Excel PivotTables 2007: A Beginner's Guide

Executive Summary – What is a Pivot Table?

Ever have endless rows of data and waste time trying to analyze or summarize? Whether you're using Excel for data entry or analysis, there's an easier way to compare and contrast numbers in Excel. Microsoft Excel's Pivot Table is a data summarization tool that can count, sort and total data. Users can save time by using PivotTables to quickly create cross-totals of data without the use of formulas. PivotTables can also instantly display the details behind the summary totals. The resulting easy-to-read PivotTable allows a user to easily drag and drop fields for a variety of analyses. Users can make the table simpler by hiding details or view more complex data by expanding columns. Data can be easily grouped together and drill-down features can reveal record detail of any PivotTable value.

How to Create a Pivot Table – Real World Example

Now, suppose your boss asks you to find *How many belts/ties from your sales this year came from Wholesale versus Retail*. Rather than wasting time with sorting, you can easily use a PivotTable to answer this question in minutes.

Figure 1 shows the sales of Belts and Ties for 2007 and 2008. Details of the table include sales regions, the type of sales, and in which quarter the sales occur.

Sales by Category - All Quarters - 2007 and 2008					
Clothing Type	**Region**	**Sales**	**Year**	**Quarter**	**Sales Type**
Belts/Ties	Midwest	23,040	2007	4	Retail
Belts/Ties	Midwest	9,610	2007	1	Retail
Belts/Ties	Midwest	16,620	2008	2	Retail
Belts/Ties	Midwest	23,080	2008	4	Retail
Belts/Ties	Midwest	14,010	2008	3	Retail
Belts/Ties	Midwest	6,300	2008	3	Wholesale
Belts/Ties	Midwest	3,540	2008	1	Wholesale
Belts/Ties	Midwest	5,230	2007	3	Wholesale
Belts/Ties	Midwest	4,040	2007	1	Wholesale
Belts/Ties	Mountain	4380	2007	3	Retail
Belts/Ties	Mountain	5000	2007	2	Retail
Belts/Ties	Mountain	6650	2008	4	Retail
Belts/Ties	Mountain	3430	2007	4	Wholesale
Belts/Ties	Mountain	1440	2007	1	Wholesale
Belts/Ties	Mountain	3580	2008	4	Wholesale
Belts/Ties	Mountain	1800	2008	3	Wholesale
Belts/Ties	Northeast	21,660	2008	4	Retail
Belts/Ties	Northeast	7,980	2008	1	Retail
Belts/Ties	Northeast	21,500	2007	4	Retail
Belts/Ties	Pacific	13,400	2007	2	Retail
Belts/Ties	Pacific	10,650	2008	3	Retail
Belts/Ties	Pacific	7,100	2007	1	Retail

Figure 1

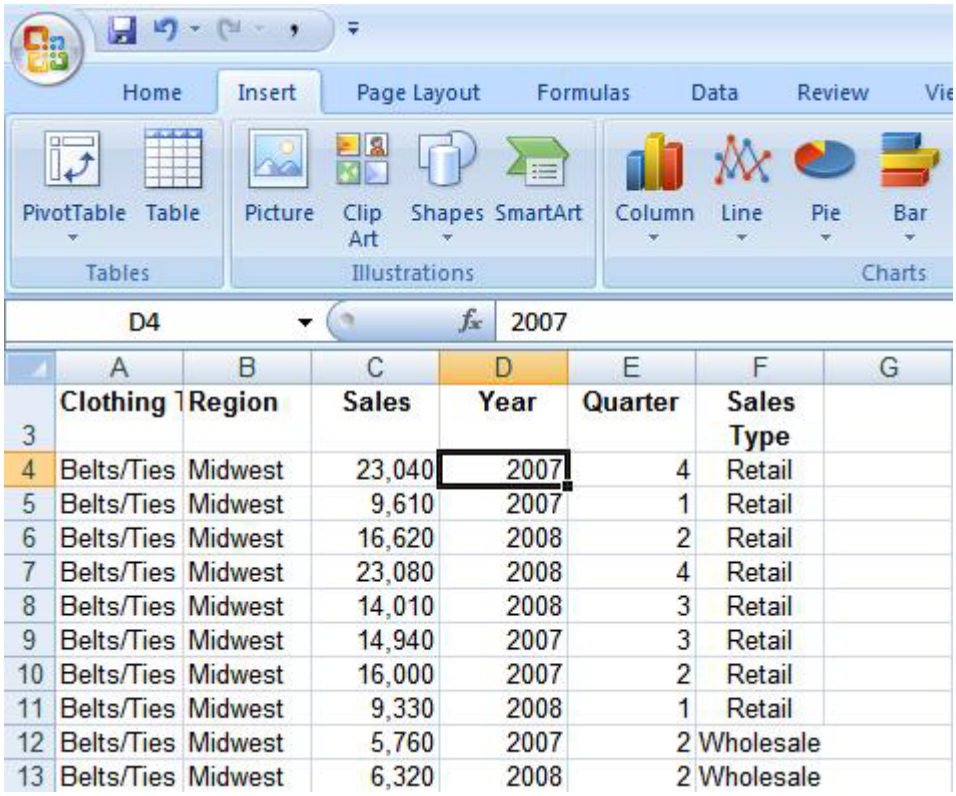
Pointer:

In order to create a PivotTable, data needs to be organized in list form. The column headers have unique field headings. Data for each column and row should be filled out, so there are no empty rows or columns. Figure 1 shows an example of the your flat data. Notice the unique headers at the top of the Pivot Table.

Field Names for the PivotTable come from the first row of the source data and are displayed in the Pivot Table Field List. The PivotTable Field List contains the list of dimensions and measures that can be used for a versatile report. These Field names can appear in various Pivot Table locations.

How to Create a PivotTable:

Step 1: In order to create the PivotTable, click on and select any cell within the source data as seen in Figure 2.



	A	B	C	D	E	F	G
3	Clothing T	Region	Sales	Year	Quarter	Sales Type	
4	Belts/Ties	Midwest	23,040	2007	4	Retail	
5	Belts/Ties	Midwest	9,610	2007	1	Retail	
6	Belts/Ties	Midwest	16,620	2008	2	Retail	
7	Belts/Ties	Midwest	23,080	2008	4	Retail	
8	Belts/Ties	Midwest	14,010	2008	3	Retail	
9	Belts/Ties	Midwest	14,940	2007	3	Retail	
10	Belts/Ties	Midwest	16,000	2007	2	Retail	
11	Belts/Ties	Midwest	9,330	2008	1	Retail	
12	Belts/Ties	Midwest	5,760	2007	2	Wholesale	
13	Belts/Ties	Midwest	6,320	2008	2	Wholesale	

Figure 2

Step 2: Click the Insert tab at the top of the screen. Next, select the Pivot Table button in the Tables group. Excel will automatically select all the data to be included in your PivotTable.

Step 3: A "Create PivotTable" pop up will appear. Click OK as seen in Figure 3.

