

Demo & Step by Step Guide

Using PowerPivot in MS Excel to analyze SQL Server Data

By: Wylie Blanchard - Great Tech Pros

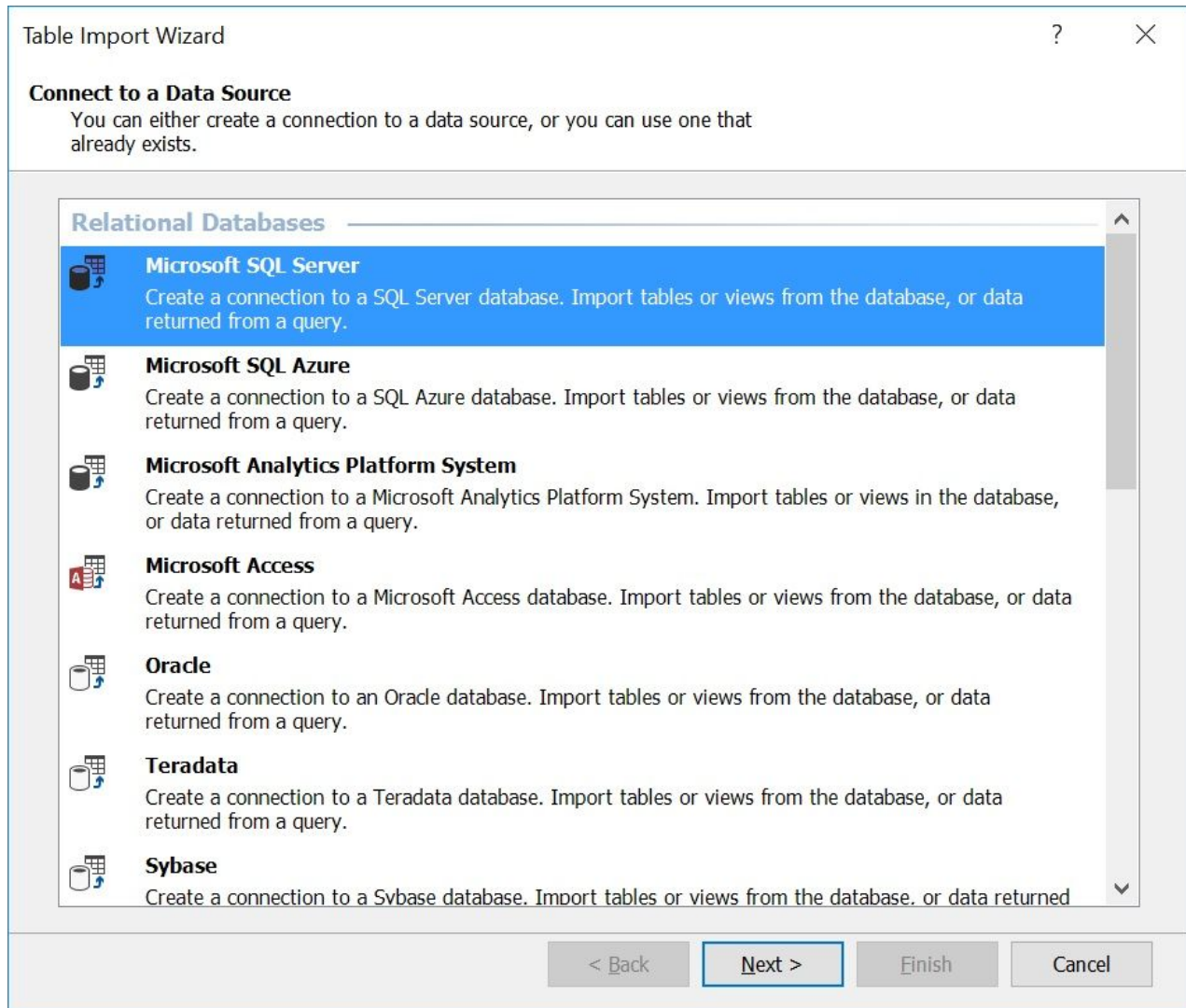
- Use a BI Semantic Model Connection in Excel
- Analyze Data & Present Data with PowerPivot & Power View

Use a BI Semantic Model Connection in Excel

Creating a Tabular Model Project

1. Open **SQL Server Data Tools** (Visual Studio)
2. Go to **File > New > Project**
3. Select project type **Analysis Services Tabular Project**
4. Insert the name of your Analysis Services Tabular instance
5. An empty model, Model.bim file is created
6. Go to **Model > Import From Data Source**
 - a. The **Table Import Wizard** window opens

7. Select the **Microsoft SQL Server** option



8. On the **Connect to a Microsoft SQL Server Database** screen, Insert the server name of your Data Warehouse (SQL Server) instance and then select the name of the database from the drop down box
9. Click **Next**, and insert your connection on the prompting screens
10. On the **Select the Source Tables and Views** screen place a checkmark next to each tables and views that you want to include in your project
11. Click **Finish**

Table Import Wizard

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Select Tables and Views

Select the tables and views that you want to import data from.

Server:

Database: AdventureWorksDW2012

Tables and Views:

☐	Source Table	Schema	Friendly Name	Filter Details
☐	AdventureWorksDWBuildVers...	dbo		
☐	DatabaseLog	dbo		
☐	DimAccount	dbo		
☐	DimCurrency	dbo		
☒	DimCustomer	dbo	Customer	
☒	DimDate	dbo	Date	
☐	DimDepartmentGroup	dbo		
☐	DimEmployee	dbo		
☒	DimGeography	dbo	Geography	
☐	DimOrganization	dbo		
☒	DimProduct	dbo	Product	
☒	DimProductCategory	dbo	Product Category	
☒	DimProductSubcategory	dbo	Product Subcategory	
☐	DimPromotion	dbo		

Select Related Tables

Preview & Filter

< Back

Next >

Finish

Cancel

12. Optionally, you can preview your data before moving

Table Import Wizard

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Preview Selected Table

Use the checkbox to select specific columns. To filter the data in a column, use the drop-down arrow for the column to select values that should be included.

Table Name: **FactInternetSales**

☒	☒ Product...	☒ OrderDat...	☒ DueDat...	☒ ShipDat...	☒ Custom...	☒ Promotio...	☒ Currenc...	☒ SalesTerritor...	☒ SalesOrderNu...	☒ Sales
1	310	20050701	20050713	20050708	21768	1	19	6	SO43697	
2	346	20050701	20050713	20050708	28389	1	39	7	SO43698	
3	346	20050701	20050713	20050708	25863	1	100	1	SO43699	
4	336	20050701	20050713	20050708	14501	1	100	4	SO43700	
5	346	20050701	20050713	20050708	11003	1	6	9	SO43701	
6	311	20050702	20050714	20050709	27645	1	100	4	SO43702	
7	310	20050702	20050714	20050709	16624	1	6	9	SO43703	
8	351	20050702	20050714	20050709	11005	1	6	9	SO43704	
9	344	20050702	20050714	20050709	11011	1	6	9	SO43705	
10	312	20050703	20050715	20050710	27621	1	100	4	SO43706	
11	312	20050703	20050715	20050710	27616	1	100	4	SO43707	
12	330	20050703	20050715	20050710	20042	1	98	10	SO43708	
13	313	20050703	20050715	20050710	16351	1	6	9	SO43709	
14	314	20050703	20050715	20050710	16517	1	6	9	SO43710	
15	314	20050704	20050716	20050711	27606	1	100	1	SO43711	

Clear Row Filters

OK

Cancel

Table Import Wizard

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Importing

The import operation might take several minutes to complete. To stop the import operation, click the Stop Import button.



