statistic choose All Statistics. After these 3 steps click Next Step

5. For time period choose the most recent year available then click Next Step

6. The data will then appear. Above the table click Download choose as an Excel. A file will immediately download, organizing into the correct heading order, and paste into Excel doc.

# BLS

## CPI

This is National-Level CPI data (for inflation adjustment in some calculations)

1. Navigate to <https://www.bls.gov/data/>
2. Under *Inflation & Prices*, *All Urban Consumers*, select Multi-Screen Data Search
3. Choose Seasonally Adjusted, US City Average, Current Base, All Items (SA0), Monthly Data
4. You should only get one table. Copy any new data into the CPI.csv sheet.
5. (Old values should not need to be updated, but double-check that they match. Update as needed.)

# Census

## ACS5\_15001 (Educational Attainment)

The raw data for educational attainment can be found on the American Fact Finder website <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

1. Under advanced search on the home page click on “Show Me All”

3. Next add geographies: Click on “Geographies” on the left hand side.

4. In the new window, click on the drop down menu under “Select a geographic type” and choose “State – 040”

5. A new section will appear. You’ll need to click on Alabama, press Shift, and then click on Wyoming. Then press “Add to your selections” and close the window.

6. On the next page, in Topic or Table Name type in “B15001”

7. Now click on the “ACS 5-year Estimates” report for the most recent year

8. Download at the top center of the page and choose “Microsoft Excel (.xls)” under “Presentation-ready formats” then click OK. A new small window will pop up and, when you can, select “Download”

9. Once the download is complete it will open as a new excel file. A file will immediately download, organizing into the correct heading order, and paste into Excel doc.

## ACS5\_16010 (Labor and Population)

Raw data can be found:

<http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

1. Under advanced search on the home page click on “Show Me All”

2. Next add geographies: Click on “Geographies” on the left hand side.

3. In the new window, click on the drop down menu under “Select a geographic type” and choose “State – 040”

4. A new section will appear. You’ll need to click on Alabama, press Shift, and then click on Wyoming. Then press “Add to your selections” and close the window.

5. On the next page, in Topic or Table Name type in “B16010”

6. Now click on the “ACS 5-year Estimates” report for the most recent year

7. Download at the top center of the page and choose “Microsoft Excel (.xls)” under “Presentation-ready formats” then click OK. In the new window select “Download”

8. Once the download is complete it will open as a new excel file. A file will immediately download, organizing into the correct heading order, and paste into Excel doc.

## ASM\_GAS\_Statistics (Manufacturing)

<http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

1. Under advanced search on the home page click on “Show Me All”
2. Next add geographies: Click on “Geographies” on the left hand side.
3. In the new window, click on the drop down menu under “Select a geographic type” and choose “State – 040”
4. A new section will appear. You’ll need to click on Alabama, press Shift, and then click on Wyoming. Then press “Add to your selections” and close the window.
5. Search ASM GAS Statistics, most likely will be the first one
   * 1. Example title is “Annual Survey of Manufactures: Geographic Area Statistics: Statistics for All Manufacturing by State: 2015 and 2014”
6. Download at the top center of the page and choose “Microsoft Excel (.xls)” under “Presentation-ready formats” then click OK. A new small window will pop up and, when you can, select “Download”
7. Once the download is complete it will open as a new excel file. A file will immediately download, organizing into the correct heading order, and paste into Excel doc.

## ASM\_GAS\_Supplemental (Manufacturing)

Raw data for manufacturing can be found here <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

1. Under advanced search on the home page click on “Show Me All”

2. Next add geographies: Click on “Geographies” on the left hand side.

3. In the new window, click on the drop down menu under “Select a geographic type” and choose “State – 040”

4. A new section will appear. You’ll need to click on Alabama, press Shift, and then click on Wyoming. Then press “Add to your selections” and close the window.

5. Search ASM GAS Supplemental

6. Download at the top center of the page and choose “Microsoft Excel (.xls)” under “Presentation-ready formats” then click OK. A new small window will pop up and, when you can, select “Download”

7. Once the download is complete it will open as a new excel file. A file will immediately download, organizing into the correct heading order, and paste into Excel doc.

