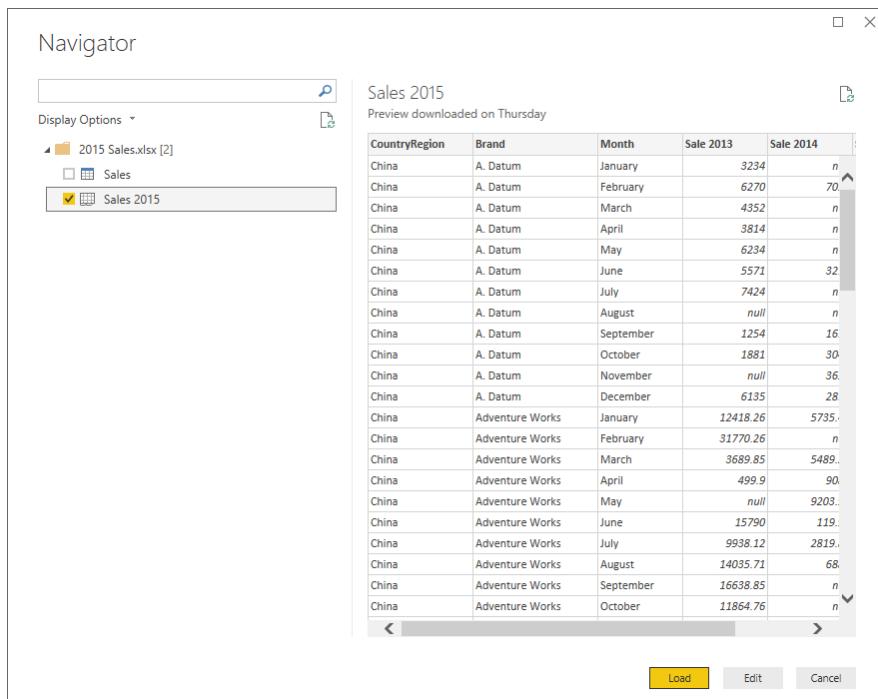


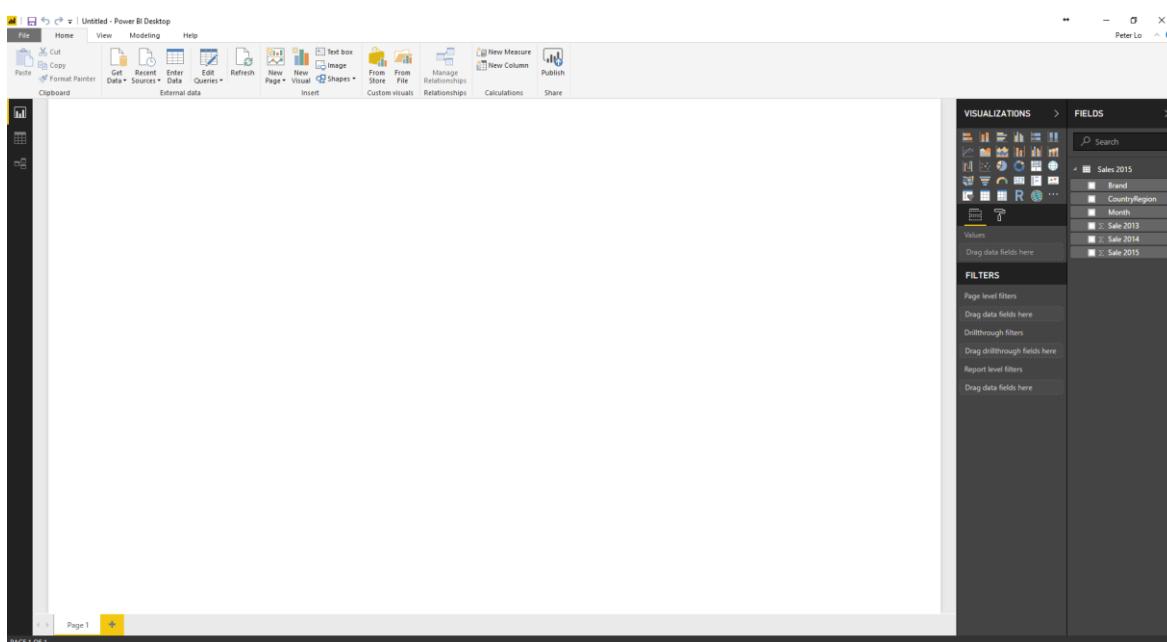
1. Creating Simple Report from Excel

1.1 Connect to Excel workbook

1. Select **Get Data → Excel** in the **Home** ribbon tab,
2. In the **Open File** dialog box, select the *2015 Sales.xlsx* file. Then in the **Navigator** pane, select the **Products** table and then select **[Load]**.



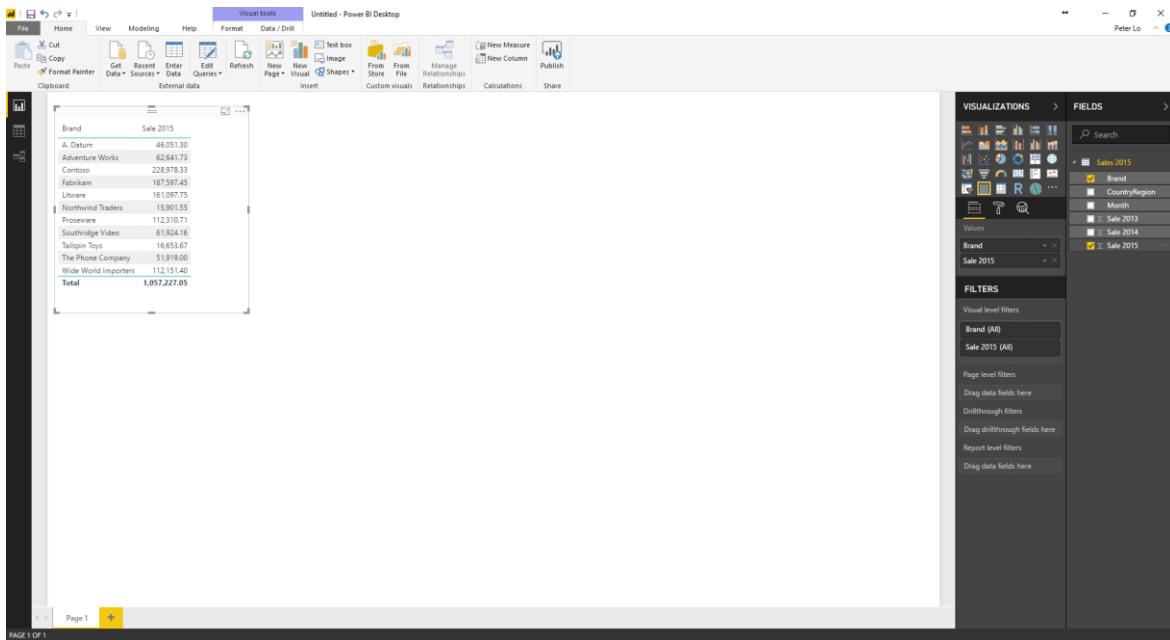
3. The file should be loaded successfully to the Power BI, and you are able to create your report.



1.2 Creating Report

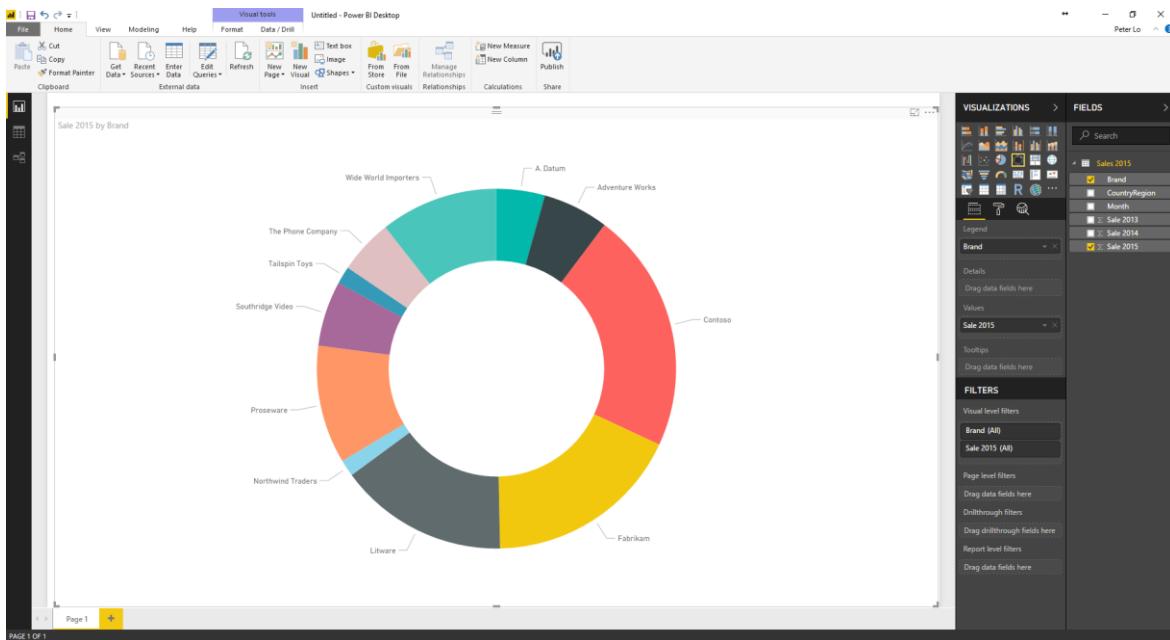
1.2.1 Create Table

- Select **Brand** and **Sales 2015** in the **Field** panel, a summary table will be created in the report area.



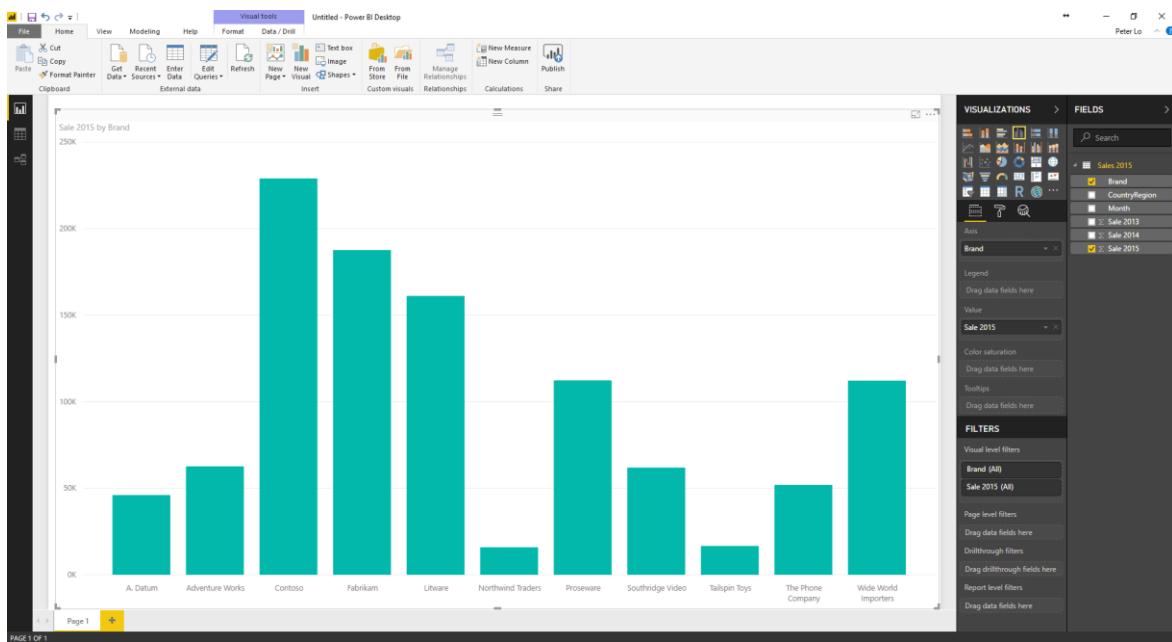
1.2.2 Create Donut Report

- Select **Donut Report** in **Visualization** panel to change the report type.

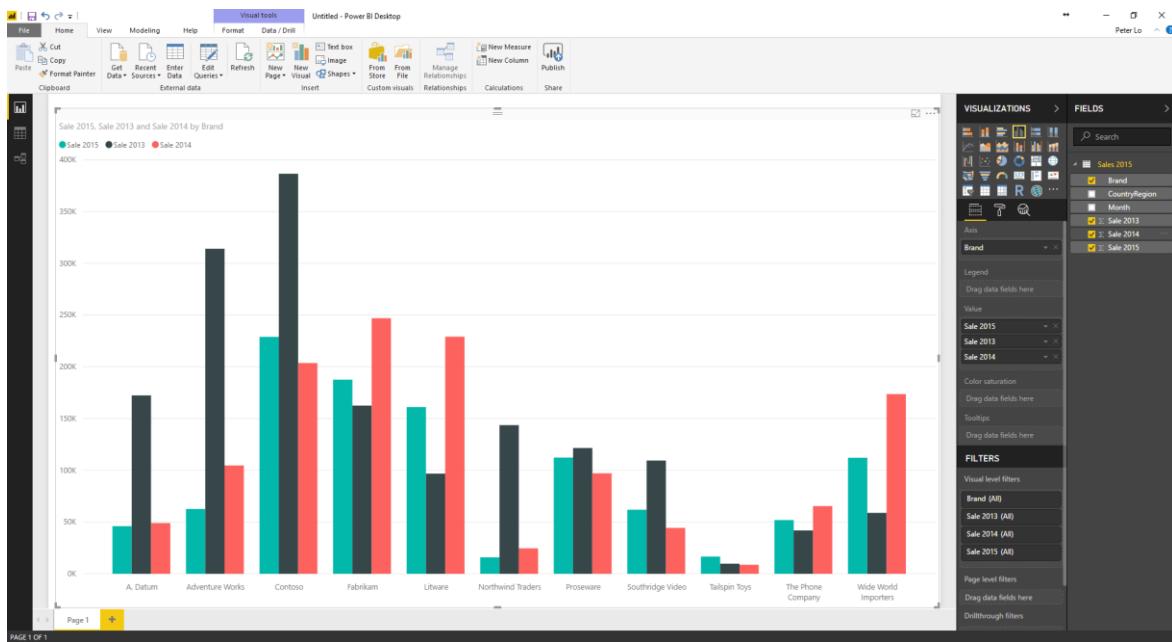


1.2.3 Create Cluster Column Chart

- Select Cluster Column Chart in Visualization panel to change the report type.