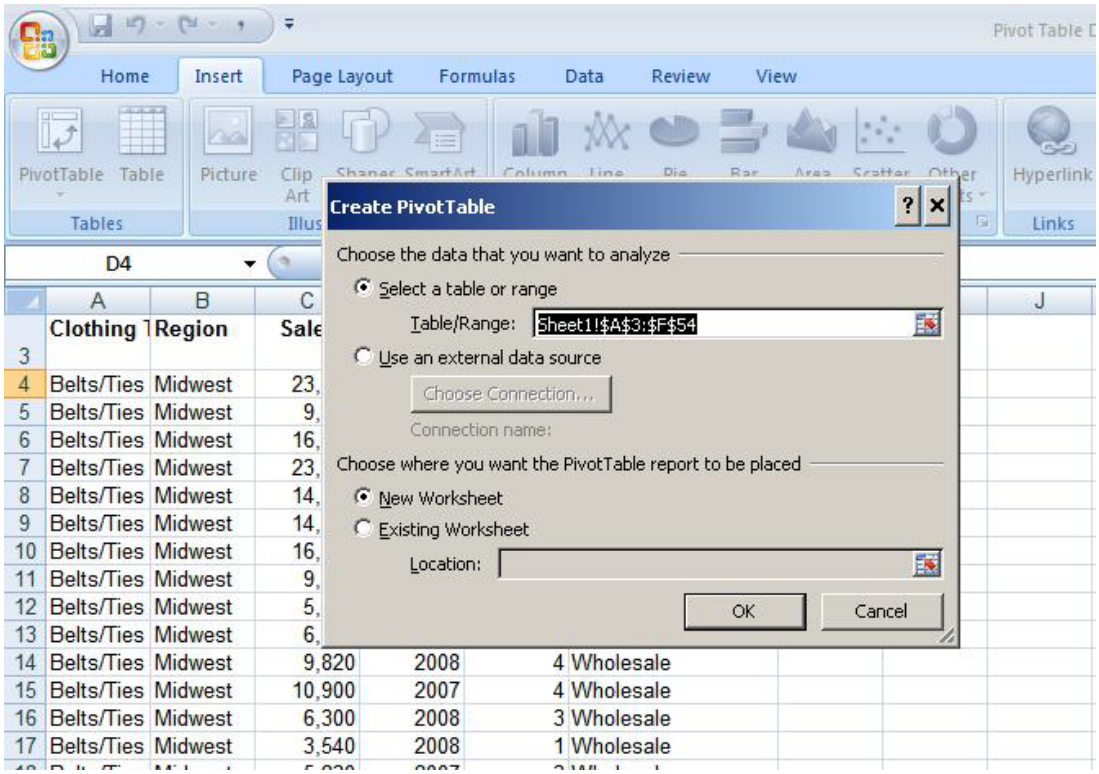


Figure 3

Step 4: The PivotTable template in Sheet 1 will open up automatically. Field names corresponding to the original data will appear in the PivotTable field list on the right side of the screen. Drag fields from the top portion of the Pivot Table Field List dialog box to the following locations to create the PivotTable:

- Row Labels – Data placed in this field will show up in the Rows. Row Labels is located in the lower left box in the Pivot Table Field List dialog box.
  - For this example: Drag the "Clothing Type" from the field list into *Row Labels*.
- Column Labels – Data places in this field will be sorted by columns. Column Labels is located in the upper right box of the Pivot Table Field List dialog box.
  - For this example: Drag the "Sales Type" into *Column Labels*.
- Values – Data placed in this field will be calculated as a result of the other fields' placement. Values are placed in the lower right box of the Pivot Table Field List.
  - For this example: Add "Sum of Sales" into *Values*.
- Report Filter – the upper left box of the Pivot Table Field List.
  - For this example: If you wanted to filter your results by which "Region", you could add this field to *Report Filters*.

- The completed example for Step 4 is shown in Figure 4.

