#### Pivot table tutorial for importing Ontario donations data

Details about how much individuals or institutions donate to federal, provincial and municipal politicians or their political parties have become standard fare, as in this Globe and Mail <u>piece</u> on The Beer Store and its monopoly of beer sales in Canada's largest province.

In order for stories to resonate, they need context, which in the Globe's story is about companies perhaps using the political process to guard to their money-making venture in the face of emerging competition from smaller and increasingly vocal players.

In order to resonate, stories about campaign donations need context, which can be best provided by answering basic questions: Have the donations increased over the years? If so, how quickly? Who are the most generous donors? Why do politicians donate money to themselves? Are there any surprising donations? Who gives to the so-called "fringe" parties and their candidates?

The questions are as endless as the story possibilities. However, context is ALWAYS the key. And this is where pivot tables come into play, arguably the most useful task that Excel will perform for journalists hunting for good stories.

In a nutshell, pivot tables summarize the information in your database by grouping key categories (donors) and providing subtotals (their donations) for each group. (**Note:** for information on pivot tables that goes beyond this tutorial, you can check out <u>Computer-Assisted Reporting</u>, <u>A Comprehensive Primer</u>, or any number of online tutorials, some of which are referenced on our <u>syllabus</u>.)

So if you want to find out who donated the most to a certain political party or candidate, for instance, you would group the donors, the parties to which they contributed, sum the donation amounts, and then sort the dollar amounts in descending order. To make things more interesting, and to add more context, you could even group all that information by year, something we'll learn in the sequel to this tutorial.

Or, instead of summing the donation amounts, perhaps you want to COUNT them in order to determine which party or candidate attracted the greatest number of donors, which could also lead to interesting stories about the effectiveness of grassroots campaigns.

As you'll see from the Elections Ontario data, the donations fall into three categories: annual contributions; campaign contributions; and leadership contests. In Ontario, it's possible to know who donated to leadership hopefuls. (Not so at the federal level.) For The Globe's Beer Store piece, it would appear that the reporter tallied the results from all three categories going back to 2015. That workload is beyond the scope of this tutorial. Instead, we'll just focus for one year's worth of data from annual contributions to get a sense of who's giving money to whom.

So let's get started with the data from <u>Ontario Elections</u>, for the three main parties: the Ontario Liberal Party, the Ontario NDP and the PC Party of Ontario

- 1) Click on the link for "Contributions to registered political parties".
- 2) Select Ontario Liberal Party, and then "Annual Contribution 2014"  $\,$

3) Hit the "Search" tab. Don't worry about the number of records displayed per page.





#### Français | A- | A | A+

Download (tab-delimited file)

#### CONTRIBUTIONS TO POLITICAL PARTIES

Party: ONTARIO LIBERAL PARTY

Contribution Report: ANNUAL CONTRIBUTION - 2014

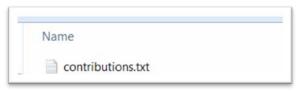
The table below is broken down into the following columns: Contributor / Deposit Date / Reporting Date / Contribution Amount / Aggregate Amount.

- . The "contributor" column represents contributors who have donated over \$100 to the political party
- The "deposit date" column represents the date the political party deposited the contribution into the appropriate depository on record with the CEO
- The "reporting date" column represents the date the political party's CFO filed the contribution report with the CEO
- The "contribution amount" column represents the amount from a single contribution in excess of \$100 or a contribution from a single source that in aggregate exceed \$100
- The "aggregate amount" column represents the total amount of contributions from the contributor during this period

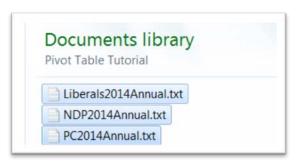
CONTRIBUTOR	DEPOSIT DATE	THE RESIDENCE OF STREET, SANSAGE TO A STREET, SANSA	CONTRIBUTION	AGGREGATE
	(mm/dd/yyyy)	(mm/ad/yyyy	JAMOUNT	AMOUNT
1003694 Ontario Inc. (Carepartners)	11/21/2014	11/28/2014	1,000.00	1,000.00
1003694 Ontario Inc. (Carepartners)	11/21/2014	11/28/2014	1,000.00	2,000.00
1084278 Ontario Inc. o/a Super 8 Sudbury	11/21/2014	11/28/2014	3,500.00	3,500.00
1150140 Ontario Inc.	11/28/2014	11/28/2014	600.00	600.00
1258702 Ontario Ltd.	05/13/2014	05/27/2014	5,025.00	9,975.00
1258702 Ontario Ltd.	03/31/2014	04/01/2014	5,025.00	5,025.0
1307997 Ontario Limited O/A First Accounting	12/15/2014	12/29/2014	20.00	240.0
1307997 Ontario Limited O/A First Accounting	11/15/2014	11/28/2014	20.00	220.0
1307997 Ontario Limited O/A First Accounting	09/15/2014	09/26/2014	20.00	180.0
1307997 Ontario Limited O/A First Accounting	08/18/2014	09/02/2014	20.00	160.0
1307997 Ontario Limited O/A First Accounting	07/15/2014	07/28/2014	20.00	140.0
1307997 Ontario Limited O/A First Accounting	06/15/2014	06/27/2014	20.00	120.0
1631057 Ontario Inc	12/22/2014	12/29/2014	2,000.00	2,000.0
1746391 Ontario Inc Canadian Motor	09/26/2014	09/26/2014	3,200.00	8,200.0

4) Before downloading the data, be sure to read the explanations under the "Contributions To Political Parties" section above the table, which explains what each column head means. (**Note:** it's always a good practice to read as much about the data you're about to download, understanding what it can tell you and, perhaps more importantly, what it can't. Many institutional, public-sector websites like Elections Ontario have excellent "readme" files, or explanations of the contents of the data you're about to download. It's also a good practice to

- either copy or download these explainer files, keeping them in the same folder that contains your data.)
- 5) To download the delimited text file, select the "Download (tab-delimited file)" tab to the right of the "Contributions To Political Parties" title.

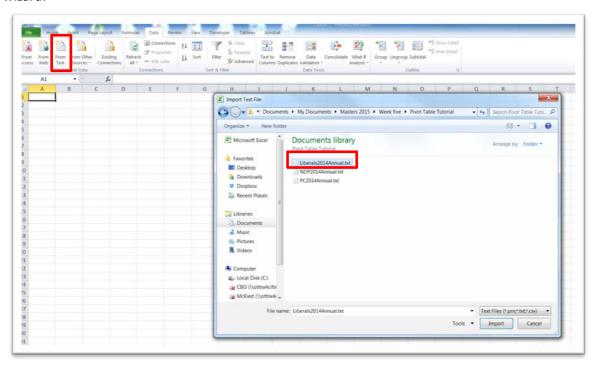


- 6) In the image above, you'll notice that the file has a generic name, which is fine if you're only importing a year's worth of data for one political party. Because we'll be repeating this exercise, it's a good idea to name the text files. Call this one, "Liberals2014Annual".
- 7) You'll notice that the title contains no spaces. Naming conventions for databases are a bit different they dislike names with spaces. So you can run either the titles together, using a capital for each new word in the text string, or an underscore to join the words. "Liberals2014Annual" could also be "Liberals\_2014\_Annual". To a database, the underscore is a character.
- 8) After you've renamed the file, move it to the folder you've created for this exercise, and repeat the process for the NDP and PCs.
- 9) Your folder should have text files for each of the three main political parties.

