# X-13-Data Version 2.0

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U.S. Census Bureau
August 26, 2014

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## 1. Introduction

Input and output files from X-13ARIMA-SEATS(X-13A-S) (U.S. Census Bureau, 2015) must be text files; however, many users store their data in Microsoft Excel files and would like their output in Microsoft Excel format.

X-13-Data is a tool that can:

- Convert data from Microsoft Excel to a text file in `datevalue` format.
- Convert X-13ARIMA-SEATS output files in `x13save` format to a Microsoft Excel file.
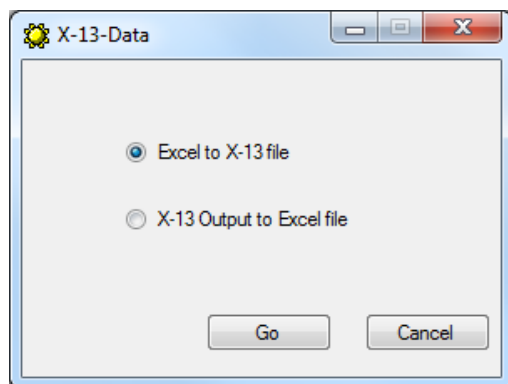
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## 2. Requirements

X-13-Data has been tested on Windows XP, Windows 7, and Windows 8. To run the program, Microsoft.NET Framework 3.5 must be installed on your computer. It can be downloaded here.

X-13-Data also requires Microsoft Excel installed on your computer and has been tested with Microsoft Excel 2007 and Microsoft Excel 2010.

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## 3. Getting Started

1. Download `X13Data.zip`.
2. Unzip `X13Data.zip`.
3. Double click on `X13Data.exe` to launch. The X-13-Data main screen will display.



**Keyboard Shortcuts:**
Go=Alt+g
Cancel=Alt+c

4. From here, you can choose to convert your Excel data into a file that can be read by X-13ARIMA-SEATS (see Section 4), or convert your X-13 output files to Excel files (see Section 5).

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# 4. Convert from Excel to X-13.

X-13-Data will read data in a Microsoft Excel file in a variety of formats (all described in Section 6) and convert them to an X-13 data file in `datevalue` format. (See the X-13ARIMA-SEATS Reference Manual (2015) for more information about `datevalue` and other accepted formats.)

1. Select *Excel to X-13 file* from the X-13-Data main page and press *Go.* The X-13-Data Excel Reader window will appear.
2. Select a Microsoft Excel file by either typing the complete file name in the *Excel File* text box or navigating to the file using the *Browse* button. Once an existing Excel file has been selected, the other controls will become available; use them to select the output file, define the data format, and locate the data within the spreadsheet, as described below.

**Keyboard Shortcuts:**
Browse=Alt+b
Go=Alt+g
Cancel=Alt+c

3. Select the Excel worksheet that contains the data using the *Worksheet Number* box.
4. Select the format that your data are in using the *Data Format* box. See Data Formats below for more information on supported formats.
5. If you are reading a single series with Vertical or Horizontal format, use the *Save File* box to select a name for the data file that will be created.
   a. The file must have a .dat extension. X-13-Data will change or add the .dat extension, if necessary.
   b. If a file with the selected name already exists, a box will display asking if you would like to overwrite or rename the file.
6. If you are reading a file containing multiple series in Vertical-Multiple, Horizontal-Multiple or MRTS format, each series will be saved to its own data file. These data files will be saved in the same directory as the input Excel file.
   a. For Vertical-Multiple and Horizontal-Multiple formats, the data file names will be the series names whose locations are specified using the *Series Names Row/Column* box.
   b. For MRTS format, the location of the series names does not need to be specified.
   c. For all of these formats, if a file with the same name already exists, the new file name will have a numeric suffix. For example, if books.dat already exists in the same directory as the input file, the new data file will be named books(2).dat.

7. Check the *Date in more than one column* box if the dates are organized such that the year is in the first date column and the period (months or quarters) is in the next column.
8. Use the following controls to describe the location of the data within Excel file:
    a. *Date Column:* The column in which the dates begin.
    b. *Data Start Column:* The column in which the numeric data begin.
    c. *Data Start Row:* The row in which the numeric data begin.
    d. *Series Names Row:* The row containing the series names. Only available for Vertical-Multiple format.
    e. *Series Names Column:* The column containing the series names. Only available for Horizontal-Multiple format.
    f. *Data End Column:* The column where the user would like the data to end. Only available for Regression Matrix format.
    g. *Data End Row:* The row where the user would like the data to end. Only available for Regression Matrix format.
9. Alternatively, you can specify the starting date manually by checking the *Manually Enter Dates* box and then selecting the starting year using the *Start Year* box and the starting period using the *Start Period* box. NOTE: *Manually Enter Dates* is not available for MRTS format.
10. Use the *Period* box to select the frequency of the data: 12 for monthly data, 6 for bimonthly data, 4 for quarterly data, 2 for biannual data or 1 for annual data.
11. X-13-Data will stop reading an Excel file when:
    a. Two consecutive non-numeric values in a series, e.g. two consecutive missing values. (Note that in X-13ARIMA-SEATS, by default the value -99999 in a series is considered a missing value; if your data has missing values, it is best to change them to this value before attempting to convert the file.)
    b. An empty row or column is encountered

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# 5. Convert X-13 Output to an Excel file.