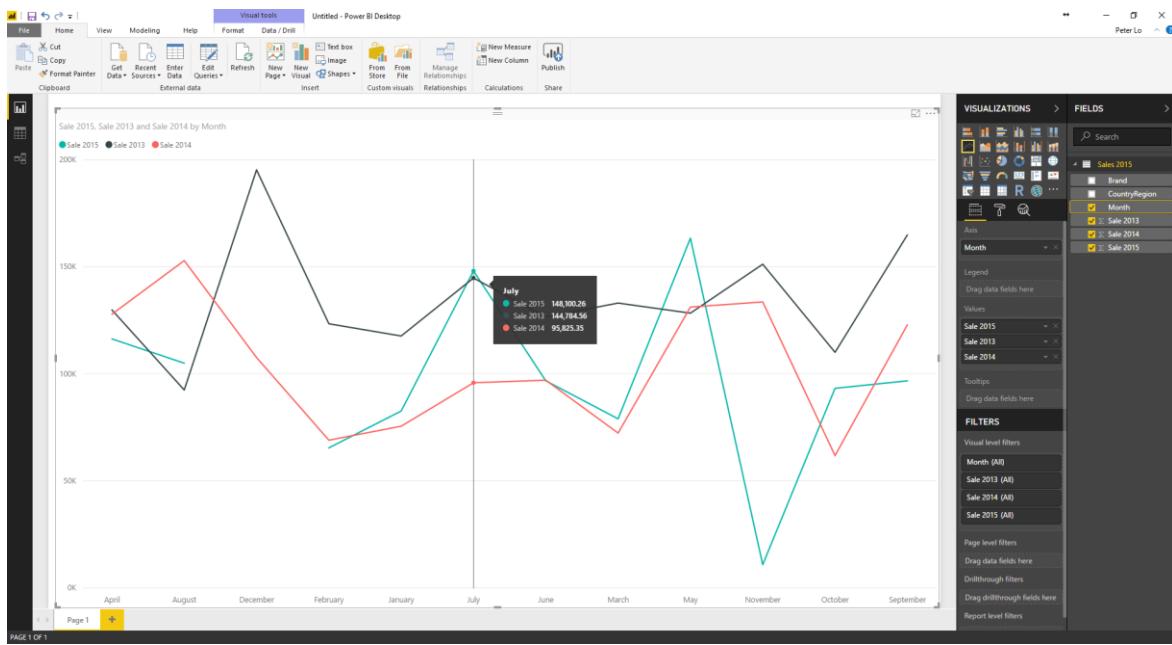


- Select Sales 2013 and Sales 2014 to create the comparison chart.



1.2.4 Create Line Chart

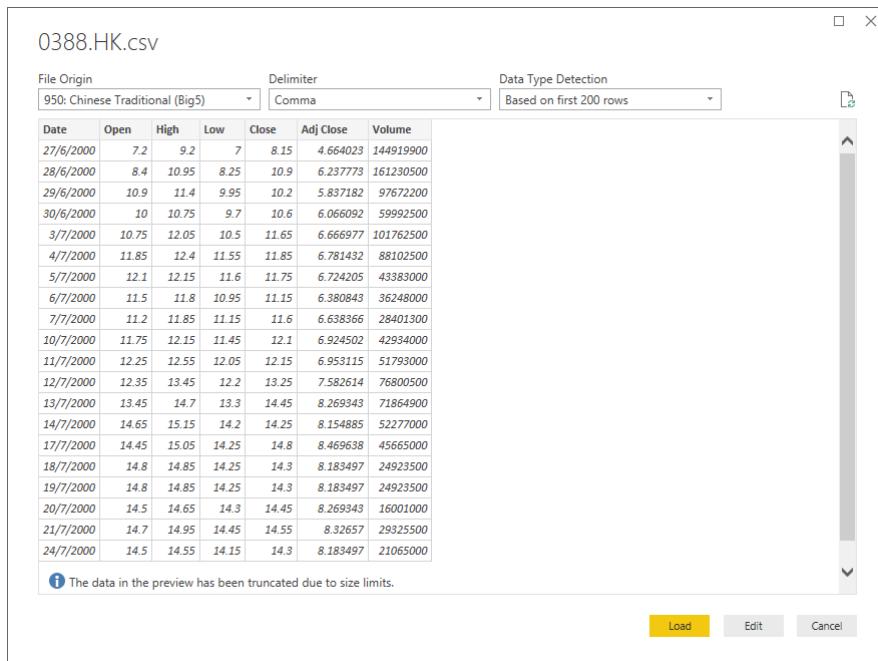
1. In order to compare the month sales per year, select *Month* and unselect *Brand*.
2. Change the visualization to **Line Chart**.



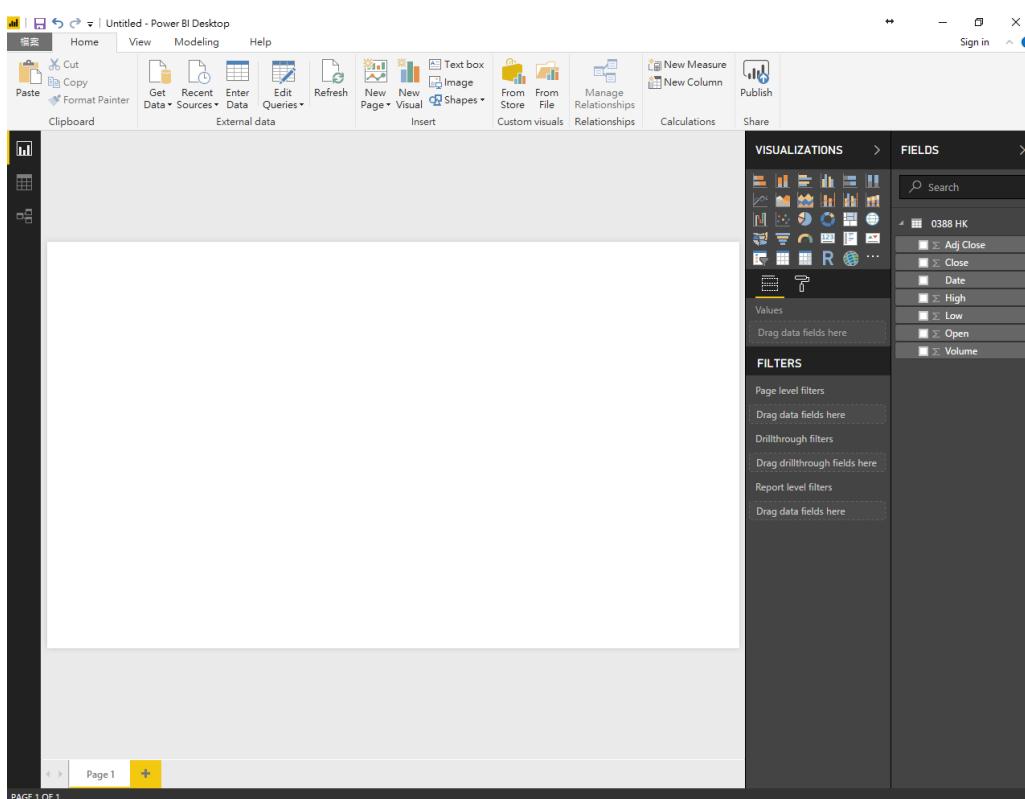
2. Connecting to CSV File

2.1 Read Text/CSV File

4. Select **Get Data → Text/CSV** in the **Home** ribbon tab,
5. In the **Open File** dialog box, select the *0388.HK.csv* file. Then in the **Navigator** pane, select the **[Load]** button.



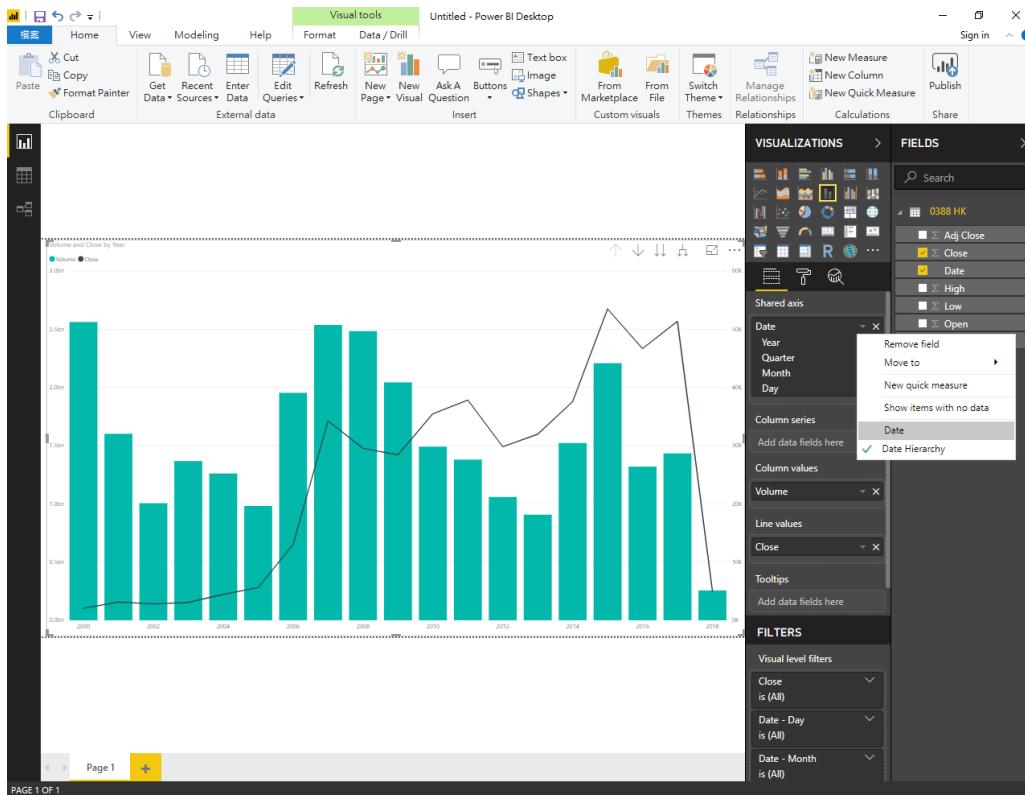
6. The file should be loaded successfully to the Power BI, and you are able to create your report.



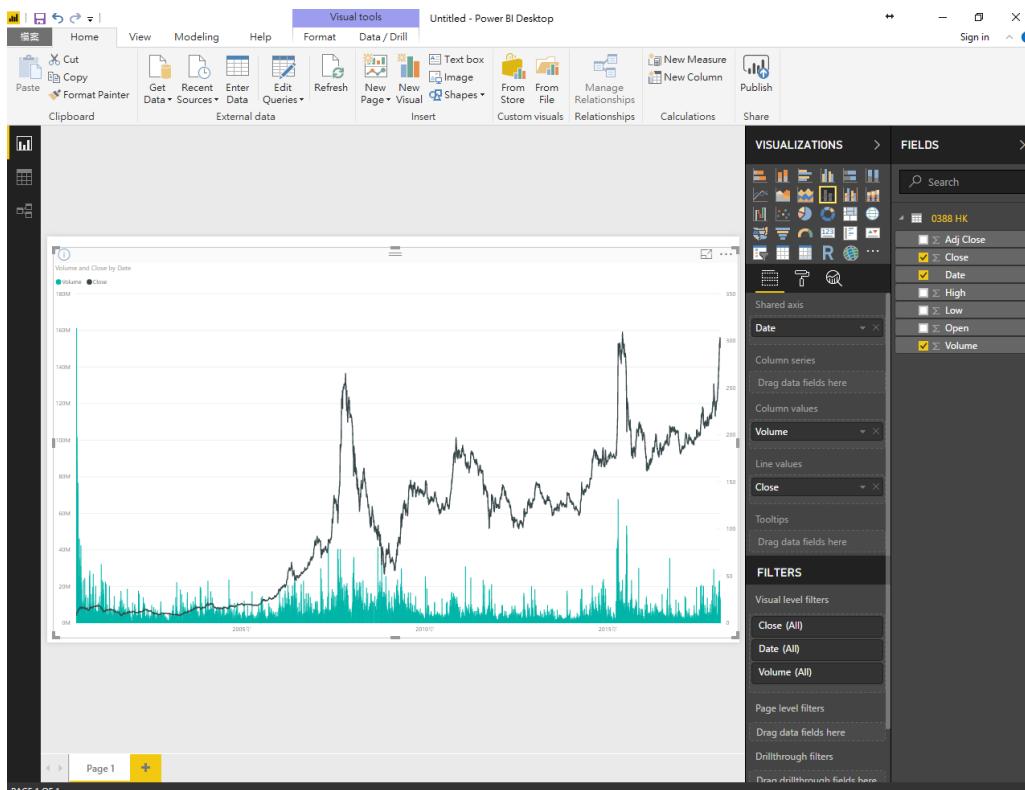
2.2 Creating Report

2.2.1 Create Line Chart

1. Select Line and Stacked Column Chart. Put *Date* in **Shared Axis**, *Volume* in **Column values**, and *Close* in **Line values**.



