

# X-13-Data Version 2.0

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U.S. Census Bureau  
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## Table of Contents

1. [Introduction](#)
2. [Requirements](#)
3. [Getting Started](#)
4. [Convert from Excel to X-13](#)
5. [Convert X-13 Output to an Excel file](#)
6. [Data Formats](#)
7. [Contact Information](#)
8. [References](#)

## 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.

Return to [contents](#).

## 2. Requirements

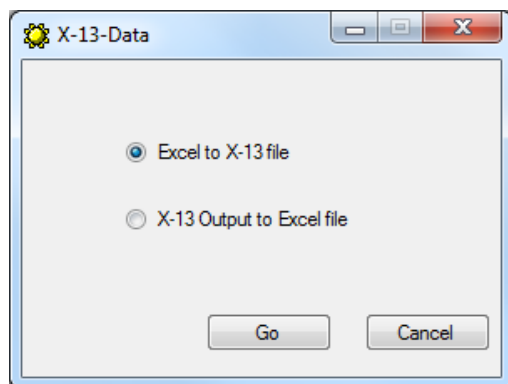
X-13-Data has been tested on Windows XP, Windows 7, and Windows 8. To run the program, Microsoft.NET Framework 3.5 must be installed on your computer. It can be downloaded [here](#).

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

Return to [contents](#).

## 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](#)).

Return to [contents](#).

## 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.

**X-13-Data: Excel Reader**

Excel File: H:\Grocery.xlsx [Browse...](#)

Worksheet number: 1

Data Format: Vertical [Examples](#)

Save File: H:\Grocery.dat

☐ Date in more than one column

☐ View data upon completion

Date Column: A Series Names Row: 1

Data Start Column: B Data Start Row: 1

Data End Column: Data End Row: 1

☐ Manually Enter Dates Period: 12

Start Year: Start Period:

[Go](#) [Cancel](#)

### 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

Return to [contents](#).

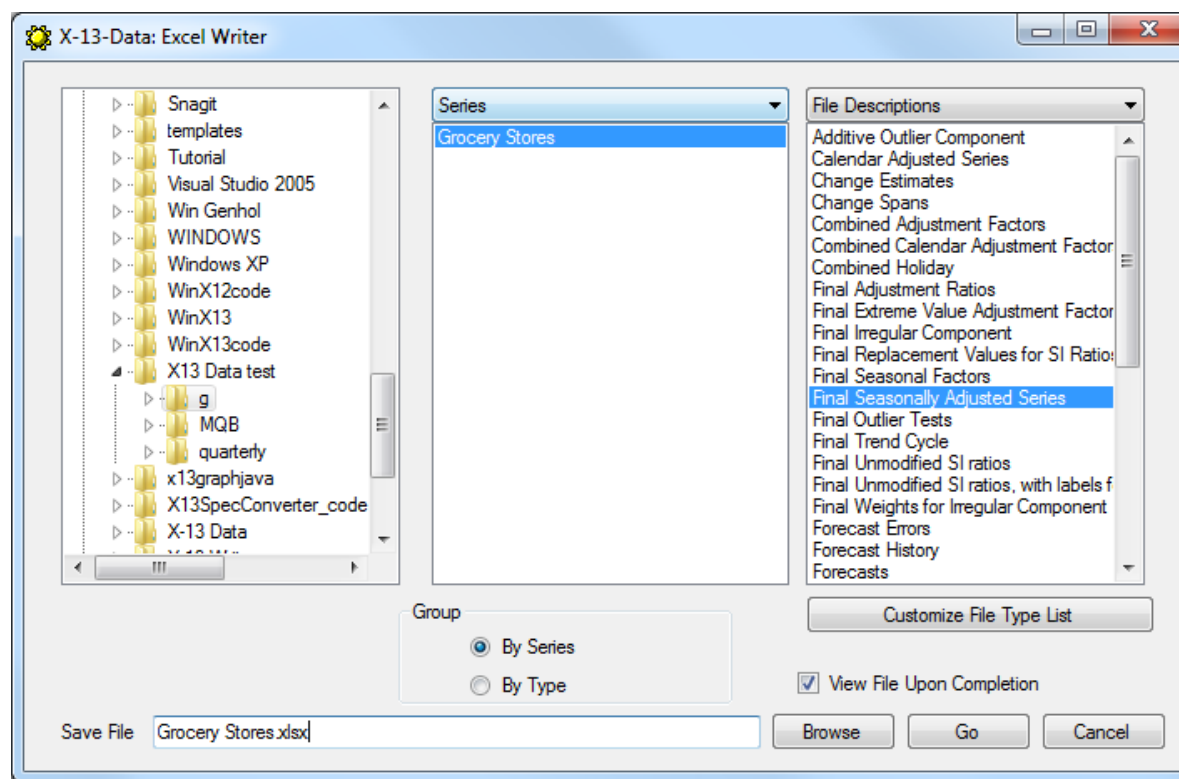
## 5. Convert X-13 Output to an Excel file.

