**Explore GDP in Excel**

Excel is an excellent (and frequently used) tool for financial analysis. This project will guide you through an analysis of Gross Domestic Product data from 1987 to 1997. This decade is particularly interesting due to the rise of computers and other information technology, and you’ll be looking to see how that changed the GDP landscape over this time period.

You’ll complete this project in our specially prepared Project Spreadsheet. Unlike exercise spreadsheets, this one won’t automatically assess your work. This is your chance to take the training wheels off and see how you do!

**First Group of Checkboxes (Initial Exploration) :**

* We’ve been given two tables of GDP data for the US from 1987 to 1997. These are on the “Raw Data” sheet. Take a look through them. The first has billions contributed to GDP broken down by category and industry. The second summarizes the first table by recording only billions contributed by the larger categories. When you’re ready to start analyzing, select the “Initial Exploration” sheet and move to the next task.
* Our ultimate goal is to zoom in on computers, but it is important to start by getting a general sense of the dataset we have. Let’s start by looking at the largest and smallest contributors to GDP by category. Sort the copy of Table 2 on the “Initial Exploration” sheet. Your goal is to group all the data for each year together. Within each group, the data should be sorted by Billions.
* To get a quick sense of what the largest and smallest contributors have been over the decade, let’s look at the beginning, middle, and end of the decade. Filter the table you just sorted so only the years 1987, 1992, and 1997 are visible.
* Scroll through the filtered table and identify the largest and smallest categories for each of the three years. Record these in the “Summary of Exploration” table and write down any observations you have in the “Statement” box.

**Second Group of Checkboxes (Investigation of Trends):**

* Let’s dig deeper into the largest and smallest categories. Comparing raw numbers will only tell us so much, since both Finance and Manufacturing increased over the course of the decade in terms of raw dollar amounts. What we’d really like to calculate is the portion of the total GDP that these categories contribute.

So let’s convert raw dollars to percentages. On the “Percentage” sheet, write a formula in C25 to sum the 1987 column of data, and drag that formula over through M25.

(Excel might display a “formula omits adjacent cell” error. This is fine: the year at the top of the column should not be included in the sum.)

* Write a formula in C28 that calculates the percentage of 1987’s GDP contributed by Agriculture, Forestry, Fishing, And Hunting (in C9).
* Add a $ sign to the formula in C28 so that when you drag it down the column, it updates to a percentage formula for each category.
* Drag the formula in C28 down through C43.
* Select the range C28:C43 and drag it over through column M
* Filter the percentage table to look at the categories you identified on the prior sheet. What trends do you notice?
* Write a brief summary of what you notice in the Summary Statement box.

**Third Group of Checkboxes (Computers):**

* Okay, we’ve got a basic idea of what the major categories look like. But we’ve been asked to analyze the impact of computers! Computers aren’t their own category, but they do appear in a separate table that breaks GDP down by individual industry. This table is on the “Computers” sheet. You’re going to create a new “Computers” category. First, copy the data table to the “Backup Table” sheet, so you can recover the original if you need it!
* Go back to the “Computers” sheet. Find the industries that list “Computer” in their description and manually alter the corresponding “Category” to “Computers”.
* Select the entire table on the “Computers” sheet and create a pivot table in G9 that reports the total GDP contribution for each category by year.
* Sort the pivot table by the 1987 values from largest to smallest. Has anything changed from the initial analysis when computers are turned into their own category? Write a brief explanation in the “Changes in 1987” box.
* Record the rank of the “Computers” category in 1987 in H2.
* Sort the pivot table by 1997 from largest to smallest and record the rank of the “Computers” category in H3.
* Write an overall summary of what you’ve discovered on the “Final Summary” sheet, including any limitations of the data or your analysis.