

PIVOT TABLES – NICAR Tipsheet

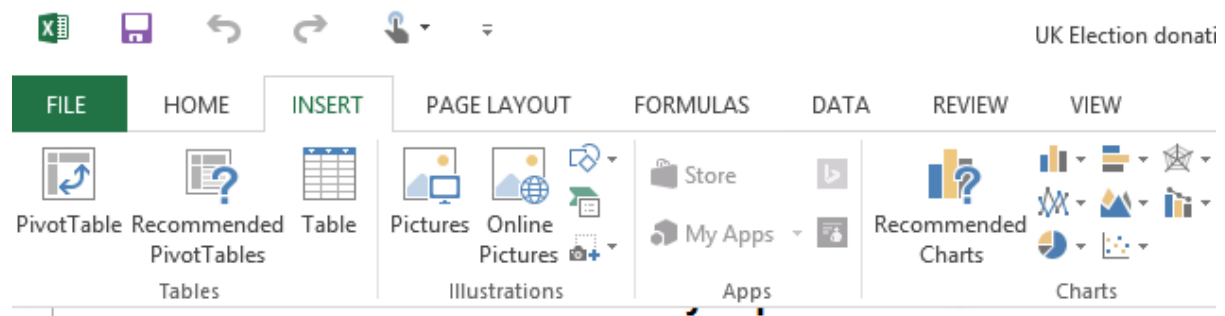
What is a pivot?

Pivot tables are a powerful way of manipulating excel worksheets so that rows can be turned into columns and vice versa. They are good for counting and adding values from multiple cells – for example, several entries which are classified under one category such as payments to the same person or political party.

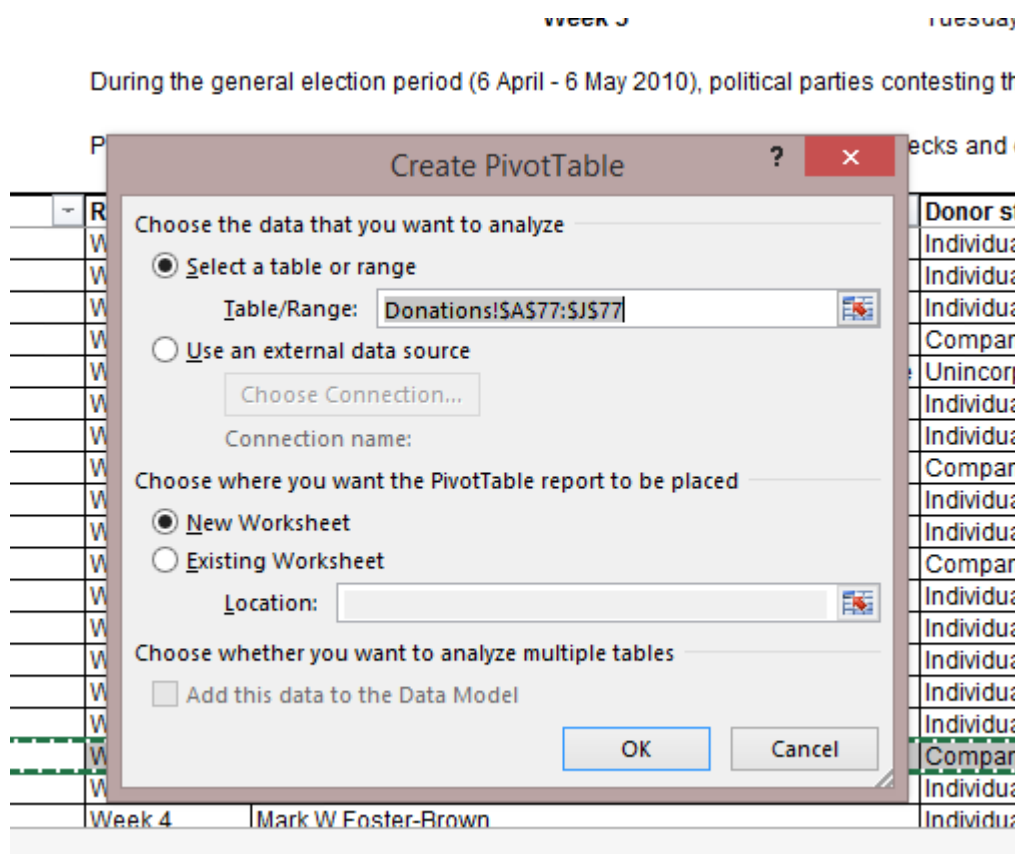
When to pivot – not every calculation needs a pivot table, although once you get the hang of it, it's awful tempting to pivot everything. Think of a time before computers, when every record might be on an individual index card: you can sort cards, by date, or alphabetical order, - sorting and filtering in Excel. But if you need to count up the number of cards in one category, or add up values on a group of cards, then you need to pivot.