The exact format of the Excel file varies depending on the type of file being converted and how many series are being converted at a time. But the general format will include:

- the series name
- the file type
- labels for the date and data columns
- converted data

To convert X-13 output files to Excel files.

1. Select *X-13 Output to Excel file* from the X-13-Data main page and press *Go*. The X-13-Data Excel Writer window will appear.
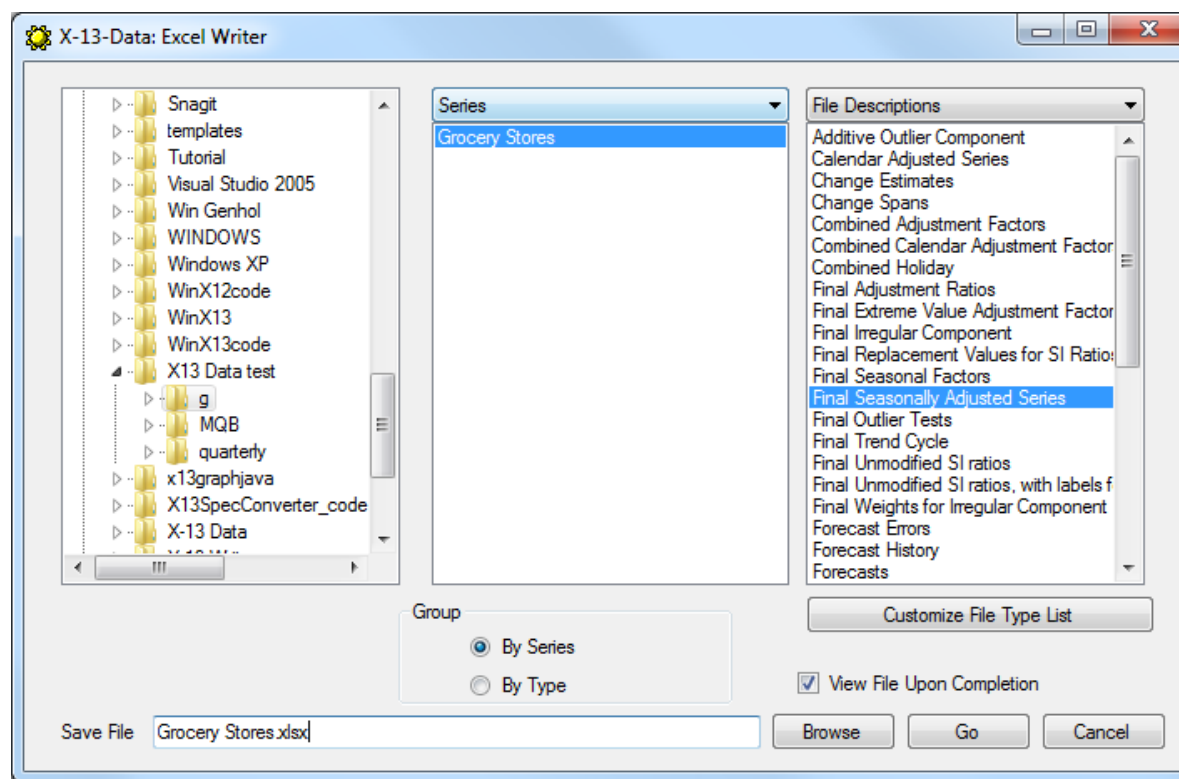
**Keyboard Shortcuts:**
Browse=Alt+b
Go=Alt+g
Cancel=Alt+c

2. Navigate to your directory using the file explorer tree on the left. This will populate the list of series in the first list box. By default, series names will be displayed here. You can populate this list with metafiles (text files containing lists of series) by selecting "Metafile" from the drop-down box above the list.
3. Select at least one item from the list. The second list will be populated with possible file types. If you select by series, X-13-Data will display the file types that actually exist in the directory for the selected series. If you select by metafile, X-13-Data will display all file types.
4. Select one or more file types from the list on the right. You can select file types by file description or by file extension. Use the drop down menu above the list on the right to switch between these two options. You can customize the order of the file types by clicking on the *Customize File Type List* button. Click here to see an example of the Change File Type Order box.
5. Select how the data wil be grouped in the Excel file. You can group data by series or by file type.
6. Enter the name for the Microsoft Excel file in the save file box. If you would like to save the file to the currently selected directory, just enter the file name. Otherwise, include the complete path and filename. This file must have a .xls or .xlsx extension. You can also navigate to the location where you would like to save the file using the *Browse* button.
7. Press the *Go* button to convert the files. See below for an example of a converted file.

