
EXCEL 2013– PIVOT TABLES AND CHARTS

Compare data in ways that show important relationships without making irreversible changes to the original worksheet.

JULY 24, 2013
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What is a PivotTable

A **PivotTable** is a summary created from a worksheet (source data) in a report form that summarizes and analyzes large amounts of data. The report displays data in an interactive format which allows you to view data in a way that makes large amounts of data understandable without making irreversible changes to the original worksheet.

The structure of a PivotTable

The screenshot shows an Excel window with a PivotTable titled "Sample Pivot Table". The PivotTable Fields task pane is visible on the right, showing fields like Department, Quarter, and Sales. A blue outline highlights the PivotTable report area. Labels "Row Fields" and "Field List" are added to the image.

Row Labels	50's Fishbowl	Cardinal Café	Cyber Café	Murphy Hall	Ward-Haffey Hall	Grand Total
1	17579	64682	51992	21909	70127	226289
2	23392	20283	45427	55578	54718	199398
3	15770	51359	38092	64046	27576	196843
4	64154	28976	33519	46200	26001	198850
Grand Total	120895	165300	169030	187733	178422	821380

- *PivotTable Field List*- **top right** section displays the fields, check a field or drag and drop it to the lower portion of the list.
- *PivotTable Field List areas*- **lower right** section identifies how and where the data shows in the PivotTable. A field can be displayed either a column or row. Data can be counted, totaled, averaged, and so on by dragging into the Values area.
- *PivotTable Report*- The **blue outlined** area is the result of your selections from the Field List. Row and Column fields usually contain text values, where a data fields usually contains numeric data.

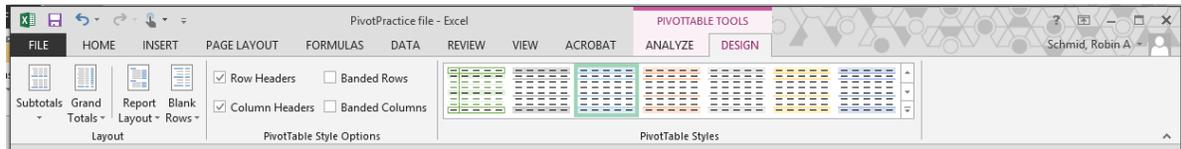
PivotTable Tools

Some commands are available only when completing a task, in the examples below, the task is a PivotTable Report.

Analyze Tab

The screenshot shows the Microsoft Excel ribbon with the PivotTable Tools - Analyze tab selected. The ribbon includes options like Active Field, Field Settings, Group Selection, Insert Slicer, Insert Timeline, Filter Connections, Refresh, Change Data Source, Move PivotTable, Fields, Items, & Sets, OLAP Tools, Relationships, PivotChart Recommended PivotTables, Field List, +/- Buttons, and Field Headers.

Design Tab



This tab is divided into three groups: select any cell in the **PivotTable** and click on the **Design** tab.

- **Layout Group**- add subtotals and grand totals and modify the basic layout.
- **PivotTable Style Options**- improve or perfect the style you selected.
- **PivotTable Styles**-a gallery of styles can be applied to the active table, click on thumbnail.

Data

Preparing your data:

- **Blank Rows**- because Excel includes the blank rows in the PivotTable Report, delete any blank rows.

Consistent Data- ensure that each column contains the same type of data. For example, in a column of part numbers, be sure each value is numeric; in a column model names, make sure each value is text.

- **Accurate Data**- values used are accurate, check there are no typos or irrelevant data.
- **Automatic Subtotals**- Excel will not create a PivotTable that has subtotals displayed, remove all subtotals. Click on **Data**→**Subtotals**, select **Remove All**.
- **Filtered Data**- subset of the worksheet data, Excel will still use some or all the hidden rows in PivotTable report, the report will not be exact. Use Excel's advanced filter Feature, copy results to a different worksheet and use the copied data as the source for PivotTable Report.
- **Column Labels**- a PivotTable uses column labels to classify and name data fields.

Create a PivotTable

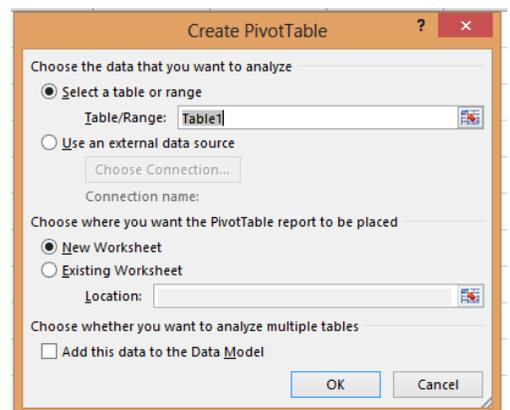
A data source is needed to create a PivotTable, click a cell within your Excel table that you want to use as the data source for the PivotTable.