## Commodity\_Flows (Commodity)

The raw data for commodity flows can be found on the American Fact Finder website <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

* 1. Under advanced search on the factfinder homepage click on “Show Me All”
  2. On the next page type in “Commodity Flow Survey” then click “Go”
  3. A page with numerous table names will appear but before you choose one from the most recent year you need to change the geography being reported
     1. This is done by clicking on “Geographies” on the left hand side.
     2. A new window will pop up in the center of the page where you can select the type of geography you want to look at. You’ll need to click on the drop down menu under “Select a geographic type” and choose “State – 04”
     3. A new section will appear below that section where you can choose what you want to displayed. You’ll need to click on Alabama, scroll down to Wyoming, press Shift, and then click on Wyoming. Then press “Add to your selections” and close the window.
  4. Now you will want to choose the table titled “Geographic Area Series: Shipment Characteristics by Origin Geography by Mode” for the most recent year available (this should be the first table in the list)
  5. Once it has generated just click download at the top center of the page and choose “Microsoft Excel (.xls)” under “Presentation-ready formats” then click OK. A new small window will pop up and, when you can, select “Download”
  6. Once the download is complete, open the file. Organize the data into the correct headers and right Excel doc

Note: May be done every five years

## Exports (Trade)

The raw data for manufacturing exports for the current year can be found at <http://www.census.gov/foreign-trade/statistics/state/zip/index.html>

1. Once you navigate to these pages choose the “XLS” for December of the most recent year available
2. An excel sheet will download and once you have it open just copy and paste the data to the “Manufacturing Exports into the correct columns then highlight the areas of “Manufacturing Commodities,” “Annual,” and “Total”

## Imports (Trade)

The raw data for manufacturing exports for the current year can be found at

<https://www.census.gov/foreign-trade/statistics/state/destination_state/index.html>

1. Once you navigate to these pages choose the “XLS” for December of the most recent year available
2. An excel sheet will download and once you have it open just copy and organize it into the correct headers

## Highway\_Exp (State and Local Highway)

The raw data for State Hwy Expenditures can be found at

<http://www.census.gov/govs/local/>

1. Once you are on the State and Local Finances page you will need to select the most recent year available from the drop down menu on the left hand side of the page under “Select a different year” and then click “Go”
2. There are a number of ways to view and download the data as can be seen in the box titled “{YEAR} State & Local Government” so you can choose how you want to organize the data into the correct headers and Exel doc
   1. No matter the way you choose to view and copy the data the information you need is “Direct Highway Expenditure” at the “State and Local” level

## Popset (Population Estimate)

Raw population data can be found at

<http://www.census.gov/programs-surveys/popest.html>

1. Under “Latest” you are looking at “Tables”
2. Click state Population Totals Tables: (Recent Years)
3. On this page choose the excel for the top table titled “Annual Estimates of the Resident Population for the United State, Regions, State, and Puerto Rico”
4. Clicking on this will download an excel
5. Once the download is complete it will open as a new excel file. A file will immediately download, organizing into the correct heading order, and paste into Excel doc.

# Custom

## Demand Adaptability Index

These are CBER calculations from years past.

Ask a supervisor if we want to update the calculations.

## Income\_FOM

This dataset contains Personal Income per Capita Derived from Foreign-Owned Manufacturers.

The data is old because the source was discontinued, but we retain the data for historical value.

# DOT\_FHWA

## INFR\_INV (Federal Highway)

The raw data for Infrastructure Invest can be found at <https://www.fhwa.dot.gov/policyinformation/statistics/2014/>

1. (Change the year in the url to find the most recent data available.)
2. The Data you are looking for is in table FA-4B. Find this table, and download the excel version of it.
3. The “Oblig\_Fed\_Aid\_Acc” column data comes from the tab “A” subtotal column (far right)
4. The “Oblig\_Total” column data comes from the tab “B” Grand Total column (far right)

**Note:** The DOT/FHWA has not made the recent years of data available online

We have had success retrieving data via email from [Helen.Davidson@dot.gov](mailto:Helen.Davidson@dot.gov)

(Other emails to CC include [ralph.davis@dot.gov](mailto:ralph.davis@dot.gov) and [clarissa.smith@dot.gov](mailto:clarissa.smith@dot.gov))

# Genworth

## Long\_term\_healthcare\_costs (Cost of Healthcare)

Raw data can be found at:

<https://www.genworth.com/about-us/industry-expertise/cost-of-care.html>

**This is not an Excel friendly process.**

1. On the webpage scroll to the bottom and look for “National and State Data Tables”, then click on annual
2. Unfortunately there is no easy way to copy this data so you will just need to scroll through the PDF and for each state enter the “Nursing Home per Year {CURRENT YEAR} (Private Room)” as well as “Assisted Living per Year {CURRENT YEAR}”
3. Organizing into the correct heading order

