Best Practices to format Excel spreadsheets for Express

Express allows users to create dashboards with just a few clicks by simply uploading Microsoft Excel files.

Express supports data upload for both tabular and crosstabbed formats. The following instructions will help you make sure that the Microsoft Excel file is formatted to fit the requirements for Express prior to being uploaded for analysis.

Tabular Data format, or a flat or denormalized table of data with a single row of headers, can be readily uploaded to Express.

Year	Supplier	City	Profit	Units Sold
2012	Bantam Books	Annapolis	$38,136	1,090
2012	Audiotronics Inc.	Baltimore	$28,434	812
2013	Bantam Books	Annapolis	$11,919	341
2013	Audiotronics Inc.	Baltimore	$35,542	1,015

Crosstabbed Data format is supported on Express and may be readily uploaded as well. Once uploaded, users may reorganize their data and may do so within the product itself

		Profit		Units Sold	
Supplier	City	2012	2013	2012	2013
Bantam Books	Annapolis	$38,136	$11,919	1,090	341
Audiotronics Inc.	Baltimore	$28,434	$35,542	812	1,015

Header Titles should not be merged. The example below shows how both merged header names and data values can be unmerged by pasting the values repeatedly across all the cells.

		Profit			
Supplier	City	Q1	Q2	Q3	Q4
Bantam Books	Annapolis	$38,136	$11,919	$47,670	$19,866
Audiotronics Inc.		$6,121	$8,744	$9,005	0,589
	Baltimore	$28,434	$35,542	$24,119	
Digital Equipment		$11,371	$14,214	$19,016	$2
Lyons Group	Chantilly	$9,660	$13,801	$3,240	

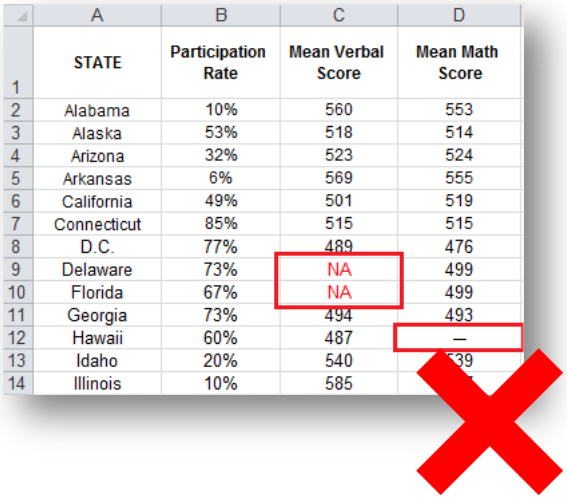
		Profit	Profit	Profit	Profit
Supplier	City	Q1	Q2	Q3	Q4
Bantam Books	Annapolis	$38,136	$11,919	$47,670	$19,866
Audiotronics Inc.	Annapolis	$6,121	$8,744	$9,005	$10,589
Audiotronics Inc.	Baltimore	$28,434	$35,542	$24,119	$3 27
Digital Equipment	Baltimore	$11,371	$14,214	$19,016	$2 ,166

Exclude information that is unrelated to tabular data It is common to have text and other information related to the tabular data within the first few or bottom rows of the Excel worksheet (in the form of headings, footers, summaries, introductions, etc.). The Excel file to be uploaded to Express must only contain the row of headers in its first line and all other data on the worksheet must be deleted and then saved prior to uploading.

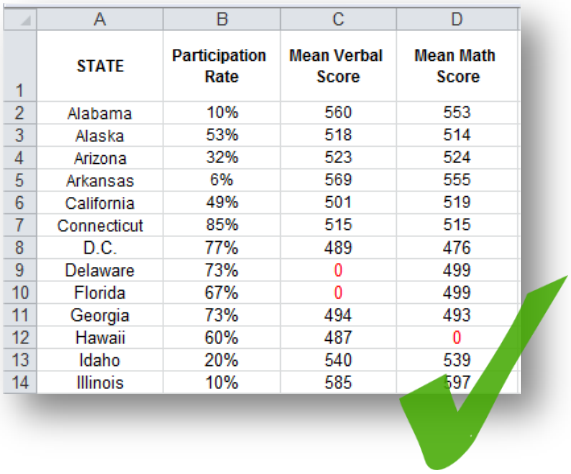
	A	B	C	D
1	STATE WISE SAT SCORES FOR 2004			
2				
3	FILTER: [YEAR = 2004]			
4				
5	STATE	Participation Rate	Mean Verbal Score	Mean Math Score
6	Alabama	10%	560	553
7	Alaska	53%	518	514
8	Arizona	32%	523	524
9	California	49%	501	
10	Colorado	27%	554	