1. From the **Insert** tab, within the **Tables** group, select **PivotTable**

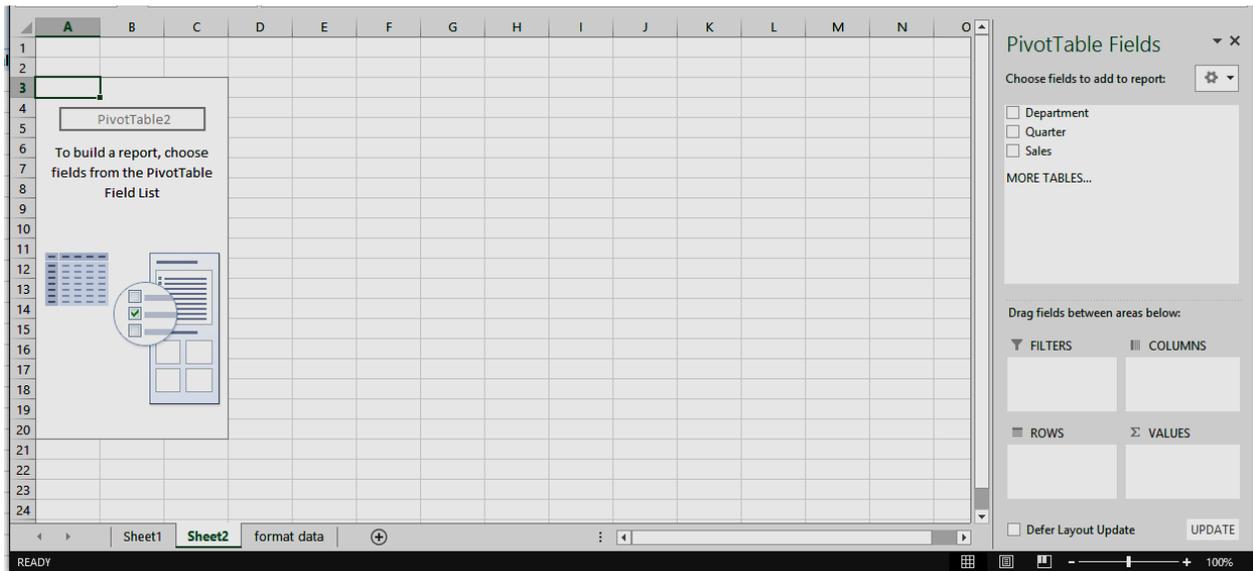


PivotTable , and click on **PivotTable**.

2. Within **the Create PivotTable** dialog box, ensure that the displayed range is correct, by default **New Worksheet** is chosen to place the PivotTable report.
3. Click **OK**.

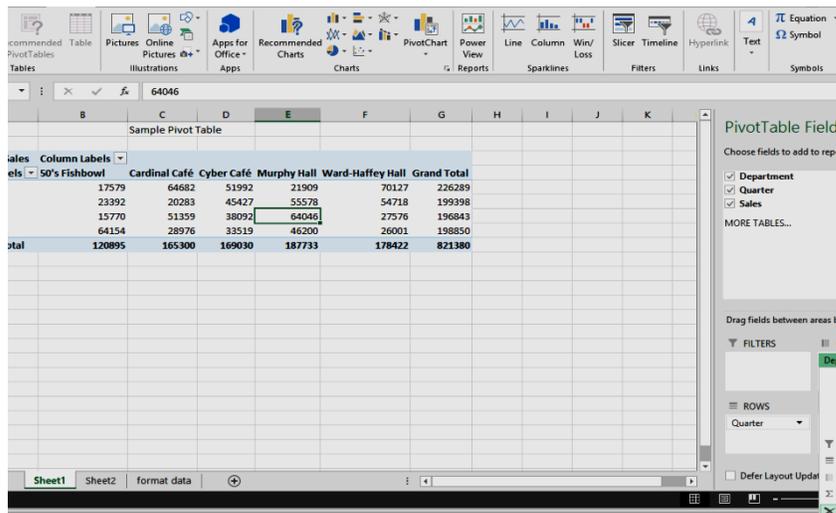


By default, an empty PivotTable is created and is located in a new tab in the current workbook.



Populate PivotTable

1. Within the PivotTable Field List pane, Drag and Drop fields into one of the four pane areas below. A green checkmark indicate that a field is in use.
2. To **remove** a field, simply **click** and **drag** it back up to the field list.
 - a. Or click on down arrow of the field in use and select **Remove Field**.



- b. Remove all fields, from the **Analyze** tab, within the **Actions** group, click on **Clear** , and select **Clear All**.
3. Show or Hide the PivotTable Field List Pane, from the **Analyze** tab, within the **Show/Hide** group click on **Field List**  to display PivotTable Field List Pane.