# KFF

## HealthCare\_Premiums (Health Care Premiums)

First, to download the Single Premium Statistics navigate to

<http://kff.org/other/state-indicator/single-coverage/>

1. Above the table click on “Download Raw Data” in Tools
2. Once the excel sheet is downloaded copy everything and paste it into the current year Healthcare Premiums tab that you created also organizing into the correct heading order

Second, to download the Family Premium statistics navigate to

[http://kff.org/other/state-indicator/family-coverage/#](http://kff.org/other/state-indicator/family-coverage/)

1. Just as with the single premium statistics, the site will automatically reflect the most current year. Follow the same process as listed above for single premium.

Note: Make sure to collect the TOTAL premiums, not the Employee/Employer Contributions!

# NASI

## Workers\_Comp (Worker’s Compensation)

Raw data for workers compensation can be found

<http://www.nasi.org/research/workers-compensation>

**This is not an Excel friendly method.**

1. Once you navigate to the site using the link above choose “Workers’ Compensation: Benefits, Coverage, and Costs” for the most recent
2. On the next page choose “Download the report” (there will be an acrobat symbol next to this)
3. The report should open in a new page
4. The table number may vary from the previous year, but the table you are looking for will be titled along the lines of “**Workers’ Compensation Total Benefits Paid Per $100 of Covered Wages, by State**”
5. Next type needed information into excel by hand.
6. Organizing into the correct heading order in the correct Excel doc.

# NCES

## Adult\_Education

Raw data can be found with the National Center for Education Statistics at

<http://nces.ed.gov/programs/digest/2013menu_tables.asp>

1. Once you navigate to the website above, choose the 2nd most recent year available from the drop-down menu next to “List of Tables and Figures” (that is if the current year is 2015, 2014 and 2013 will be available in the drop-down menu but 2013 will be complete and 2014 will not)
2. The data you need will be in Chapter 5. Expand Chapter 5 then expand “507 Skills of Adults and Continuing Education”
3. Table 507.20 or the table labeled “Participants in state-administered adult basic education, secondary education, and English as a second language programs, by type of program and state or jurisdiction” is the table that you need to download by clicking on the blue Table link.
4. Clicking on the link will open a new page with the data.
5. Click “Download Excel” above the table on the right. Once the file is downloaded open it, select all data, copy it, and organizing under the correct headings

## Grad Rates (High School Graduation Rates)

Raw data for HS Grad Rates can be found with the National Center for Education Statistics at

<https://nces.ed.gov/ccd/data_tables.asp>

1. After navigating to this site you’ll see a number of table links under the title “Dropout/Completer Data Tables”
2. Click on “Public high school 4-year adjusted cohort graduation rate (AGGR), by race/ethnicity and selected demographics for the United States, the 50 states, and the District of Columbia” for the most recent school year available
   * 1. Note that the most recent school year’s table should be listed near the top
3. Once the table is downloaded simply copy the data from the excel spreadsheet to the tab you created for the current year’s HS Grad Rate
   * 1. Delete the rows between Rhode Island and South Carolina so that the table is continuous
4. Organize data into the correct headers

## 8th Grade Math Score (Math Scores)

**NOTE: If you are working on this in the Spring of an odd year (i.e. 2013, 2015, 2017, etc) you will not have new data as reports of released in the Fall of the odd year every 2 years (see note given in the “Checklist of Project Tasks.”)**

Find raw data from

<http://nces.ed.gov/nationsreportcard/statecomparisons/>

1. On the webpage choose “Grade 8,” “Mathematics,” “Gender,” and the most recent year under the 4th box. The 5th box should be left with zero and neither selected.
2. Choose next steps and the table will generate. Then choose “Export to Excel” above the table.
3. Once the excel sheet is downloaded and opened you’ll need to select all the data, copy it, and organize the data into the correct headers

# NSF

## Res\_Dev\_Spending (Research and Development Spending)

The raw data for R&D can be found at

<http://www.nsf.gov/statistics/srvyindustry/#tabs-1>

1. Once you navigate to this page choose the “Data” tab to the right of the tab labeled “About the Survey”

2. In the “Data” tab you will see three sections, if the “Data Tables” section is not expanded do so by clicking on the plus sign next to the section title

