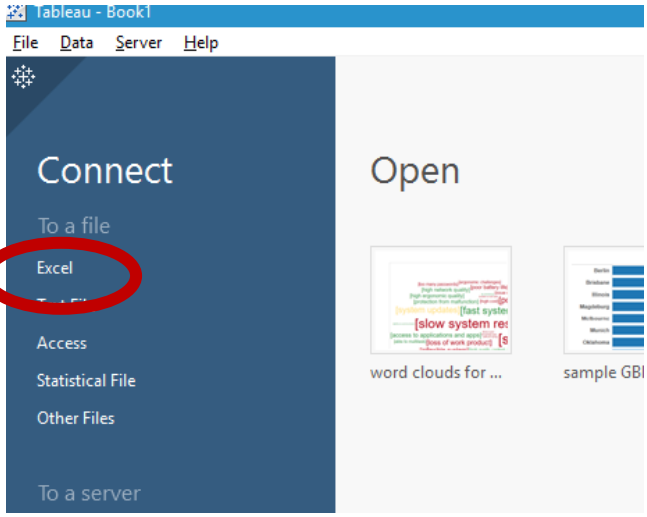
**Case Study: Creating PivotTables in Tableau**

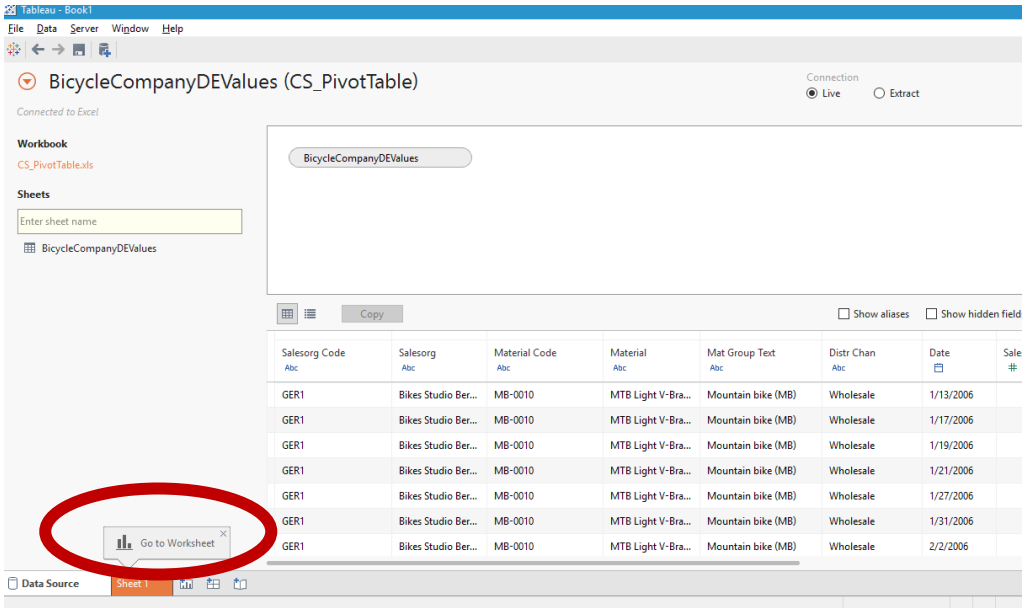
---

Note: This case study is designed to work with the Excel file titled CS_PivotTable.xlsx file file from the PivotTable Case Study completed earlier in the semester (i.e., the first assignment). Save it to your desktop.