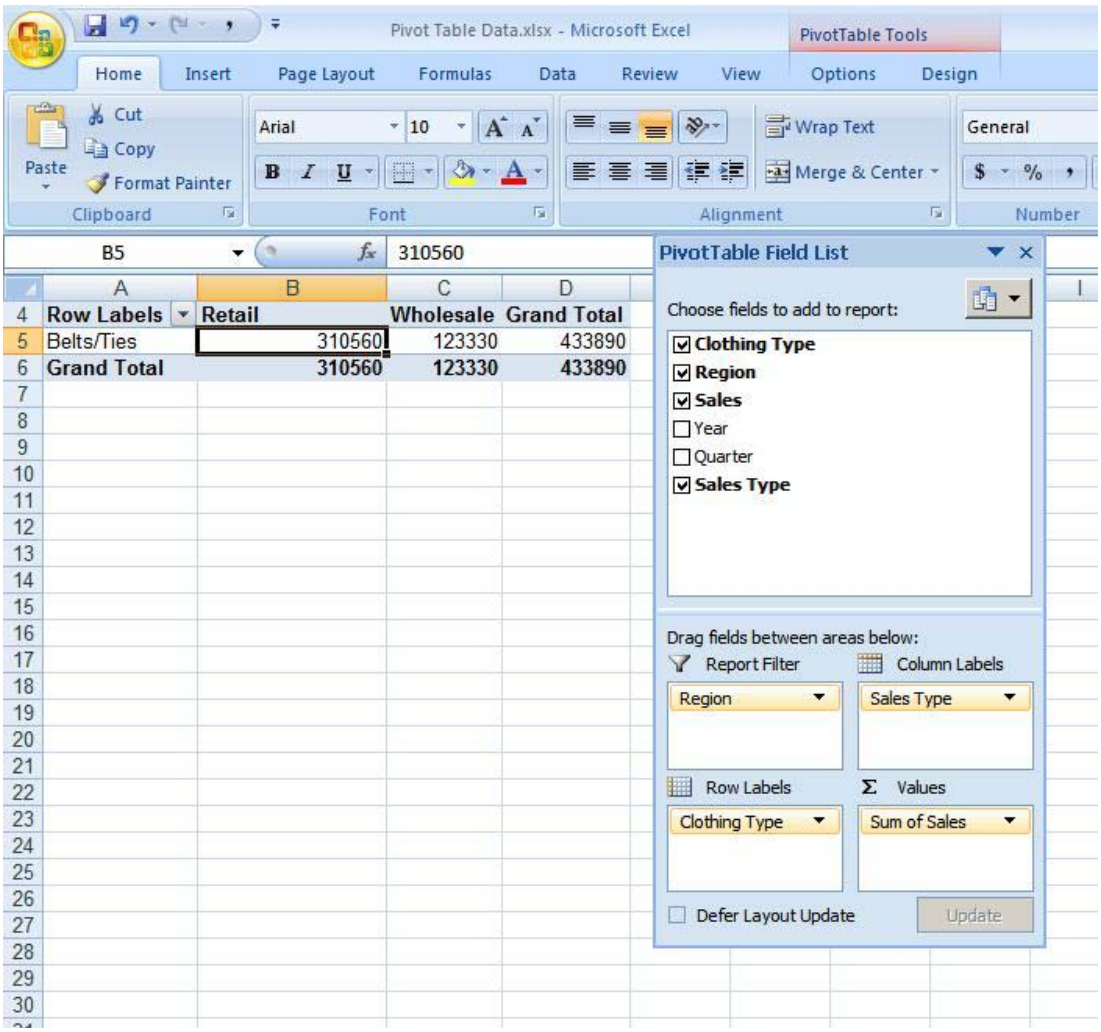
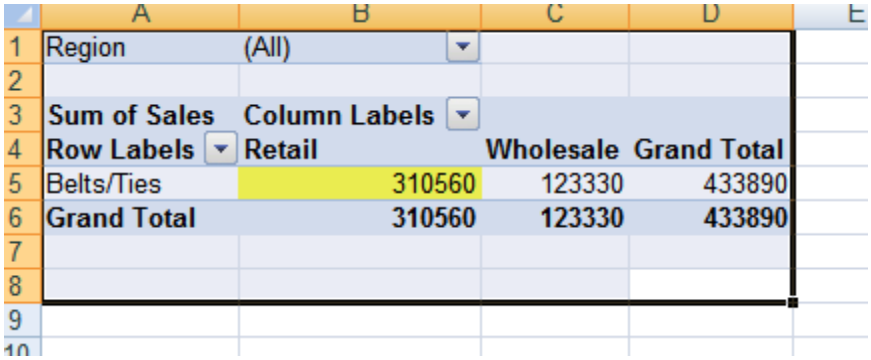


Figure 4

By completing these steps, you'll be able to easily compare that there are 310,560 Belt/Ties sold from Retail compared to 123,330 sold from Wholesale. This PivotTable will display whether your sales are coming from Wholesale versus Retail, so you can answer your boss's questions and confidently know where to concentrate your sales efforts. Here's how the Pivoted Chart should appear in Figure 5:



	A	B	C	D	E
1	Region	(All)			
2					
3	Sum of Sales	Column Labels			
4	Row Labels	Retail	Wholesale	Grand Total	
5	Belts/Ties	310560	123330	433890	
6	Grand Total	310560	123330	433890	
7					
8					
9					
10					

Figure 5

Additionally, you can use a Report Filter to specify data further. You can filter sales by the region. When using the Report Filter, make sure to click the icon on the right side to select multiple items (as seen in Figure 6):