	A	B	C	D
1	STATE	Participation Rate	Mean Verbal Score	Mean Math Score
2	Alabama	10%	560	553
3	Alaska	53%	518	514
4	Arizona	32%	523	524
5	California	49%	501	519
6	Colorado	27%	554	553

Data fields with alphabetic characters or symbols If data fields contain text or symbols, these values will appear blank because they cannot be aggregated. In order to work around this problem, all data should be in numeric format prior to uploading the Excel file. This can be done by using the "Convert to number" feature in Excel for all numeric data fields. Numeric Data that is not available for cells may be left blank. If cells contain alphabetic characters or symbols (e.g. NA, NUL, zero, - , not applicable etc.), replace with a number (i.e. 0) or leave blank as needed. Delete blank rows.



	A	B	C	D
1	STATE	Participation Rate	Mean Verbal Score	Mean Math Score
2	Alabama	10%	560	553
3	Alaska	53%	518	514
4	Arizona	32%	523	524
5	Arkansas	6%	569	555
6	California	49%	501	519
7	Connecticut	85%	515	515
8	D.C.	77%	489	476
9	Delaware	73%	NA	499
10	Florida	67%	NA	499
11	Georgia	73%	494	493
12	Hawaii	60%	487	–
13	Idaho	20%	540	539
14	Illinois	10%	585	597



	A	B	C	D
1	STATE	Participation Rate	Mean Verbal Score	Mean Math Score
2	Alabama	10%	560	553
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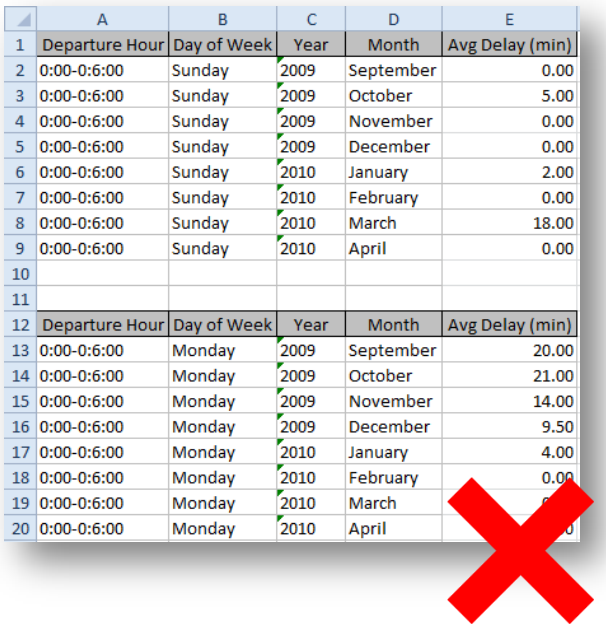
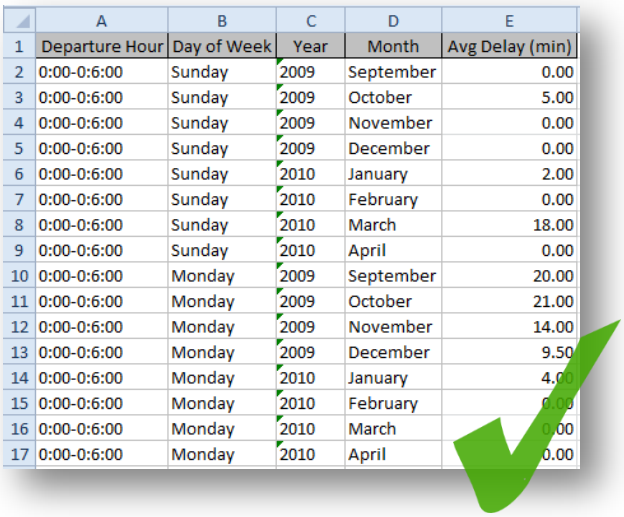
4	Arizona	32%	523	524
5	Arkansas	6%	569	555
6	California	49%	501	519
7	Connecticut	85%	515	515
8	D.C.	77%	489	476
9	Delaware	73%	0	499
10	Florida	67%	0	499
11	Georgia	73%	494	493
12	Hawaii	60%	487	0
13	Idaho	20%	540	539
14	Illinois	10%	585	597