Field List Pane

PivotTables can have multiple fields per area and some PivotTables will not need to have a field in each area. A good way to learn how the fields act together is by experimenting with different combinations.

- Row Labels- make up the horizontal (X) axis
- Values- make up the vertical (Y) axis
- Column Labels- different types or series of data that are compared in a PivotChart.

1	Item	(All)			
2					
3	Sum of Total	Region			
4	Rep	Alberta	Ontario	Quebec	Grand Total
5	Andrews		438.37		438.37
6	Gill		1749.87		1749.87
7	Howard			536.75	536.75
8	Jardine		2812.19		2812.19
9	Jones			2363.04	2363.04
10	Kivell		3109.44		3109.44
11	Morgan		1387.77		1387.77
12	Parent			3102.3	3102.3
13	Smith		1641.43		1641.43
14	Sorvino	1283.61			1283.61
15	Thompson	1203.11			1203.11
16	Grand Total	2486.72	11139.07	6002.09	19627.88
17					

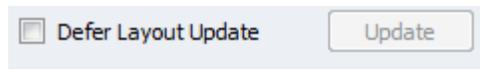
Row Labels (X) axis

Column Label

Values (Y) axis

Updating PivotTable

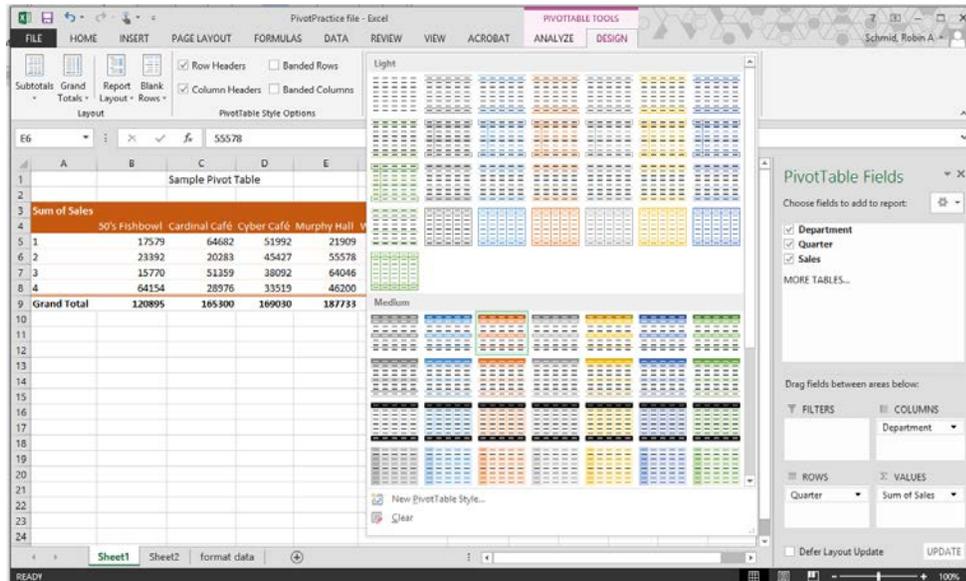
To manually update a PivotTable, within the **Field Pane List**, check **Defer Layout Update**. The PivotTable will not automatically update by default. Click on the **Update** button for the PivotTable to reflect changes.



Or, using the **Analyze** tab, within the **Data** group, click on **Refresh**  to update a PivotTable.

Change a PivotTable Design

1. From the PivotTable Tools **Design** tab, within the **PivotTable Styles** group, and click on a thumbnail from the gallery to select a new style. Use the **down arrow** icon  to open the gallery window and view more options.

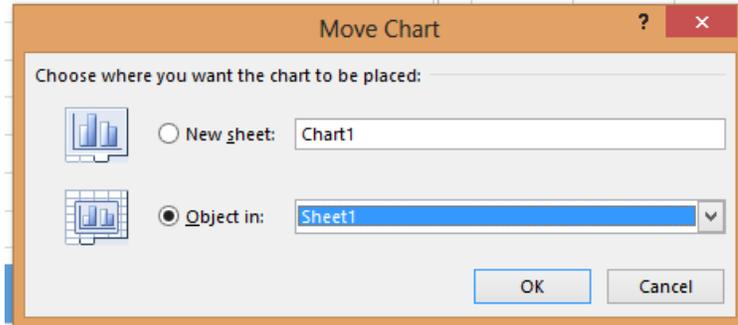


2. With the PivotTable report selected, from the **Design** tab, within the **Layout** group, click on **Report Layout** down arrow and select one of the following:
 - a. Show in Compact Form – keep data from spreading horizontally off the screen
 - b. Show in Outline Form – outline data in classic PivotTable style
 - c. Show in Tabular Form – traditional table format, easy to copy to another worksheet
 - d. Repeat All Item Labels or Do Not Repeat All Item Labels
3. Highlight every other row or column in a table will make it easier to read the data within a large table.
 - e. With the PivotTable report selected, from the **Design tab**, within the **PivotTable Style Options** group, click **Banded Rows** and/or **Banded Columns**.
4. Draw attention to row or column headers in a PivotTable and highlighting these areas in a table.
 - f. With the PivotTable report selected, from the **Design tab**, within the **PivotTable Style Options** group, click **Row** and/or **Column Headers**.