Success

Total: 7 Cancelled: 0
Success: 7 Error: 0

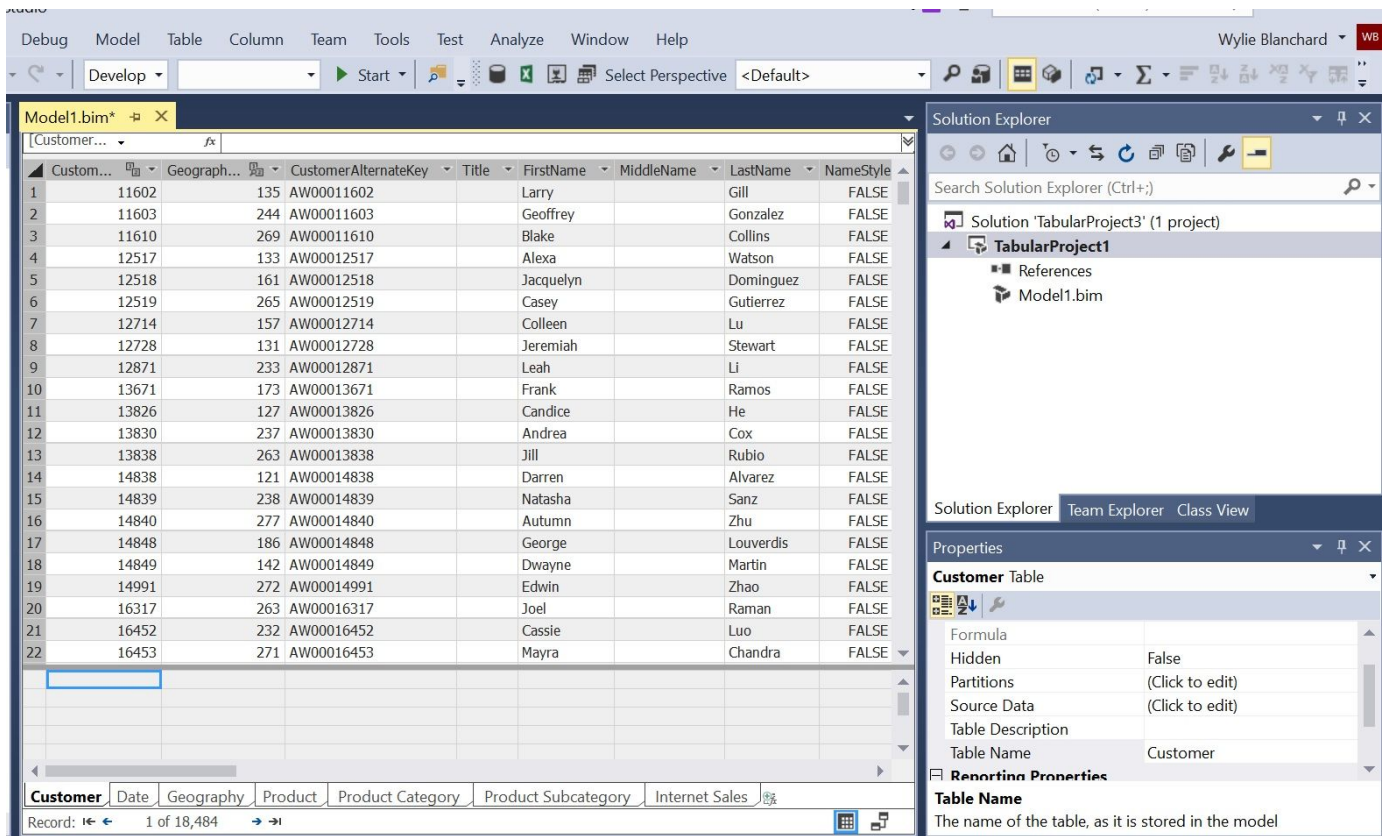
Details:

Work Item	Status	Message
✓ Customer	Success. 18,484 rows transferred.	
✓ Date	Success. 2,191 rows transferred.	
✓ Geography	Success. 655 rows transferred.	
✓ Product	Success. 606 rows transferred.	
✓ Product Category	Success. 4 rows transferred.	
✓ Product Subcategory	Success. 37 rows transferred.	
✓ Internet Sales	Success. 60,398 rows transferred.	
✓ Data preparation	Completed	Details

Stop Import

Close

13. Final view of the model (below) - note the tabs at the bottom of the screen



Deploy the Tabular Model

1. Right-click the project name
2. select **Properties**
 - a. Properties box opens
3. Ensure that the **Server** property displays the name of your Tabular instance
4. Click **Ok**
5. Go to Build > **Deploy TabularProject 1** (the name of your project)
6. Your project is now deployed to the server

Deploy

Deploying

The deployment operation may take several minutes to complete.

✓

Success

8 Total0 Cancelled

8 Success0 Error

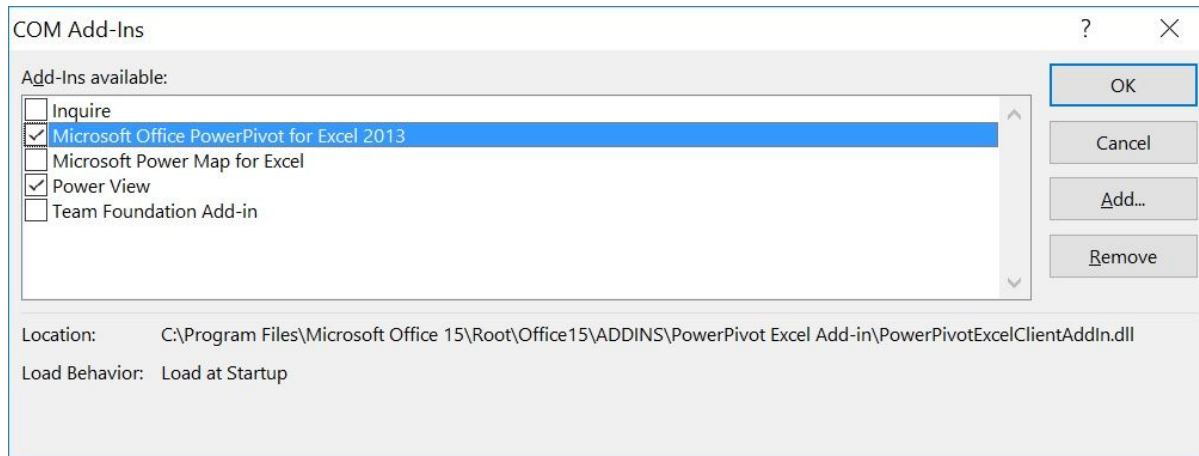
Details:

	Work Item	Status	Message
✓	Deploy metadata	Success. Metadata deployed.	
✓	Customer	Success. 18,484 rows transferred.	
✓	Date	Success. 2,191 rows transferred.	
✓	Geography	Success. 655 rows transferred.	
✓	Product	Success. 606 rows transferred.	
✓	Product Category	Success. 4 rows transferred.	
✓	Product Subcategory	Success. 37 rows transferred.	
✓	Internet Sales	Success. 60,398 rows transferred.	