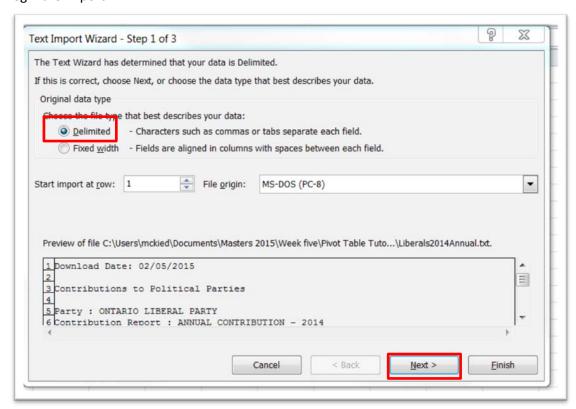


10) Now we'll pull each of these files into an Excel workbook.

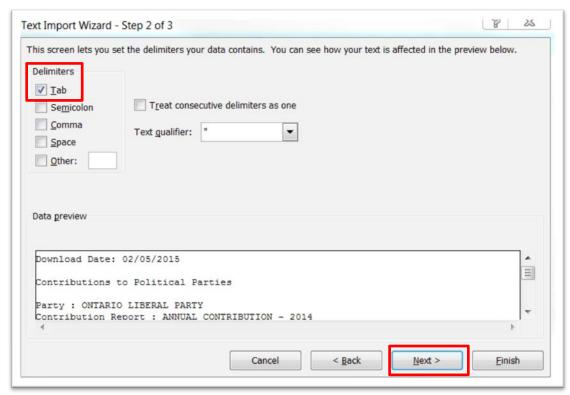
11) Open a workbook, and import the first file ( it doesn't matter which one ), using the import wizard.



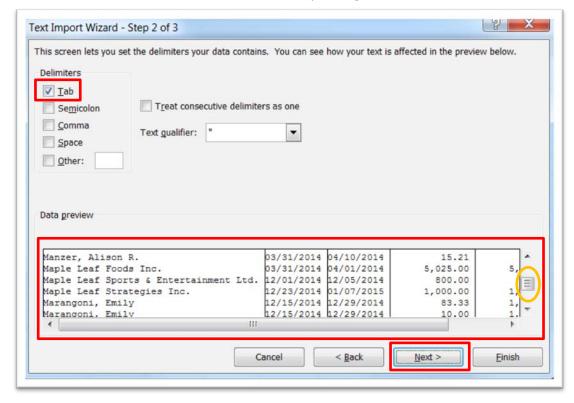
- 12) Your interface may look a bit different than mine.
- 13) Begin the import.



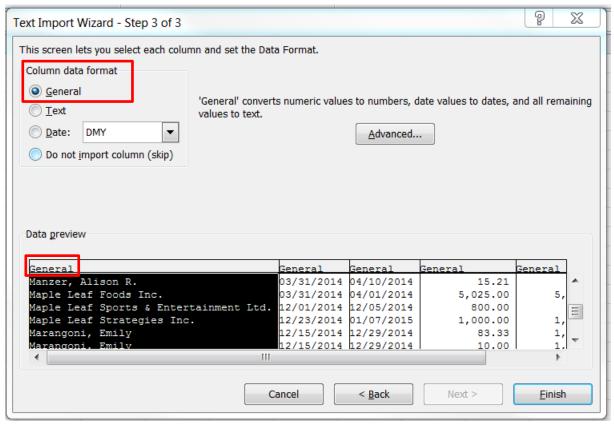
- 14) Excel defaults to the "Delimited" data type format. As we explained in class, a delimited text file uses "delimiters", in this case tabs, to replace the column separators in the data tables. A carriage return ends each row. Many open data sites use these delimited files (Comma Separated Values, or "csv", files are also popular) to reduce the size of the files. Excel and database managers like Access, MySQL of SQL can open these files.
- 15) Select the "Next" tab.



16) Excel's Text Import Wizard defaults to the "Tab" delimiter, the one we want. Use the vertical scroll bar to ensure that the delimiter is, indeed, separating the columns.

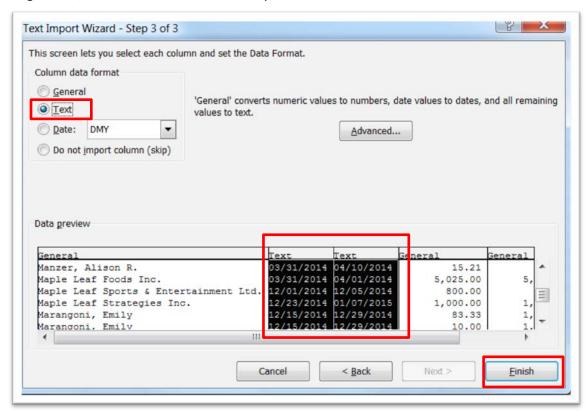


17) Select the "Next" Tab.

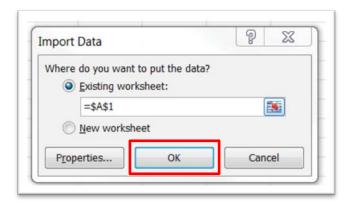


18) The term "General" appears at the top of each column. This means that the wizard has given the information, or data in each column, a generic format, which you can change, by clicking on each column, which the wizard will then highlight in black. Depending on what system you're using, the date columns may be imported as text and dates. This consistent formatting makes it difficult to work with the dates, a task we'll complete in part two of this tutorial. So to make

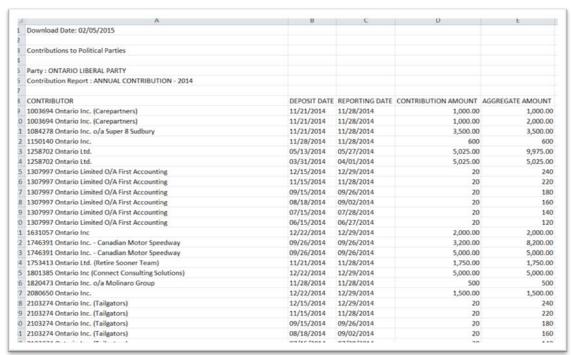
things easier, and for the sake of consistency, let's format these two date columns as "Text".



19) Select the "Finish" tab.

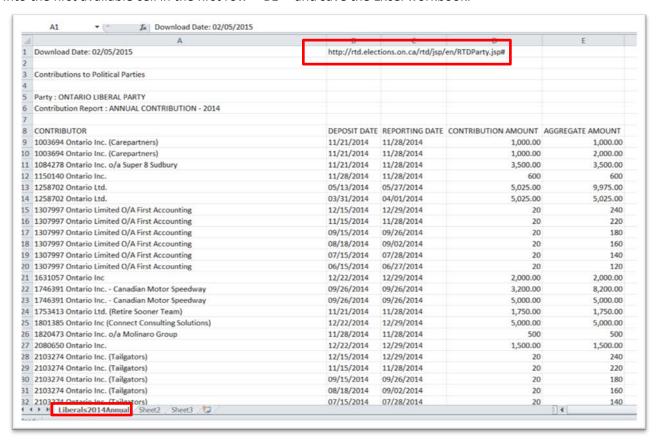


20)



21) We've imported our first table.

22) Rename the sheet with a title makes senses, "Liberals2014Annual", and paste the website's URL into the first available cell in the first row -- B1 -- and save the Excel workbook.



# 23) Using your keyboard's short-cut keys (**NOTE:** you'll make your life much easier to learning them), select the table.