Merge Tables Express only supports the import of one table per worksheet, and only one worksheet at once. If the data in two different tables has no similarities, you will have to put the data on different workbooks/worksheets, to be put on different dashboards.



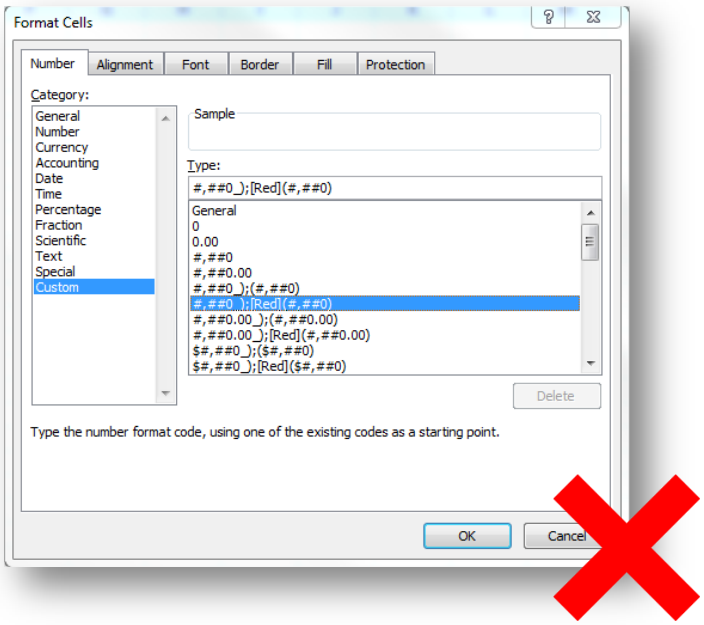
	A	B	C	D	E
1	Departure Hour	Day of Week	Year	Month	Avg Delay (min)
2	0:00-0:6:00	Sunday	2009	September	0.00
3	0:00-0:6:00	Sunday	2009	October	5.00
4	0:00-0:6:00	Sunday	2009	November	0.00
5	0:00-0:6:00	Sunday	2009	December	0.00
6	0:00-0:6:00	Sunday	2010	January	2.00
7	0:00-0:6:00	Sunday	2010	February	0.00
8	0:00-0:6:00	Sunday	2010	March	18.00
9	0:00-0:6:00	Sunday	2010	April	0.00
10					
11					
12	Departure Hour	Day of Week	Year	Month	Avg Delay (min)
13	0:00-0:6:00	Monday	2009	September	20.00
14	0:00-0:6:00	Monday	2009	October	21.00
15	0:00-0:6:00	Monday	2009	November	14.00
16	0:00-0:6:00	Monday	2009	December	9.50
17	0:00-0:6:00	Monday	2010	January	4.00
18	0:00-0:6:00	Monday	2010	February	0.00
19	0:00-0:6:00	Monday	2010	March	0
20	0:00-0:6:00	Monday	2010	April	0



	A	B	C	D	E
1	Departure Hour	Day of Week	Year	Month	Avg Delay (min)
2	0:00-0:6:00	Sunday	2009	September	0.00
3	0:00-0:6:00	Sunday	2009	October	5.00
4	0:00-0:6:00	Sunday	2009	November	0.00
5	0:00-0:6:00	Sunday	2009	December	0.00
6	0:00-0:6:00	Sunday	2010	January	2.00
7	0:00-0:6:00	Sunday	2010	February	0.00
8	0:00-0:6:00	Sunday	2010	March	18.00
9	0:00-0:6:00	Sunday	2010	April	0.00
10	0:00-0:6:00	Monday	2009	September	20.00
11	0:00-0:6:00	Monday	2009	October	21.00
12	0:00-0:6:00	Monday	2009	November	14.00
13	0:00-0:6:00	Monday	2009	December	9.50
14	0:00-0:6:00	Monday	2010	January	4.00
15	0:00-0:6:00	Monday	2010	February	0.00
16	0:00-0:6:00	Monday	2010	March	0.00
17	0:00-0:6:00	Monday	2010	April	0.00

Excel Number Formats Some Excel number formats are not supported with Express. Examples are [**Accounting, Text and Special**]. It is recommended that number formatting is applied using Express after the Excel file has been uploaded.