1. Open Tableau and open the CS_PivotTable.xlsx file.

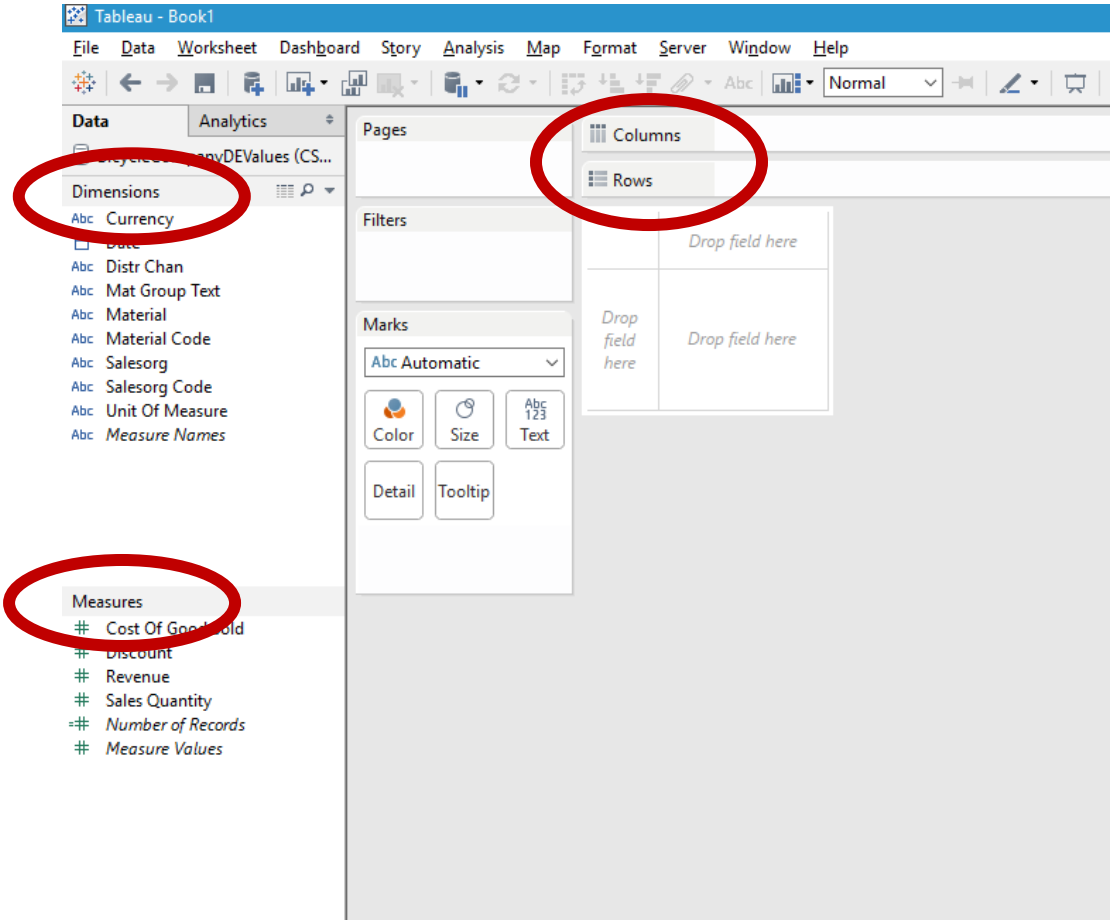



2. Explore the Window and Think of how it is similar or different from Excel



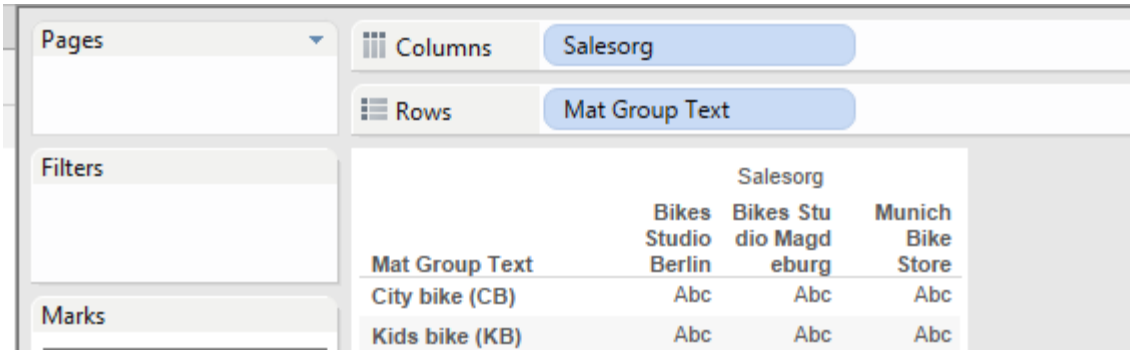
3. **Click on “Go to Worksheet” to start the analysis**

- You will be selecting fields to analyze by from the “Dimensions” window
- You will be selecting “Facts” or “Key Figures” from the “Measures” window.