Party : ONTARIO LIBERAL PARTY				
Contribution Report : ANNUAL CONTRIBUTION - 2014				
CONTRIBUTOR	DEPOSIT DATE	REPORTING DATE	CONTRIBUTION AMOUNT	AGGREGATE AMOUNT
1003694 Ontario Inc. (Carepartners)	11/21/2014	11/28/2014	1,000.00	1,000.00
1003694 Ontario Inc. (Carepartners)	11/21/2014	11/28/2014	1,000.00	2,000.00
1084278 Ontario Inc. o/a Super 8 Sudbury	11/21/2014	11/28/2014	3,500.00	3,500.00
1150140 Ontario Inc.	11/28/2014	11/28/2014	600	600
1258702 Ontario Ltd.	05/13/2014	05/27/2014	5,025.00	9,975.00
1258702 Ontario Ltd.	03/31/2014	04/01/2014	5,025.00	5,025.00
1307997 Ontario Limited O/A First Accounting	12/15/2014	12/29/2014	20	240
1307997 Ontario Limited O/A First Accounting	11/15/2014	11/28/2014	20	220
1307997 Ontario Limited O/A First Accounting	09/15/2014	09/26/2014	20	180
1307997 Ontario Limited O/A First Accounting	08/18/2014	09/02/2014	20	160
1307997 Ontario Limited O/A First Accounting	07/15/2014	07/28/2014	20	140
1307997 Ontario Limited O/A First Accounting	06/15/2014	06/27/2014	20	120
1631057 Ontario Inc	12/22/2014	12/29/2014	2,000.00	2,000.00
1746391 Ontario Inc Canadian Motor Speedway	09/26/2014	09/26/2014	3,200.00	8,200.00
1746391 Ontario Inc Canadian Motor Speedway	09/26/2014	09/26/2014	5,000.00	5,000.00
1753413 Ontario Ltd. (Retire Sooner Team)	11/21/2014	11/28/2014	1,750.00	1,750.00
1801385 Ontario Inc (Connect Consulting Solutions)	12/22/2014	12/29/2014	5,000.00	5,000.00
1820473 Ontario Inc. o/a Molinaro Group	11/28/2014	11/28/2014	500	500
2080650 Ontario Inc.	12/22/2014	12/29/2014	1,500.00	1,500.00
2103274 Ontario Inc. (Tailgators)	12/15/2014	12/29/2014	20	240
2103274 Ontario Inc. (Tailgators)	11/15/2014	11/28/2014	20	220
2103274 Ontario Inc. (Tailgators)	09/15/2014	09/26/2014	20	180
2103274 Ontario Inc. (Tailgators)	08/18/2014	09/02/2014	20	160
2103274 Ontario Inc. (Tailgators)	07/15/2014	07/28/2014	20	140
2103274 Ontario Inc. (Tailgators)	06/15/2014	06/27/2014	20	120

24) Paste the table into a new worksheet (make sure the worksheet is to the right, which may mean dragging it with your cursor), which you will call "Liberals2014AnnualWorkingCopy".

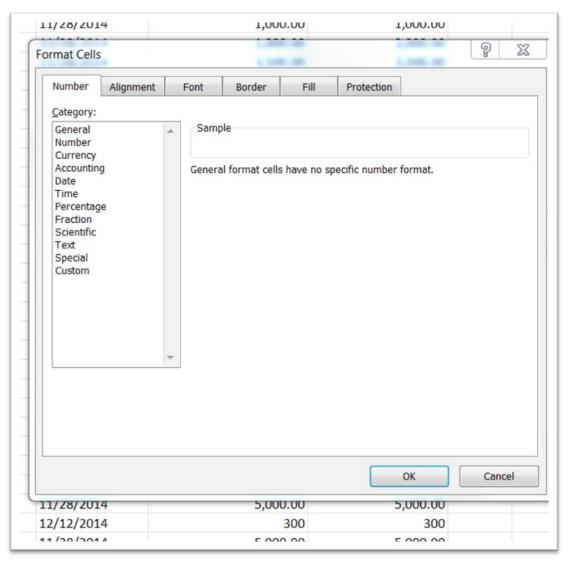
d	A	В	C	D	E	
	CONTRIBUTOR	DEPOSIT DATE	REPORTING DATE	CONTRIBL	AGGREGATE AMOUNT	
	1003694 Ontario Inc. (Carepartners)	11/21/2014	11/28/2014	1,000.00	1,000.00	
1	1003694 Ontario Inc. (Carepartners)	11/21/2014	11/28/2014	1,000.00	2,000.00	
	1084278 Ontario Inc. o/a Super 8 Sudbury	11/21/2014	11/28/2014	3,500.00	3,500.00	
	1150140 Ontario Inc.	11/28/2014	11/28/2014	600	600	
	1258702 Ontario Ltd.	05/13/2014	05/27/2014	5,025.00	9,975.00	
	1258702 Ontario Ltd.	03/31/2014	04/01/2014	5,025.00	5,025.00	
	1307997 Ontario Limited O/A First Accounting	12/15/2014	12/29/2014	20	240	
	1307997 Ontario Limited O/A First Accounting	11/15/2014	11/28/2014	20	220	
)	1307997 Ontario Limited O/A First Accounting	09/15/2014	09/26/2014	20	180	
l	1307997 Ontario Limited O/A First Accounting	08/18/2014	09/02/2014	20	160	
2	1307997 Ontario Limited O/A First Accounting	07/15/2014	07/28/2014	20	140	
3	1307997 Ontario Limited O/A First Accounting	06/15/2014	06/27/2014	20	120	
1	1631057 Ontario Inc	12/22/2014	12/29/2014	2,000.00	2,000.00	
5	1746391 Ontario Inc Canadian Motor Speedway	09/26/2014	09/26/2014	3,200.00	8,200.00	
5	1746391 Ontario Inc Canadian Motor Speedway	09/26/2014	09/26/2014	5,000.00	5,000.00	
7	1753413 Ontario Ltd. (Retire Sooner Team)	11/21/2014	11/28/2014	1,750.00	1,750.00	
3	1801385 Ontario Inc (Connect Consulting Solutions)	12/22/2014	12/29/2014	5,000.00	5,000.00	
)	1820473 Ontario Inc. o/a Molinaro Group	11/28/2014	11/28/2014	500	500	
)	2080650 Ontario Inc.	12/22/2014	12/29/2014	1,500.00	1,500.00	
	2103274 Ontario Inc. (Tailgators)	12/15/2014	12/29/2014	20	240	
2	2103274 Ontario Inc. (Tailgators)	11/15/2014	11/28/2014	20	220	
3	2103274 Ontario Inc. (Tailgators)	09/15/2014	09/26/2014	20	180	
1	2103274 Ontario Inc. (Tailgators)	08/18/2014	09/02/2014	20	160	
5	2103274 Ontario Inc. (Tailgators)	07/15/2014	07/28/2014	20	140	
5	2103274 Ontario Inc. (Tailgators)	06/15/2014	06/27/2014	20	120	
7	2168587 Ontario Ltd. O/A Upper Crust	11/21/2014	11/28/2014	5,000.00	5,000.00	
3	2248774 Ontario Inc. o/a Destination Niagara Falls	12/11/2014	12/12/2014	300	300	
)	2285045 Ontario Inc. o/a Grand Niagara Golf Club	11/21/2014	11/28/2014	5,000.00	5,000.00	
)	2348505 Ontario Inc. o/a Activar	11/27/2014	11/28/2014	600	1,800.00	
L	2348505 Ontario Inc. o/a Activar	11/21/2014	11/28/2014	1,200.00	1,200.00	
-	Liberals2014Annual Liberals2014AnnualWor	rkingCopy Sheet	42/20/2044	2500 40	2 500 00	m

25) The first cell in each column contains the title. You'll notice that the columns containing the dates are justified to the left, meaning that Excel reads them as text. Because they are in a text format, we won't be able to sort them. However, we will be able to use a function to easily extract the year from each date, which will come in handy for our pivot table in the next tutorial. The columns containing the contribution amounts are numbers. How do we know that? Because they are justified to the right.