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | | All other gen. merchandise stores | | | |
| 2 | date | Original Series | | | |
| 3 | Jan-2000 | 2050.00 | | | |
| 4 | Feb-2000 | 2280.00 | | | |
| 5 | Mar-2000 | 2559.00 | | | |
| 6 | Apr-2000 | 2477.00 | | | |
| 7 | May-2000 | 2653.00 | | | |
| 8 | Jun-2000 | 2639.00 | | | |
| 9 | Jul-2000 | 2595.00 | | | |
| 10 | Aug-2000 | 2668.00 | | | |
| 11 | Sep-2000 | 2513.00 | | | |
| 12 | Oct-2000 | 2660.00 | | | |
| 13 | Nov-2000 | 3026.00 | | | |
| 14 | Dec-2000 | 4019.00 | | | |
| 15 | Jan-2001 | 2276.00 | | | |
| 16 | Feb-2001 | 2363.00 | | | |
| 17 | Mar-2001 | 2645.00 | | | |
| 18 | Apr-2001 | 2785.00 | | | |
| 19 | May-2001 | 2969.00 | | | |
| 20 | Jun-2001 | 2741.00 | | | |
| 21 | Jul-2001 | 2725.00 | | | |
| 22 | Aug-2001 | 2802.00 | | | |
| 23 | Sep-2001 | 2511.00 | | | |
| 24 | Oct-2001 | 2739.00 | | | |

All other gen. merchandise stor / Sheet2

## A note about grouping.

Series can be grouped by series or file type. Each grouping will be on its own worksheet in the Excel file. X-13ARIMA-SEATS can accommodate series with one of five periods: annual, biannual, quarterly, bimonthly, and monthly. X-13-Data can convert files of all four periods at once if requested by the user. When organizing the output by series, this doesn't present a problem since all file types for a single series will have the same period. However, when organizing the output by file types; there is the potential for different periods for the same file type. In this case, X-13-Data creates a separate worksheet for each combination of file type and period. In this case, the worksheet name will be the file type followed by the period.

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## 6. Data Formats

**Vertical**

| Period | Value |
|--------|--------|
| Jan-1992 | 27,306 |
| Feb-1992 | 26,223 |
| Mar-1992 | 27,235 |
| Apr-1992 | 27,588 |
| May-1992 | 28,883 |
| Jun-1992 | 28,039 |
| Jul-1992 | 29,479 |
| Aug-1992 | 28,645 |
| Sep-1992 | 27,475 |
| Oct-1992 | 28,583 |
| Nov-1992 | 27,620 |
| Dec-1992 | 30,294 |
| Jan-1993 | 27,571 |
| Feb-1993 | 25,748 |
| Mar-1993 | 27,911 |
| Apr-1993 | 28,112 |
| May-1993 | 29,096 |
| Jun-1993 | 28,576 |
| Jul-1993 | 30,067 |
| Aug-1993 | 28,470 |
| Sep-1993 | 28,022 |
| Oct-1993 | 28,532 |
| Nov-1993 | 28,081 |
| Dec-1993 | 31,132 |

**U.S. Census Bureau**

**Source: Monthly Retail Trade and Food Services**

**4451: Grocery stores**

**Not Seasonally Adjusted Sales - Monthly [Millions of Dollars]**

**Geographical Level: U.S. Total**

The dates are in one or two columns and the data is in another column

**Horizontal**

| | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | |
| 2 | U.S. Census Bureau | | | | | | | | | | | | |
| 3 | Source: Monthly Retail Trade and Food Services | | | | | | | | | | | | |
| 4 | 4451: Grocery stores | | | | | | | | | | | | |
| 5 | Not Seasonally Adjusted Sales - Monthly [Millions of Dollars] | | | | | | | | | | | | |
| 6 | Geographical Level: U.S. Total | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | |
| 8 | Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| 9 | 1992 | 27,306 | 26,223 | 27,235 | 27,588 | 28,883 | 28,039 | 29,479 | 28,645 | 27,475 | 28,583 | 27,620 | 30,294 |
| 10 | 1993 | 27,571 | 25,748 | 27,911 | 28,112 | 29,096 | 28,576 | 30,067 | 28,470 | 28,022 | 28,532 | 28,081 | 31,132 |
| 11 | 1994 | 27,889 | 26,175 | 29,261 | 28,529 | 29,402 | 29,721 | 30,344 | 29,792 | 29,102 | 29,079 | 29,077 | 32,152 |
| 12 | 1995 | 28,629 | 26,762 | 29,708 | 29,086 | 30,388 | 30,229 | 30,654 | 30,434 | 29,378 | 29,068 | 29,619 | 32,454 |
| 13 | 1996 | 29,172 | 28,191 | 30,245 | 29,344 | 31,364 | 30,470 | 31,377 | 31,747 | 29,495 | 30,674 | 31,014 | 32,454 |
| 14 | 1997 | 30,534 | 27,985 | 31,513 | 29,853 | 32,412 | 30,527 | 32,232 | 32,032 | 30,142 | 31,319 | 31,032 | 32,989 |
| 15 | 1998 | 30,679 | 27,947 | 30,501 | 30,826 | 32,456 | 31,215 | 33,067 | 32,220 | 31,005 | 32,214 | 31,377 | 34,681 |
| 16 | 1999 | 31,516 | 29,413 | 32,451 | 31,948 | 33,727 | 32,568 | 34,568 | 32,944 | 32,624 | 32,935 | 32,510 | 37,046 |
| 17 | 2000 | 31,336 | 30,515 | 33,216 | 33,004 | 34,085 | 33,880 | 34,517 | 34,225 | 33,324 | 33,190 | 33,969 | 37,254 |
| 18 | 2001 | 33,236 | 31,488 | 34,856 | 33,685 | 36,068 | 35,215 | 35,418 | 35,919 | 34,379 | 34,847 | 35,308 | 37,708 |

Data is in a table, with each row containing one year of data. Each column contains data for one period.