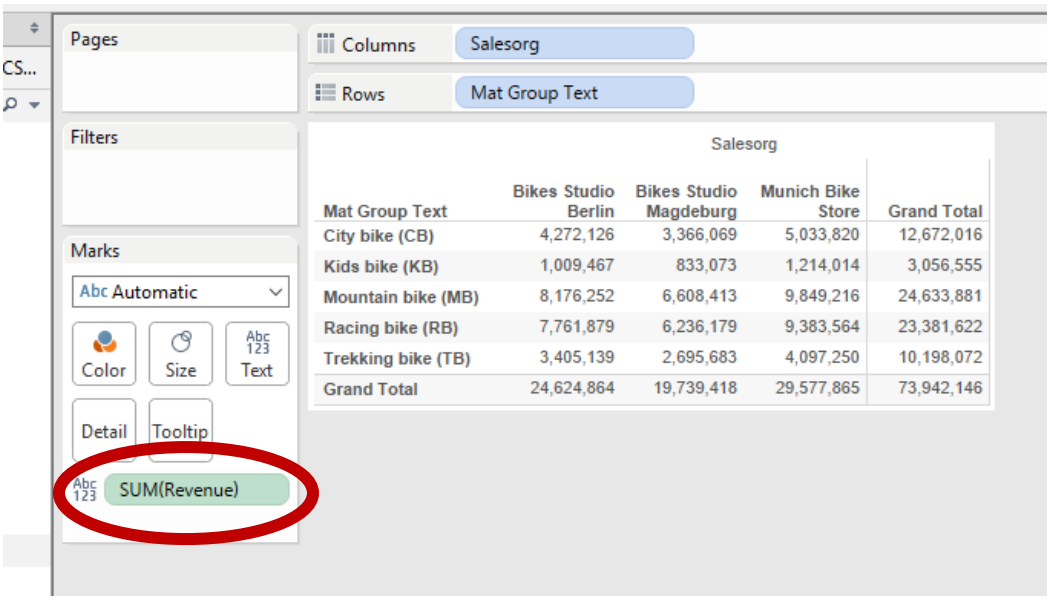

4. **Create a PivotTable to determine the total revenue for material groups in each sales organization**

- Drag “Materials Group Text” into the Rows box, and drag “Sales Org” into the Columns box. When you are done it should look as shown below



5. **Adding a measure: Click on revenue and drag it into the part of the table above with "abc"**

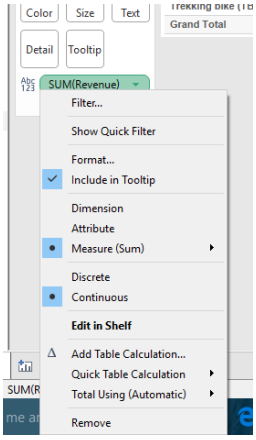
- Adding Totals: Go to Analysis -> Totals -> Show Row Grand Totals and click that, repeat that and Show Column Grand Totals as well. Your window should look like this:




Salesorg

| Mat Group Text | Bikes Studio Berlin | Bikes Studio Magdeburg | Munich Bike Store | Grand Total |
|---|---|---|---|---|
| City bike (CB) | 4,272,126 | 3,366,069 | 5,033,820 | 12,672,016 |
| Kids bike (KB) | 1,009,467 | 833,073 | 1,214,014 | 3,056,555 |
| Mountain bike (MB) | 8,176,252 | 6,608,413 | 9,849,216 | 24,633,881 |
| Racing bike (RB) | 7,761,879 | 6,236,179 | 9,383,564 | 23,381,622 |
| Trekking bike (TB) | 3,405,139 | 2,695,683 | 4,097,250 | 10,198,072 |
| Grand Total | 24,624,864 | 19,739,418 | 29,577,865 | 73,942,146 |

6. **To add formatting to the text (e.g. currency)**




Click on the little arrow that shows when you mouse over the measure. Select the Format option. Change the "Numbers" menu to "Currency".