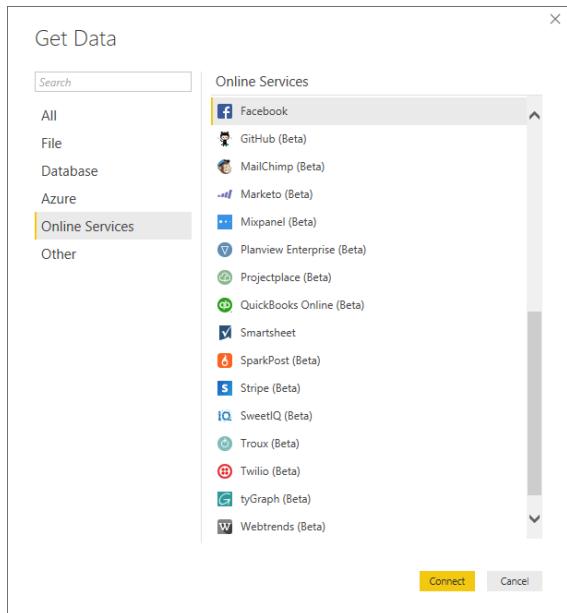
2. Select Date → Date to expand the chart



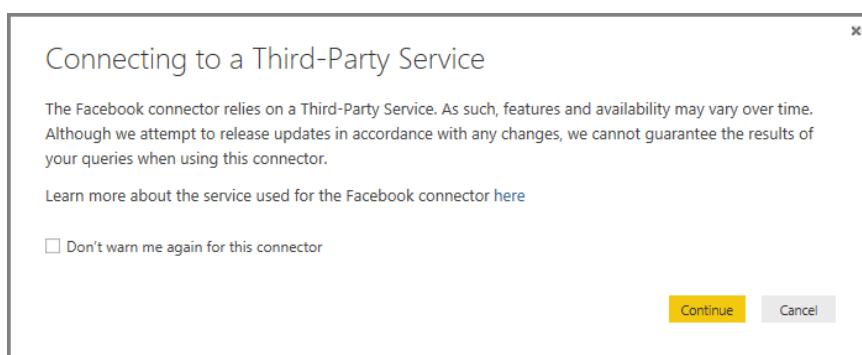
3. Facebook Analytics

3.1 Connect to Facebook

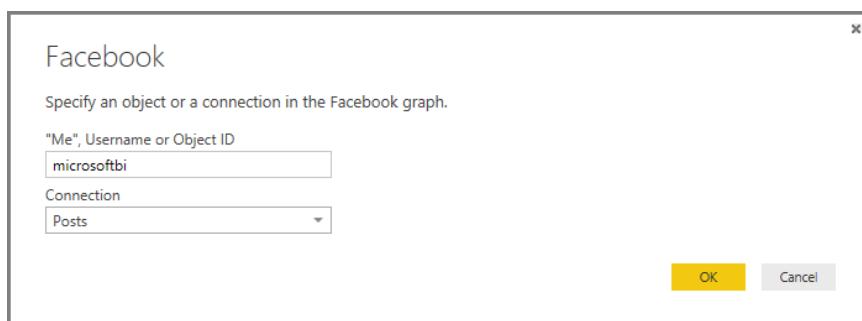
1. Select **Get Data** in the **Home** ribbon tab.
2. When the **Get Data** dialog appears, select **Facebook** from the **Online Services** group



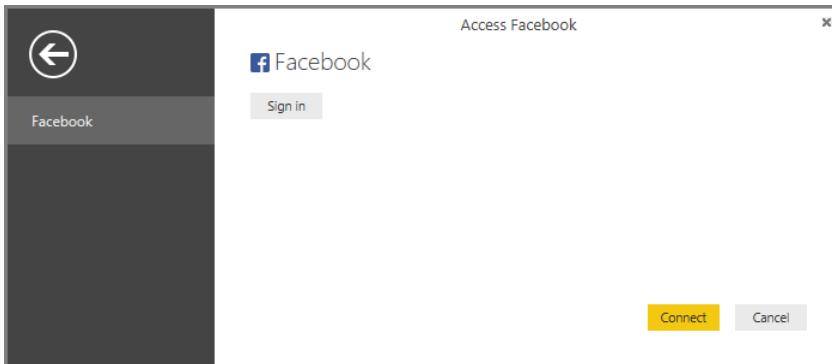
3. When you select [**Connect**], a dialog appears to alert you to the risks of using a third-party service.



4. When you select [**Continue**], the Facebook dialog box appears where you can paste the page name (*microsoftbi*) into the **Username** text box. Select **Posts** from the **Connection** drop down and press [**OK**] button.



5. When prompted for credentials, sign in using your Facebook account and allow Power BI access through your account.



6. After establishing a connection to the page, you will see the data being loaded in the model.

message	created_time	id	object_link	story
Your data deserves to be presented with the latest interactive...	2018-01-19T16:00:02+0000	177650892253298_1813680318650339	Record	
Donuts and funnels and pies, oh my! Who knew there were so many...	2018-01-18T17:12:00+0000	177650892253298_1812644622087242	Record	
Power BI makes actionable, meaningful intelligence accessible. Start...	2018-01-17T20:00:01+0000	177650892253298_1811675915517446	Record	
There's still time to submit your best Power BI data story...	2018-01-17T19:30:00+0000	177650892253298_1811653882166316	Record	
Go inside the mind of data master Nate Silver, Editor-in-Chief of ESPN...	2018-01-16T18:15:00+0000	177650892253298_1810493888968982	Record	
You already analyze data like a business intelligence pro...	2018-01-12T20:45:00+0000	177650892253298_1806544866030551	Record	
Hear experts discuss the top 5 reasons why Excel and Power BI are even...	2018-01-11T20:00:00+0000	177650892253298_1805583302793374	Record	
We want to see your best Power BI data visualization...	2018-01-10T19:15:00+0000	177650892253298_1804537562897948	Record	
You know that Power BI is the most powerful suite of business...	2018-01-10T01:00:01+0000	177650892253298_1803752522976452	Record	
Explore the role of Power BI in data governance and learn how to...	2018-01-08T19:45:00+0000	177650892253298_1802409603110744	Record	
We are pleased to introduce the REST API for Azure Analysis Services...	2018-01-05T22:00:01+0000	177650892253298_1798990476785996	Record	
You already analyze data like a business intelligence pro...	2018-01-05T18:45:00+0000	177650892253298_1798825703469134	Record	
Learn about new features to #AzureAnalysisServices...	2018-01-04T20:00:01+0000	177650892253298_1797745083577196	Record	
Happy New Year! We want to see your best Power BI data...	2018-01-03T21:15:00+0000	177650892253298_179586854693050	Record	
Quickly learn how to visualize your #data with Power BI's...	2018-01-03T20:00:01+0000	177650892253298_1795620793596925	Record	
Quickly learn how to visualize your data with Power BI's...	2018-01-03T19:00:00+0000	177650892253298_1796468507038187	Record	
Hear experts discuss the top 5 reasons why Excel and Power BI are even...	2018-01-03T18:30:01+0000	177650892253298_1796443240374047	Record	
Learn to extract useful knowledge from data to solve business problems...	2018-01-03T17:00:01+0000	177650892253298_1793635723716033	Record	
null	2018-01-02T22:19:33:0000	177650892253298_1795505807134457	Record	Power BI shared data
Go inside the mind of data master Nate Silver, Editor-in-Chief of ESPN...	2017-12-21T18:15:00+0000	177650892253298_1782368798448158	Record	Record

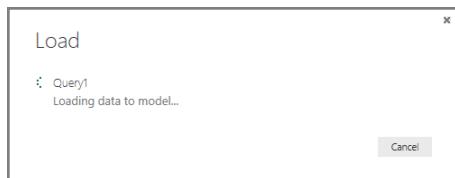
The data in the preview has been truncated due to size limits.

3.2 Change the Data Type of Column

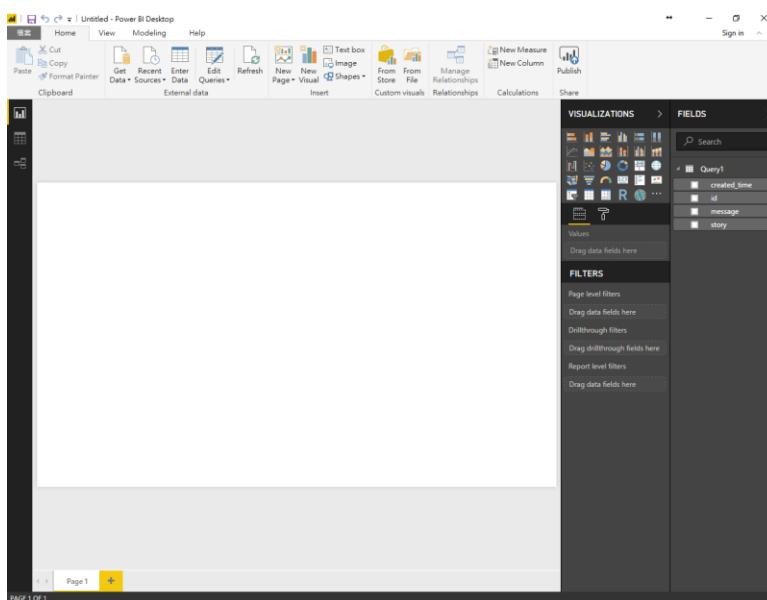
- Select the *created_time* column in Query Editor.
- Right-click on column header and select **Change Type → Date/Time**.

3.3 Confirm the Query

- From the **Home** ribbon of **Query Editor**, select [**Close & Apply**] to load the model that we created in **Query Editor** into Power BI Desktop. A dialog will display the progress of loading the data into the Power BI Desktop data model.

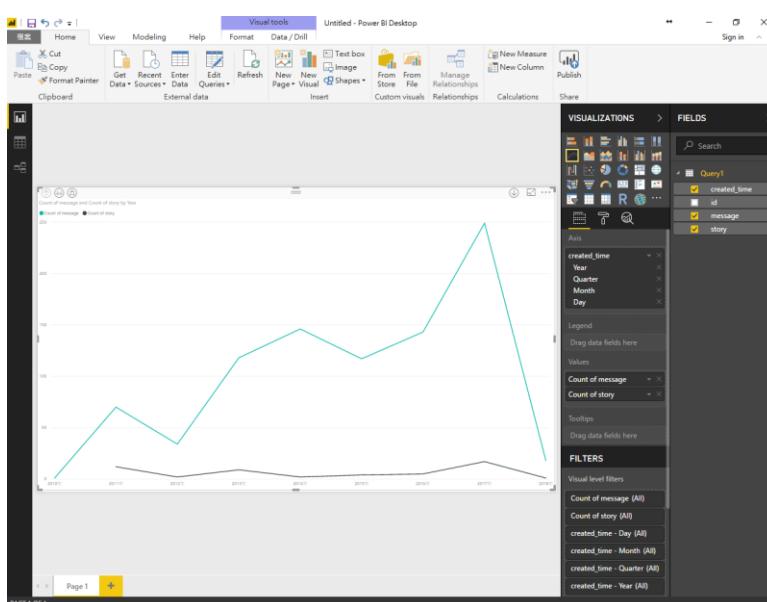


- Once loaded, you'll be taken to the Report view where the columns from the table are listed in the Field list on the right.



3.4 Create Visualizations using the Report View

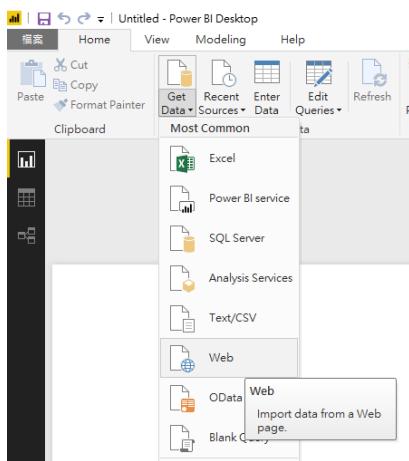
- Drag the *created_time* into Axis, and then drag the *message* and *story* into value. Since we want to analysis the number of message and story again the time, the count function will be used.



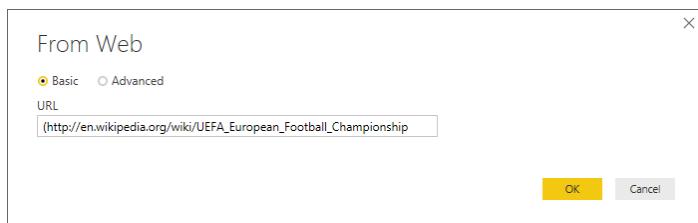
4. Connecting to Web Data Source

4.1 Add a Wikipedia Page Data Source

1. Select **Get Data → Web** in the **Home** ribbon tab,



2. Type the address (http://en.wikipedia.org/wiki/UEFA_European_Football_Championship) in the URL to import a Tournament Summary table from the UEFA European Football Championship Wikipedia, and click [OK] button to continue



3. After establishing a connection to the web page, you see a list of tables available on this Wikipedia page in the Navigator dialog. You can single-click on each of these tables to preview the data. In the **Navigator** left-pane, select the *Results[edit]* table and select [Edit]

Year	Host	Final Winner	Final Score
1960 Details	France	null	Winner
1964 Details	Spain	null	Spain
1968 Details	Italy	null	Italy
1972 Details	Belgium	null	West Germany
1976 Details	Yugoslavia	null	Czechoslovakia
1980 Details	Italy	null	West Germany
1984 Details	France	null	France
1988 Details	West Germany	null	Netherlands
1992 Details	Sweden	null	Denmark
1996 Details	England	null	Germany
2000 Details	Belgium & Netherlands	null	France
2004 Details	Portugal	null	Greece
2008 Details	Austria & Switzerland	null	Spain
2012 Details	Poland & Ukraine	null	Spain
2016 Details	France	null	Portugal
2020 Details	Pan-European	null	null

4. This will allow us to reshape this table before loading it to the Report, since the data is not in the shape that we need for our analysis

The screenshot shows the Power Query Editor interface with a table titled 'Results[edit]'. The table has 12 columns and 20 rows. The columns are labeled: A_C Year, A_B Host, A_C Final Winner, A_C Final Score, A_B Final Runner-up, A_C 2, A_C 3, A_C 4, A_C 5, A_C 6, A_C 7, and A_C 8. The data includes years from 1960 to 2000, host countries like France, Spain, Italy, Belgium, Yugoslavia, Czechoslovakia, West Germany, England, and a Pan-European host, and various final results and runner-ups. The 'APPLIED STEPS' pane on the right shows a single step named 'Changed type'.