**Vertical-Multiple**

**U.S. Census Bureau**

**Source: Quarterly Services Survey**

**51 Information**

**Not Seasonally Adjusted Total revenue [Millions of Dollars]**

**Geographical Level: U.S. Total**

| Period | Information | Motion Picture | Software | Radio and TV | Cable |
|--------|-------------|----------------|----------|--------------|-------|
| Q4-2003 | 237,312 | 24,310 | 30,679 | 12,868 | |
| Q1-2004 | 223,586 | 20,386 | 26,439 | 11,594 | |
| Q2-2004 | 233,202 | 21,595 | 26,749 | 13,569 | |
| Q3-2004 | 232,990 | 19,472 | 26,763 | 12,980 | |
| Q4-2004 | 246,321 | 24,089 | 30,254 | 14,273 | |
| Q1-2005 | 235,968 | 21,697 | 27,382 | 12,620 | |
| Q2-2005 | 244,096 | 21,764 | 28,760 | 13,332 | |
| Q3-2005 | 244,776 | 21,164 | 28,356 | 12,323 | |
| Q4-2005 | 255,896 | 24,341 | 32,145 | 14,377 | |
| Q1-2006 | 245,165 | 21,511 | 29,521 | 13,563 | |
| Q2-2006 | 254,695 | 23,016 | 30,587 | 13,973 | |
| Q3-2006 | 255,763 | 21,958 | 30,517 | 12,917 | 10,077 |
| Q4-2006 | 271,440 | 26,780 | 34,578 | 14,951 | 10,874 |
| Q1-2007 | 258,050 | 23,204 | 33,757 | 13,376 | 10,154 |
| Q2-2007 | 265,760 | 23,408 | 33,236 | 13,970 | 11,147 |
| Q3-2007 | 267,333 | 22,649 | 31,547 | 13,146 | 11,516 |
| Q4-2007 | 281,198 | 25,725 | 36,861 | 14,501 | 12,109 |
| Q1-2008 | 270,308 | 23,248 | 35,013 | 13,965 | 11,360 |
| Q2-2008 | 277,714 | 24,297 | 36,078 | 14,199 | 12,251 |
| Q3-2008 | 277,654 | 22,724 | 34,189 | 13,655 | 12,422 |
| Q4-2008 | 282,673 | 25,002 | 37,437 | 13,196 | 13,536 |
| Q1-2009 | 261,828 | 22,066 | 32,436 | 11,233 | 12,437 |
| Q2-2009 | 266,885 | 22,243 | 34,038 | 11,800 | 12,765 |
| Q3-2009 | 265,504 | 21,231 | 32,535 | 11,306 | 12,943 |
| Q4-2009 | 280,742 | 24,858 | 39,972 | 13,164 | 13,286 |
| Q1-2010 | 267,820 | 23,229 | 34,167 | 12,950 | 12,966 |
| Q2-2010 | 275,092 | 23,264 | 36,171 | 12,647 | 14,361 |
| Q3-2010 | 276,004 | 22,696 | 34,422 | 12,206 | 13,492 |
| Q4-2010 | 291,309 | 25,929 | 40,665 | 14,549 | 14,349 |
| Q1-2011 | 276,123 | 20,849 | 35,630 | 12,616 | 14,278 |
| Q2-2011 | 286,900 | 22,839 | 37,690 | 12,537 | 15,707 |
| Q3-2011 | 285,780 | 22,838 | 36,034 | 11,729 | 14,975 |
| Q4-2011 | 300,630 | 25,548 | 42,189 | 13,747 | 15,489 |
| Q1-2012 | X | X | X | X | X |
| Q2-2012 | X | X | X | X | X |
| Q3-2012 | X | X | X | X | X |
| Q4-2012 | X | X | X | X | X |

CIDR / Page2 / Sheet1 / Sheet2 / Sheet3

Similar to Vertical for single series, each series is in its own column. There is a row containing the names of each series. These are used to name the data files created by X-13-Data.