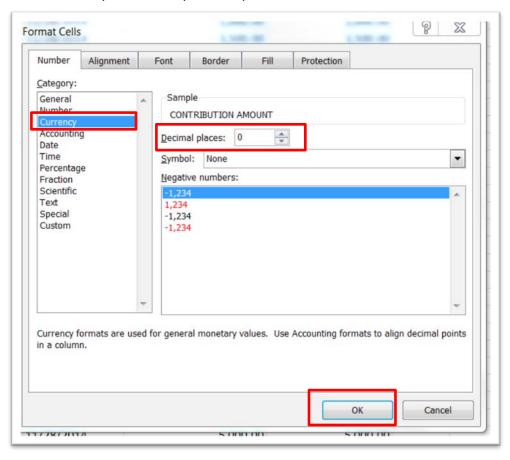
26) Before we go any farther. Adjust the column widths so that we can see all the titles, and then reformat the numbers as "currency" without any decimal places. Highlight the columns.

E	D
AGGREGATE AMOUNT	CONTRIBUTION AMOUNT
1,000.00	1,000.00
2,000.00	1,000.00
3,500.00	3,500.00
600	600
9,975.00	5,025.00
5,025.00	5,025.00
240	20
220	20
180	20
160	20
140	20
120	20
2,000.00	2,000.00
8,200.00	3,200.00
5,000.00	5,000.00
1,750.00	1,750.00
5,000.00	5,000.00
500	500
1,500.00	1,500.00
240	20
220	20
180	20
160	20
140	20
120	20

### 27) Get the short-cut menu.

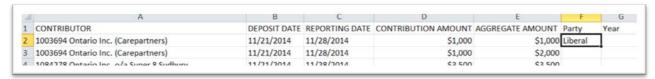


28) Choose "currency" without any decimal places.

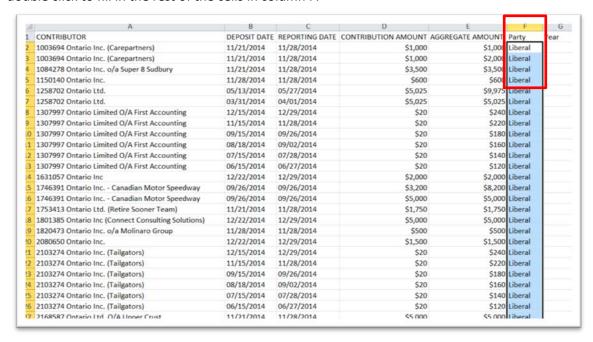


E	D
AGGREGATE AMOUNT	CONTRIBUTION AMOUNT
\$1,000	\$1,000
\$2,000	\$1,000
\$3,500	\$3,500
\$600	\$600
\$9,975	\$5,025
\$5,025	\$5,025
\$240	\$20
\$220	\$20
\$180	\$20
\$160	\$20
\$140	\$20
\$120	\$20
\$2,000	\$2,000
\$8,200	\$3,200
\$5,000	\$5,000
\$1,750	\$1,750
\$5,000	\$5,000
\$500	\$500
\$1,500	\$1,500
\$240	\$20
\$220	\$20
\$180	\$20
\$160	\$20
\$140	\$20
\$120	\$20

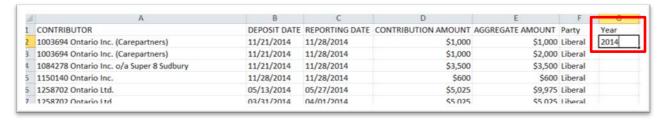
- 29) We'll add to new columns to our Working Copy table: "Party"; and "Year
- 30) Type "Party" into cell F1, "Liberal" in F2.



31) Place your cursor at the bottom right corner of F2 until it turns into a black cross, and then double click to fill in the rest of the cells in column F.



- 32) Scroll to the bottom to make sure "Liberal" populates ALL the column's cells. If not, you'll have to manually complete the process by clicking on the last cell above the blank space, clicking on the bottom right-hand corner and dragging your cursor to the bottom. (**NOTE:** if there are blanks in the adjacent column to the left in this case, column E Excel will stop the process of copying)
- 33) Once you're assured that all the columns in the Party columns are filled, type the 2014 under "Year".



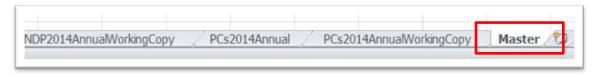
34) Repeat the process to populate column G with 2014.

A	A	В	C	D	E	F	G
1	CONTRIBUTOR	DEPOSIT DATE	REPORTING DATE	CONTRIBUTION AMOUNT	AGGREGATE AMOUNT	Party	Year
2	1003694 Ontario Inc. (Carepartners)	11/21/2014	11/28/2014	\$1,000	\$1,000	Liberal	2014
3	1003694 Ontario Inc. (Carepartners)	11/21/2014	11/28/2014	\$1,000	\$2,000	Liberal	2014
4	1084278 Ontario Inc. o/a Super 8 Sudbury	11/21/2014	11/28/2014	\$3,500	\$3,500	Liberal	2014
5	1150140 Ontario Inc.	11/28/2014	11/28/2014	\$600	\$600	Liberal	2014
6	1258702 Ontario Ltd.	05/13/2014	05/27/2014	\$5,025	\$9,975	Liberal	2014
7	1258702 Ontario Ltd.	03/31/2014	04/01/2014	\$5,025	\$5,025	Liberal	2014
8	1307997 Ontario Limited O/A First Accounting	12/15/2014	12/29/2014	\$20	\$240	Liberal	2014
9	1307997 Ontario Limited O/A First Accounting	11/15/2014	11/28/2014	\$20	\$220	Liberal	2014
0	1307997 Ontario Limited O/A First Accounting	09/15/2014	09/26/2014	\$20	\$180	Liberal	201
1	1307997 Ontario Limited O/A First Accounting	08/18/2014	09/02/2014	\$20	\$160	Liberal	201
2	1307997 Ontario Limited O/A First Accounting	07/15/2014	07/28/2014	\$20	\$140	Liberal	201
13	1307997 Ontario Limited O/A First Accounting	06/15/2014	06/27/2014	\$20	\$120	Liberal	201
4	1631057 Ontario Inc	12/22/2014	12/29/2014	\$2,000	\$2,000	Liberal	201
5	1746391 Ontario Inc Canadian Motor Speedway	09/26/2014	09/26/2014	\$3,200	\$8,200	Liberal	201
6	1746391 Ontario Inc Canadian Motor Speedway	09/26/2014	09/26/2014	\$5,000	\$5,000	Liberal	201
7	1753413 Ontario Ltd. (Retire Sooner Team)	11/21/2014	11/28/2014	\$1,750	\$1,750	Liberal	201
8	1801385 Ontario Inc (Connect Consulting Solutions)	12/22/2014	12/29/2014	\$5,000	\$5,000	Liberal	201
19	1820473 Ontario Inc. o/a Molinaro Group	11/28/2014	11/28/2014	\$500	\$500	Liberal	201
20	2080650 Ontario Inc.	12/22/2014	12/29/2014	\$1,500	\$1,500	Liberal	201
1	2103274 Ontario Inc. (Tailgators)	12/15/2014	12/29/2014	\$20	\$240	Liberal	201
2	2103274 Ontario Inc. (Tailgators)	11/15/2014	11/28/2014	\$20	\$220	Liberal	201
3	2103274 Ontario Inc. (Tailgators)	09/15/2014	09/26/2014	\$20	\$180	Liberal	201
24	2103274 Ontario Inc. (Tailgators)	08/18/2014	09/02/2014	\$20	\$160	Liberal	201
25	2103274 Ontario Inc. (Tailgators)	07/15/2014	07/28/2014	\$20	\$140	Liberal	201
26	2103274 Ontario Inc. (Tailgators)	06/15/2014	06/27/2014	\$20	\$120	Liberal	201
27	2168587 Ontario Ltd. O/A Upper Crust	11/21/2014	11/28/2014	\$5,000	\$5,000	Liberal	201
8	2248774 Ontario Inc. o/a Destination Niagara Falls	12/11/2014	12/12/2014	\$300	\$300	Liberal	201
19	2285045 Ontario Inc. o/a Grand Niagara Golf Club	11/21/2014	11/28/2014	\$5,000	\$5,000	Liberal	201
30	2348505 Ontario Inc. o/a Activar	11/27/2014	11/28/2014	\$600	\$1,800	Liberal	201

