

Instructions on Adding Zeros to the Comtrade Data

Required: An excel spreadsheet with the commodity codes for all goods you want. In this exercise we will want all 4-digit SITC commodity codes. These are included in the files **4DigitSITC2Codes.xls** and **4DigitSITC3Codes.xls** for Revision 2 and Revision 3 codes respectively.

Step 1 – (Download Data from Comtrade)

- 1.a) Go to <http://comtrade.un.org/db/dqQuickQuery.aspx> it should be accessible in all browsers
- 1.b) Click the radio button for **SITC Rev. 2** or **SITC Rev. 3** under *Select Classification*
- 1.c) Under *Enter Commodity Codes/Text* enter **????** (this tells it to include all 4 digit codes)
- 1.d) Under *Enter Reporters Codes / Text* enter the code for your reporting country. E.g. **842** for the United States. You can click *Lookup* to add reporters by name instead of code.
- 1.e) Under *Enter Partners Codes / Text* enter the code for your partner countries, separated by commas if there are more than one. E.g. **124, 484** for Canada and Mexico, respectively. You can click *Lookup* to add partners by name instead of code.
- 1.f) Under *Enter Years* enter all years that you want data for, separated by commas. E.g. **1990,1991,1992,1993,1994,1995** for 1990 to 1995. There is no way give it just a start and end point to have it include a range; each year you want included must be listed explicitly.
- 1.g) Under *Select Trade Flow* click the check boxes next to the trade flows you want, e.g. **Imports** and/or **Exports**.
- 1.h) Click *Submit Query*
- 1.i) When the *Basic Query Results* page loads click *Direct Download*. Click OK then *Save as* and download the data to your computer. ****If your query returns over 50000 records you will be unable to download it. If this is the case then you must go back and include fewer years or fewer partners****

Alternative: Comtrade data can also be downloaded by creating an account at WITS.

<https://wits.worldbank.org/WITS/WITS/Restricted/Login.aspx> although instructions will not be provided for this site.

Step 2 – Use a Pivot Table to Organize Data by Years

- 2.a) Open your downloaded data from Step 1 in Excel.

For Excel 1997-2003:

- 2.b) First click on a cell containing some data and then click *Data* on the top and then *PivotTable and PivotChart Report...* from the dropdown menu
- 2.c) Leave *Microsoft Excel list or database* and *PivotTable* selected and click *Next*.
- 2.d) It will ask you what data you want to use and should automatically guess and be filled in with the correct range if you first clicked a cell in your dataset in step 2.b. Click *Next*
- 2.e) When it asks *Where do you want to put the PivotTable report* click the radio button next to **New Worksheet**. Click *Finish*.
- 2.f) In the new sheet with the empty pivot table drag **Years** to *Drop Column Fields Here*, drag **Commodity Code** to the *Drop Row Fields Here* and drag **Value** to *Drop Data Items Here*. It should list it as *Sum of Value*, which is what you want (average, min, and max are also fine since there is only one data point).

For Excel 2007-2010

- 2.b) First click on a cell containing some data and then click *Insert* on the top and then *PivotTable* in the below ribbon.
- 2.c) It will ask you what data you want to use and should automatically guess and be filled in with the correct range if you first clicked a cell in your dataset in step 2.b. Leave the radio buttons next to **Select a table or range** and **New Worksheet** selected. Click *Next*
- 2.d) In the new sheet with the empty pivot table drag **Years** to *Column Labels*, drag **Commodity Code** to the *Row Labels* and drag **Value** to *Values*. It should list it as *Sum of Value*, which is what you want (average, min, and max are also fine since there is only one data point).