Custom Formatting If you have any cells that have custom formatting, data may be displayed incorrectly on Express.



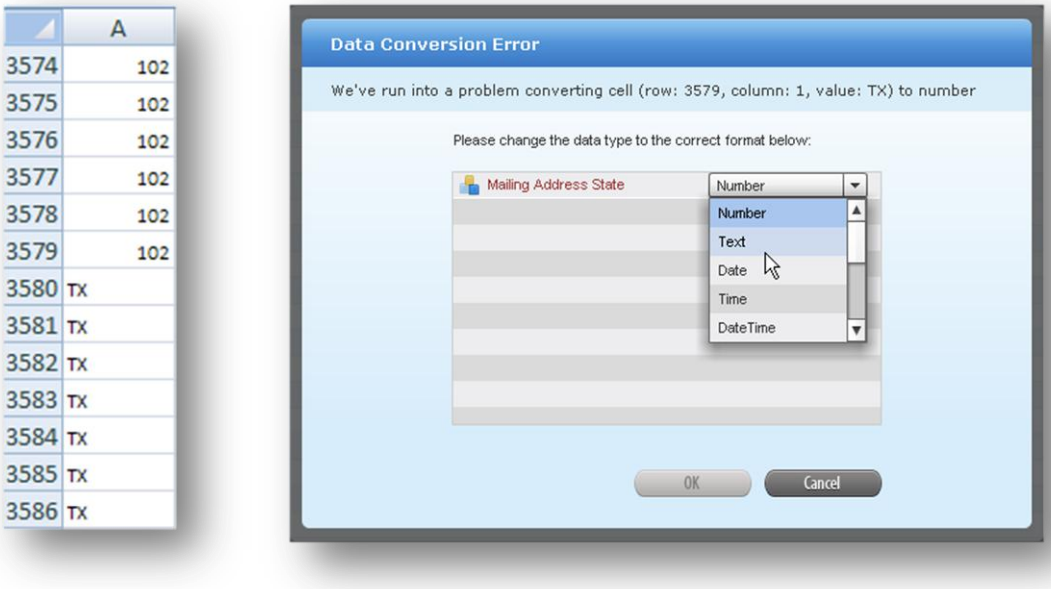
Macros Excel files that are uploaded on to Express should not contain any macros as they are not supported.

Data Ranges Sorting may not work correctly when rows contain data ranges. For example, in a column that contains numeric ranges such as <100, 100-200, 200-300, 300-400… >1000, the smallest and largest values (>100 and >1000) will appear at the end after using an ascending sort because of the symbols.

	A	B
1	**Division**	**Revenue**
2	Large	$1,000,001 - $5,000,000
3	Medium	$50,001 - $500,000
4	Intermediary	$500,001 - $1,000,000
5	Small	< $50,000
6	Very Large	> $5,000,001

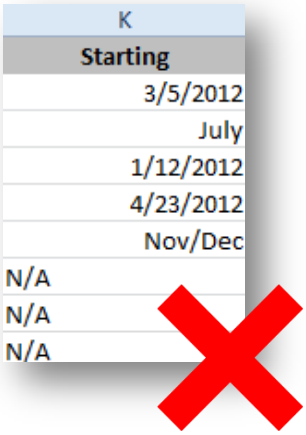
Data Type Mismatch Express assigns a data type to each data entry in an Excel file. This is done by scanning the first 1,000 rows of each column in the worksheet. For a column containing both numeric values and text values, if the first few rows have both types of values, text data type will be assigned to the column.

However, in cases where first thousand values are numbers and there are text values in rows beyond the 1,000th row, users will observe a Data Conversion error while publishing the cube. This is because Express assigns data type as numeric (based on 1,000 values) and returns an error when it finds text values. Users can change the data type as shown below and proceed with the upload.