4.2 Data Sharpening and Cleansing

4.2.1 Remove Other Columns to only Display columns of interest

1. Select Use First Row as Headers.

The screenshot shows the Power Query Editor interface with a table titled 'Results[edit]'. The table has 21 columns and 20 rows. The columns are labeled: A_C Column1, A_C Column2, A_C Column3, A_C Column4, A_C Column5, A_C Column6, and A_C Column7. The data is identical to the previous screenshot. A context menu is open over the first row, with 'Use First Row as Headers' highlighted. The 'APPLIED STEPS' pane on the right shows a single step named 'Changed Type'.

2. In the query preview grid, select the *Year* and *Final Winners* columns.

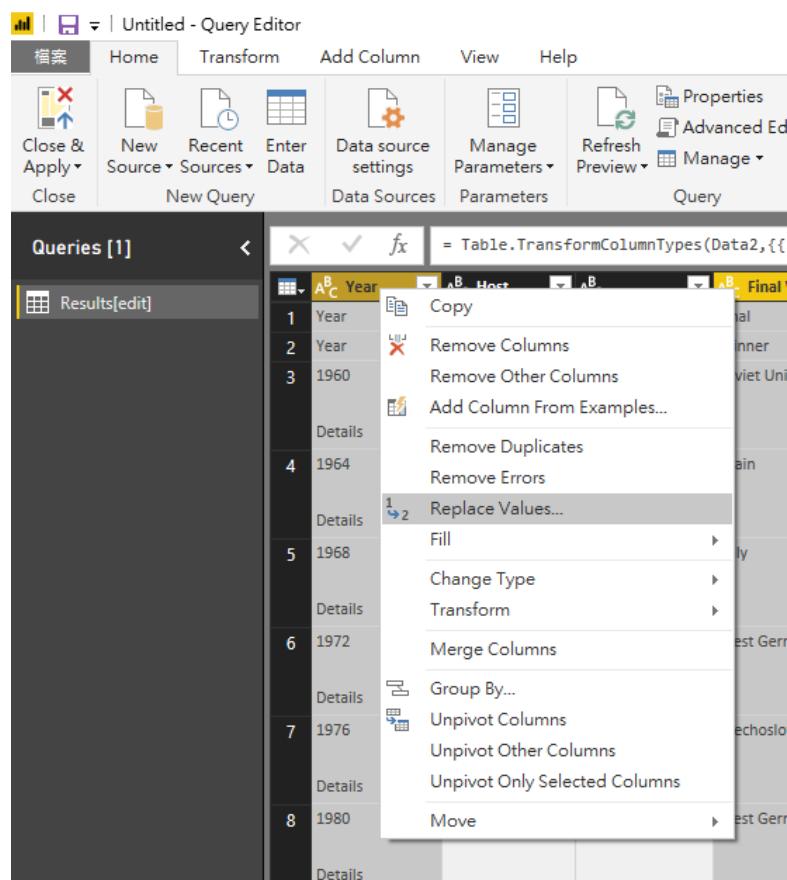
The screenshot shows the Power BI Query Editor interface. The 'Home' tab is selected. A table preview is displayed with columns labeled 'Year', 'Host', 'Final Winner', 'Final Score', 'Final Runner-up', and '2'. The 'Year' and 'Final Winner' columns are highlighted with blue selection bars. To the right, the 'QUERY SETTINGS' pane is open, showing the query name 'Results[edit]' and the applied step 'Changed Type'. The preview area at the bottom indicates 12 columns and 20 rows.

3. Right-click to select Remove Other Columns to remove the unselected columns.

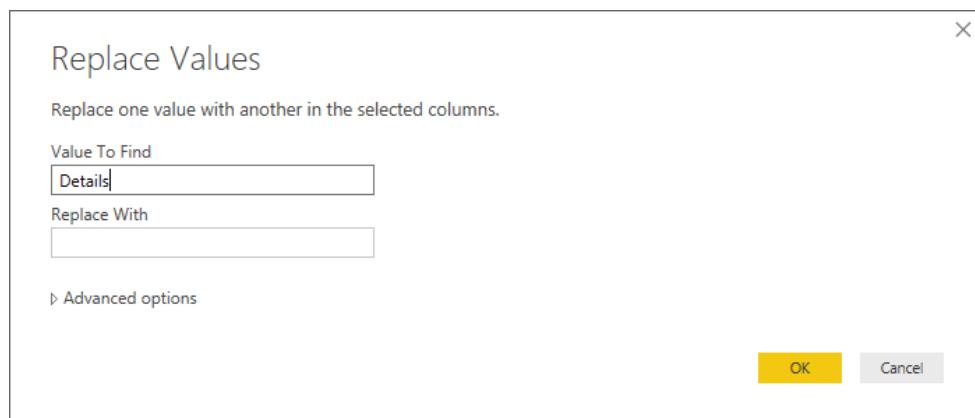
The screenshot shows the Power BI Query Editor with a context menu open over the 'Year' column header. The menu includes options such as 'Remove Columns', 'Remove Other Columns' (which is highlighted with a pink arrow), 'Remove Duplicates', 'Remove Errors', 'Replace Values...', 'Fill', 'Change Type', 'Transform', and 'Merge Columns'. The main query preview shows the 'Year' column and other columns like 'Host', 'Final Winner', etc.

4.2.2 Clean up Values in Selected Column

- Select the *Year* column, and right click to select **Replace Value**.



- In the **Replace Values** dialog box, type *Details* in the **Value to Find** text box and leave the **Replace With** text box empty. Click **[OK]** button to start.



4.2.3 Filter Values in Column

1. Click the filter drop down arrow on the *Year* column.
2. In the Filter drop-down, clear the *Year* option and click [OK].

The screenshot shows the Power BI Query Editor interface. A modal dialog box is open over the main area, titled 'Results[edit] - Query Editor'. The dialog contains a table with two columns and 20 rows, representing the result of the 'ReplaceValue' step. The first column is labeled 'Year' and the second is 'Final Winner'. The 'Final Winner' column contains values like 'Final', 'Winner', and country names. On the left side of the dialog, there's a 'Text Filters' section with a search bar and a list of checked years from 1972 to 2020. A pink arrow points to the filter dropdown arrow on the 'Year' column header. Another pink arrow points to the 'Year' checkbox in the filter list. The 'Query Settings' pane on the right shows the step name 'Results[edit]' and the applied step 'Replaced Value'. The bottom right corner of the dialog says 'PREVIEW DOWNLOADED AT 10:56 AM'.

4.2.4 Rename Column

1. Select the *Final Winner* column in the **Query Editor**, and then right click to select **Rename**.
2. Change the name of this column to “Country”.

The screenshot shows the Power BI Query Editor interface. A modal dialog box is open, titled 'Untitled - Query Editor'. The dialog displays a table with columns 'Year' and 'Final Winner'. The 'Final Winner' column contains values such as 'Final', 'Winner', and country names. A context menu is open over the 'Final Winner' column, with the 'Rename...' option highlighted. Other options in the menu include Copy, Remove, Remove Other Columns, Duplicate Column, Add Column From Examples..., Remove Duplicates, Remove Errors, Change Type, Transform, Replace Values..., Replace Errors..., Split Column, Group By..., Fill, Unpivot Columns, Unpivot Other Columns, Unpivot Only Selected Columns, Move, Drill Down, and Add as New Query. The bottom right corner of the dialog says 'PREVIEW DOWNLOADED AT 10:56 AM'.

4.2.5 Filter out null Values in Column

1. Right-click on one of the cells in the *Country* column that contain a null value.
2. Select **Text Filters → Does not Equal** in the context menu. This creates a new filter step to remove rows with *null* values in the Country column.

The screenshot shows the Power BI Query Editor interface. On the left, there's a 'Queries [1]' pane with a single query named 'Results[edit]'. The main area displays a table with two columns: 'Year' and 'Country'. The 'Year' column has values from 1984 to 2020. The 'Country' column has values for France, Netherlands, Denmark, Germany, France, Greece, Spain, Spain, Portugal, and null. A context menu is open over the last 'null' entry in the 'Country' column. The menu includes options like 'Copy', 'Text Filters', and a submenu with 'Equals' and 'Does Not Equal'. To the right of the table is the 'QUERY SETTINGS' pane, which shows the query name 'Results[edit]' and a list of applied steps: Source, Navigation, Changed Type, Replaced Value, Removed Other Columns, Renamed Columns, and Filtered Rows. The 'Filtered Rows' step is highlighted.

4.2.6 Name a query

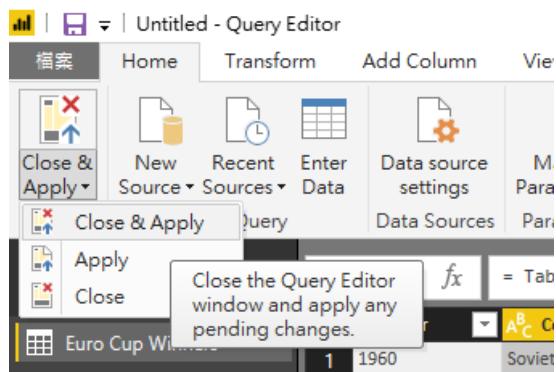
1. In the **Query Settings** pane, in the **Name** text box, enter **Euro Cup Winners**.

The screenshot shows the 'Query Settings' pane. Under the 'PROPERTIES' section, the 'Name' field is highlighted with a yellow box and a pink arrow pointing to it. The value 'Euro Cup Winners' is typed into the field. Below this, there's a link 'All Properties'. Under the 'APPLIED STEPS' section, a list of steps is shown, each with a gear icon: Source, Navigation, Changed Type, Removed Other Columns, Replaced Value, Filtered Rows, and Renamed Columns. The 'Filtered Rows' step is highlighted with a yellow box.

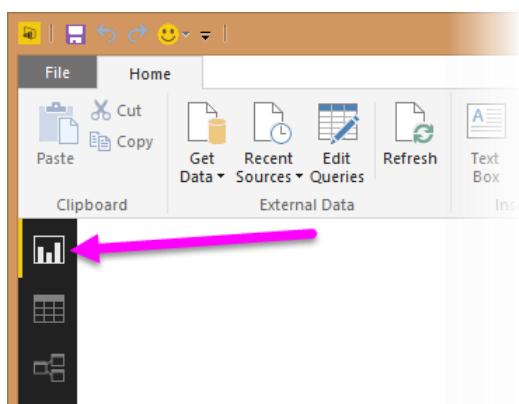
4.3 Create Visualizations using the Report View

4.3.1 Load the Query to report

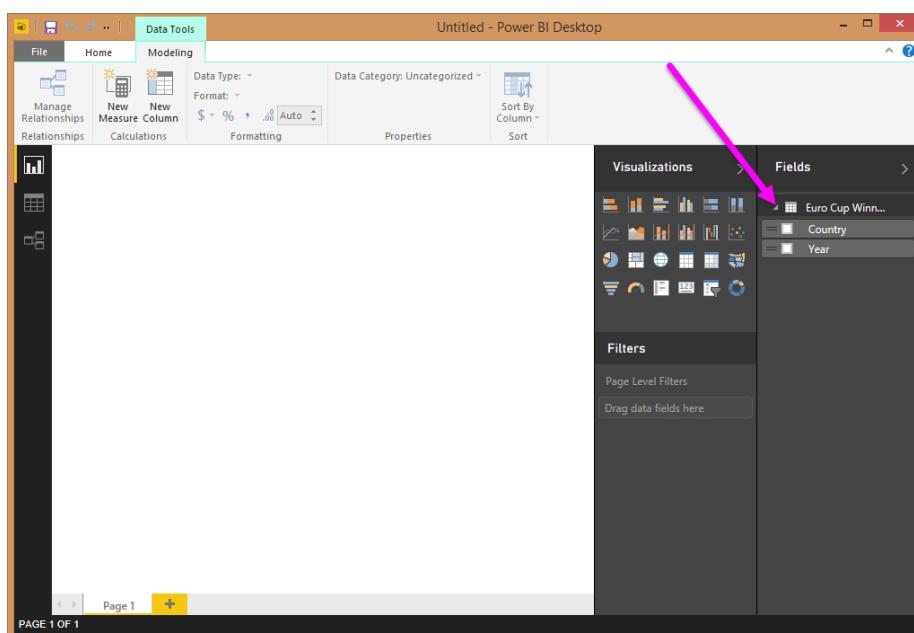
1. To load the query results to Power BI Desktop and create a report, we select **Close & Apply** from the **Home** ribbon.



This will trigger evaluation of the query and load of the table output to the Report. In Power BI Desktop, select the **Report** icon to see Power BI Desktop in **Report** view.