- 35) Now we have two worksheets for the Liberals 2014 annual contribution report, with the additional columns in the workingcopy worksheet. Repeat the same process for the PCs and NDP.
- 36) Once you've achieved this step, your Excel workbook should have six worksheets.



37) Create a new worksheet called Master.



## 38) Select, copy and paste the table from "Liberals2014AnnualWorkingCopy" into the "Master" worksheet.

1	A	В	C	D	
1	CONTRIBUTOR	DEPOSIT DATE	REPORTING DATE	CONTRIBUTION AMOUNT	AGGREG
2	1003694 Ontario Inc. (Carepartners)	11/21/2014	11/28/2014	\$1,000	
3	1003694 Ontario Inc. (Carepartners)	11/21/2014	11/28/2014	\$1,000	
4	1084278 Ontario Inc. o/a Super 8 Sudbury	11/21/2014	11/28/2014	\$3,500	
5	1150140 Ontario Inc.	11/28/2014	11/28/2014	\$600	
6	1258702 Ontario Ltd.	05/13/2014	05/27/2014	\$5,025	
7	1258702 Ontario Ltd.	03/31/2014	04/01/2014	\$5,025	
8	1307997 Ontario Limited O/A First Accounting	12/15/2014	12/29/2014	\$20	
9	1307997 Ontario Limited O/A First Accounting	11/15/2014	11/28/2014	\$20	
10	1307997 Ontario Limited O/A First Accounting	09/15/2014	09/26/2014	\$20	
11	1307997 Ontario Limited O/A First Accounting	08/18/2014	09/02/2014	\$20	
12	1307997 Ontario Limited O/A First Accounting	07/15/2014	07/28/2014	\$20	
13	1307997 Ontario Limited O/A First Accounting	06/15/2014	06/27/2014	\$20	
14	1631057 Ontario Inc	12/22/2014	12/29/2014	\$2,000	
15	1746391 Ontario Inc Canadian Motor Speedway	09/26/2014	09/26/2014	\$3,200	
16	1746391 Ontario Inc Canadian Motor Speedway	09/26/2014	09/26/2014	\$5,000	
17	1753413 Ontario Ltd. (Retire Sooner Team)	11/21/2014	11/28/2014	\$1,750	
18	1801385 Ontario Inc (Connect Consulting Solutions)	12/22/2014	12/29/2014	\$5,000	
19	1820473 Ontario Inc. o/a Molinaro Group	11/28/2014	11/28/2014	\$500	
20	2080650 Ontario Inc.	12/22/2014	12/29/2014	\$1,500	
21	2103274 Ontario Inc. (Tailgators)	12/15/2014	12/29/2014	\$20	
22	2103274 Ontario Inc. (Tailgators)	11/15/2014	11/28/2014	\$20	
23	2103274 Ontario Inc. (Tailgators)	09/15/2014	09/26/2014	\$20	
24	2103274 Ontario Inc. (Tailgators)	08/18/2014	09/02/2014	\$20	
25	2103274 Ontario Inc. (Tailgators)	07/15/2014	07/28/2014	\$20	
26	2103274 Ontario Inc. (Tailgators)	06/15/2014	06/27/2014	\$20	
27	2168587 Ontario Ltd. O/A Upper Crust	11/21/2014	11/28/2014	\$5,000	
28	2248774 Ontario Inc. o/a Destination Niagara Falls	12/11/2014	12/12/2014	\$300	
29	2285045 Ontario Inc. o/a Grand Niagara Golf Club	11/21/2014	11/28/2014	\$5,000	
30	2348505 Ontario Inc. o/a Activar	11/27/2014	11/28/2014	\$600	
31	2348505 Ontario Inc. o/a Activar	11/21/2014	11/28/2014	\$1,200	
1	NDP2014Annual NDP2014AnnualWorkingCop	y PCs2014Ann	ual PCs2014Ann	nualWorkingCopy Master	2/

39) Scoll to the bottom of this table ( NOTE: it's easiest to use your shortcut keys ).

1	A	В	C	D	E	F	G
7480	de Haan, Glenna Jean	12/15/2014	12/29/2014	\$100	\$300	Liberal	2014
7481	de Haan, Glenna Jean	11/15/2014	11/28/2014	\$100	\$200	Liberal	2014
7482	de Man, Leny	12/15/2014	12/29/2014	\$25	\$300	Liberal	2014
7483	de Man, Leny	11/15/2014	11/28/2014	\$25	\$275	Liberal	2014
7484	de Man, Leny	09/15/2014	09/26/2014	\$25	\$225	Liberal	2014
7485	de Man, Leny	08/18/2014	09/02/2014	\$25	\$200	Liberal	2014
7486	de Man, Leny	07/15/2014	07/28/2014	\$25	\$175	Liberal	2014
7487	de Man, Leny	06/15/2014	06/27/2014	\$25	\$150	Liberal	2014
7488	de Man, Leny	05/15/2014	05/27/2014	\$25	\$125	Liberal	2014
7489	de Meulles, Leslie Anne	12/15/2014	12/29/2014	\$83	\$1,000	Liberal	2014
7490	de Meulles, Leslie Anne	11/15/2014	11/28/2014	\$83	\$917	Liberal	2014
7491	de Meulles, Leslie Anne	09/15/2014	09/26/2014	\$83	\$750	Liberal	2014
7492	de Meulles, Leslie Anne	08/18/2014	09/02/2014	\$83	\$667	Liberal	2014
7493	de Meulles, Leslie Anne	07/15/2014	07/28/2014	\$83	\$583	Liberal	2014
7494	de Meulles, Leslie Anne	06/15/2014	06/27/2014	\$83	\$500	Liberal	2014
7495	de Meulles, Leslie Anne	05/15/2014	05/27/2014	\$83	\$417	Liberal	2014
7496	de Meulles, Leslie Anne	04/15/2014	04/29/2014	\$83	\$333	Liberal	2014
7497	de Meulles, Leslie Anne	03/18/2014	04/01/2014	\$83	\$250	Liberal	2014
7498	de Meulles, Leslie Anne	02/15/2014	02/28/2014	\$83	\$167	Liberal	2014
7499	de Salaberry, Nicolas	12/15/2014	12/29/2014	\$35	\$420	Liberal	2014
7500	de Salaberry, Nicolas	11/15/2014	11/28/2014	\$35	\$385	Liberal	2014
7501	de Salaberry, Nicolas	09/15/2014	09/26/2014	\$35	\$315	Liberal	2014
7502	de Salaberry, Nicolas	08/18/2014	09/02/2014	\$35	\$280	Liberal	2014
7503	de Salaberry, Nicolas	07/15/2014	07/28/2014	\$35	\$245	Liberal	2014
7504	de Salaberry, Nicolas	06/15/2014	06/27/2014	\$35	\$210	Liberal	2014
7505	de Salaberry, Nicolas	05/15/2014	05/27/2014	\$35	\$175	Liberal	2014
7506	de Salaberry, Nicolas	04/15/2014	04/29/2014	\$35	\$140	Liberal	2014
7507	de Salaberry, Nicolas	03/18/2014	04/01/2014	\$35	\$105	Liberal	2014
7508	khandakar, Samia	10/03/2014	10/17/2014	\$100	\$170	Liberal	2014
7509							
7510							