## Horizontal-Multiple

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | AMTMNO | 1992 | | 223837 | 233184 | 238667 | 241733 | 240788 | 238894 | 235296 | 238914 | 243069 | 240926 | 244027 |
| 2 | AMTMNO | 1993 | 239295 | 247607 | 245007 | 245027 | 245546 | 249055 | 246167 | 246398 | 245787 | 251700 | 248814 | 249661 |
| 3 | AMTMNO | 1994 | 256762 | 257195 | 256893 | 259751 | 263767 | 266928 | 267806 | 269810 | 270411 | 275430 | 276952 | 282325 |
| 4 | AMTMNO | 1995 | 279756 | 285693 | 281536 | 283264 | 283095 | 282046 | 281559 | 285823 | 293290 | 287580 | 288452 | 296783 |
| 5 | AMTMNO | 1996 | 285913 | 278941 | 298612 | 290405 | 298584 | 299640 | 298623 | 293069 | 302518 | 301580 | 309413 | 299708 |
| 6 | AMTMNO | 1997 | 300906 | 311513 | 308183 | 312547 | 308725 | 315165 | 318449 | 317752 | 319368 | 320391 | 334315 | 315144 |
| 7 | AMTMNO | 1998 | 316008 | 323103 | 318411 | 320409 | 319596 | 312538 | 307778 | 318281 | 318998 | 316657 | 318706 | 316415 |
| 8 | AMTMNO | 1999 | 322977 | 324830 | 323810 | 320936 | 326029 | 324275 | 329695 | 333075 | 333858 | 340346 | 334601 | 344241 |
| 9 | AMTMNO | 2000 | 350521 | 332073 | 344453 | 347585 | 340606 | 375483 | 343348 | 341550 | 353850 | 339382 | 343363 | 342778 |
| 10 | AMTMNO | 2001 | 331290 | 334551 | 334134 | 321351 | 330628 | 323463 | 318206 | 321838 | 311090 | 318188 | 308889 | 312239 |
| 11 | AMTMNO | 2002 | 307492 | 315678 | 314951 | 318347 | 321452 | 314866 | 321981 | 327139 | 320596 | 320300 | 321497 | 316577 |
| 12 | AMTMNO | 2003 | 322083 | 328741 | 331890 | 321062 | 323642 | 327942 | 331362 | 330239 | 335485 | 341718 | 338442 | 340105 |
| 13 | AMTMNO | 2004 | 336025 | 337483 | 355729 | 349217 | 350800 | 353006 | 358223 | 357325 | 360560 | 363491 | 373864 | 373092 |
| 14 | AMTMNO | 2005 | 375675 | 379018 | 377177 | 384765 | 395356 | 400602 | 388555 | 400562 | 403575 | 408550 | 420648 | 421400 |
| 15 | AMTMNO | 2006 | 412213 | 416067 | 429827 | 418475 | 422332 | 428651 | 419823 | 419151 | 434349 | 413592 | 425983 | 438546 |
| 16 | AMTMNO | 2007 | 419850 | 428973 | 441590 | 448641 | 445685 | 447679 | 456665 | 448507 | 448167 | 456033 | 468344 | 480914 |
| 17 | AMTMNO | 2008 | 471193 | 467100 | 468819 | 476331 | 478562 | 484944 | 484047 | 463049 | 448957 | 418574 | 387424 | 366341 |
| 18 | AMTMNO | 2009 | 343743 | 346354 | 335873 | 335983 | 344338 | 347275 | 357787 | 355894 | 361910 | 367537 | 368788 | 373572 |
| 19 | AMTMNO | 2010 | 385593 | 388104 | 391734 | 398577 | 393090 | 390126 | 397922 | 395248 | 410063 | 406014 | 411543 | 416654 |
| 20 | AMTMNO | 2011 | 430864 | 429658 | 445836 | 441740 | 444454 | 442711 | 451885 | 452121 | 451636 | 450932 | 460931 | 467341 |
| 21 | AMTMNO | 2012 | 462357 | 468406 | | | | | | | | | | |
| 22 | AMXTNO | 1992 | | 191789 | 199122 | 200489 | 204021 | 206152 | 204086 | 202501 | 206667 | 202545 | 207627 | 209682 |
| 23 | AMXTNO | 1993 | 209351 | 208808 | 210402 | 209166 | 209990 | 210272 | 210274 | 210597 | 212490 | 214367 | 212338 | 214445 |
| 24 | AMXTNO | 1994 | 216077 | 218201 | 219024 | 220358 | 223397 | 226628 | 227325 | 228011 | 229660 | 233539 | 233755 | 239577 |
| 25 | AMXTNO | 1995 | 241404 | 240683 | 238823 | 242234 | 241729 | 241638 | 241299 | 244067 | 245648 | 247788 | 245553 | 250479 |
| 26 | AMXTNO | 1996 | 242235 | 237915 | 247998 | 247410 | 251445 | 252938 | 251798 | 253624 | 252970 | 255902 | 257988 | 254569 |
| 27 | AMXTNO | 1997 | 257605 | 264268 | 263322 | 264797 | 263151 | 266750 | 269061 | 268721 | 271925 | 269436 | 271441 | 269376 |
| 28 | AMXTNO | 1998 | 269051 | 272270 | 269737 | 266388 | 269189 | 269615 | 264398 | 265875 | 266419 | 262976 | 264568 | 267915 |
| 29 | AMXTNO | 1999 | 264022 | 269511 | 268306 | 268739 | 270763 | 271365 | 275538 | 277551 | 280744 | 283276 | 282332 | 286500 |
| 30 | AMXTNO | 2000 | 288957 | 280548 | 292239 | 293809 | 289763 | 298698 | 292514 | 291357 | 295395 | 290918 | 289979 | 288824 |
| 31 | AMXTNO | 2001 | 285614 | 286142 | 277285 | 270779 | 279343 | 272149 | 270245 | 274218 | 265656 | 262438 | 262817 | 264763 |
| 32 | AMXTNO | 2002 | 258372 | 260440 | 261366 | 265515 | 269849 | 266617 | 264487 | 267164 | 270415 | 268796 | 268051 | 268673 |
| 33 | AMXTNO | 2003 | 269184 | 273788 | 275233 | 266531 | 269048 | 272899 | 275974 | 276596 | 279511 | 284191 | 280959 | 283487 |
| 34 | AMXTNO | 2004 | 282452 | 281275 | 295980 | 293353 | 295544 | 296900 | 298963 | 303021 | 306014 | 310478 | 314568 | 316835 |
| 35 | AMXTNO | 2005 | 319671 | 323250 | 326764 | 326549 | 326376 | 332190 | 328293 | 340034 | 345009 | 344215 | 347122 | 349158 |
| 36 | AMXTNO | 2006 | 356487 | 351107 | 357830 | 355479 | 360734 | 362395 | 361374 | 360086 | 354046 | 351124 | 354201 | 366018 |
| 37 | AMXTNO | 2007 | 357025 | 363406 | 367500 | 373260 | 376569 | 372059 | 376564 | 376254 | 379869 | 387756 | 396895 | 399626 |

One column contains the series names. (Here it is column A.) Each series is presented in its entirety before the next series begins. Each row contains one year of data. Each month (quarter) is in its own column.