Analyze & Present Data with PowerPivot & Power View

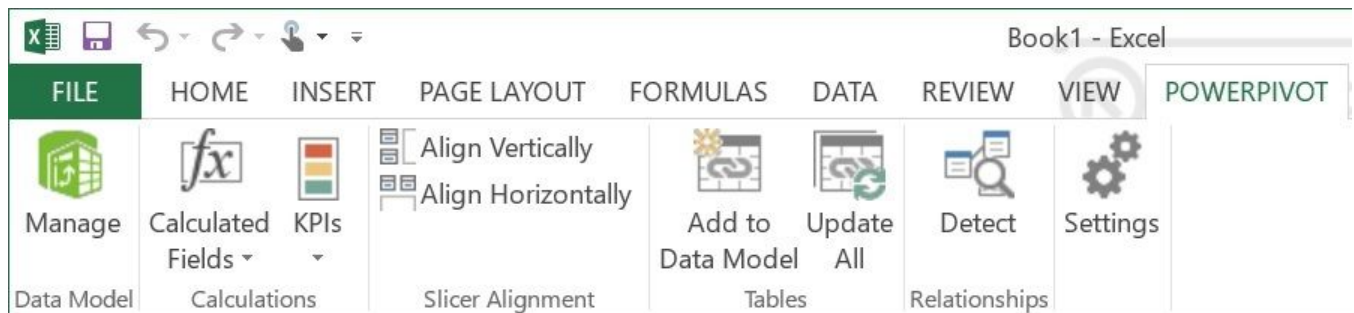
Activate PowerPivot MS Excel add-in

1. Open MS Excel 2013
2. Go to **File > Options > Add-Ins**
3. In the Manage box, click **COM Add-ins> Go**
4. Check the **Microsoft Office PowerPivot & Power View** boxes

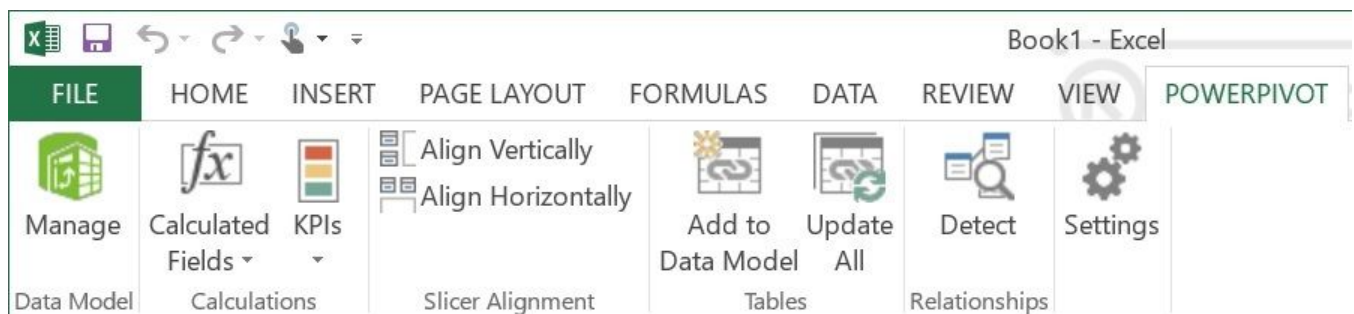


PowerPivot tab

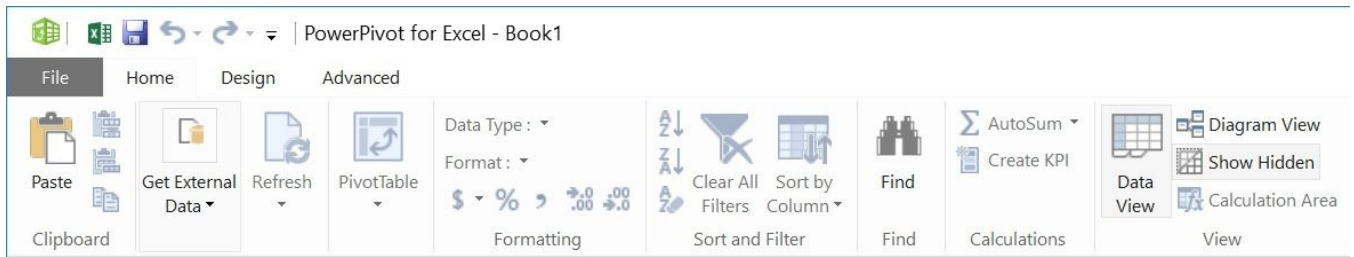
1. Click the **Power Pivot** tab
 - a. This is the tab where you work with Power Pivot PivotTables, calculated fields, and key performance indicators (KPIs), and creating linked tables
2. Click **Manage** to open the PowerPivot window to manage data



3. Click the **Power Pivot** tab



4. Click **Manage** to open the PowerPivot window



Import Data from SQL Server

1. In the Power Pivot window, click **Get External Data > From Database > From SQL Server**
2. In **Connect to Microsoft SQL Server Database**, in **Server or File Name**, enter the name of SQL Server instance where your Data Warehouse is located.
3. Click the down arrow to the right of the **Database name** list, and select an Analysis Services database from the list
4. Click **Test Connection** to verify that the server is available.
5. Click **Next**

Table Import Wizard

Connect to a Microsoft SQL Server Database

Enter the information required to connect to the Microsoft SQL Server database.

Friendly connection name:

Server name:

Log on to the server

☒ Use Windows Authentication

☐ Use SQL Server Authentication

User name:

Password:

☐ Save my password

Database name:

6. On the **Choose How to Import the Data** screen click the radial button for **Select from a list of tables and views to choose the data to import**
7. Click **Next**
8. Select the tables and views that you want included.
 - a. You can change any **Source Table** name to **Friendly Name**
 - b. You can click **Preview and Filter** to exclude columns and data
9. Click **Finish** to complete import process

Table Import Wizard



Select Tables and Views

Select the tables and views that you want to import data from.

Server: LAPTOP-P3AJK7V7

Database: AdventureWorksDW2012

Tables and Views:

☐	Source Table	Schema	Friendly Name	Filter Details
☐	AdventureWorksDWBuildVersion	dbo		
☐	DatabaseLog	dbo		
☐	DimAccount	dbo		
☐	DimCurrency	dbo		
☒	DimCustomer	dbo	Customer	
☒	DimDate	dbo	Date	
☐	DimDepartmentGroup	dbo		
☐	DimEmployee	dbo		
☒	DimGeography	dbo	Geography	
☐	DimOrganization	dbo		
☒	DimProduct	dbo	Product	
☒	DimProductCategory	dbo	Product Category	
☒	DimProductSubcategory	dbo	Product Subcategory	
☐	DimPromotion	dbo		
☐	DimReseller	dbo		

Select Related Tables

Preview & Filter

< Back

Next >

Finish

Cancel

Table Import Wizard

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Importing

The import operation might take several minutes to complete. To stop the import operation, click the Stop Import button.

✓

Success

Total: 7 Cancelled: 0
Success: 7 Error: 0

Details:

Work Item	Status	Message
✓ Customer	Success. 18,484 rows transferred.	
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✓ Product Category	Success. 4 rows transferred.	
✓ Product Subcategory	Success. 37 rows transferred.	
✓ Internet Sales	Success. 60,398 rows transferred.	
✓ Data preparation	Completed	Details

Stop Import

Close

Completed Data Import (below)

PowerPivot for Excel - Book1

File Home Design Advanced

Paste Append Paste Replace Paste Copy

From Database From Data Service From Other Sources Existing Connections Refresh PivotTable

Data Type: Format: \$ % .00 +.00

Sort A to Z Sort Z to A Clear All Filters Sort by Column Clear Sort

Find

AutoSum Create KPI

Data View Diagram View Show Hidden Calculation Area

[Custom ...]