40) Select the NDP working copy table, minus the column headings which we don't need because they are standard for each table.

## 41) Place your cursor in cell A7509 in the Master worksheet and paste the NDP table.

- 4	A	В	C	D	Ł I	+	G	
7498	de Meulles, Leslie Anne	02/15/2014	02/28/2014	\$83	\$167	Liberal	2014	
7499	de Salaberry, Nicolas	12/15/2014	12/29/2014	\$35	\$420	Liberal	2014	
7500	de Salaberry, Nicolas	11/15/2014	11/28/2014	\$35	\$385	Liberal	2014	
7501	de Salaberry, Nicolas	09/15/2014	09/26/2014	\$35	\$315	Liberal	2014	
7502	de Salaberry, Nicolas	08/18/2014	09/02/2014	\$35	\$280	Liberal	2014	
503	de Salaberry, Nicolas	07/15/2014	07/28/2014	\$35	\$245	Liberal	2014	
504	de Salaberry, Nicolas	06/15/2014	06/27/2014	\$35	\$210	Liberal	2014	
505	de Salaberry, Nicolas	05/15/2014	05/27/2014	\$35	\$175	Liberal	2014	
506	de Salaberry, Nicolas	04/15/2014	04/29/2014	\$35	\$140	Liberal	2014	
507	de Salaberry, Nicolas	03/18/2014	04/01/2014	\$35	\$105	Liberal	2014	
7508	khandakar, Samia	10/03/2014	10/17/2014	\$100	\$170	Liberal	2014	
509	AMAPCEO	02/19/2014	02/27/2014	\$1,431	\$1,431	NDP	2014	
510	Aass, Miriam	12/15/2014	12/17/2014	\$12	\$144	NDP	2014	
511	Aass, Miriam	11/19/2014	11/20/2014	\$12	\$132	NDP	2014	
512	Aass, Miriam	10/15/2014	11/05/2014	\$12	\$108	NDP	2014	
513	Aass, Miriam	09/15/2014	11/05/2014	\$12	\$120	NDP	2014	
514	Aass, Miriam	09/15/2014	09/26/2014	\$12	\$108	NDP	2014	
515	Abbas, Nazar	12/01/2014	12/09/2014	\$26	\$312	NDP	2014	
7516	Abbas, Nazar	11/03/2014	11/05/2014	\$26	\$286	NDP	2014	
7517	Abbas, Nazar	10/01/2014	11/05/2014	\$26	\$260	NDP	2014	
7518	Abbas, Nazar	09/02/2014	09/10/2014	\$26	\$234	NDP	2014	
7519	Abbas, Nazar	08/01/2014	08/13/2014	\$26	\$208	NDP	2014	
7520	Abbas, Nazar	07/02/2014	07/08/2014	\$26	\$182	NDP	2014	
7521	Abbas, Nazar	06/02/2014	06/04/2014	\$26	\$156	NDP	2014	
7522	Abbas, Nazar	05/01/2014	05/07/2014	\$26	\$130	NDP	2014	
523	Abbas, Nazar	04/01/2014	04/10/2014	\$26	\$104	NDP	2014	
524	Abbott, Diane	04/25/2014	05/07/2014	\$375	\$400	NDP	2014	
525	Abbott, Mary	12/01/2014	12/09/2014	\$10	\$120	NDP	2014	
7526	Abbott, Mary	11/03/2014	11/05/2014	\$10	\$110	NDP	2014	
527	Abel, David	12/01/2014	12/09/2014	\$10	\$120	NDP	2014	
528	Abel, David	11/03/2014	11/05/2014	\$10	\$110	NDP	2014	
( )	H NDP2014Annual	NDP2014AnnualM	antentana a	PCs2014Annual PCs2014AnnualWorkingCopy	Master	**************************************	2044	

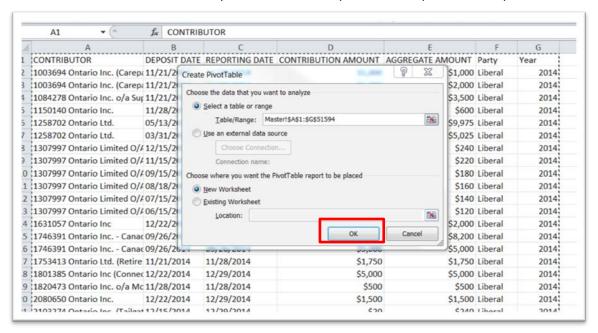
### 42) Repeat the same process for the PCs.

9835 van wagner, vick	09/15/2014	11/05/2014	\$33	JUNI NCEC	2014
9854 van Wagner, Vick	09/15/2014	09/26/2014	\$35	\$315 NDP	2014
9855 van Wagner, Vick	08/15/2014	08/28/2014	\$35	\$280 NDP	2014
9856 van Wagner, Vick	07/15/2014	07/16/2014	\$35	\$245 NDP	2014
9857 van Wagner, Vick	06/17/2014	06/18/2014	\$35	\$210 NDP	2014
9858 Tora Collingwoo	dLimited 12/11/2014	12/23/2014	\$800	\$800 PCs	2014
9859 1039591 Ontario	Ltd. o/a D & 01/10/2014	01/23/2014	\$200	\$200 PCs	2014
9860 1181525 Ontario	Inc 06/11/2014	06/24/2014	\$9,975	\$9,975 PCs	2014
9861 1528564 Ontario	Limited 09/25/2014	10/02/2014	\$150	\$150 PCs	2014
9862 1584592 Ontario	Limited 11/13/2014	11/26/2014	\$200	\$200 PCs	2014
9863 1668345 Ontario	Inc c/a Chil 12/31/2014	01/15/2015	\$200	\$200 PCs	2014
9864 2168587 Ontario	Ltd. o/a Up 10/30/2014	11/11/2014	\$250	\$250 PCs	2014
9865 407 ETR Concessi	on Co Ltd 04/22/2014	05/05/2014	\$3,825	\$3,825 PCs	201
9866 553562 Ontario L	imited o/a \ 11/20/2014	12/02/2014	\$200	\$200 PCs	201
9867 941106 Ontario L	td o/a Sylva 10/02/2014	10/07/2014	\$200	\$400 PCs	201
9868 941106 Ontario L	td o/a Sylva 09/11/2014	09/16/2014	\$200	\$200 PCs	201
9869 942334 Ontario I	nc 11/13/2014	11/26/2014	\$250	\$250 PCs	201
9870 AGF Managemen	t Limited 04/22/2014	05/05/2014	\$3,825	\$3,825 PCs	201
9871 Abbott, David	09/11/2014	09/16/2014	\$200	\$200 PCs	201
9872 Abell, Nicholas	11/13/2014	11/26/2014	\$200	\$200 PCs	201
9873 Adelson, Sheldon	10/15/2014	10/27/2014	\$199	\$199 PCs	201
9874 Aecon Group Inc.	04/11/2014	04/24/2014	\$2,285	\$9,975 PCs	201
9875 Alex McGregor Di	rugs Ltd. 12/24/2014	01/05/2015	\$200	\$200 PCs	201
9876 Allan, James	12/11/2014	12/23/2014	\$75	\$150 PCs	201
9877 Allen, Doris	12/16/2014	12/23/2014	\$100	\$200 PCs	201
9878 Allen, Murray	01/13/2014	01/15/2014	\$150	\$150 PCs	201
9879 Allison, Paul	10/23/2014	10/31/2014	\$200	\$200 PCs	201
9880 Ambrus, Irene	12/15/2014	12/23/2014	\$50	\$250 PCs	201
9881 Ambrus, Irene	11/18/2014	11/26/2014	\$50	\$200 PCs	201
9882 Ambrus, Irene	10/15/2014	10/27/2014	\$50	\$150 PCs	201
9883 Anderson, David	10/15/2014	10/27/2014	\$200	\$200 PCs	201