## MRTS

MRTS refers to the U.S. Census Bureau's Monthly Retail Trade and Food Services report. It is available at http://www.census.gov/retail/

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Estimates of | Monthly Retail and Food Services Sales by Kind of Business: 2011 | | | | | | | | | | | | | |
| 2 | [Estimates are shown in millions of dollars and are based on data from the Monthly Retail Trade Survey, Annual Retail Trade Survey, and administrative records] | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | |
| 4 | NAICS Code | Kind of Business | | | | | | | | | | | | | |
| 5 | | | Jan. 2011 | Feb. 2011 | Mar. 2011 | Apr. 2011 | May 2011 | Jun. 2011 | Jul. 2011 | Aug. 2011 | Sep. 2011 | Oct. 2011 | Nov. 2011 | Dec. 2011 | TOTAL |
| 6 | | NOT ADJUSTED | | | | | | | | | | | | | |
| 7 | | Retail and food services sales, total | 338,500 | 340,500 | 390,622 | 384,506 | 396,066 | 392,888 | 388,749 | 398,950 | 379,330 | 384,345 | 395,724 | 457,468 | 4,647,648 |
| 8 | | Retail sales and food services excl motor vehicle and parts | 279,782 | 276,831 | 314,066 | 313,654 | 325,448 | 321,351 | 318,246 | 326,393 | 311,306 | 317,494 | 330,984 | 385,794 | 3,821,349 |
| 9 | | Retail sales, total | 301,732 | 303,323 | 348,836 | 342,996 | 353,318 | 351,082 | 345,661 | 356,718 | 338,059 | 341,995 | 355,969 | 414,458 | 4,154,147 |
| 10 | | Retail sales, total (excl. motor vehicle and parts dealers) | 243,014 | 239,654 | 272,280 | 272,144 | 282,700 | 279,545 | 275,158 | 284,161 | 270,035 | 275,144 | 291,229 | 342,784 | 3,327,848 |
| 11 | | GAFO(1) | 81,186 | 84,462 | 93,171 | 92,521 | 94,310 | 93,161 | 93,214 | 98,373 | 91,623 | 93,453 | 107,147 | 143,357 | 1,165,978 |
| 12 | 441 | Motor vehicle and parts dealers | 58,718 | 63,669 | 76,556 | 70,852 | 70,618 | 71,537 | 70,503 | 72,557 | 68,024 | 66,851 | 64,740 | 71,674 | 826,299 |
| 13 | 4411,4412 | Automobile and other motor vehicle dealers | 53,044 | 57,688 | 69,413 | 64,173 | 63,765 | 64,099 | 63,514 | 64,919 | 60,866 | 59,790 | 57,946 | 65,093 | 744,310 |
| 14 | 4411 | Automobile dealers | 50,636 | 54,753 | 64,990 | 59,539 | 58,881 | 59,126 | 58,929 | 60,741 | 57,489 | 56,731 | 55,216 | 62,145 | 699,176 |
| 15 | 44111 | New car dealers | 44,246 | 46,915 | 56,717 | 52,534 | 52,056 | 52,071 | 51,993 | 53,711 | 51,006 | 50,532 | 49,240 | 56,081 | 617,102 |
| 16 | 44112 | Used car dealers | 6,390 | 7,838 | 8,273 | 7,005 | 6,825 | 7,055 | 6,936 | 7,030 | 6,483 | 6,199 | 5,976 | 6,064 | 82,074 |
| 17 | 4413 | Automotive parts, acc., and tire stores | 5,674 | 5,981 | 7,143 | 6,679 | 6,853 | 7,438 | 6,989 | 7,638 | 7,158 | 7,061 | 6,794 | 6,581 | 81,989 |
| 18 | 442,443 | Furniture, home furn, electronics, and appliance stores | 13,798 | 14,245 | 15,697 | 14,174 | 14,664 | 14,853 | 15,198 | 16,065 | 15,134 | 14,793 | 18,079 | 22,117 | 188,817 |
| 19 | 442 | Furniture and home furnishings stores | 6,329 | 6,559 | 7,605 | 6,960 | 7,148 | 7,101 | 7,316 | 7,772 | 7,556 | 7,098 | 8,110 | 9,267 | 88,821 |
| 20 | 4421 | Furniture stores | 3,593 | 3,884 | 4,316 | 3,912 | 3,872 | 3,805 | 4,020 | 4,157 | 4,085 | 3,784 | 4,185 | 4,376 | 47,989 |
| 21 | 4422 | Home furnishings stores | 2,736 | 2,675 | 3,289 | 3,048 | 3,276 | 3,296 | 3,296 | 3,615 | 3,471 | 3,314 | 3,925 | 4,891 | 40,832 |
| 22 | 44221 | Floor covering stores | 939 | 944 | 1,188 | 1,103 | 1,233 | 1,269 | 1,252 | 1,458 | 1,399 | 1,326 | 1,308 | 1,325 | 14,744 |
| 23 | 442299 | All other home furnishings stores | 1,693 | 1,624 | 1,979 | 1,848 | 1,940 | 1,931 | 1,947 | 2,049 | 1,959 | 1,874 | 2,508 | 3,468 | 24,820 |
| 24 | 443 | Electronics and appliance stores | 7,469 | 7,686 | 8,092 | 7,214 | 7,516 | 7,752 | 7,882 | 8,293 | 7,578 | 7,695 | 9,969 | 12,850 | 99,996 |
| 25 | 44311 | Appl.,TV, and other elect. stores | 5,551 | 5,811 | 5,835 | 5,319 | 5,491 | 5,716 | 5,850 | 6,147 | 5,542 | 5,458 | 7,102 | 9,360 | 73,182 |
| 26 | 443111 | Household appliance stores | 1,027 | 1,087 | 1,157 | 1,122 | 1,208 | 1,242 | 1,257 | 1,277 | 1,293 | 1,189 | 1,497 | 1,514 | 14,870 |
| 27 | 443112 | Radio, T.V., and other elect. stores | 4,524 | 4,724 | 4,678 | 4,197 | 4,283 | 4,474 | 4,593 | 4,870 | 4,249 | 4,269 | 5,605 | 7,846 | 58,312 |