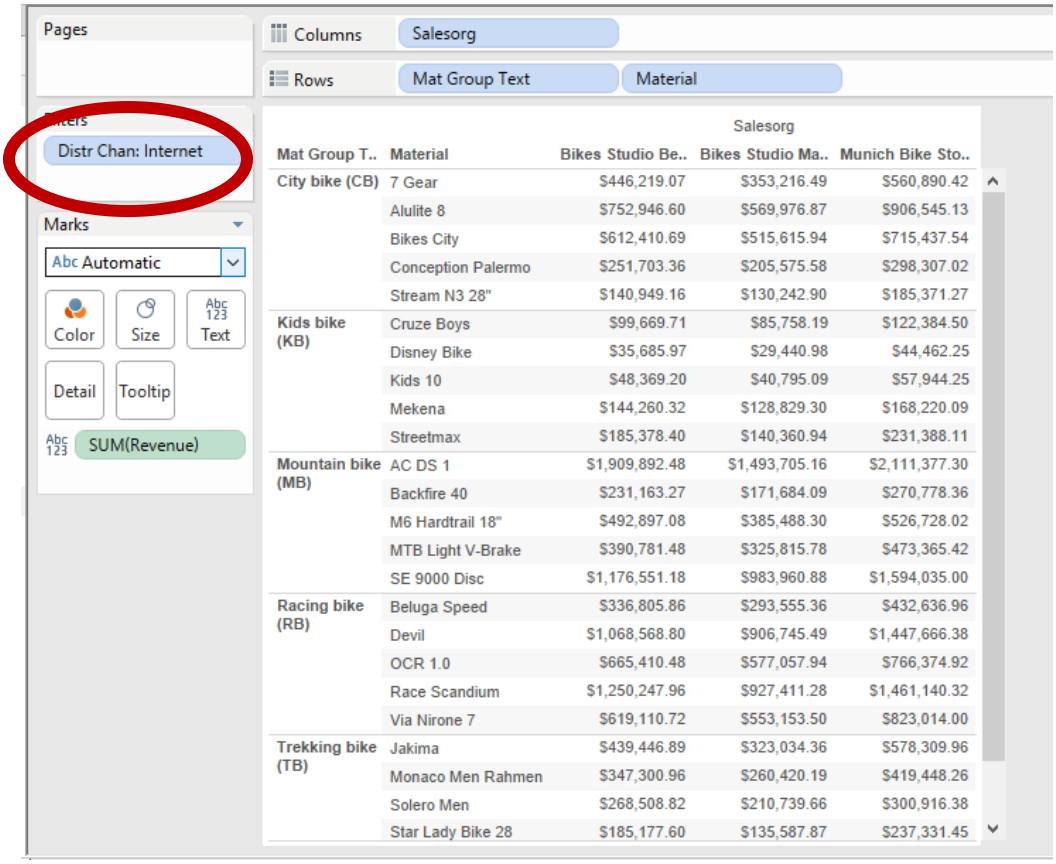
7. **Slicing Data in Tableau**

One easy way to slice data is by adding a filter. Click on the dimension you would like to filter by and drag it into the "Filter" window. You will see a pop up asking you to select a particular value to slice the data by.

- Slice the current PivotTable of Revenue by SalesOrg and MatGroupText to show only the Internet Distribution Channel. Drag Distribution Channel to the Filters area and select Internet.
    - If you did this correctly, your grand total should now be $38,033,765

8. **Drilling Down**

To drill down further by material, drag material into the "Rows" window next to the Material Group Text variable. The detail of the data displayed should increase.




| | | Salesorg | | |
|---|---|---|---|---|
| Mat Group T.. | Material | Bikes Studio Be.. | Bikes Studio Ma.. | Munich Bike Sto.. |
| City bike (CB) | 7 Gear | $446,219.07 | $353,216.49 | $560,890.42 |
| | Alulite 8 | $752,946.60 | $569,976.87 | $906,545.13 |
| | Bikes City | $612,410.69 | $515,615.94 | $715,437.54 |
| | Conception Palermo | $251,703.36 | $205,575.58 | $298,307.02 |
| | Stream N3 28" | $140,949.16 | $130,242.90 | $185,371.27 |
| Kids bike (KB) | Cruze Boys | $99,669.71 | $85,758.19 | $122,384.50 |
| | Disney Bike | $35,685.97 | $29,440.98 | $44,462.25 |
| | Kids 10 | $48,369.20 | $40,795.09 | $57,944.25 |
| | Mekena | $144,260.32 | $128,829.30 | $168,220.09 |
| | Streetmax | $185,378.40 | $140,360.94 | $231,388.11 |
| Mountain bike (MB) | AC DS 1 | $1,909,892.48 | $1,493,705.16 | $2,111,377.30 |
| | Backfire 40 | $231,163.27 | $171,684.09 | $270,778.36 |
| | M6 Hardtrail 18" | $492,897.08 | $385,488.30 | $526,728.02 |
| | MTB Light V-Brake | $390,781.48 | $325,815.78 | $473,365.42 |
| | SE 9000 Disc | $1,176,551.18 | $983,960.88 | $1,594,035.00 |
| Racing bike (RB) | Beluga Speed | $336,805.86 | $293,555.36 | $432,636.96 |
| | Devil | $1,068,568.80 | $906,745.49 | $1,447,666.38 |
| | OCR 1.0 | $665,410.48 | $577,057.94 | $766,374.92 |
| | Race Scandium | $1,250,247.96 | $927,411.28 | $1,461,140.32 |
| | Via Nirone 7 | $619,110.72 | $553,153.50 | $823,014.00 |
| Trekking bike (TB) | Jakima | $439,446.89 | $323,034.36 | $578,309.96 |
| | Monaco Men Rahmen | $347,300.96 | $260,420.19 | $419,448.26 |
| | Solero Men | $268,508.82 | $210,739.66 | $300,916.38 |
| | Star Lady Bike 28 | $185,177.60 | $135,587.87 | $237,331.45 |