The Data Conversion Error would also show up if a column contains more than 1,000 rows of numeric data followed by a footnote in text format. If the footnote is present following a column with less than 1000 rows of numeric data, the error will now show and text data type will be assigned to the entire column.

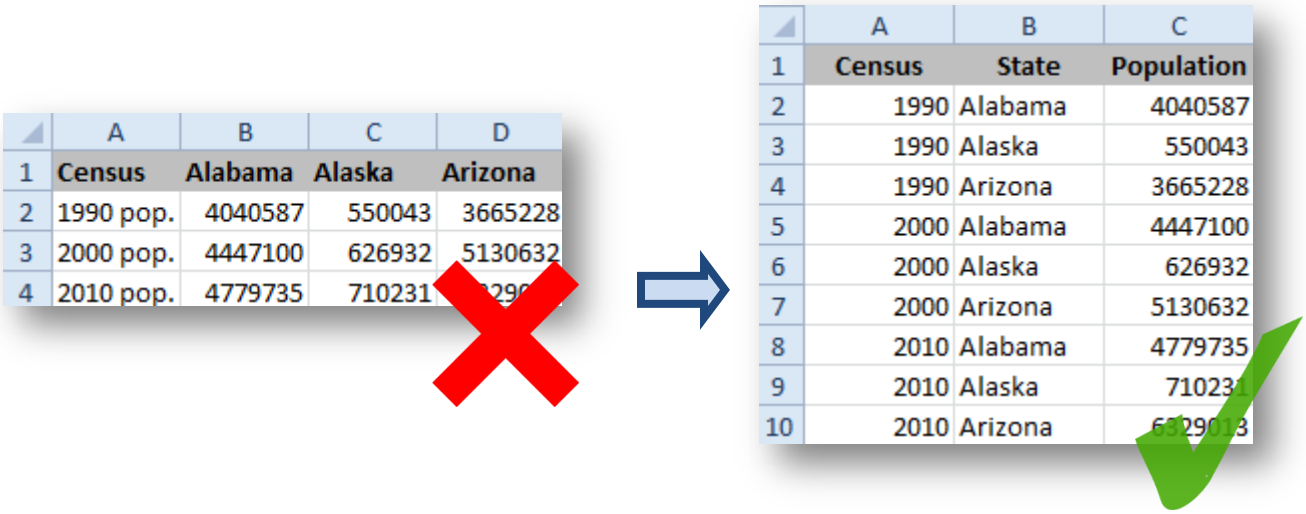
Different Data Types Please maintain uniformity and consistency of data types for any given column of data



Aggregated Data Rows that contain aggregated data like grand totals, sub totals, or averages, will not be recognized based on row headers. It is best practice to delete rows with aggregated data prior to uploading the Excel file. Aggregations can be calculated once the Excel file has been uploaded to Express. Alternatively, if a sheet that has been uploaded contains such data, the row can be excluded from the visualization as needed.

	A	B	C
1	Country	Year	Number Of Students Enrolled
2	Australia	1998	5565536
3	Canada	1998	7057996
4	France	1998	14495237
5	USA	1998	68915727
6	**Total**	**1998**	**96034496**

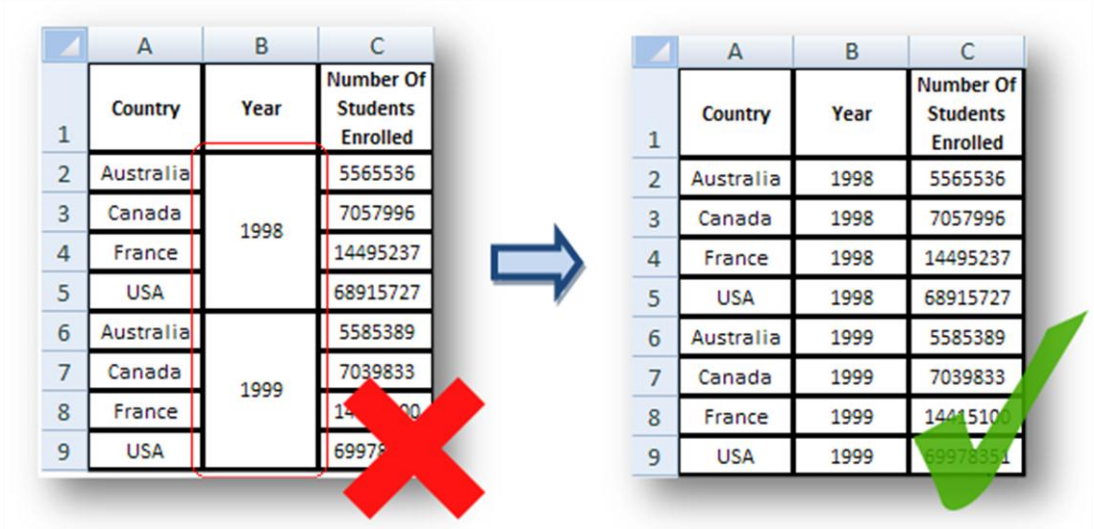
Data Transposition In cases where column headers can be converted into attribute values, transposition of data will aid better analysis. To do this, first convert metric names to represent attribute values, and then consolidate all metric columns into a single column of data.