3. You will then see a list of the recent “Business Research and Development and Innovation” reports

a. The 2014 and 2015 Scorecards used 2011 data. It is my assumption that 2013 data should be available for the 2016 Scorecard.

b. If a report is labeled with a more recent year than what was used for the previous Scorecard then choose that report

4. The easiest way to locate the correct table is to click on the PDF icon to open the entire report

5. When the report is open use the “Find” function to locate the table you need by searching for “by source of funds and state”

b. Once you locate the correct table, go back to the page where all the tables were listed and find the correct table in the list then download the table as an excel file and organizing into the correct headings

# NCHEMS

## AA\_Grad\_Rates

**Received via email in March (see notes in “Checklist.xlsx”)**

## Rentention\_Rates

**Received via email in March (see notes in “Checklist.xlsx”)**

# Public Plans Data

## Unfunded\_Liabilities (Pensions)

The raw data can be found at the Center for Retirement Research at Boston College

<http://crr.bc.edu/data/public-plans-database/>

1. Once you have navigated to this page click on “Access the Public Plans Data” in the middle of the page
2. Next go to the bottom of the page and look for the header “PUBLIC PLANS DATA” and click downloadable data
3. Under State and Local Public Plans Database, click Download Full Data Set
4. Organize and sort the data into the correct headers
   1. This is a multi-year dataset, so it should REPLACE the previous year’s data. (Delete the previous year’s data before adding the new data.)
   2. Make sure the columns follow previous convention (all values are mostly-positive). If the expense column is mostly negative numbers, for example, you need to multiply the whole column by -1 (otherwise, the calculations get weird).

**Advice:** This will be a large Excel document. Use the search tool to try to find the right headers and the information needed.

# S\_and\_P

## Bond\_Rating (Bonds)

In order to get the raw data for state bond ratings the easiest way is to open a google search and search “U.S. State Ratings And Outlook: Current List”

**FYI: This process will most likely not work. Search the internet for other possible sources.**

1. Once the search has been done you should find a PDF result titled “U.S. State Ratings And Outlooks: Current List – Bizj” with the publication date as November of the year before the current year; e.g. 2015’s scorecard uses the publication released on November 5, 2014
2. When you open this the report will be from Standard & Poor’s Ratings Services and will be titled RatingsDirect
3. Now, copy the layout of the table for bond ratings from the previous year and paste it into worksheet under the correct heading

# Tax\_Foundation

## Business\_Tax\_Climate (Tax and Business)

The data for this statistic can be found on the Tax Foundation website at

<https://taxfoundation.org/state-tax/business-taxes/>

1. Most Likely the “ (Year) State Business Tax Climate Index” with be one of the top pages
2. Then click to download the PDF
3. Organizing into the correct heading order in the correct Excel doc

# TSE (Trade States Express)

## Durable\_Exports

1. Navigate to <http://tse.export.gov/tse/>
2. Select “State Export Data”, then “State-by-State Exports to a Selected Market”
3. Under Product, Select **“Durable Manufactures**” (under “Manufactures”), then click “Go”.
4. Click on the “Download Center” button (near the top of the page), and download as a CSV
5. Copy Data from the most recent year into the durable\_exports.csv file

## Non\_Durable\_Exports

1. Navigate to <http://tse.export.gov/tse/>
2. Select “State Export Data”, then “State-by-State Exports to a Selected Market”
3. Under Product, Select “**Non-Durable Manufactures**” (under “Manufactures”), then click “Go”.
4. Click on the “Download Center” button (near the top of the page), and download as a CSV
5. Copy Data from the most recent year into the non\_durable\_exports.csv file

# USA\_Spending

## Fed\_Runds\_Exp (Federal Funds Expenditure)

The raw data for Federal Funds Expenditure can be found at <https://www.usaspending.gov/transparency/Pages/statesummary.aspx>

1. This is not an excel friend process. Once you navigate to this page you will see that each state is going to have to be recorded in the excel worksheet for the current year separately.
2. Select the first state (Alabama) and the most current year
   1. **NOTE: Do not choose the current year as these values are calculated on a rolling basis, use last year’s FY data**
3. Organizing into the correct heading order in the correct Excel doc.

# USPTO

## Patents (Number of Patents)

Raw data for patents can be found at <http://www.uspto.gov/web/offices/ac/ido/oeip/taf/cst_all.htm>

1. Once you navigate to this page the most recent year will automatically be present with all other available years
2. Copy the needed data
3. Organizing into the correct heading order in the correct Excel doc.