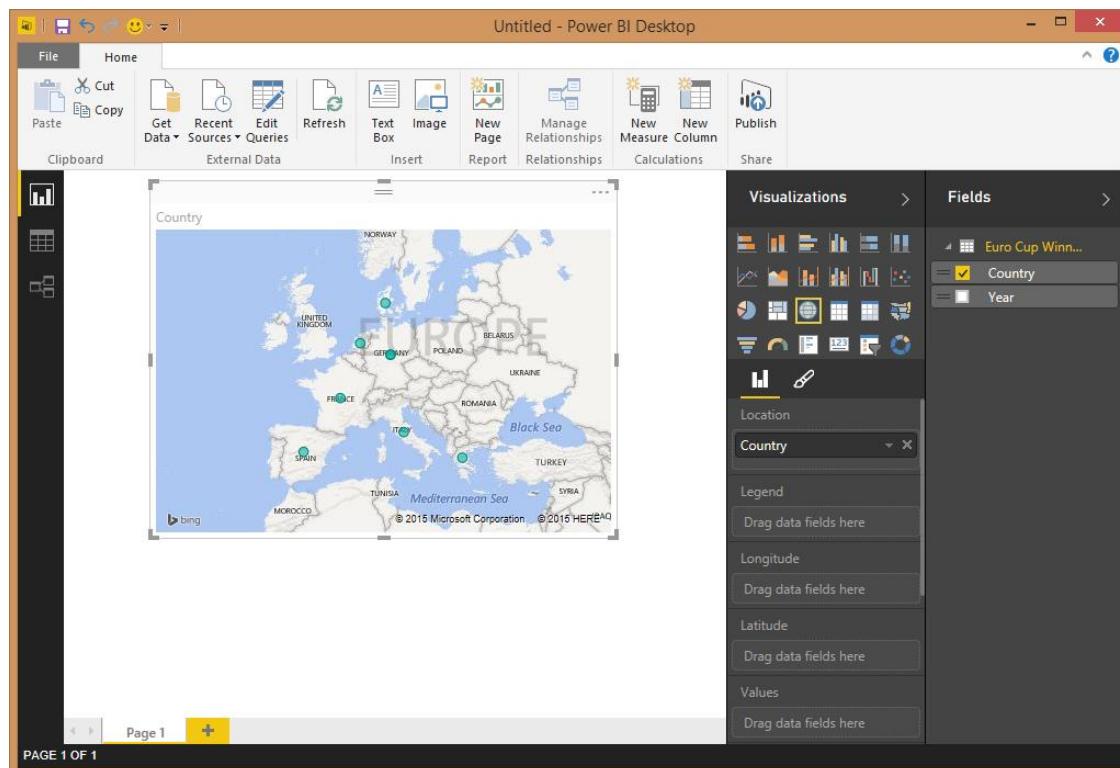


You can see the resulting table fields in the **Fields** pane at the right of the **Report** view.

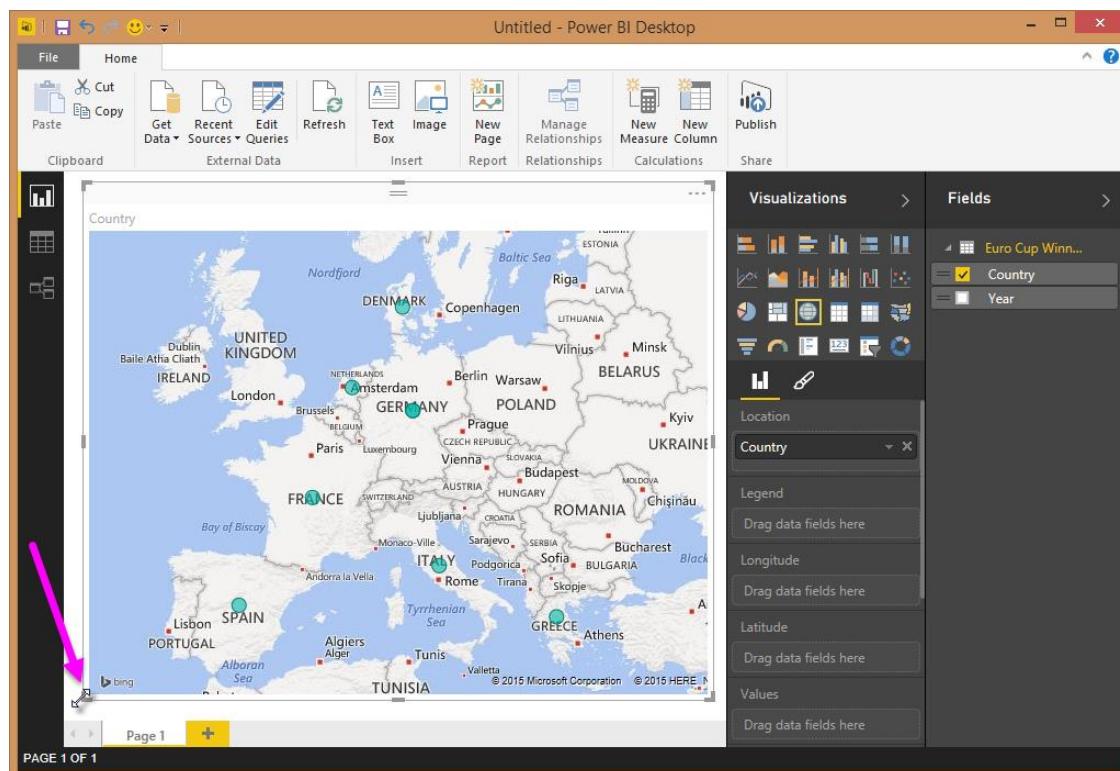


4.3.2 Create a Map Visualization

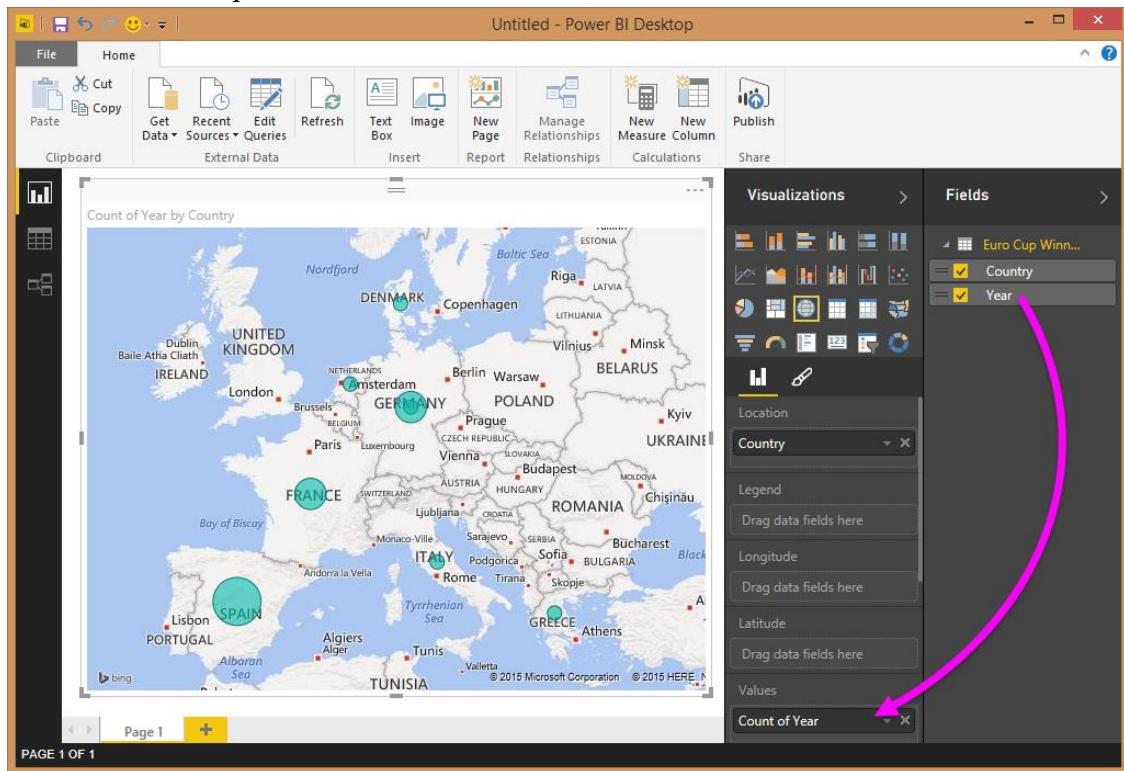
1. Drag the **Country** field and drop it in the **Report** canvas. This will create a new visualization in the **Report** canvas. In this case, since we have a list of countries, it will create a **Map** visualization.



2. We can resize the visualization by dragging from one of the corners of the visualization up to the desired size.



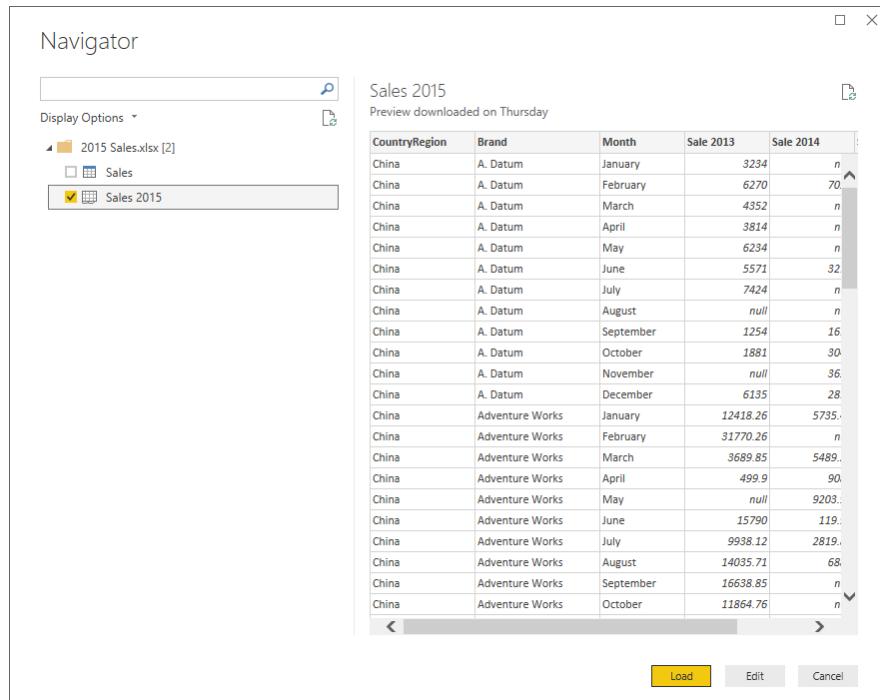
3. Note that currently all the points in the map have the same size. We want to change this so that countries with more Euro Cup tournaments won are represented with a larger point in the map. In order to do this, we can drag the *Year* field in the **Fields** list to the **Values** box in the lower half of the Fields pane.



5. Combine Data for Analysis

5.1 Open First Excel workbook

1. Select **Get Data → Excel** in the **Home** ribbon tab,
2. In the **Open File** dialog box, select the *2015 Sales.xlsx* file. Then in the **Navigator** pane, select the *Sales 2015* table and then select [**Edit**].



3. The file should be loaded successfully to the Power BI

The screenshot shows the Power BI Query Editor. The 'Queries [1]' pane on the left lists the 'Sales 2015' query. The main area displays the data grid with columns: CountryRegion, Brand, Month, 1.2 Sale 2013, 1.2 Sale 2014, and 1.2 Sale 2015. To the right of the data grid is the 'QUERY SETTINGS' pane, which includes sections for 'PROPERTIES' (Name: Sales 2015) and 'APPLIED STEPS' (listing 'Source', 'Navigation', 'Promoted Headers', and 'Changed Type'). The bottom right corner of the editor window shows the text 'PREVIEW DOWNLOADED AT 11:33'.

5.2 Open Second Excel workbook

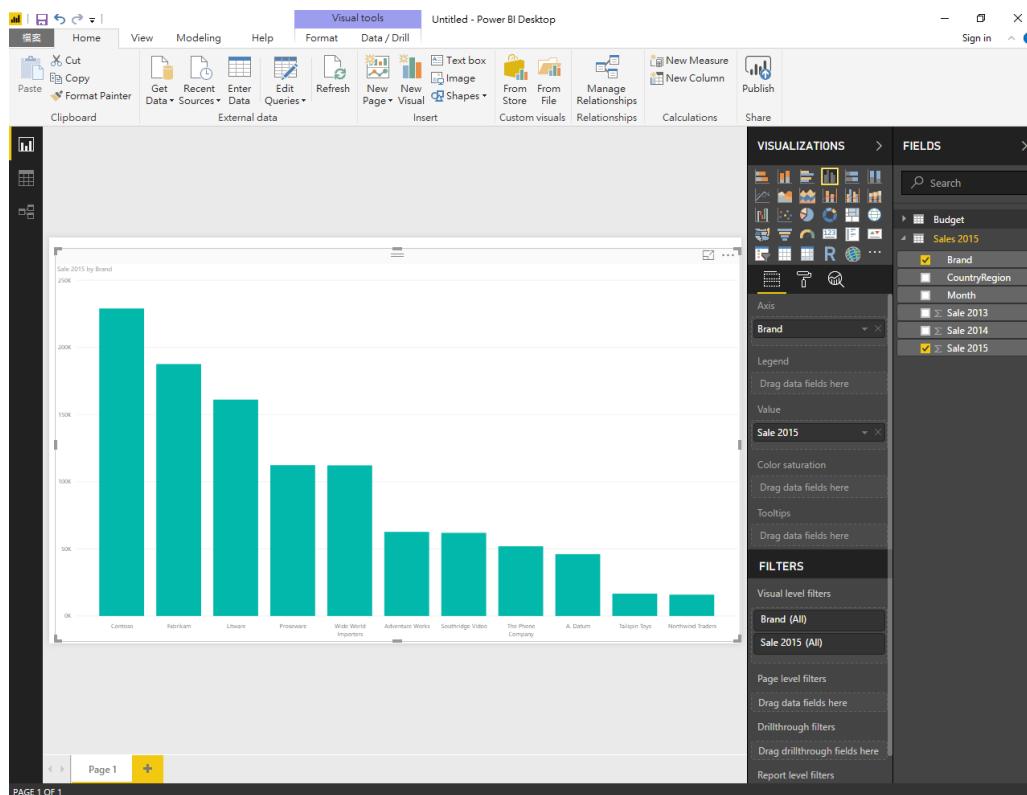
- Select Get Source → Excel in the Home ribbon tab

The screenshot shows the Microsoft Power Query Editor interface. The 'Home' ribbon tab is selected. In the 'Get Source' section, 'Excel' is chosen from the dropdown. A preview of an Excel table is displayed, showing columns for Brand, Month, and Sales values for various months and years. To the right, the 'QUERY SETTINGS' pane is open, showing the query name 'Sales 2015' and the applied steps 'Source', 'Navigation', 'Promoted Headers', and 'Changed Type'. The status bar at the bottom indicates 'PREVIEW DOWNLOADED AT 11:33' and the date '28/1/2018'.