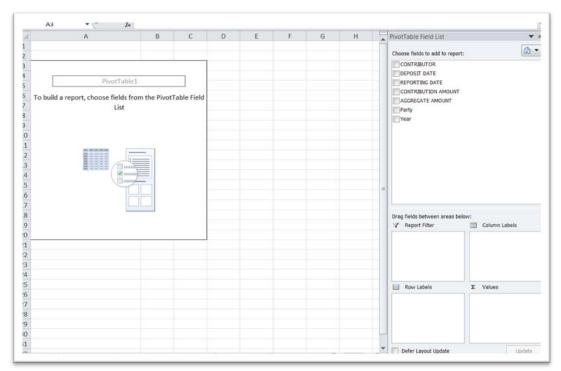
- 43) Your master file should have 51,594 rows or records.
- 44) We can use sorting and filtering to extract information from this master table, such as who gave the most. But it's much better to use a pivot table to answer questions such as who gave the most overall, which party raised the most money and attracted the highest number of donors.
- 45) Scroll to the top of the master table and put your cursor on cell A1.

A	A	В	C	D	E	F	G
1	CONTRIBUTOR	EPOSIT DATE	REPORTING DATE	CONTRIBUTION AMOUNT	AGGREGATE AMOUNT	Party	Year
2	1003694 Ontario Inc. (Carep.	1/21/2014	11/28/2014	\$1,000	\$1,000	Liberal	2014
3	1003694 Ontario Inc. (Carepa	11/21/2014	11/28/2014	\$1,000	\$2,000	Liberal	201
4	1084278 Ontario Inc. o/a Sug	11/21/2014	11/28/2014	\$3,500	\$3,500	Liberal	201
5	1150140 Ontario Inc.	11/28/2014	11/28/2014	\$600	\$600	Liberal	201
5	1258702 Ontario Ltd.	05/13/2014	05/27/2014	\$5,025	\$9,975	Liberal	201
7	1258702 Ontario Ltd.	03/31/2014	04/01/2014	\$5,025	\$5,025	Liberal	201
В	1307997 Ontario Limited O/A	12/15/2014	12/29/2014	\$20	\$240	Liberal	201
9	1307997 Ontario Limited O/A	11/15/2014	11/28/2014	\$20	\$220	Liberal	201
0	1307997 Ontario Limited O/A	09/15/2014	09/26/2014	\$20	\$180	Liberal	201
1	1307997 Ontario Limited O/A	08/18/2014	09/02/2014	\$20	\$160	Liberal	201
2	1307997 Ontario Limited O/A	07/15/2014	07/28/2014	\$20	\$140	Liberal	201
3	1307997 Ontario Limited O/F	06/15/2014	06/27/2014	\$20	\$120	Liberal	201
4	1631057 Ontario Inc	12/22/2014	12/29/2014	\$2,000	\$2,000	Liberal	201
5	1746391 Ontario Inc Canac	09/26/2014	09/26/2014	\$3,200	\$8,200	Liberal	201
6	1746391 Ontario Inc Canac	09/26/2014	09/26/2014	\$5,000	\$5,000	Liberal	201
7	1753413 Ontario Ltd. (Retire	11/21/2014	11/28/2014	\$1,750	\$1,750	Liberal	201
8	1801385 Ontario Inc (Connec	12/22/2014	12/29/2014	\$5,000	\$5,000	Liberal	201
9	1820473 Ontario Inc. o/a Mc	11/28/2014	11/28/2014	\$500	\$500	Liberal	201
0.9	2080650 Ontario Inc.	12/22/2014	12/29/2014	\$1,500	\$1,500	Liberal	201
11	2103274 Ontario Inc. (Tailgat	12/15/2014	12/20/2014	\$20	\$240	Liberal	201

46) Select the Insert, or Data section on your menu at the top to find the "pivot table" option.

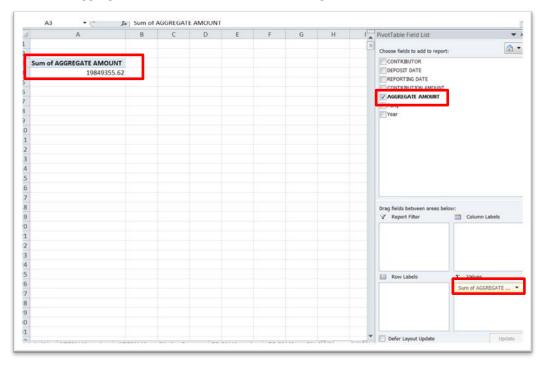


47) Notice the range. Excel has automatically chosen the range for your data (**NOTE:** the dollar sign "anchors" the cell ranges. Removing them wouldn't affect the result. ) The dialog box gives you the option of placing the pivot table in a new worksheet, or the existing one. Usually, we'll want a new worksheet. So select the OK tab.



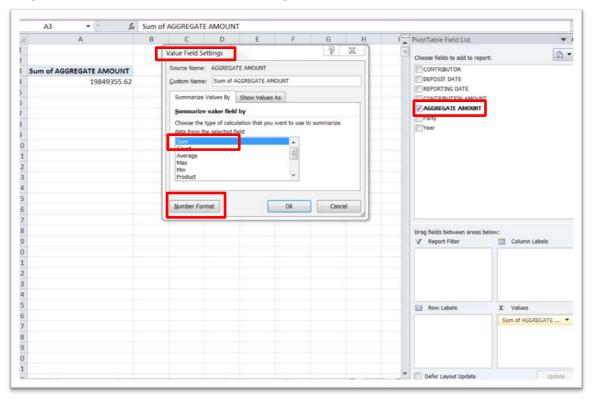
48) The upper window on the right side contains the names of your columns. The lower side contains the areas where you'll do the grouping and calculations. On the left is the area where you'll see the table.

49) Drag the "Aggregate Amount" and into the "Values" area. (**NOTE:** clicking on the check box to the left of "Aggregate Amount" will do the same thing.)