	A	B	C	D
1	Census	Alabama	Alaska	Arizona
2	1990 pop.	4040587	550043	3665228
3	2000 pop.	4447100	626932	5130632
4	2010 pop.	4779735	710231	

	A	B	C
1	Census	State	Population
2	1990	Alabama	4040587
3	1990	Alaska	550043
4	1990	Arizona	3665228
5	2000	Alabama	4447100
6	2000	Alaska	626932
7	2000	Arizona	5130632
8	2010	Alabama	4779735
9	2010	Alaska	710231
10	2010	Arizona	6329013

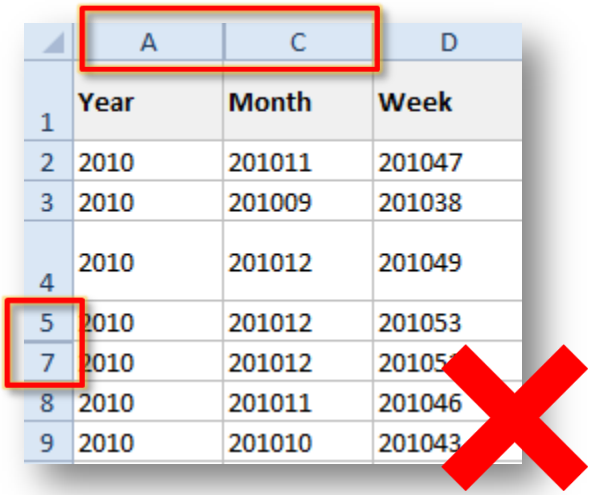
Merged Cells Data that is the same across multiple cells are often merged into a single cell in Microsoft Excel. Express requires that the cells remain unmerged and the data be repeated to be present as needed across the multiple cells.



	A	B	C
1	Country	Year	Number Of Students Enrolled
2	Australia	1998	5565536
3	Canada		7057996
4	France		14495237
5	USA		68915727
6	Australia	1999	5585389
7	Canada		7039833
8	France		14
9	USA		69978

	A	B	C
1	Country	Year	Number Of Students Enrolled
2	Australia	1998	5565536
3	Canada	1998	7057996
4	France	1998	14495237
5	USA	1998	68915727
6	Australia	1999	5585389
7	Canada	1999	7039833
8	France	1999	14415100
9	USA	1999	69978351

Hidden Cells Data in hidden columns and rows will be imported. Please check your columns and rows to make sure none have been hidden.



	A	C	D
1	Year	Month	Week
2	2010	201011	201047
3	2010	201009	201038
4	2010	201012	201049
5	2010	201012	201053
7	2010	201012	201052
8	2010	201011	201046
9	2010	201010	201043

Separate Headers In crosstabbed examples such as below, ensure that you header names are listed separately

	A	B	C
1		2011	2011
2	City	Central-Revenue	Central-Units
3	Annapolis	$38,136	655
4	Annapolis	$6,121	
5	Baltimore	$28,434	1,44
6	Baltimore	$11,371	1,0

	2011 Central	2011 Central
City	Revenue	Units
Annapolis	$38,136	655
Annapolis	$6,121	720
Baltimore	$28,434	1,449
Baltimore	$11,371	1,026