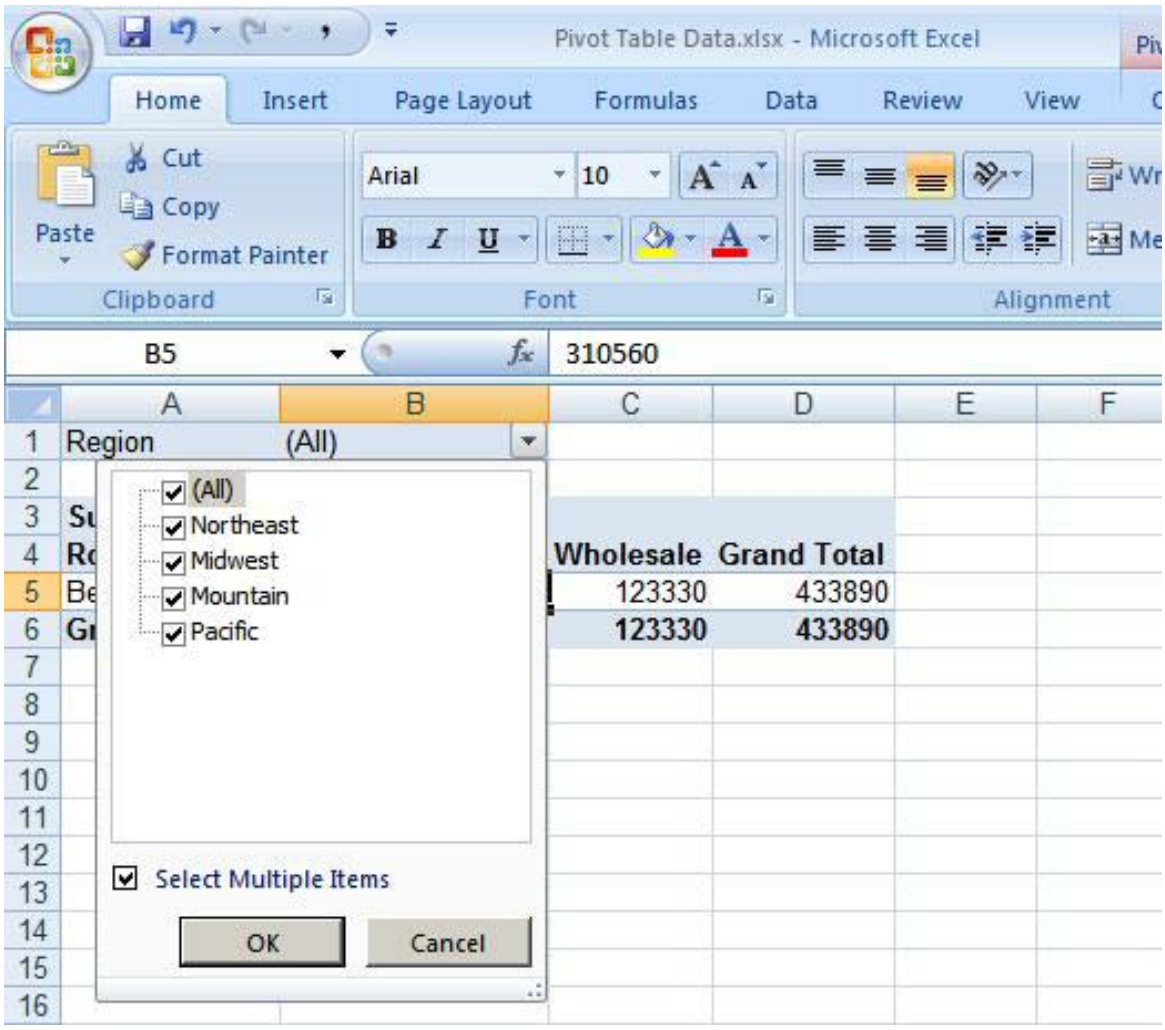


Figure 6

Conclusion:

PivotTables easily summarize, compare and contrast data, whether a few or thousands of rows. You can drag and drop various fields repeatedly in order to analyze different aspects of your data, making this tool very useful for problem solving. PivotTables has many other features including graphing, collapsing and expanding Outer fields, creating a pivot Chart, grouping Data by Time or Date, and much more!