Pivoting. Step 1

First make sure you highlight just one cell inside the data you plan to pivot. Select the "Insert" ribbon, and choose "pivot table" on the far left



When you click on pivot table you get the following wizard:



The range of cells to be pivoted cannot be edited manually. The only way they can be wrong is if you have highlighted the wrong area of the table. If so, cancel, select the single cell inside the data, and try again.

When you click OK – and we recommend always accepting the “new worksheet” option, you get a new worksheet which looks like this:



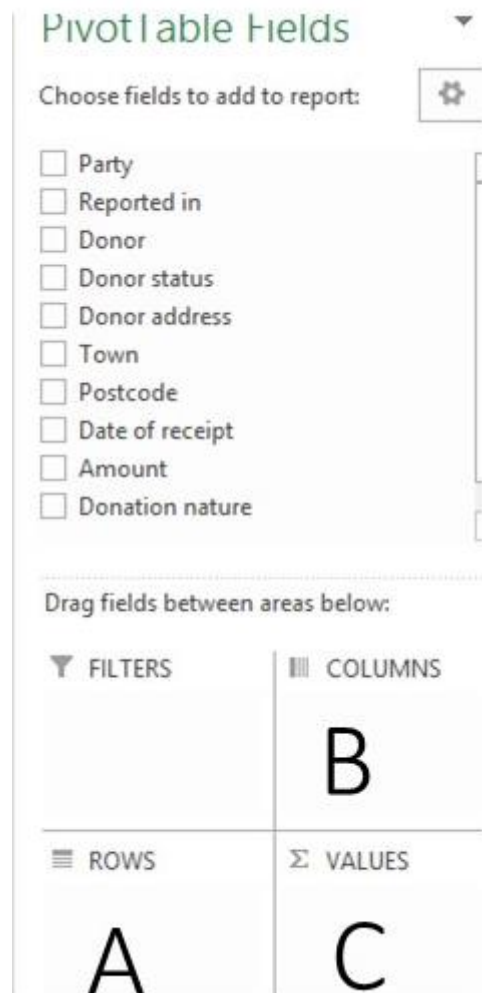
This is a blank table.

Step 2

The columns from the original worksheet are all listed in the menu on the right. You are being invited to decide which of them should be the rows, and/or columns, in the new table. Normally you decide this first, then drop the values you’re calculating into the value fields

area. This is typically going to be where you total expenditure, amounts, and other sums; Excel will always try to count or add up – if you were to drop a set of zipcodes into the values fields, Excel would count them. Likewise dates or serial numbers will be counted, not summed.

In Excel 2007 and later, the menu includes a diagram on the right which allows you to see at a glance what column has been placed in which field area – A, B, C.