Step 3 – Get Values for all Commodity Codes

- 3.a) We're going to want to use this pivot table data elsewhere so we need to copy it to a new spreadsheet.
 - To select all data in the rectangle given by the first commodity code in the upper left corner and the value for the last year and last commodity code for the lower right corner. You can do this by clicking and dragging with the mouse or by holding shift and using the arrow keys (you can press the end key and an arrow key to move immediately to the last cell with data in it in that direction). Don't include the totals in the last column or last row of the pivot table in your selection.
 - After the Data is selected press **Ctrl+C** or right click in your selection and click *Copy*

- Create a new worksheet (**Shift+F11**) and in this worksheet select cell A1 and paste the data with **Ctrl+V** or by right clicking and selecting *Paste*
- You should end up with just the inside of the pivot table, with no headers and commodity codes in the first column, the values for the first year of your period in the second column and so on to the values for the last year in your period in the last column.
- Double click the worksheet name at the bottom and name it **pivotdata**

3.b) We now need the list of commodity codes and the data we just pasted in the same worksheet. Open the **4DigitSITC2Codes.xls** or **4DigitSITC2Codes.xls** excel file (depending if you did Rev 2 or Rev 3) and copy the worksheet to your excel file with the comtrade data.

- To do this right click on the worksheet name *Codes* and select **Move or Copy**.
- In the *To book*: select the name of the excel file containing your comtrade data
- Click *OK*

3.c) We are now going to use the Vlookup function to match up the data with the full list of codes. Click cell **C1** in the *Codes* worksheet and press **=** to start typing a formula.

- Vlookup takes the following arguments in the following order
 - *lookup_value* : this is the value we want to lookup. It will be the cell of the corresponding row in the first column. For the formula in C1 we want **A1**
 - *table_array* : this the table you are searching. We want it to be all the data in the *pivotdata* worksheet. We want to put **pivotdata!\$A\$1:??** where ?? is the bottom right cell containing data in *pivotdata* with \$ signs before both the letter and number. E.g. **pivotdata!\$A\$1:\$G\$742** (the \$ signs are very important)
 - *col_index_num* : This is the column that you want to return a value from when you find the row you're looking for. A value of 1 returns the first column (the code) while a value of 2 returns the year for your first period and so on. We'll want this to be **2** for C1.
 - *[range_lookup]* : This is asking whether you want approximate matches. Always set this to **False**.
- Cell C1 should have something like **=VLOOKUP(\$A2,copypivot!\$A\$1:\$G\$742,2,FALSE)** in it

3.d) We now want to copy the formula to all cells.

- First copy it horizontally along the same column by selecting C1 and copying the cell (**Ctrl+C**) and then selecting the cells to the right of it equal to the number of periods you have and then pasting the formula into them by pressing **Ctrl+V** or Enter.
- IMPORTANT: We need to change the *col_index_num* in the Vlookup function for each of the columns. So in cell D1 we want it equal to **3**, in cell E1 we want it equal to **4** and so on. This means that column D will contain the data for the second year in your period, E for the third year, etc.

- We now want to copy the formula to all the cells below the first row down to the last row. To do that select all the cells with the Vlookup function in the first row and copy them (**Ctrl+C**). Then highlight all the cells below them down to the last row and paste the formula with **Ctrl+V** or Enter.

Step 4 – Replace #N/A's with Zeros

- 4.a) When Vlookup fails to find what it's looking for (in this case indicating a dropped zero) it returns #N/A; but we want those cells to be zeros
 - 4.b) Copy all the data in the worksheet with the Vlookup formulas by pressing **Ctrl+A** and then **Ctrl+C**
 - 4.c) Create a new worksheet (**Shift+F11**) and select the place where you want to paste your data (e.g. **A1**) and right click in that cell. Select **Paste Special** from the Right click menu and then select **Values** and click okay to paste as values. Note a normal paste will not work here.
 - 4.d) To now replace the #N/A's with zeros press **Ctrl+H** to bring up the find and replace option. Under *Find what:* put **#N/A** and under *Replace with:* put **0** then click **OK**.
 - 4.e) We're all done. We now have added the dropped zeros back into the comtrade data and we can use this data to complete the least traded exercise.
- It may be useful to rename this worksheet with the final data to a descriptive name or save it to its own spreadsheet as well as to label it with years and such. At this point you can also delete the first column of the commodity codes without descriptions if desired.