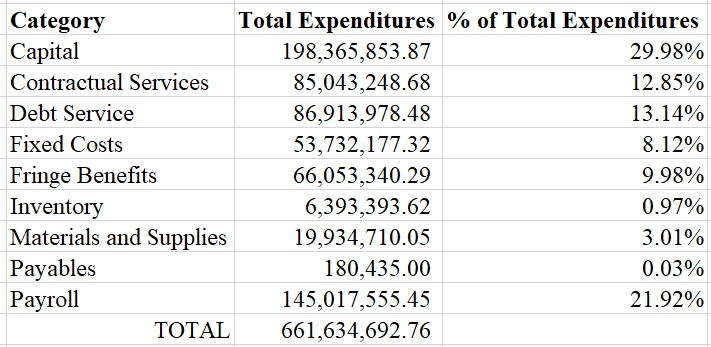
Queen City – Teaching Tips

# General

Students should be reminded about the use of absolute and relative cell references when copying formulas.

# Category – Amount of Expenditures and Percent of Total Expenditures

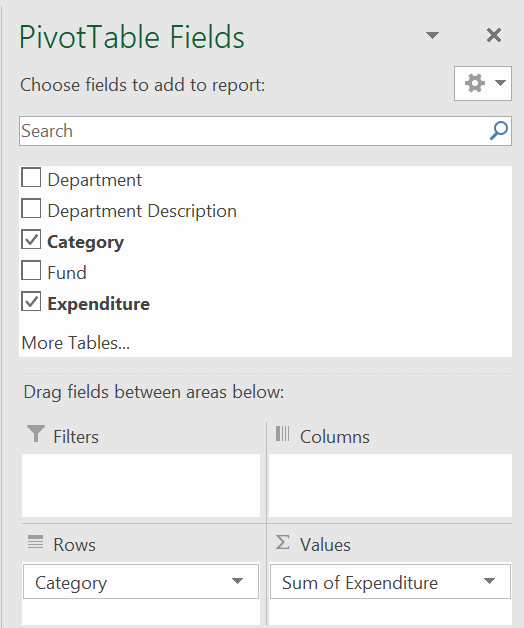
There are 5427 records. The size of the database may intimidate students in to sorting data by categories and performing multiple summations to create table data. While the PivotTable is the easiest approach, students may manually create a table with the categories and then use the SUMIF() function to compute expenditures data. If this approach is used, the COUNTIF() function can be used to confirm that the number of categories includes all 5427 records. This approach is used in the 2013ExpenseDB worksheet of the QueenCity\_Key file.



Use the frequency distribution to create a bar chart by expenditure and % of Expenditures. Let category be the x axis data and expenditures or % of expenditures the y axis data. Refer to p. 72 for general guidelines for effective displays. The Design tab can be used to format axis titles. In the % of Expenditures table remove extra zeroes from the y axis titles (right-click on axis title – format axis scroll down to number 0 decimals).

The majority of students in this level Statistics course may not have been exposed to the use of Pivot Tables. Students should be referred to the exercise in the Chapter 2 (pp. 98-101) as a reference.

When the PivotTable field list appears, students should visualize what fields they want located on the rows and columns. Since a total of expenditures is required, the category labels are best represented as rows. For each category, the total expenditures are required. These are the values. Once dragged to the values area of the report Sum of Expenditures appears.



# Table of Amount of Expenditures by Department and the Percentage of Expenditures by Department

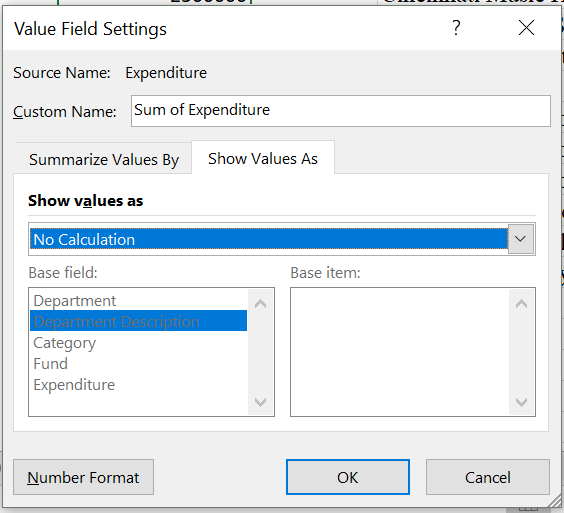
It may be helpful for students to generate a new worksheet and sort the data by department to help visualize the process while creating the Pivot Table. Remind students to select the table by clicking in A1 and using CTRL-SHIFT-Right Arrow then CTRL-SHIFT-Down Arrow to select the data (dragging the mouse to select this size data is inefficient). For this table, the Row category is department description (again visualize Department names in the rows in column A). The values field is again the Expenditures.

Once created the table summing expenditures can be copied to a new location (allowing for a table name), column titles added, and the expenditures data can be formatted in an exceptable style (comma, 2 decimals is appropriate). Remind students that the $ style clouds the data with extra symbols.

The original PivotTable can now be used to create the % of Expenditures table. To change the Expenditures values to percent, students will have to right-click on the expenditures data in the Pivot Table and choose Value Field Settings. They will most likely not be familiar with the Show Values As tab and should be instructed to select that tab and choose the desired calculation (% of Expenditures).

To combine all percent values less than 1%, PivotTable data should be copied (use the Paste Special to remove PivotTable features from the data). Formatted as a table, sorted, less than 1% data combined and and Other field created. Use the SUMIF() function to compute the Other data. Students will have to be reminded that the criteria (<1%) must be put in quotes (“<1%”). Appropriate formatting (column headings, table name can then be added for reporting).

The Paste Special feature is often overlooked. For example, once the Other department description has been created, this result (21.20%) must be copied/paste special to remove the SUMIF function or the result will be lost.



# Table of Amount of Expenditures by Fund and the Percentage of Fund by Department

This table is created exactly as the expenditures by department tables. Use the previous Teaching Tips for help.