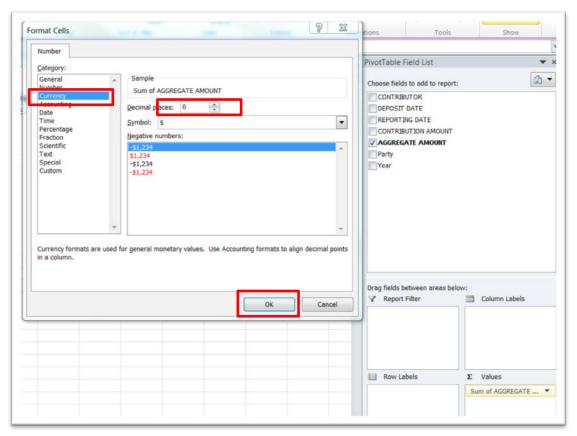


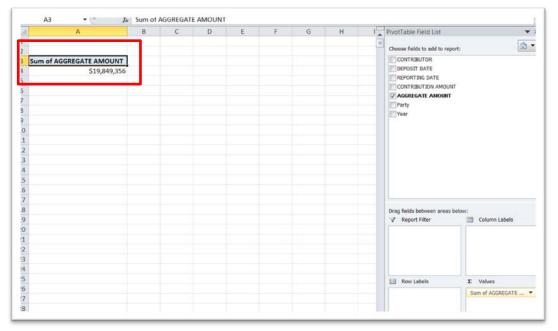
50) The pivot table has SUMMED the aggregate contribution, which is what we want it to do at this point. We just have to reformat the number as currency without decimal points to make it easier to read.

51) Click on the downward arrow to the right of the "Values" area in the lower window to obtain a dialog box, and then choose "Value Field Settings".



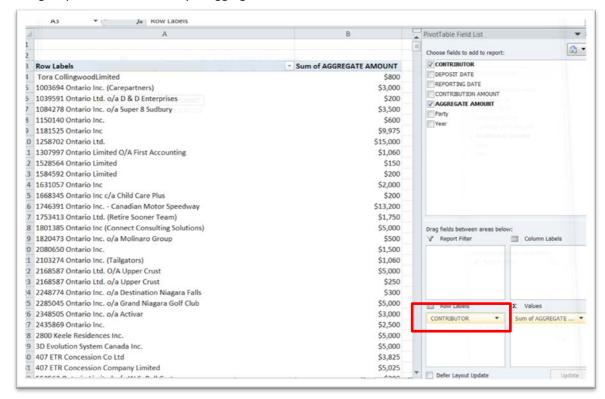
52) Select the "Number Format" tab.



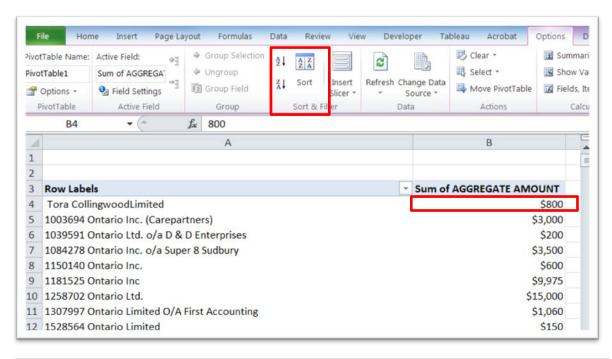


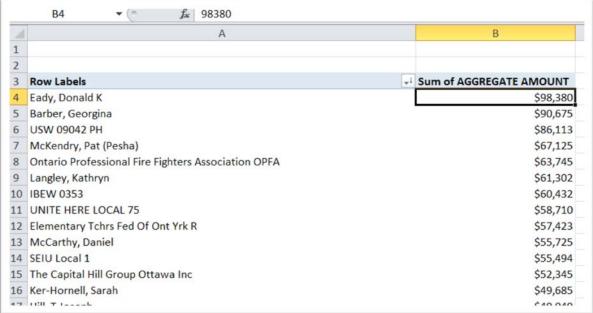
53) In 2014, donors contributed slightly more than \$19.8 million to three main political parties in Ontario. This could be a headline. Not a very interesting one, though. But a headline, nonetheless.

54) Let's group the contributors by dragging that column into the "Row Labels" section.



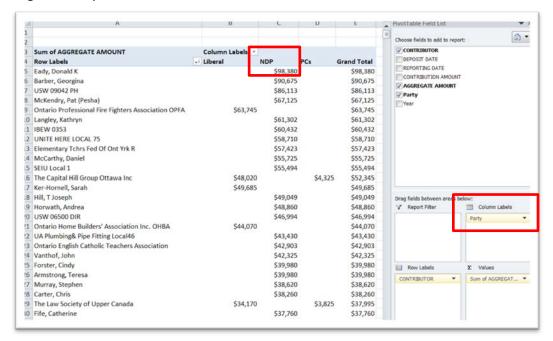
55) Sort the values in column B in descending order by selecting the first cell under the title, B4, and selecting the sort function to arrange the values in descending order (Z to A).





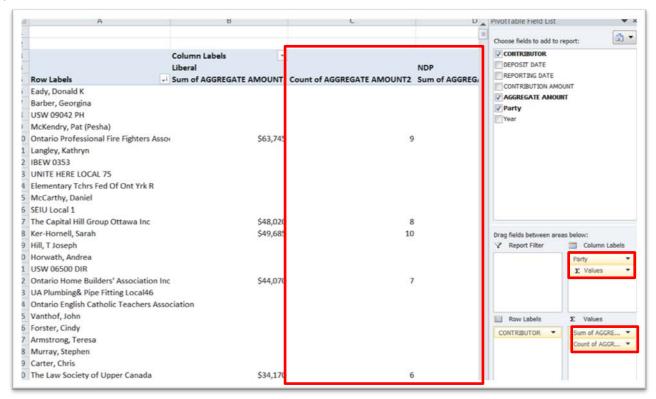
56) So Donald K. Eady was the most generous donor in 2014, contributing \$98,380. Again, not a bad headline, or lead. But wouldn't it be helpful to know which party was the recipient of his largess?

57) Drag the "Party" column into the Column area.

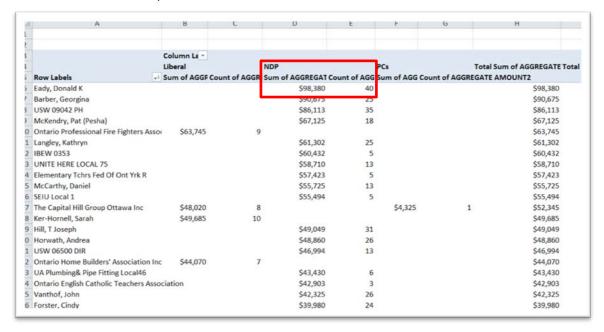


- 58) Ah, he donated to the NDP, making the party the recipient of the largest donation in 2014, an even better headline.
- 59) Our pivot table has provided lots of information that would have been too difficult to discern otherwise. We can filter the dataset to see who donated to whom, getting us a little closer to the trend uncovered by The Globe and Mail.
- 60) Let's do one more thing. We can also determine the number of times each person donated by COUNTING the cells containing the aggregate amount. In other words, getting the pivot table to simply count each time a person donated.

61) To do this, drag the "Aggregate Amount" into the "Values" section, which also automatically place it in the "Column Labels" section.



62) The extra columns have expanded the pivot table, making it difficult to see the results. So close the "PivotTable Field List" box to the right, and reduce the width of the columns, making it easier to see most of the pivot table at once.



63) Donald K. Eady made 40 donations! And even better lead or headline.

64) In part two of this tutorial, we'll learn how to repeat the process for the year 2013, which will allow us to make more comparisons, uncover more trends, and inch us closer to the figure The Globe and Mail uncovered.