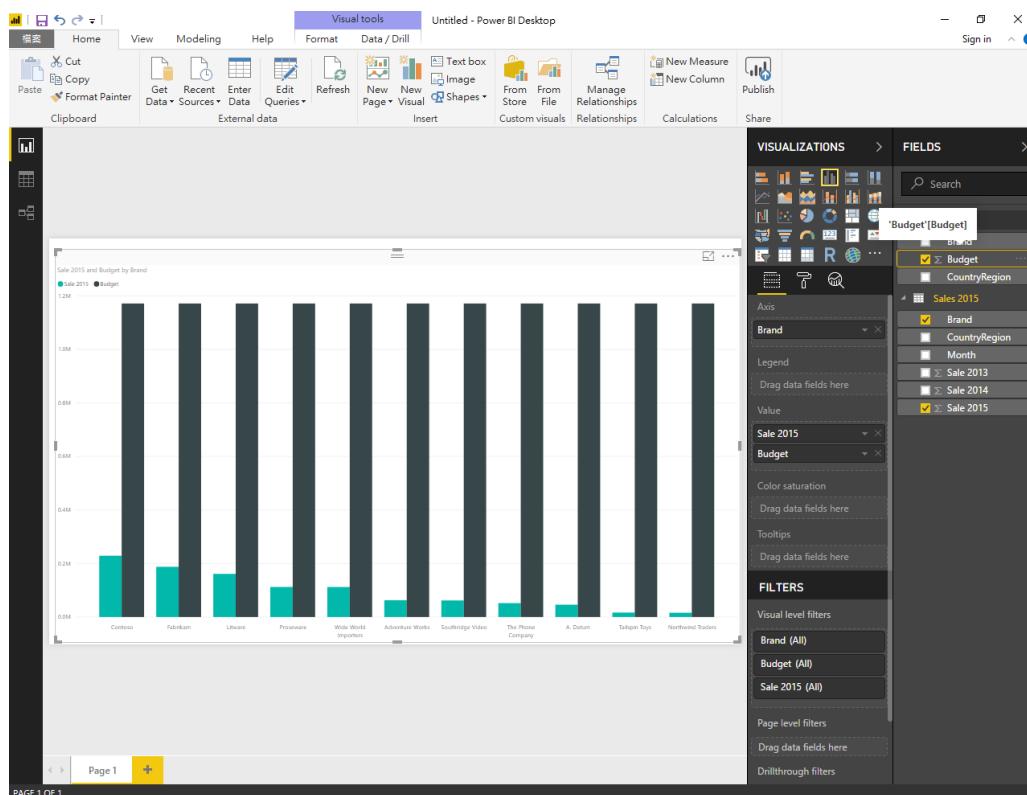
- In the Open File dialog box, select the *2015 Budget.xlsx* file. Then in the Navigator pane, select the **Budget** table and then select [Edit].

The screenshot shows the 'Navigator' dialog box. The 'Display Options' dropdown is set to '2015 Budget.xlsx [2]'. Under the 'Tables' section, the 'Budget' table is selected, indicated by a checked checkbox. The main area shows the 'Budget' table with columns 'CountryRegion', 'Brand', and 'Budget'. The data includes rows for China, Germany, and United States. At the bottom are 'OK' and 'Cancel' buttons.

3. The file should be loaded successfully to the Power BI. Select [Close and Apply] to confirm. Then create a Clustered Column Chart by selecting *Brand* and *Sales 2015* from *Sales 2015* Query.



4. Select *Budget* from *Budget 2015*. The budget is failed to load.



5.3 Merge Query

1. Select Combine in Query Editor

The screenshot shows the Microsoft Power BI Query Editor interface. It displays two queries: "Sales 2015" and "Budget". The "Sales 2015" query is currently active, showing a preview of 382 rows of data. The data includes columns for CountryRegion, Brand, Month, and Sales values for the years 2013, 2014, and 2015. The "Budget" query is also visible in the list. On the right side, the "QUERY SETTINGS" pane is open, with "Combine" selected under the "Merge Queries" section. The "APPLIED STEPS" pane lists several steps taken during the query creation process.

- Select field *CountryRegion* and *Brand* in query *Sales 2015*, and also select field *CountryRegion* and *Brand* in query *Budget*. Then select **Left Outer (all from first, matching from second)** as **Join Kind**.

The screenshot shows the "Merge" dialog box. It contains two tables: "Sales 2015" and "Budget". The "Sales 2015" table has columns: CountryRegion, Brand, Month, Sale 2013, Sale 2014, Sale 2015. The "Budget" table has columns: CountryRegion, Brand, Budget. Below the tables, there is a "Join Kind" dropdown menu set to "Left Outer (all from first, matching from second)". A note at the bottom left states: "The selection has matched 362 out of the first 382 rows." At the bottom right, there are "OK" and "Cancel" buttons.

3. Expand to *Budget* column and select *Budget* field only.

The screenshot shows the Power BI Query Editor interface. A context menu is open over the 'Budget' column header, specifically over the 'Budget' field. The menu path 'Expand' > 'Select All Columns' is highlighted. Other options like 'Aggregate' and 'Use original column name as prefix' are also visible. The main query grid displays data from 'CountryRegion', 'Brand', 'Month', and three sales years ('1.2 Sale 2013', '1.2 Sale 2014', '1.2 Sale 2015'). The 'Budget' column contains numerical values representing sales figures. The 'QUERY SETTINGS' pane on the right shows the query name 'Sales 2015' and the applied step 'Merged Queries'. The status bar at the bottom indicates 'PREVIEW DOWNLOADED AT 11:33' and the date '28/1/2018'.

4. Right click the column **Budget.Budget** and select **Rename**.

This screenshot shows the same Power BI Query Editor environment after the 'Budget' column has been renamed. The context menu is now open over the newly renamed 'Budget.Budget' column header. The 'Rename...' option is selected, indicating the process of renaming the column. The main query grid and 'QUERY SETTINGS' pane remain largely the same, with the exception of the renamed column header. The status bar at the bottom shows 'PREVIEW DOWNLOADED AT 11:33' and the date '28/1/2018'.

5. Change the column name to Budget 2015.

The screenshot shows the Power Query Editor interface. A query named 'Sales 2015' is open, displaying a table with columns: tryRegion, Brand, Month, 1..2 Sale 2013, 1..2 Sale 2014, 1..2 Sale 2015, and Budget 2015. The 'Applied Steps' pane on the right shows the step 'Renamed Columns' has been applied. The 'Properties' pane shows the query name is 'Sales 2015'. The status bar at the bottom right indicates 'PREVIEW DOWNLOADED AT 11:33'.

5.4 Create Combined Report

1. Add Budget 2015 to the Sales Report

The screenshot shows the Power BI Desktop interface. A stacked bar chart is displayed on the canvas, comparing 'Sale 2015' (light blue) and 'Budget 2015' (dark grey/black) across different brands. The chart is titled 'Sale 2015 and Budget 2015 by Brand'. The 'Visualizations' pane on the right shows various chart types, and the 'Fields' pane lists fields like Brand, Budget 2015, CountryRegion, Month, Sale 2013, Sale 2014, and Sale 2015. The status bar at the bottom left indicates 'PAGE 1 OF 1'.

6. Create Custom Column

6.1 Import Product Data from Excel

6.1.1 Connect to Excel workbook

1. Select **Get Data → Excel** in the **Home** ribbon tab,
2. In the **Open File** dialog box, select the *product.xlsx* file. Then in the **Navigator** pane, select the **Products** table and then select [**Load**].

The screenshot shows the Power BI Navigator pane. On the left, there's a tree view with 'Products.xlsx [2]' expanded, showing 'Products' and 'Sheet1'. The main area displays the 'Products' table with columns: ProductID, ProductName, SupplierID, CategoryID, and Quan. The 'Quan' column has a dropdown arrow icon. At the bottom right of the table preview and the entire pane, there are 'Load', 'Edit', and 'Cancel' buttons. A pink arrow points from the 'Edit' button in the table preview to the 'Edit' button in the bottom right corner of the pane.

6.1.2 Remove other Columns to only Display Columns of Interest

1. In **Query Editor**, select the *ProductID*, *ProductName*, *QuantityPerUnit* and *UnitsInStock* columns
2. Right-click on a column header and click **Remove Other Columns**.

The screenshot shows the Power BI Query Editor. The top ribbon is visible with tabs like Home, Transform, Add Column, View, and Help. The main area shows a table with columns: CategoryID, QuantityPerUnit, UnitPrice, and Unit. A context menu is open over the 'CategoryID' column header, with the 'Remove Other Columns' option highlighted. Other options in the menu include Remove Columns, Add Column From Examples..., Remove Duplicates, Remove Errors, Replace Values..., Fill, Change Type, Merge Columns, Group By..., Unpivot Columns, Unpivot Other Columns, Unpivot Only Selected Columns, and Move.

6.1.3 Change the Data Type of Column

3. Select the *UnitsInStock* column.
4. Right-click on column header and select **Change Type → Whole Number**.

The screenshot shows the Microsoft Power BI Query Editor interface. A table named 'Products' is displayed with columns: ProductID, ProductName, QuantityPerUnit, and UnitsInStock. The 'UnitsInStock' column is currently selected. A context menu is open at the top of this column, with the 'Change Type' option highlighted. A submenu under 'Change Type' shows various data types, with 'Whole Number' selected and checked. The 'APPLIED STEPS' pane on the right lists the steps taken so far, including 'Source' and 'Whole Number'.

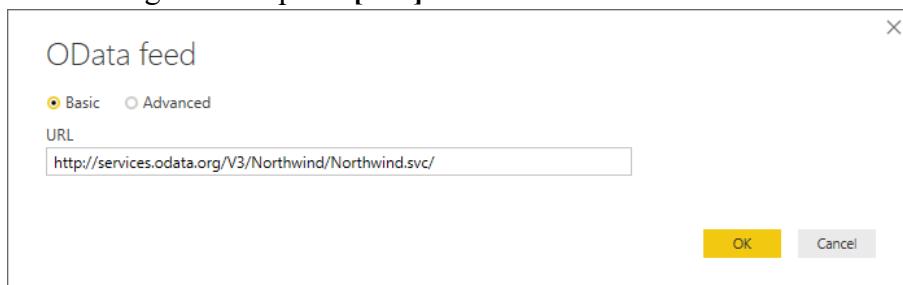
6.2 Import Order Data from OData Feed

6.2.1 Connect to OData Feed

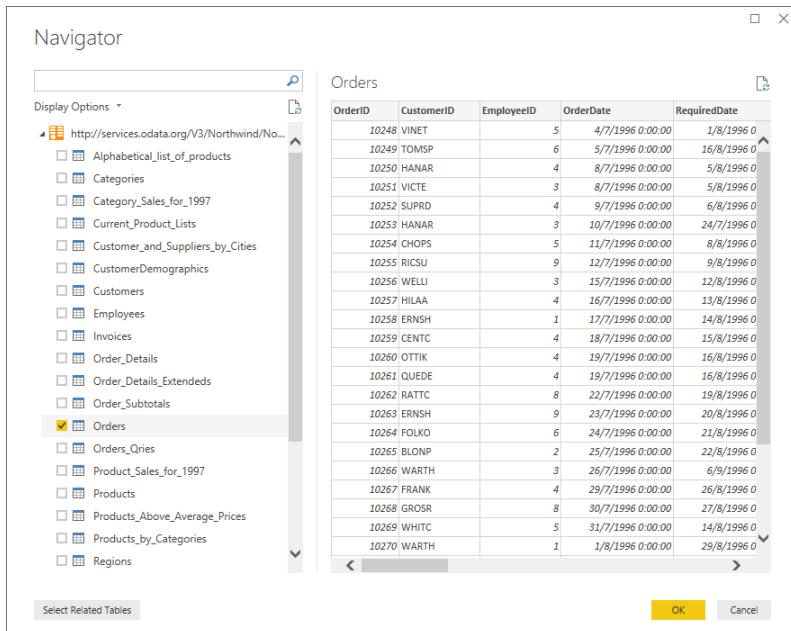
1. From the Home ribbon tab in Query Editor, select **New Source → OData feed**.

The screenshot shows the Microsoft Power BI Query Editor interface with the 'Sources' tab selected in the ribbon. In the 'New Source' dropdown, the 'OData feed' option is highlighted. A tooltip for 'OData feed' appears, stating 'Import data from an OData feed.' Other options like 'Excel', 'SQL Server', 'Analysis Services', 'Text/CSV', and 'Web' are also listed.

2. Input <http://services.odata.org/V3/Northwind/Northwind.svc/> in the URL field of the **OData Feed** dialog box and press [OK] button.

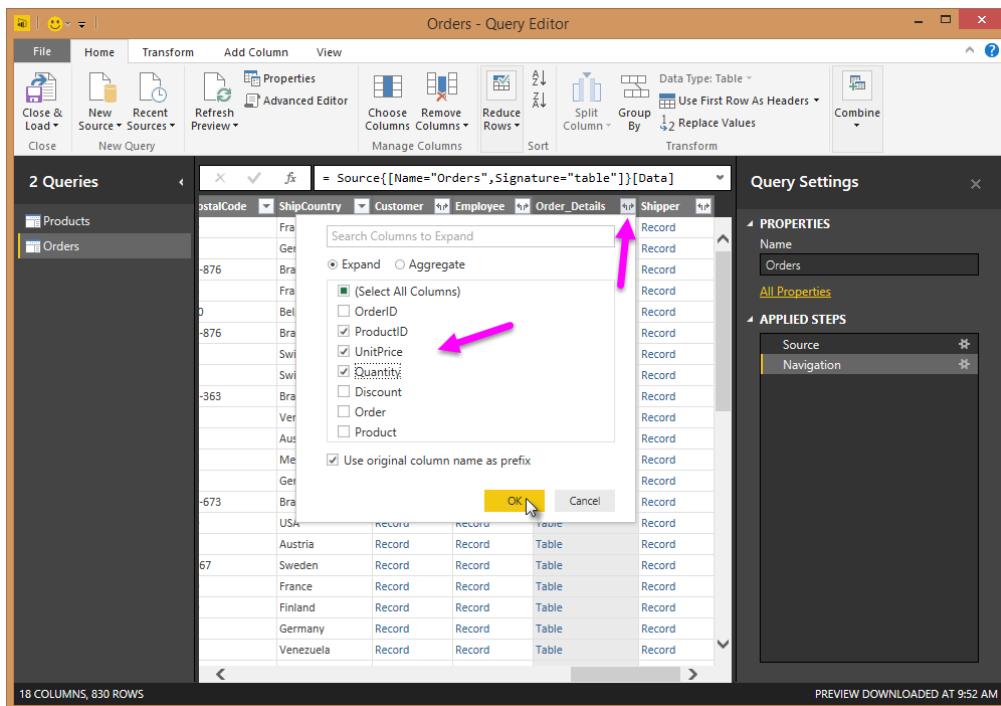


3. In the Navigator pane, select the *Orders* table, and then select [OK].



6.2.2 Expand the Order_Details Table

- In the Query View, scroll to the *Order_Details* column and select the expand icon
- Select *ProductID*, *UnitPrice*, and *Quantity* in the Expand drop-down, and then click [OK].