Move/Resize PivotChart

To move a chart to another worksheet:

1. With the chart selected, from the **Analyze** tab, within the **Actions** group, click on the **Move Chart** button.



2. From the **Move Chart** dialog box, click **New Sheet** button and enter a name for the worksheet and click on OK.

To move a chart within a worksheet:

1. Using the **move cursor** , click and drag on a blank area within the PivotChart.

To resize a chart:

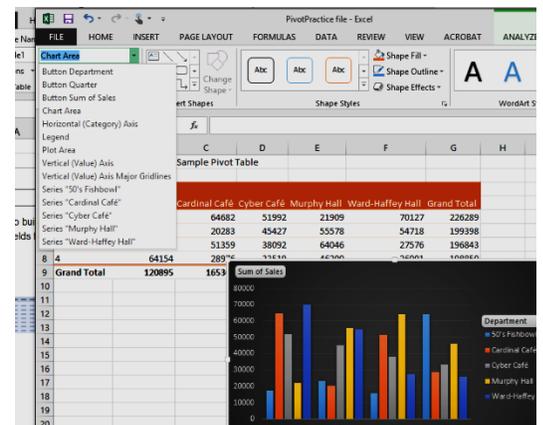
1. Using the **resize cursor** , click and drag on a corner of the PivotChart.

Format a Pivot Chart

1. With the PivotChart selected, from the **Design** tab, within the **Type** group, click on the **Change**

Chart Type button . This will launch the **Change Chart Type** dialog box, select type and click **OK**.

2. From the **Design** tab, within the **Chart Styles** group, select from the gallery a new visual style. To view all the options available click on the icon to the right of the gallery list.
3. From the **Format** tab, within the **Current Selection** group, click on the icon to select the chart element you want to format. (i.e., Legend)



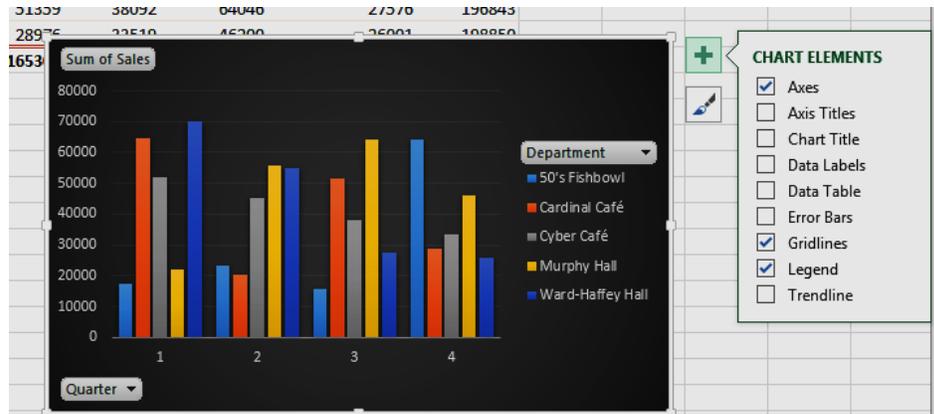
Adding and Removing Elements

To add or remove the **chart title** element:

- From the **Design** tab, within the **Chart Layouts** group, click on the **Add Chart Element** button, and select an option from the menu.

To add or remove the **axis title** element:

- Click on the **Plus** sign next to the chart and select which options you want to add or remove from the chart.



Slicers

A visual tool applied to a PivotTable or PivotChart allowing data to be quickly and easily filter in an interactive way.

1. With the data selected i.e., PivotTable, from the **Analyze** tab, within the **Filter** group, and click on the **Insert Slicer** button.
2. From the **Slicers** dialog box, check which fields to create a slicer for and click on **OK**.
3. Within the slicer box, click a button to filter the data, hold **CTRL** or **SHIFT** while clicking on multiple buttons.
4. For more options with the slicer selected, from the **Slicer Tools Options** tab, within the **Slicer Styles** group and select an option from style gallery.
5. Right-click on the slicer box and select **Remove** from the drop down menu to delete a slicer box.

Contact Info

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