Right click on the MatGroupText "Mountain Bike (MB) and select "Keep Only". Notice what happens. Can you see what has changed in the "Filter" Window?

You can always determine if your data has been sliced by observing the filter window.

9. **Continue your analysis**

- Remove the filter for Mountain Bike Materials. Also remove the details for each material
- Focusing on just Material Groups and Sales organizations, filter the data to view revenue for First Quarter of 2007 only. (Note: there are different ways to do this, try to figure this out on your own). Hint: You may have to drag in the "Date" dimension more than once.

10. **Calculations in Tableau**

- Now we will figure out which products had the greatest contribution margin ratio. Click at the bottom to create a new Sheet.
- Right click over any of the measures and select Create -> Calculated Field.
- In the window that opens enter the following formulas. Note that Tableau requires you to enclose variable names within [square brackets]. As you create new variables, they are added to the "Measures" window and can be used as any other variables in analysis.

Net Sales = Revenue – Discount
Contribution Margin = Net Sales – Cost Of Good Sold
Contribution Margin Ratio = Contribution Margin / Net Sales

- Drag in MaterialCode, Material, and Revenue fields as well as the three newly created variables. Note that you can drag the variables into the "Measure Values" window directly. You can also rearrange the order in which they appear in the same window.

- But do you notice something weird about the numbers and how they appear?

- To fix this issue, you need to ensure that Sums are being calculated for only Revenue and Net sales and the Average is being displayed for contribution margin and contribution margin ratio. Right click over those measures and where it says Measure (Sum), go ahead and select AVERAGE.

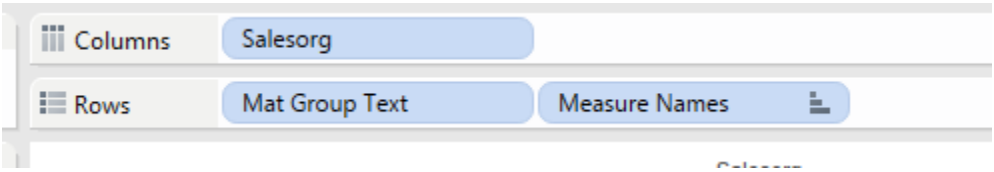
- Now, do you notice ANOTHER issue with the display? All the contribution margin ratios are ZERO. Format that field and turn it to a percentage. Remember how?

- While the format window is still open, click through the other variables to set the right type (they are all currency in dollars).

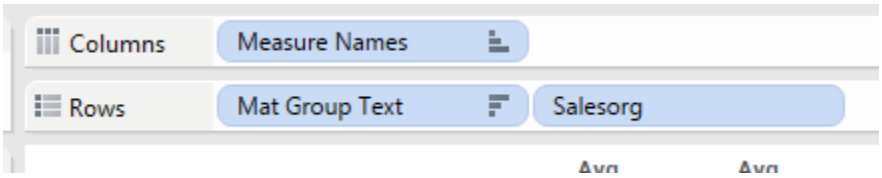
11. **What material provided the highest contribution Ratio?**
    We can answer this question in many different ways. Lets see some of the ways.

    Method One:
    Using Sort. Move your "Measure Names" from the Row to a Column, and move "Sales Organization" to Column. The following should change:

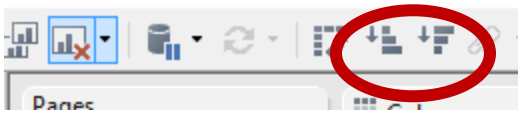
Before




After




- Now you can sort by Contribution Margin Ratio. Click on that variable and click on the Sort Icon on the Toolbar menu




**12. Using Statistical Graphics**

- First right click over Contribution Margin ratio and keep only that measure. Click on all the charts that light up on the “Show me” window on the right.
- Which one of them is most clear at showing you which Material has the highest contribution margin ratio? Why do you think this is so?


**13. Save your workbook by Selecting File | Print to PEF. Submit this PDF via blackboard.**