6.2.3 Remove Other Columns to only Display Columns of Interest

- In the Query View, select all columns by click the first column (*OrderID*), and then press [Shift] to click the last column (*Shipper*).
- Press [Ctrl] and click to unselect the following columns: *OrderDate*, *ShipCity*, *ShipCountry*, *Order_Details.ProductID*, *Order_Details.UnitPrice* and *Order_Details.Quantity*.

3. Right-click on any selected column header and click **Remove Columns**.

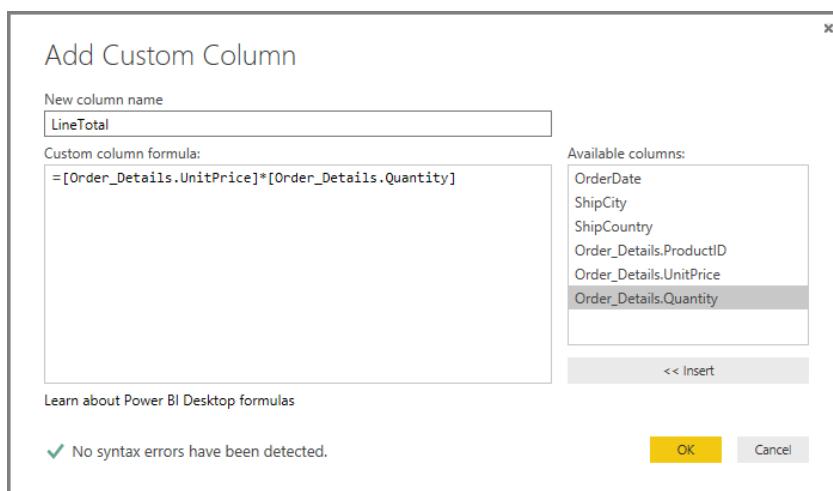
The screenshot shows the Power BI Query Editor interface. A table named 'Employee' is displayed with three columns: 'Order_Details.ProductID', 'Order_Details.UnitPrice', and 'Order_Details.Quantity'. A context menu is open over the 'Order_Details.Quantity' column, with the 'Remove Columns' option highlighted.

6.2.4 Calculate the Line Total for each Order_Details row

1. In the Add Column ribbon tab, click **Add Custom Column**.

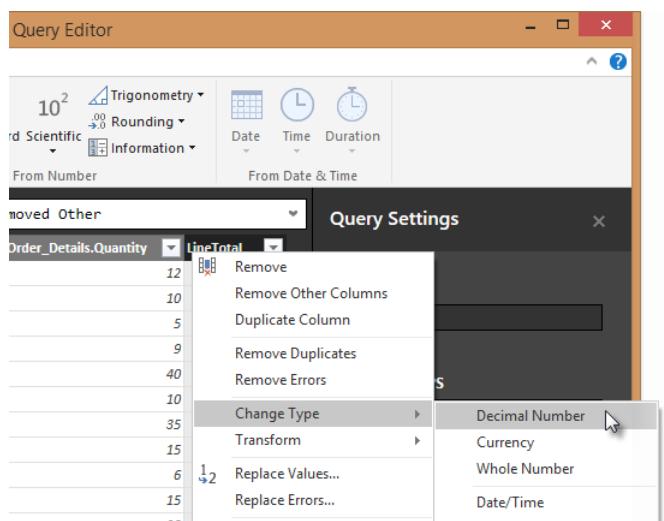
The screenshot shows the Power BI Query Editor interface with the 'Add Column' ribbon tab selected. A 'Custom Column' dialog box is open, showing the formula `= Table.RemoveCo...` and the new column name `LineTotal`.

2. In the **Add Custom Column** dialog box, in the **Custom Column Formula** textbox, enter `[Order_Details.UnitPrice] * [Order_Details.Quantity]`. Then in the **New column name** textbox, enter `LineTotal`. Click **[OK]** to continue.



6.2.5 Set the Datatype of the LineTotal field

- Right click the *LineTotal* column, and select **Change Type → Decimal Number**.



6.2.6 Rename and Reorder Columns in the Query

- In **Query Editor**, drag the *LineTotal* column to the left, after *ShipCountry*.

- Rename the column name by removing the *Order_Details.* prefix from the *Order_Details.ProductID*, *Order_Details.UnitPrice* and *Order_Details.Quantity* columns, by double-clicking on each column header, and then deleting that text from the column name.

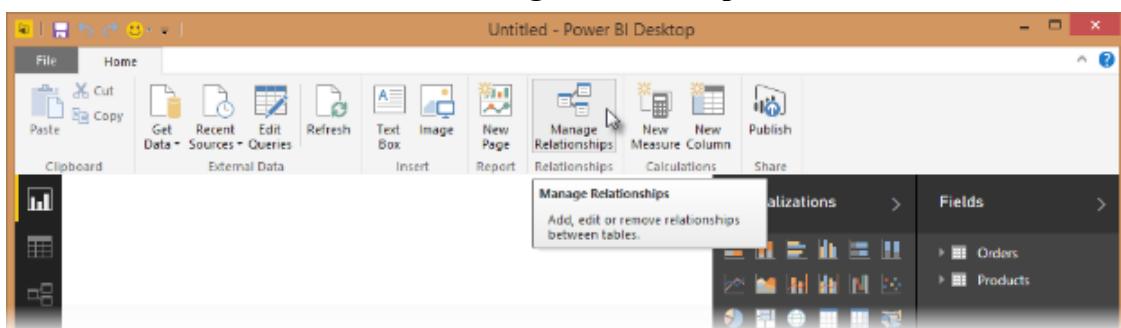
6.3 Combine the Products and Total Sales Queries

6.3.1 Confirm the Relationship between Products and Total Sales

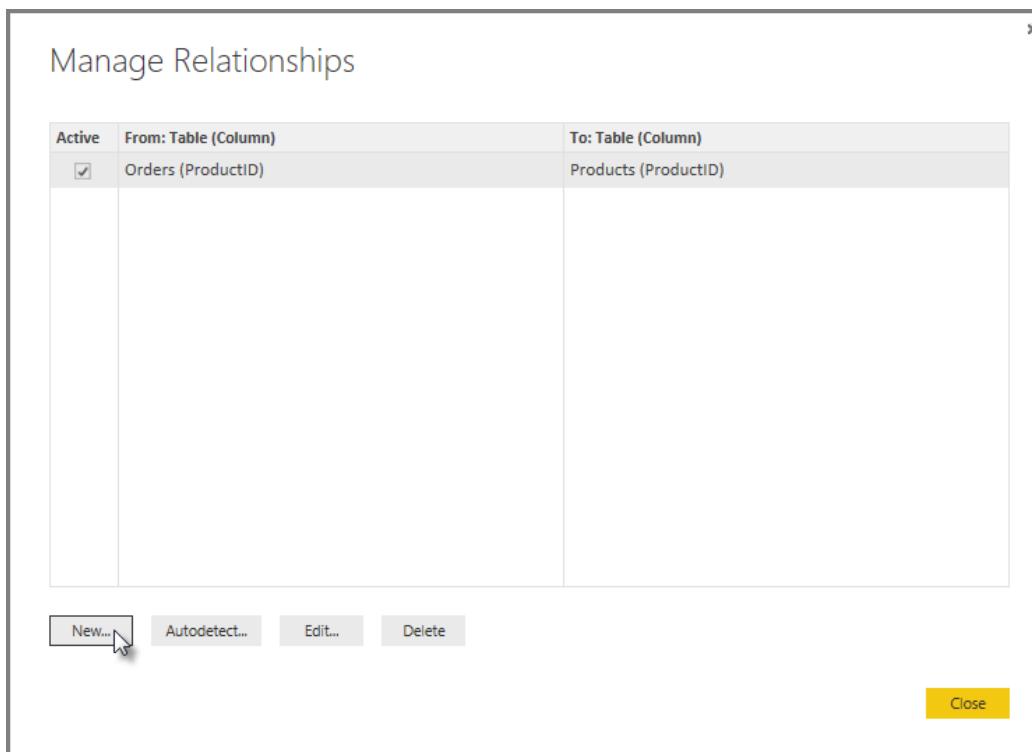
- From the **Home** ribbon of **Query Editor**, select **Close & Apply** to load the model that we created in **Query Editor** into Power BI Desktop.



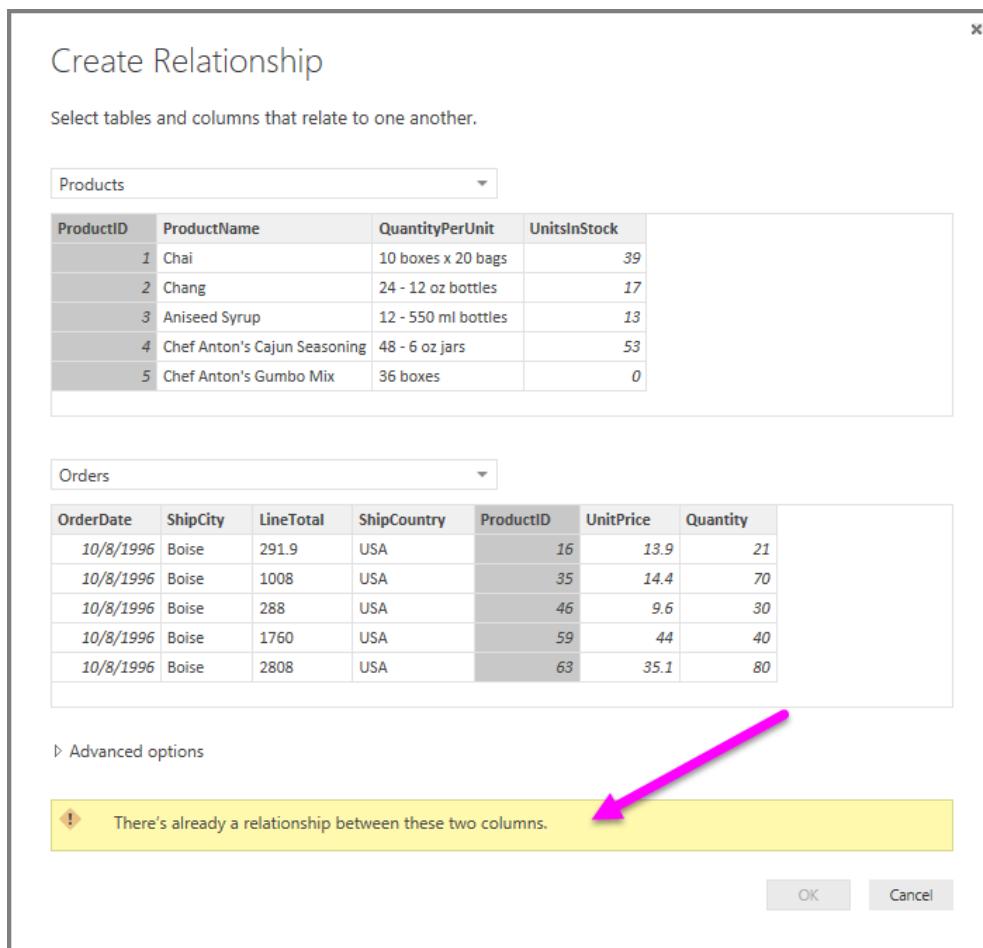
- Once the data is loaded, select the **Manage Relationships** from **Home** ribbon.