| 28 | 44312 | Computer and software stores | 1,734 | 1,687 | 2,020 | 1,705 | 1,791 | 1,795 | 1,815 | 1,909 | 1,815 | 2,052 | 2,629 | 3,179 | 24,131 |
| 29 | 444 | Building mat. and garden equip. and supplies dealers | 16,476 | 16,460 | 22,643 | 25,222 | 28,694 | 28,007 | 24,256 | 24,540 | 23,299 | 24,018 | 23,222 | 22,065 | 278,902 |
| 30 | 4441 | Building mat. and supplies dealers | 14,440 | 14,344 | 19,145 | 20,464 | 22,932 | 22,791 | 21,071 | 21,499 | 20,396 | 20,390 | 19,764 | 18,476 | 235,712 |
| 31 | 44412 | Paint and wallpaper stores | 510 | 533 | 685 | 703 | 707 | 851 | 799 | 859 | 789 | 737 | 664 | 567 | 8,404 |
| 32 | 44413 | Hardware stores | 1,329 | 1,240 | 1,495 | 1,741 | 2,025 | 1,910 | 1,756 | 1,781 | 1,637 | 1,724 | 1,725 | 1,765 | 20,128 |
| 33 | 445 | Food and beverage stores | 48,674 | 45,856 | 50,069 | 50,985 | 51,905 | 51,506 | 53,005 | 52,054 | 50,360 | 51,298 | 51,730 | 56,466 | 613,908 |
| 34 | 4451 | Grocery stores | 44,445 | 41,431 | 45,327 | 45,888 | 46,677 | 46,256 | 47,570 | 46,841 | 45,229 | 46,057 | 46,338 | 49,114 | 551,173 |
| 35 | 44511 | Supermarkets and other grocery (except convenience) store | 42,228 | 39,226 | 42,816 | 43,239 | 43,821 | 43,403 | 44,606 | 43,940 | 42,531 | 43,398 | 43,787 | 46,512 | 519,507 |
| 36 | 4453 | Beer, wine, and liquor stores | 2,929 | 3,034 | 3,308 | 3,429 | 3,545 | 3,629 | 3,825 | 3,658 | 3,597 | 3,593 | 3,725 | 4,994 | 43,266 |
| 37 | 446 | Health and personal care stores | 22,242 | 21,290 | 23,625 | 22,250 | 22,783 | 22,413 | 21,909 | 23,032 | 22,265 | 22,622 | 22,468 | 25,387 | 272,286 |
| 38 | 44611 | Pharmacies and drug stores | 19,078 | 18,016 | 19,913 | 18,808 | 19,357 | 18,935 | 18,406 | 19,349 | 18,736 | 19,214 | 19,048 | 21,105 | 229,965 |
| 39 | 447 | Gasoline stations | 37,659 | 36,290 | 43,860 | 45,268 | 47,615 | 46,880 | 47,493 | 47,602 | 44,738 | 44,421 | 42,312 | 42,058 | 526,196 |
| 40 | 448 | Clothing and clothing access. stores | 13,633 | 15,820 | 18,117 | 18,498 | 18,618 | 17,637 | 17,776 | 19,056 | 17,818 | 18,095 | 20,787 | 30,893 | 226,748 |
| 41 | 4481 | Clothing stores | 10,170 | 11,360 | 13,702 | 13,842 | 13,627 | 13,259 | 13,401 | 13,876 | 13,404 | 13,787 | 15,813 | 21,735 | 167,976 |
| 42 | 44811 | Men's clothing stores | 528 | 539 | 650 | 749 | 736 | 718 | 639 | 596 | 698 | 740 | 766 | 1,171 | 8,530 |
| 43 | 44812 | Women's clothing stores | 2,273 | 2,660 | 3,327 | 3,448 | 3,371 | 3,155 | 2,938 | 2,909 | 3,177 | 3,180 | 3,505 | 4,666 | 38,609 |
| 44 | 44814 | Family clothing stores | 5,214 | 5,932 | 7,060 | 7,117 | 7,011 | 6,833 | 7,249 | 7,685 | 6,854 | 7,209 | 8,587 | 11,972 | 88,723 |
| 45 | 44819 | Other clothing stores | 1,007 | 922 | 1,123 | 1,045 | 1,092 | 1,139 | 1,049 | 1,064 | 983 | 1,074 | 1,202 | 1,665 | 13,365 |
| 46 | 4482 | Shoe stores | 1,685 | 2,069 | 2,245 | 2,280 | 2,180 | 2,102 | 2,195 | 2,824 | 2,163 | 2,129 | 2,326 | 3,214 | 27,412 |
| 47 | 44831 | Jewelry stores | 1,627 | 2,238 | 1,982 | 2,200 | 2,631 | 2,098 | 1,987 | 2,183 | 2,085 | 2,009 | 2,461 | 5,636 | 29,137 |
| 48 | 451 | Sporting goods, hobby, book, and music stores | 6,479 | 5,577 | 6,574 | 6,401 | 6,348 | 6,666 | 6,441 | 8,239 | 6,899 | 6,051 | 7,472 | 11,524 | 84,671 |
| 49 | 45111 | Sporting goods stores | 2,471 | 2,514 | 3,342 | 3,321 | 3,241 | 3,585 | 3,409 | 3,704 | 3,079 | 2,807 | 3,298 | 5,107 | 39,878 |
| 50 | 45112 | Hobby, toy, and game stores | 1,033 | 1,098 | 1,285 | 1,281 | 1,159 | 1,159 | 1,186 | 1,175 | 1,262 | 1,379 | 2,166 | 3,372 | 17,555 |
| 51 | 451211 | Book stores | 2,039 | 1,035 | 958 | 874 | 1,031 | 1,002 | 969 | 2,402 | 1,522 | 874 | 934 | 1,643 | 15,283 |
| 52 | 452 | General merchandise stores | 44,578 | 46,044 | 49,927 | 50,733 | 51,708 | 51,193 | 50,990 | 51,642 | 48,615 | 51,324 | 57,735 | 74,634 | 629,123 |
| 53 | 4521 | Department stores (excl.L.D) | 11,974 | 12,934 | 14,264 | 14,598 | 14,577 | 14,823 | 14,015 | 14,811 | 13,730 | 14,425 | 18,244 | 26,541 | 184,936 |
| 54 | 452112 | Discount dept. stores | 8,081 | 8,503 | 9,378 | 9,453 | 9,499 | 9,730 | 9,304 | 9,901 | 8,893 | 9,482 | 11,674 | 16,168 | 120,066 |
| 55 | 452111 | Department stores(excl. discount department stores) | 3,893 | 4,431 | 4,886 | 5,145 | 5,078 | 5,093 | 4,711 | 4,910 | 4,837 | 4,943 | 6,570 | 10,373 | 64,870 |