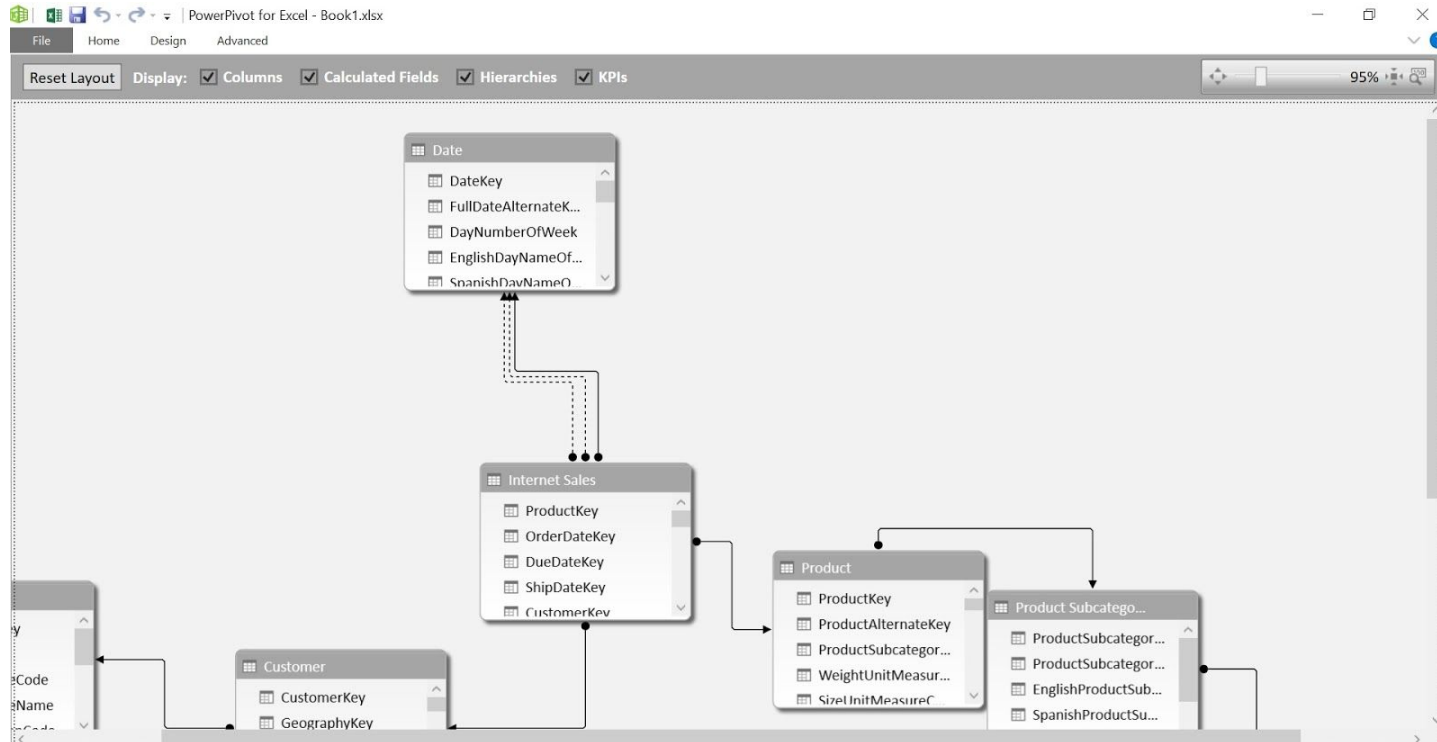
CustomerID	GeographyID	CustomerAlternateKey	Title	FirstName	MiddleName	LastName	NameStyle	BirthDate	MaritalStatus	Suffix	Gender	Email
11602	135	AW00011602		Larry		Gill	FALSE	4/13/1977 ...	S		M	larry
11603	244	AW00011603		Geoffrey		Gonzalez	FALSE	2/6/1977 1...	S		M	geof
11610	269	AW00011610		Blake		Collins	FALSE	4/23/1975 ...	S		M	blak
12517	133	AW00012517		Alexa		Watson	FALSE	8/25/1977 ...	S		F	alexi
12518	161	AW00012518		Jacquelyn		Dominguez	FALSE	9/27/1977 ...	S		F	jacqi
12519	265	AW00012519		Casey		Gutierrez	FALSE	12/17/197...	S		M	case
12714	157	AW00012714		Colleen		Lu	FALSE	7/17/1973 ...	S		F	colle
12728	131	AW00012728		Jeremiah		Stewart	FALSE	6/26/1979 ...	S		M	jerer
12871	233	AW00012871		Leah		Li	FALSE	10/6/1976 ...	S		F	leah
13671	173	AW00013671		Frank		Ramos	FALSE	2/7/1974 1...	S		M	fran
13826	127	AW00013826		Candice		He	FALSE	11/25/197...	S		F	canc
13830	237	AW00013830		Andrea		Cox	FALSE	8/3/1977 1...	S		F	andri
13838	263	AW00013838		Jill		Rubio	FALSE	6/27/1976 ...	S		F	jill29
14838	121	AW00014838		Darren		Alvarez	FALSE	7/26/1977 ...	S		M	darr
14839	238	AW00014839		Natasha		Sanz	FALSE	5/18/1977 ...	S		F	nata
14840	277	AW00014840		Autumn		Zhu	FALSE	10/23/197...	S		F	autu
14848	186	AW00014848		George		Louverdis	FALSE	9/10/1975 ...	S		M	geor

Customer Date Geography Product Product Category Product Subcategory Internet Sales

Record: 1 of 18,484

9:20 AM 8/13/2016

Diagram View - Table Relationships



Create a PivotTable

1. While in **PowerPivot** click the **PivotTable** button
2. On the **Create PivotTable** screen select **New Worksheet**
 - a. A new PivotTable Worksheet is created
3. Under **PivotTable Fields** do the following
 - a. Go to **Product**. Select **ModelName**
 - b. Go to **Internet Sales**. Select **OrderQuantity**
4. Give it a title
5. Complete. You've created a **PivotTable**

The screenshot shows an Excel workbook with a PivotTable on Sheet3. The PivotTable has 'Row Labels' and 'Sum of OrderQuantity'. The data is as follows:

Row Labels	Sum of OrderQuantity
All-Purpose Bike Stand	249
Bike Wash	908
Classic Vest	562
Cycling Cap	2190
Fender Set - Mountain	2121
Half-Finger Gloves	1430
Hitch Rack - 4-Bike	328
HL Mountain Tire	1396
HL Road Tire	858
Hydration Pack	733
LL Mountain Tire	862
LL Road Tire	1044
Long-Sleeve Logo Jersey	1736
ML Mountain Tire	1161
ML Road Tire	926
Mountain Bottle Cage	2025
Mountain Tire Tube	3095
Mountain-100	396
Mountain-200	3552
Mountain-400-W	543
Mountain-500	479
Patch kit	3191
Racing Socks	568
Road Bottle Cage	1712

The PivotTable Fields task pane on the right shows the following configuration:

- ACTIVE** | **ALL**
- Choose fields to add to report:
 - ☐ weight
 - ☐ DaysToManufacture
 - ☐ ProductLine
 - ☐ DealerPrice
 - ☐ Class
 - ☐ Style
 - ☒ **ModelName**
 - ☐ LargePhoto
- Drag fields between areas below:
 - FILTERS**
 - COLUMNS**
 - ROWS**: ModelNa...
 - VALUES**: Sum of Or...
- ☐ Defer Layout Upda... **UPDATE**