This makes it very easy, not only to drag and drop a category into one of the areas, but also to change the selection if you need to. It also makes it easy to put more than one category into the field; it is well worth trying out this option, and finding out how the order of the category affects the finished table.

box A:

See how the row fields change in the following two screenshots, just by reversing the order of field in

Sum of Amount	Reported in	Donor status	
Party	Company	Friendly or Registered Society	Individual
Christian Party "Proclaiming Christ's Lordship"	Week2 - LATE		60000
Christian Party "Proclaiming Christ's Lordship" Total			60000
Conservative Party	Week 1	599410	856401.86
	Week 2	623341.45	1598000
	Week 3	167750	477500
	Week 4	352909.22	998999
	Week 5	311009.5	1299000
Conservative Party Total		2054420.17	5229900.86
Co-operative Party [The]	Week 3		33745
Co-operative Party [The] Total			33745
Labour Party [The]	Week 1		126867
	Week 2	630000	340000
	Week 3		380000
	Week 4		375000
	Week 5		91304.1
Labour Party [The] Total		630000	1313171.1
Liberal Democrats	Week 1		20000
	Week 2	95000	25000
	Week 3	14000	50000
	Week 4	370000	130000
	Week 5	20000	
Liberal Democrats Total		499000	225000
Scottish National Party	Week 2		10000
Scottish National Party Total			10000
Solihull and Meriden Residents Association	Week 5		11582
Solihull and Meriden Residents Association Total			11582

Sum of Amount	Reported in	Donor status	
Party	Company	Friendly or Registered Society	Individual
Week 1	Conservative Party	599410	
	Labour Party [The]		
	Liberal Democrats		
Week 1 Total		599410	
Week 2	Conservative Party	623341.45	
	Labour Party [The]	630000	
	Liberal Democrats	95000	
	Scottish National Party		
	The Buckinghamshire Campaign for Democracy		
Week 2 Total		1348341.45	
Week 3	Conservative Party	167750	
	Co-operative Party [The]		33745
	Labour Party [The]		
	Liberal Democrats	14000	
Week 3 Total		181750	33745
Week 4	Conservative Party	352909.22	
	Labour Party [The]		
	Liberal Democrats	370000	
Week 4 Total		722909.22	
Week 5	Conservative Party	311009.5	
	Labour Party [The]		
	Liberal Democrats	20000	
	Solihull and Meriden Residents Association		
Week 5 Total		331009.5	
Week2 - LATE	Christian Party "Proclaiming Christ's Lordship"		

When using a pivot table, filters and sorting don't work in the usual way.

A drop down filter selector appears with each field:

Sum of Amount	Reported in	Party
Week 1	Conservative Party	
	Labour Party [The]	
	Liberal Democrats	
Week 1 Total		
Week 2	Conservative Party	
	Labour Party [The]	

But sorting has to be done by right-clicking in any once cell of the field you need to sort, and then sort selected from the resulting menu.

A useful feature is that selecting a cell with a value in it, and double-clicking, will make Excel create a new worksheet which shows all the records which make up that total – so in the current example, clicking on the £724000 total for donations to the Liberal Democrat party will result in a new sheet which shows all 20 transactions which made up that sum.

Pivoting is a powerful feature of Excel. It is worth practicing before you need to do it in researching a story – it is all too easy to make Excel do ridiculous things without realising it: always remind yourself what you’re trying to achieve before you click! And if something looks odd, you may have made Excel answer an impossible question! Try again. Play around, see what works, what doesn’t, and what effect the various options have.

What if I don’t have Excel?

Although this tipsheet is concerned with MS Excel, Office for Mac, and Libre Office will do the same kind of operations, albeit with different menus. Google spreadsheets also have a powerful pivot function. The principles are the same, even though the menus and appearances are different.

Further reading

There is plenty online; Googling “Excel Pivot” will get you a long way. There are “Excel Bibles” on the various editions. Although expensive, they are worth the money. The most useful book on Pivot Tables that I have found is – ***Pivot Table Data Crunching*** in the Mr Excel Library series. Well worth a read if you want to get the most out of your pivots.

For questions, feel free to email me – jonathan.stoneman@gmail.com

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