| 2012 | **2011** | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 | 2004 | 2003 | 2002 | 2001 | 2000 | 1999 | 1998 | 1997 | 1996 | 1995 | 1994 | 1993 | 19... |

X-13-Data will create a data file for each unadjusted series from the MRTS report. You do not need to specify any parameters when the MRTS format has been selected.

**Regression Matrix**

| ◢ | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Regression Matrix | | | | | | |
| 2 | Date | Mon | Tue | Wed | Thu | Fri | Sat |
| 3 | Jan-1992 | 0.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| 4 | Feb-1992 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| 5 | Mar-1992 | 0.00 | 0.00 | -1.00 | -1.00 | -1.00 | -1.00 |
| 6 | Apr-1992 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 |
| 7 | May-1992 | -1.00 | -1.00 | -1.00 | -1.00 | 0.00 | 0.00 |
| 8 | Jun-1992 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | Jul-1992 | 0.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| 10 | Aug-1992 | 0.00 | -1.00 | -1.00 | -1.00 | -1.00 | 0.00 |
| 11 | Sep-1992 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 |
| 12 | Oct-1992 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| 13 | Nov-1992 | 0.00 | -1.00 | -1.00 | -1.00 | -1.00 | -1.00 |
| 14 | Dec-1992 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 |
| 15 | Jan-1993 | -1.00 | -1.00 | -1.00 | -1.00 | 0.00 | 0.00 |
| 16 | Feb-1993 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17 | Mar-1993 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 |
| 18 | Apr-1993 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| 19 | May-1993 | 0.00 | -1.00 | -1.00 | -1.00 | -1.00 | 0.00 |

This is similar to Vertical Multiple format except that entire matrix will be saved into one data file. This type of file can be read into X-13ARIMA-SEATS as a user-defined regressor.

Use the controls to specify the start and end rows and columns of the regression matrix. *Data Start Column* and *Data Start Row* are required. Leave *Data End Column* and *Data End Row* at their default values to read the entire matrix. Otherwise, use *Data End Column* and *Data End Row* to read a subset of the data in the Excel file.

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# 7. Contact Information

For more information or to report bugs, please contact Nikki Czaplicki.
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# 8. References

U.S. Census Bureau (2015). X-13ARIMA-SEATS,Version 1.1

U.S. Census Bureau (2015). X-13ARIMA-SEATS Reference Manual,Version 1.1

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