Add a Hierarchy

1. In **PowerPivot** go to table/sheet **Geography**
2. Click the **Diagram View** button
 - a. Find the Geography table in the Diagram View
3. Right Click the table and then Select **Create Hierarchy**
4. Rename the "Hierarchy" to "Region Hierarchy"
5. Drag **EnglishCountryRegionName** to "Region Hierarchy"
6. Drag **StateProvinceName** to "Region Hierarchy" underneath **EnglishCountryRegionName**
7. Click the **Data View** button
8. Go back to your pivot table
9. Under **PivotTable Fields** do the following
 - a. Go to **Geography**. Select **Region Hierarchy**
 - b. Region Hierarchy appears in the **ROWS** section.
10. Drag Region Hierarchy from the **ROWS** section to the **COLUMNS** section
11. Filter PivotTable to display only the **United States**
12. Click the save button, name the workbook "SQLSatIndy-PowerPivotExcelSQLAnalysis" and close the workbook
13. Complete. You've created a **Hierarchy** and added it to your **PivotTable**

The screenshot shows an Excel workbook with a PivotTable. The PivotTable is located in the range C4:D27. The PivotTable Fields task pane is open on the right side of the screen.

PivotTable Data:

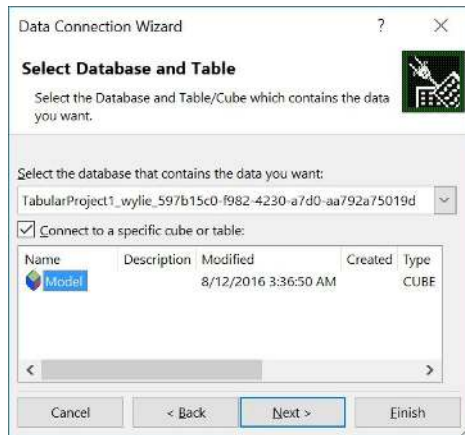
Row Labels	United States	Grand Total
All-Purpose Bike Stand	85	85
Bike Wash	354	354
Classic Vest	229	229
Cycling Cap	680	680
Fender Set - Mountain	989	989
Half-Finger Gloves	538	538
Hitch Rack - 4-Bike	141	141
HL Mountain Tire	662	662
HL Road Tire	343	343
Hydration Pack	273	273
LL Mountain Tire	301	301
LL Road Tire	286	286
Long-Sleeve Logo Jersey	697	697
ML Mountain Tire	440	440
ML Road Tire	234	234
Mountain Bottle Cage	827	827
Mountain Tire Tube	1329	1329
Mountain-100	95	95
Mountain-200	1261	1261
Mountain-400-W	212	212
Mountain-500	180	180
Patch kit	1165	1165
Racing Socks	237	237

PivotTable Fields Task Pane:

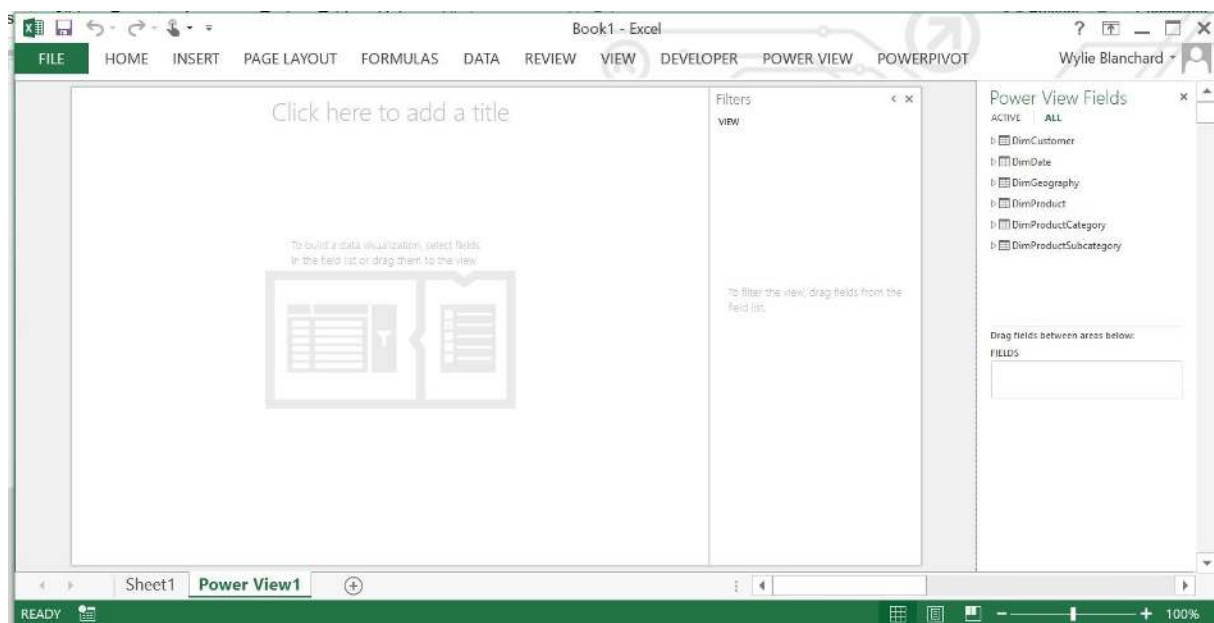
- ACTIVE:** ALL
- Choose fields to add to report:** Customer, Date, Geography (Region Hierarchy), More Fields, Internet Sales, Product.
- Drag fields between areas below:**
 - FILTERS:** Region Hi...
 - COLUMNS:** (Empty)
 - ROWS:** ModelNa...
 - VALUES:** Sum of Or...
- Buttons:** Defer Layout Upda..., UPDATE

Optional: SASS to Power View Quickly

1. Open **MS Excel**
2. Create a blank workbook
3. Go to **Data > From Other Sources > Get External Data > From Analysis Services**
4. In the **Connect to Database Server** screen, in **Server Name**, enter the name of SQL Server Analysis instance where your Tabular Model was deployed.
5. Select your Tabular Model
6. Select **Next**, then click **Finish**