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 will 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.

Return to [contents](#).

6. Data Formats

Vertical

	A	B	C	D	E	F	G	H
1	<b>U.S. Census Bureau</b> <b>Source: Monthly Retail Trade and Food Services</b> <b>4451: Grocery stores</b> <b>Not Seasonally Adjusted Sales - Monthly [Millions of Dollars]</b> <b>Geographical Level: U.S. Total</b>							
2								
3								
4								
5								
6								
7								
8	Period	Value						
9	Jan-1992	27,306						
10	Feb-1992	26,223						
11	Mar-1992	27,235						
12	Apr-1992	27,588						
13	May-1992	28,883						
14	Jun-1992	28,039						
15	Jul-1992	29,479						
16	Aug-1992	28,645						
17	Sep-1992	27,475						
18	Oct-1992	28,583						
19	Nov-1992	27,620						
20	Dec-1992	30,294						
21	Jan-1993	27,571						
22	Feb-1993	25,748						
23	Mar-1993	27,911						
24	Apr-1993	28,112						
25	May-1993	29,096						
26	Jun-1993	28,576						
27	Jul-1993	30,067						
28	Aug-1993	28,470						
29	Sep-1993	28,022						
30	Oct-1993	28,532						
31	Nov-1993	28,081						
32	Dec-1993	31,132						

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



	A	B	C	D	E	F
1						
2	U.S. Census Bureau					
3	Source: Quarterly Services Survey					
4	51 Information					
5	Not Seasonally Adjusted Total revenue [Millions of Dollars]					
6	Geographical Level: U.S. Total					
7						
8	Period	Information	Motion Picture	Software	Radio and TV	Cable
9	Q4-2003	237,312	24,310	30,679	12,868	
10	Q1-2004	223,586	20,386	26,439	11,594	
11	Q2-2004	233,202	21,595	26,749	13,569	
12	Q3-2004	232,990	19,472	26,763	12,980	
13	Q4-2004	246,321	24,089	30,254	14,273	
14	Q1-2005	235,968	21,697	27,382	12,620	
15	Q2-2005	244,096	21,764	28,760	13,332	
16	Q3-2005	244,776	21,164	28,356	12,323	
17	Q4-2005	255,896	24,341	32,145	14,377	
18	Q1-2006	245,165	21,511	29,521	13,563	
19	Q2-2006	254,695	23,016	30,587	13,973	
20	Q3-2006	255,763	21,958	30,517	12,917	10,077
21	Q4-2006	271,440	26,780	34,578	14,951	10,874
22	Q1-2007	258,050	23,204	33,757	13,376	10,154
23	Q2-2007	265,760	23,408	33,236	13,970	11,147
24	Q3-2007	267,333	22,649	31,547	13,146	11,516
25	Q4-2007	281,198	25,725	36,861	14,501	12,109
26	Q1-2008	270,308	23,248	35,013	13,965	11,360
27	Q2-2008	277,714	24,297	36,078	14,199	12,251
28	Q3-2008	277,654	22,724	34,189	13,655	12,422
29	Q4-2008	282,673	25,002	37,437	13,196	13,536
30	Q1-2009	261,828	22,066	32,436	11,233	12,437
31	Q2-2009	266,885	22,243	34,038	11,800	12,765
32	Q3-2009	265,504	21,231	32,535	11,306	12,943
33	Q4-2009	280,742	24,858	39,972	13,164	13,286
34	Q1-2010	267,820	23,229	34,167	12,950	12,966
35	Q2-2010	275,092	23,264	36,171	12,647	14,361
36	Q3-2010	276,004	22,696	34,422	12,206	13,492
37	Q4-2010	291,309	25,929	40,665	14,549	14,349
38	Q1-2011	276,123	20,849	35,630	12,616	14,278
39	Q2-2011	286,900	22,839	37,690	12,537	15,707
40	Q3-2011	285,780	22,838	36,034	11,729	14,975
41	Q4-2011	300,630	25,548	42,189	13,747	15,489
42	Q1-2012	X	X	X	X	X
43	Q2-2012	X	X	X	X	X
44	Q3-2012	X	X	X	X	X
45	Q4-2012	X	X	X	X	X

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	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878</



	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.

Return to [contents](#).

## 7. Contact Information

For more information or to report bugs, please contact Nikki Czaplicki.  
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Phone: 301-763-6206

Return to [contents](#).

## 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](#)

Return to [contents](#).