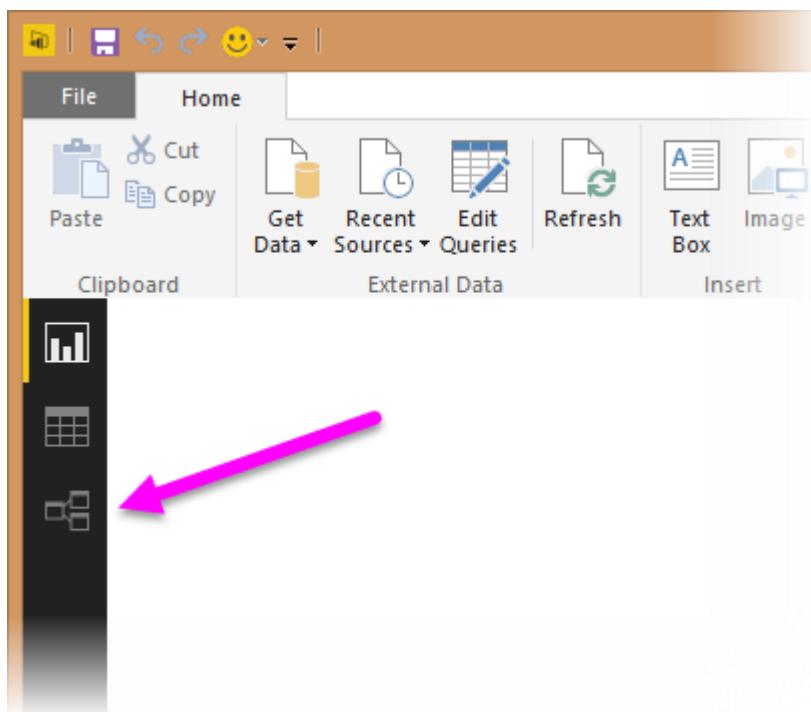
- Select the [**New...**] button



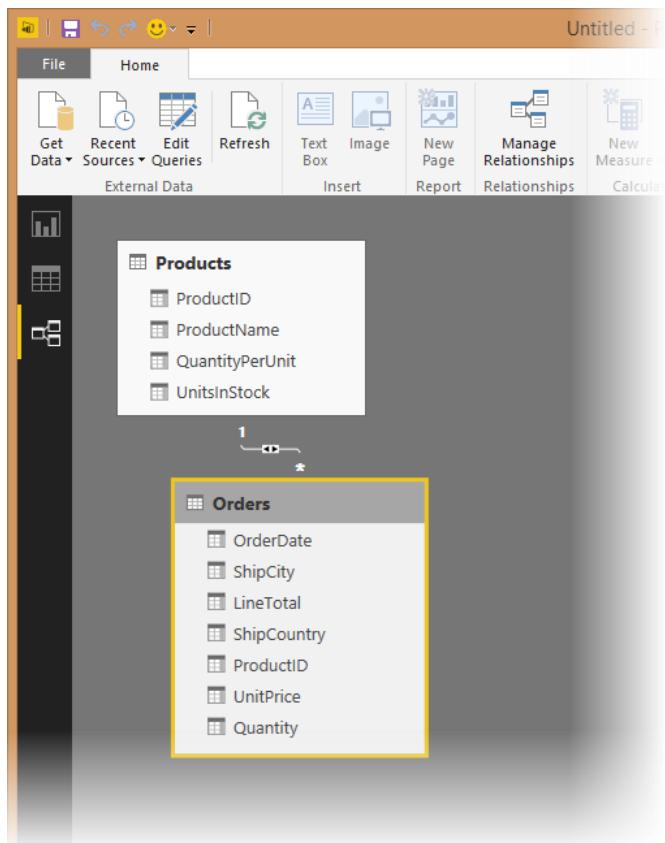
6. When we attempt to create the relationship, we see that one already exists! As shown in the **Create Relationship** dialog, the *ProductsID* fields in each query already have an established relationship



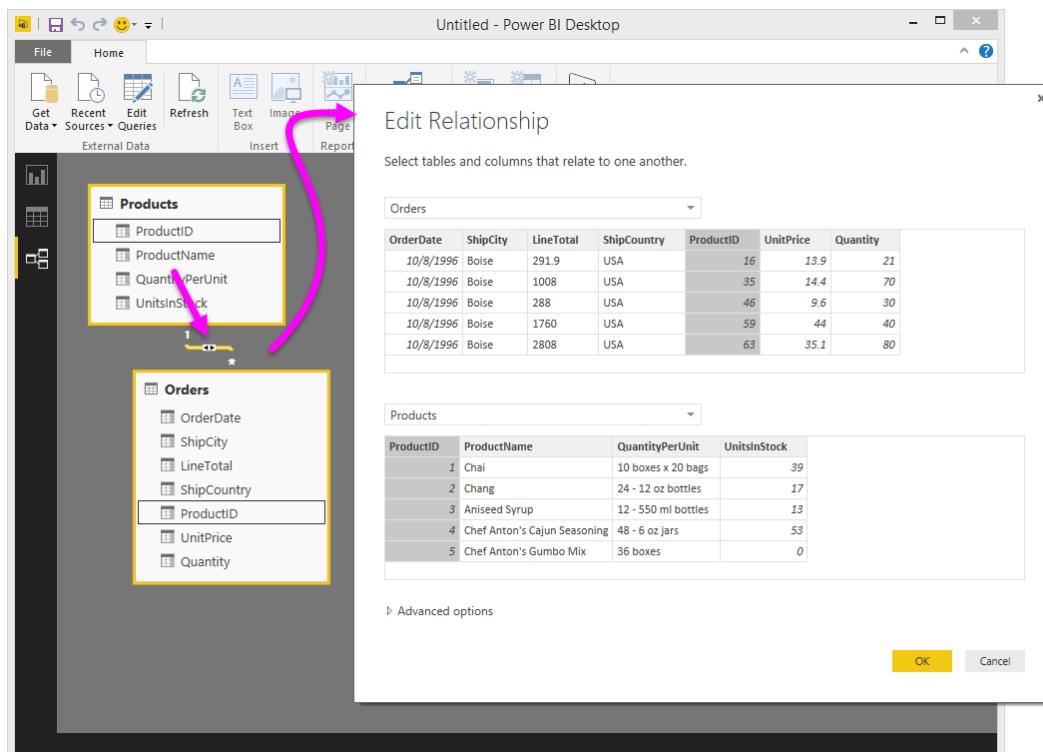
7. Select [Cancel], and then select **Relationship** view in Power BI Desktop



8. The relationship between the queries are visualized



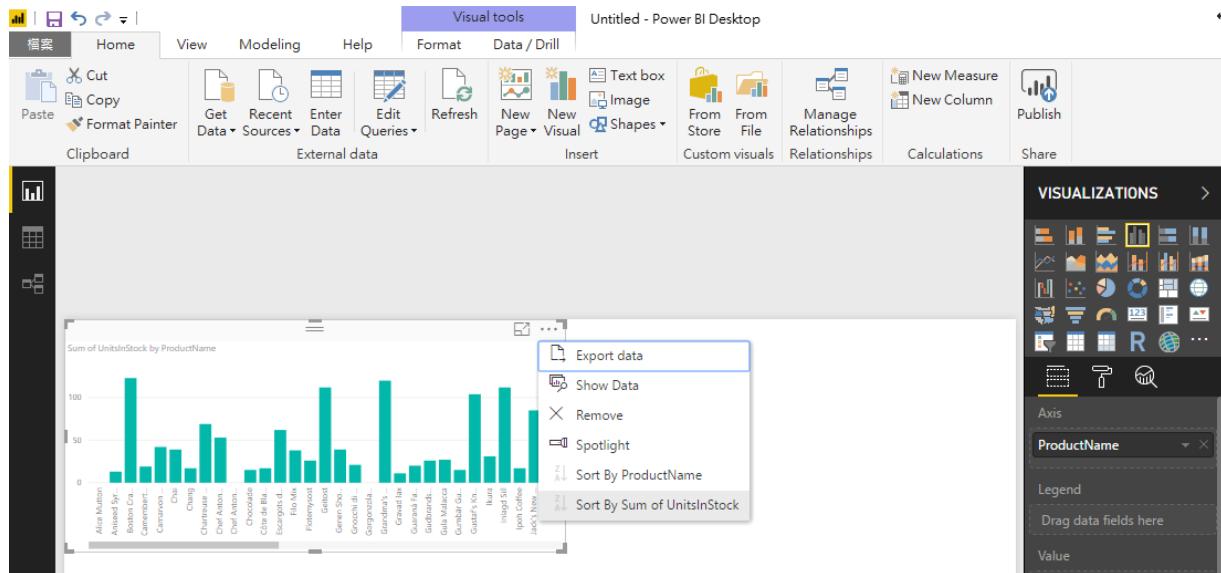
9. When you double-click the arrow on the line that connects the two queries, an **Edit Relationship** dialog appears. Since we don't need to make any changes, so we'll just select [**Cancel**] to close the **Edit Relationship** dialog.



6.4 Build Visuals Using your Data

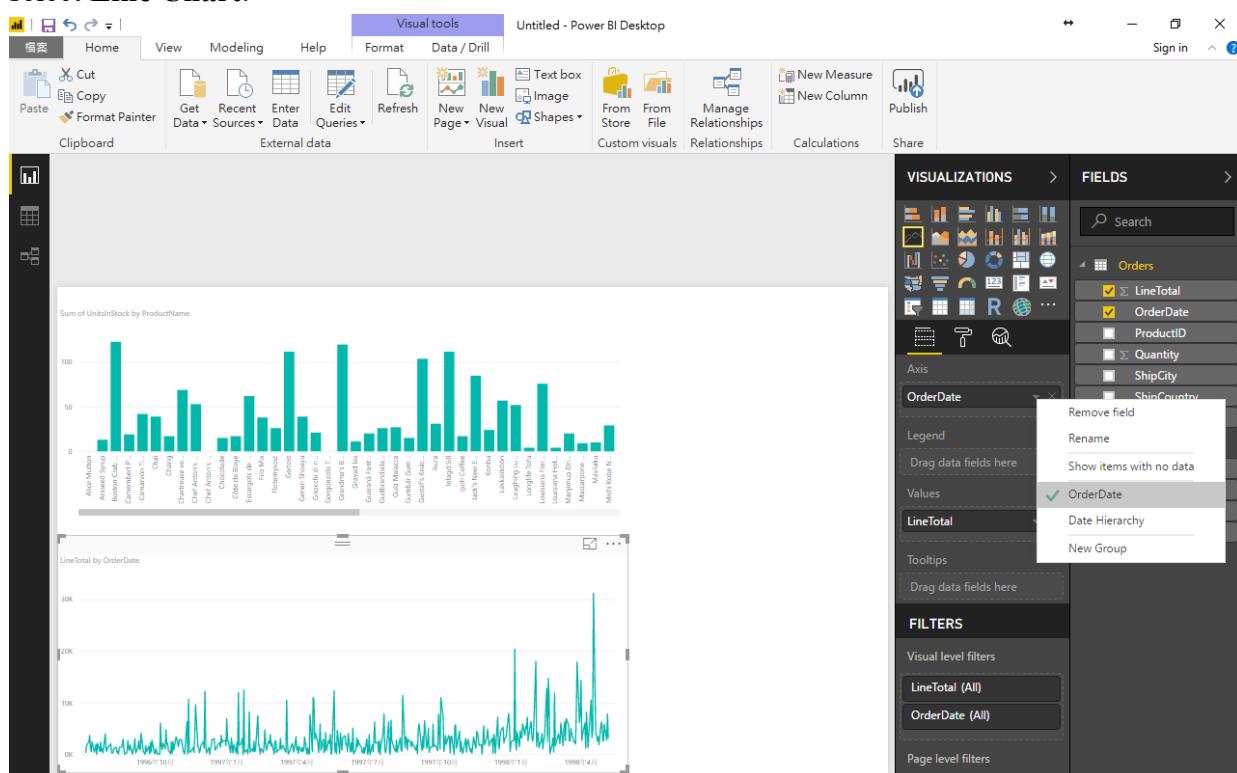
6.4.1 Create Charts Showing Units in Stock by Product

1. Drag *UnitsInStock* from the Field pane onto a blank space on the canvas. A Table visualization is created. Next, drag *ProductName* to the Axis box, found in the bottom half of the Visualizations pane. Then we then select **Sort By ➔ Sum of UnitsInStock** using the skittles in the top right corner of the visualization.



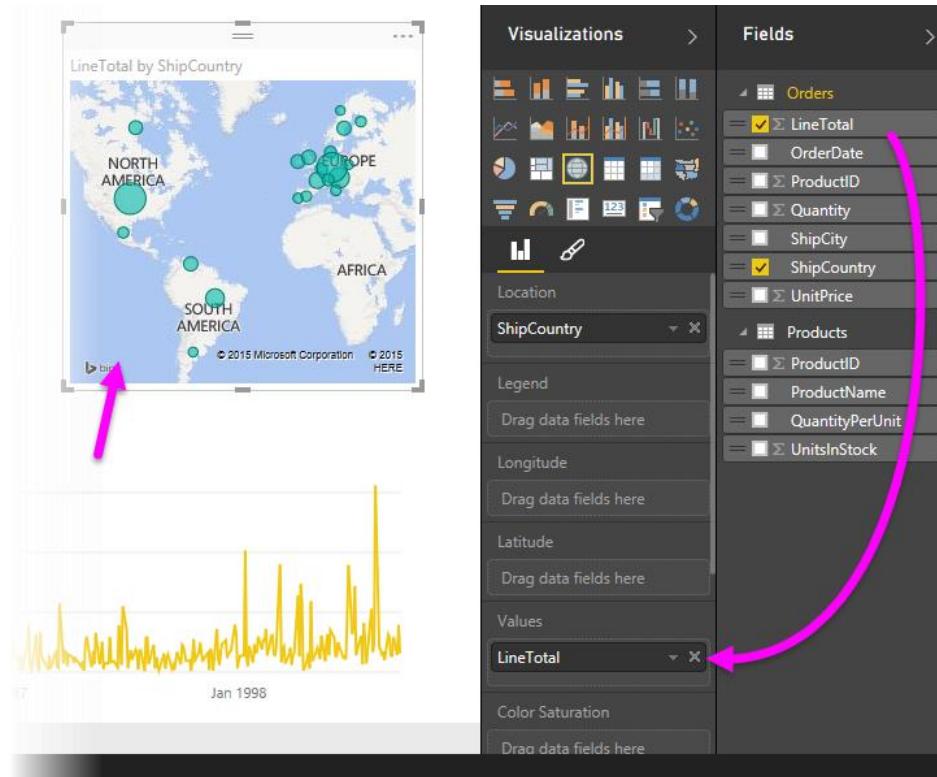
6.4.2 Create Charts Showing Total Sales by Year

1. Drag *OrderDate* to the canvas beneath the first chart, then drag *LineTotal* onto the visual, then select **Line Chart**.



6.4.3 Create Charts Showing Total Sales per Country

1. Drag *ShipCountry* to a space on the canvas in the top right. Because you selected a geographic field, a map was created automatically. Now drag *LineTotal* to the **Size** field; the circles on the map for each country are now relative in size to the *LineTotal* for orders shipped to that country.



6.4.4 Interact with Report Visuals

1. Click on the light blue circle centered in Canada. Note how the other visuals are filtered to show Stock (*ShipCountry*) and Total Orders (*LineTotal*) just for Canada.