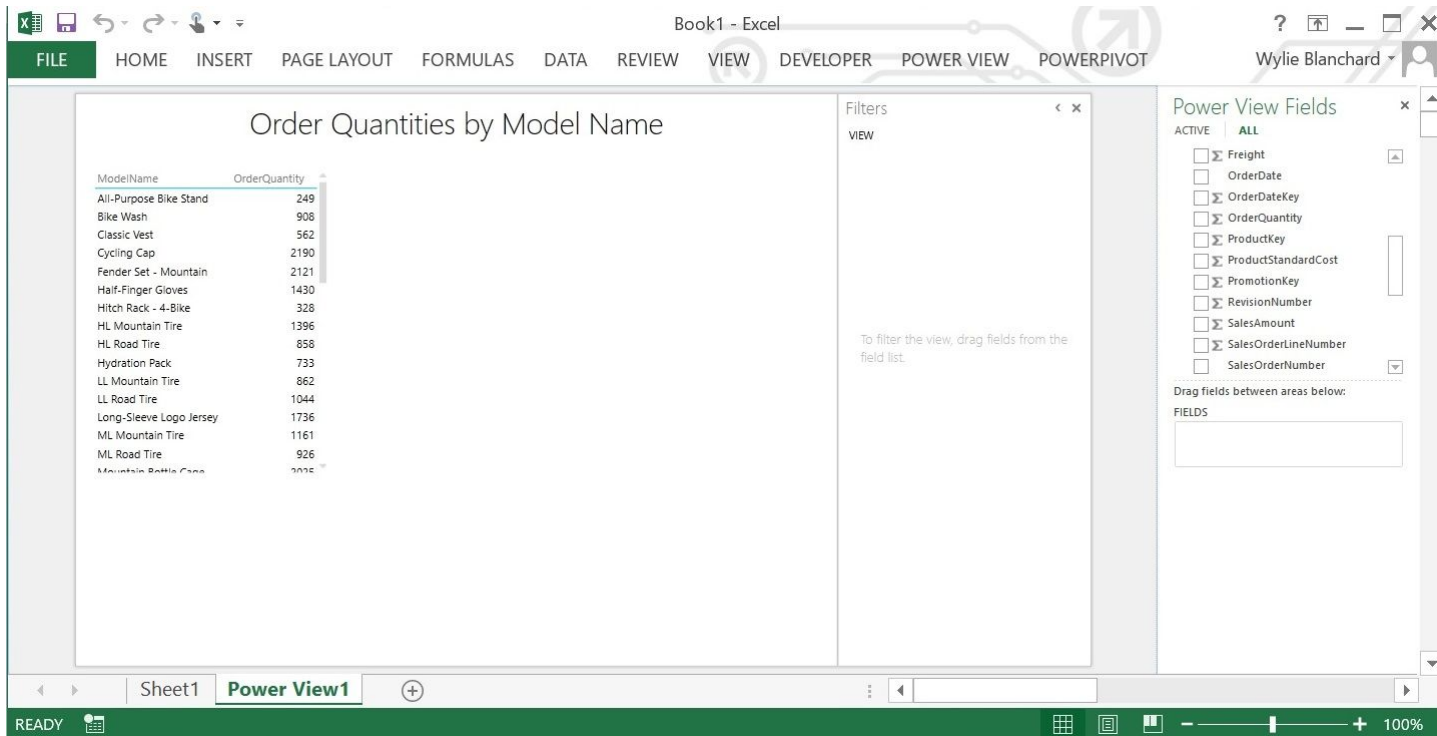


7. On the Import Data screen, select **Power View Report**
8. Excel creates a Power View Sheet with your tabular data model in the Field List.



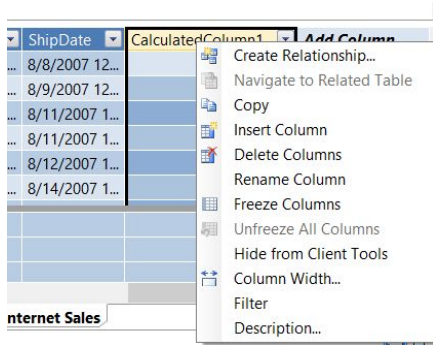
9. In the **Power View Fields** list do the following
 - a. Go to **Product**. Select **ModelName**
 - b. Go to **Internet Sales**. Select **OrderQuantity**
10. Click where it says, “**Click here to add a title**” and type in “**Order Quantities by Model Name**”.
11. Click the save button, name the workbook “SQLSatIndy_SSASToPower View” and close

- the workbook
12. Complete, you've created your first **Power View** report using your **SSAS Tabular Model**



Adding a Calculated Column using DAX

1. Reopen the previously saved workbook "SQLSatIndy-PowerPivotExcelSQLAnalysis"
2. Go to the **PowerPivot** tab at the top of the Workbook
3. Click the **Manage** button
4. Go to a table ("InternetSales")
5. Click a blank column click "**Insert Column**"
 - a. Its default name is **CalculatedColumn1**. By right-clicking on the heading, the following options are presented:



3. Select the **"Rename Column"** option and enter **TotalProfit** as the new column name
4. Create a formula that will subtract the **unit price** (selling price) from the **product cost** (cost to create/sell product) to arrive at the total profit.
 - a. DAX formula = $[\text{UnitPrice}] - [\text{ProductStandardCost}]$

PowerPivot for Excel - Book1.xlsx

File Home Design Advanced

Clipboard: Paste, Copy, Paste Append, Paste Replace, From Database, From Data Service, From Other Sources, Existing Connections, Refresh, PivotTable

Data Type: Auto (Currency) | Format: Currency | Sort Smallest to Largest | Sort Largest to Smallest | Clear Sort | Clear All Filters | Sort by Column | Find | AutoSum | Create KPI

View: Data View, Diagram View, Show Hidden, Calculation Area

[ProductCost]	SalesAmount	TaxAmt	Freight	CarrierTrackingNumber	CustomerPONumber	OrderDate	DueDate	ShipDate	TotalProfit	Add Column
\$9.16	\$24.49	\$1.96	\$0.61			4/19/2008 1...	5/1/2008 ...	4/26/2008 ...	\$15.33	
\$9.16	\$24.49	\$1.96	\$0.61			4/20/2008 1...	5/2/2008 ...	4/27/2008 ...	\$15.33	
\$23.75	\$63.50	\$5.08	\$1.59			4/21/2008 1...	5/3/2008 ...	4/28/2008 ...	\$39.75	
\$9.16	\$24.49	\$1.96	\$0.61			4/21/2008 1...	5/3/2008 ...	4/28/2008 ...	\$15.33	
\$23.75	\$63.50	\$5.08	\$1.59			4/23/2008 1...	5/5/2008 ...	4/30/2008 ...	\$39.75	
\$9.16	\$24.49	\$1.96	\$0.61			4/25/2008 1...	5/7/2008 ...	5/2/2008 1...	\$15.33	
\$23.75	\$63.50	\$5.08	\$1.59			4/26/2008 1...	5/8/2008 ...	5/3/2008 1...	\$39.75	
\$20.57	\$54.99	\$4.40	\$1.37			5/1/2008 12...	5/13/2008...	5/8/2008 1...	\$34.42	
\$20.57	\$54.99	\$4.40	\$1.37			5/1/2008 12...	5/13/2008...	5/8/2008 1...	\$34.42	
\$44.88	\$120.00	\$9.60	\$3.00			5/3/2008 12...	5/15/2008...	5/10/2008 ...	\$75.12	
\$44.88	\$120.00	\$9.60	\$3.00			5/3/2008 12...	5/15/2008...	5/10/2008 ...	\$75.12	
\$44.88	\$120.00	\$9.60	\$3.00			5/4/2008 12...	5/16/2008...	5/11/2008 ...	\$75.12	
\$23.75	\$63.50	\$5.08	\$1.59			5/5/2008 12...	5/17/2008...	5/12/2008 ...	\$39.75	
\$44.88	\$120.00	\$9.60	\$3.00			5/6/2008 12...	5/18/2008...	5/13/2008 ...	\$75.12	
\$9.16	\$24.49	\$1.96	\$0.61			5/7/2008 12...	5/19/2008...	5/14/2008 ...	\$15.33	
\$2.97	\$7.95	\$0.64	\$0.20			5/7/2008 12...	5/19/2008...	5/14/2008 ...	\$4.98	
\$44.88	\$120.00	\$9.60	\$3.00			5/7/2008 12...	5/19/2008...	5/14/2008 ...	\$75.12	

Customer | Date | Geography | Product | Product Category | Product Subcategory | Internet Sales

Record: 8,627 of 60,398

5. Complete, you've created a calculated column using DAX that indicates the total profit

Optional: Add two more Calculated Columns using DAX

1. Product Standard Cost < 25% of Unit Price
 - a. Create an additional column

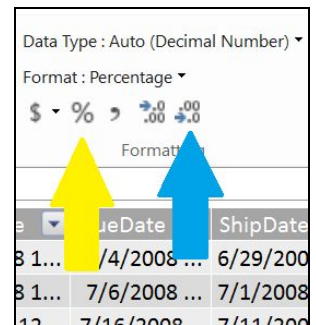
- Name the column "**ProductStandardCost <25%**"
- Apply DAX formula **=([ProductStandardCost]<(.40*[UnitPrice]))**
- Your results should look similar to the image below
- Complete. You've created a **Calculated Column** indicating whether the Product Standard Cost is less than 40% of Unit Price

The screenshot shows the PowerPivot for Excel interface. The formula bar displays the DAX formula: **=([ProductStandardCost]<(.40*[UnitPrice]))**. The table below shows the results of this calculation, with a new column 'ProductStandardCost <25%' added. The data is as follows:

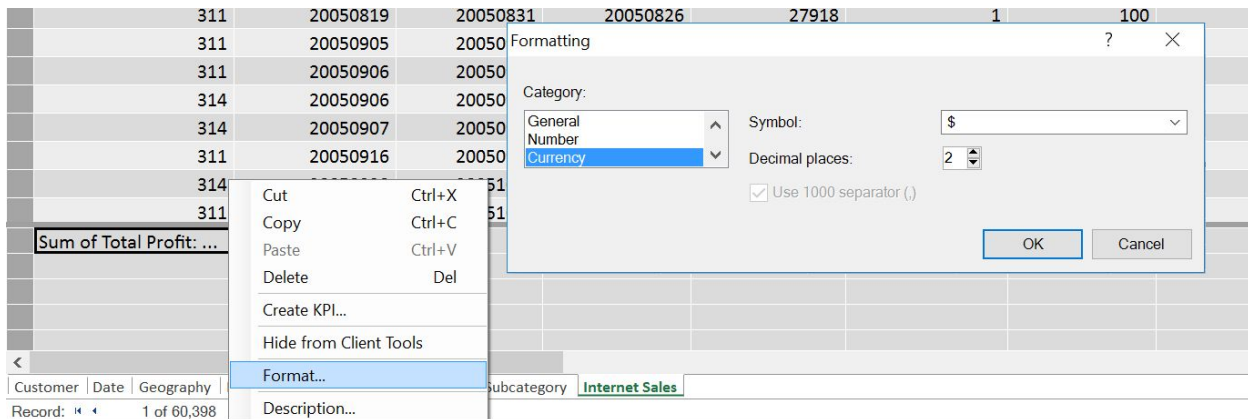
Amount	TaxAmt	Freight	CarrierTrackingNumber	CustomerPONumber	OrderDate	DueDate	ShipDate	TotalProfit	ProductStandardCost <25%
\$4.99	\$0.40	\$0.12			6/22/2008 1...	7/4/2008 ...	6/29/2008 ...	\$3.12	TRUE
\$4.99	\$0.40	\$0.12			6/24/2008 1...	7/6/2008 ...	7/1/2008 1...	\$3.12	TRUE
\$4.99	\$0.40	\$0.12			7/4/2008 12...	7/16/2008...	7/11/2008 ...	\$3.12	TRUE
\$4.99	\$0.40	\$0.12			7/21/2008 1...	8/2/2008 ...	7/28/2008 ...	\$3.12	TRUE
\$4.99	\$0.40	\$0.12			7/22/2008 1...	8/3/2008 ...	7/29/2008 ...	\$3.12	TRUE
\$4.99	\$0.40	\$0.12			7/24/2008 1...	8/5/2008 ...	7/31/2008 ...	\$3.12	TRUE
\$4.99	\$0.40	\$0.12			7/26/2008 1...	8/7/2008 ...	8/2/2008 1...	\$3.12	TRUE
\$3,578.27	\$286.26	\$89.46			7/2/2005 12...	7/14/2005...	7/9/2005 1...	\$1,406.98	FALSE
\$3,578.27	\$286.26	\$89.46			7/14/2005 1...	7/26/2005...	7/21/2005 ...	\$1,406.98	FALSE
\$3,578.27	\$286.26	\$89.46			7/15/2005 1...	7/27/2005...	7/22/2005 ...	\$1,406.98	FALSE
\$3,578.27	\$286.26	\$89.46			7/17/2005 1...	7/29/2005...	7/24/2005 ...	\$1,406.98	FALSE
\$3,578.27	\$286.26	\$89.46			8/5/2005 12...	8/17/2005...	8/12/2005 ...	\$1,406.98	FALSE
\$3,578.27	\$286.26	\$89.46			8/7/2005 12...	8/19/2005...	8/14/2005 ...	\$1,406.98	FALSE
\$3,578.27	\$286.26	\$89.46			8/10/2005 1...	8/22/2005...	8/17/2005 ...	\$1,406.98	FALSE
\$3,578.27	\$286.26	\$89.46			8/18/2005 1...	8/30/2005...	8/25/2005 ...	\$1,406.98	FALSE
\$3,578.27	\$286.26	\$89.46			8/19/2005 1...	8/31/2005...	8/26/2005 ...	\$1,406.98	FALSE
\$3,578.27	\$286.26	\$89.46			9/5/2005 12...	9/17/2005...	9/12/2005 ...	\$1,406.98	FALSE

2. Product Standard Cost % of Unit Price

- Create an additional column
- Name the column "**ProductStandardCost % of UnitPrice**"
- Apply DAX formula **=([ProductStandardCost]/[UnitPrice])**
- Use the **Apply Percentage Format** button
- Use the **Decrease Decimal** button twice
- Your results should look similar to the image below
- Complete. You've created a Calculated Column displaying difference between Product Standard Cost and Unit Price as a percentage

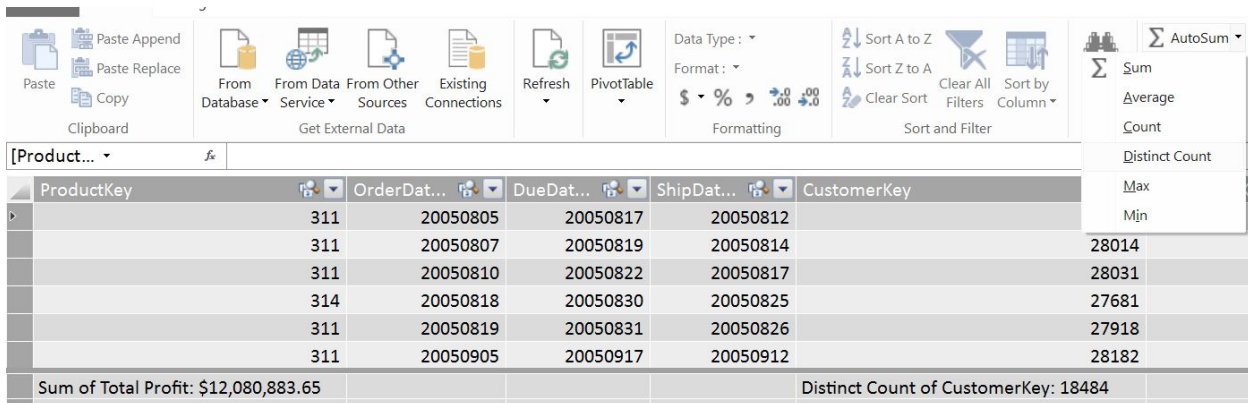


3. Right click the cell in the **Calculation Area**
4. From list, select **Format**
 - a. The **Formatting** window opens
5. Select the following in the **Formatting** window
 - a. Category = Currency
 - b. Symbol = \$
 - c. Decimal places = 2
6. Click **OK**
7. Complete. You've created a **Measure** to sum the total profit



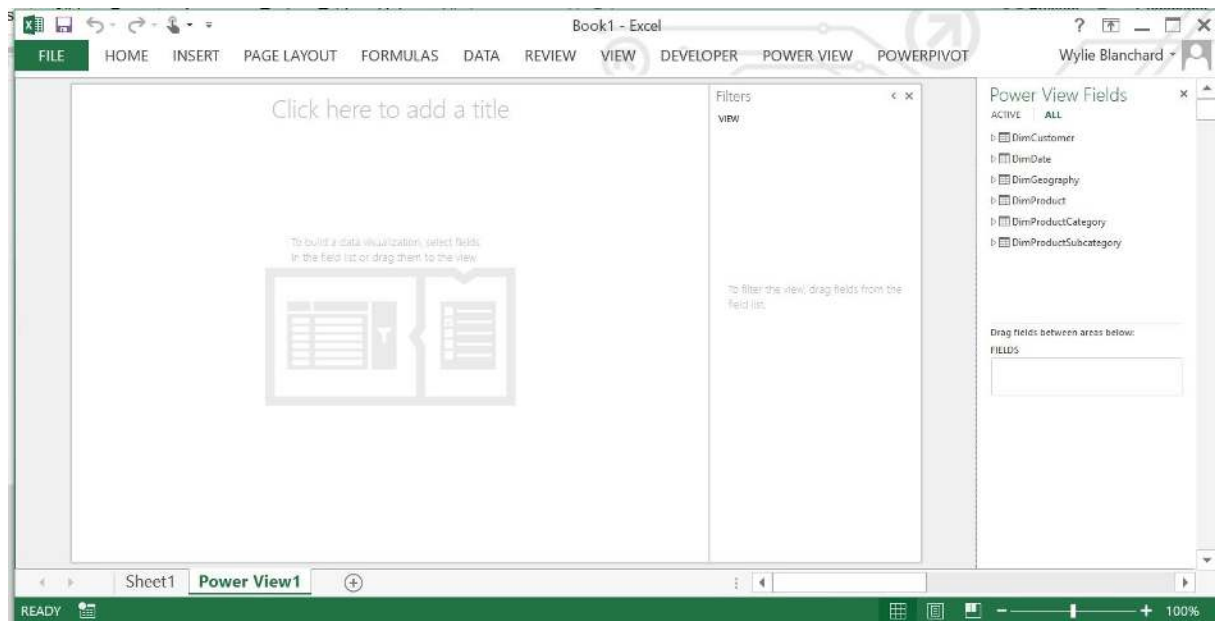
Optional: Add another Measure

1. Click and Highlight the CustomerKey column
2. Then go to the **AutoSum** button and click the drop down symbol.
3. Select **Distinct Count**
4. Complete. You've created a **Measure** to count each unique customer key



Create a PowerPivot Workbook

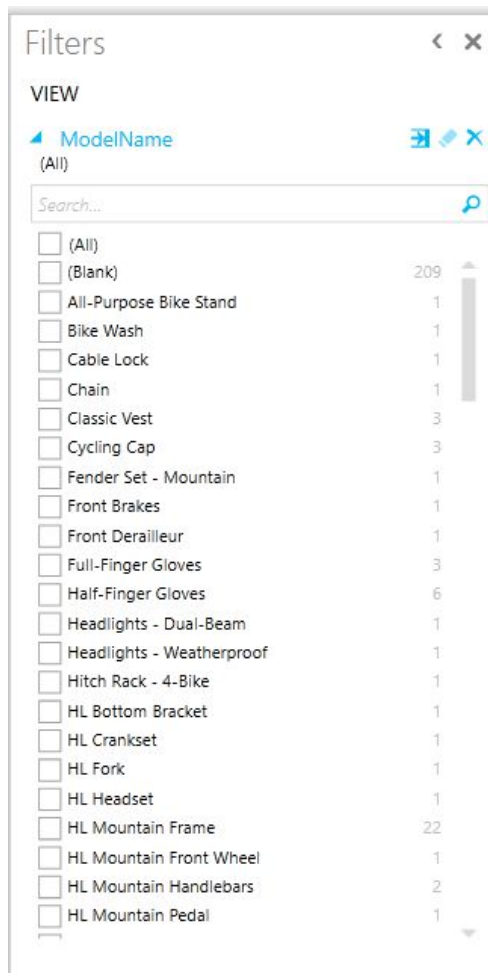
1. Navigate back to your excel workbook to display your previously created PivotTable
2. Using the top Ribbon, go to Insert and then click the Power View button
3. Excel creates a Power View Sheet with your data model in the Field List



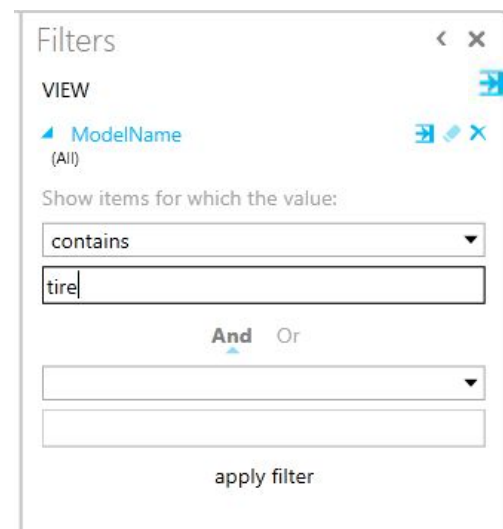
4. In the **Power View Fields** list do the following
 - a. Go to **Product**. Select **ModelName**
 - b. Go to **Internet Sales**. Select **OrderQuantity**
5. Click where it says, “**Click here to add a title**” and type in “**Order Quantities by Model Name**”.
6. Complete, you’ve created your another **Power View** report using your **SSAS Tabular Model**

Filter the data in Power View using Measure

1. In the Power View Fields Pane, Go to **Product** and find **ModelName**
2. Drag **ModelName** to the **Filter** pane
 - a. The table ModelName and its Columns will display under the Filter pane



3. Click on the **Advanced Filter Mode** button next to ModelName in the Filter pane
4. In the text box under **contains** type "tire"
5. Click **apply filter**
6. The Power View table displays the order quantities for tires only
7. Complete, you've applied a filter to your **Power View** table

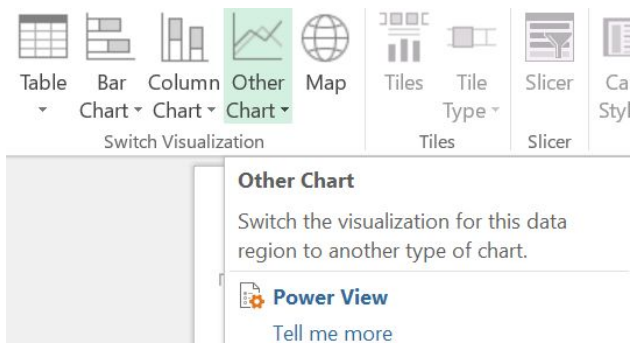


Order Qua

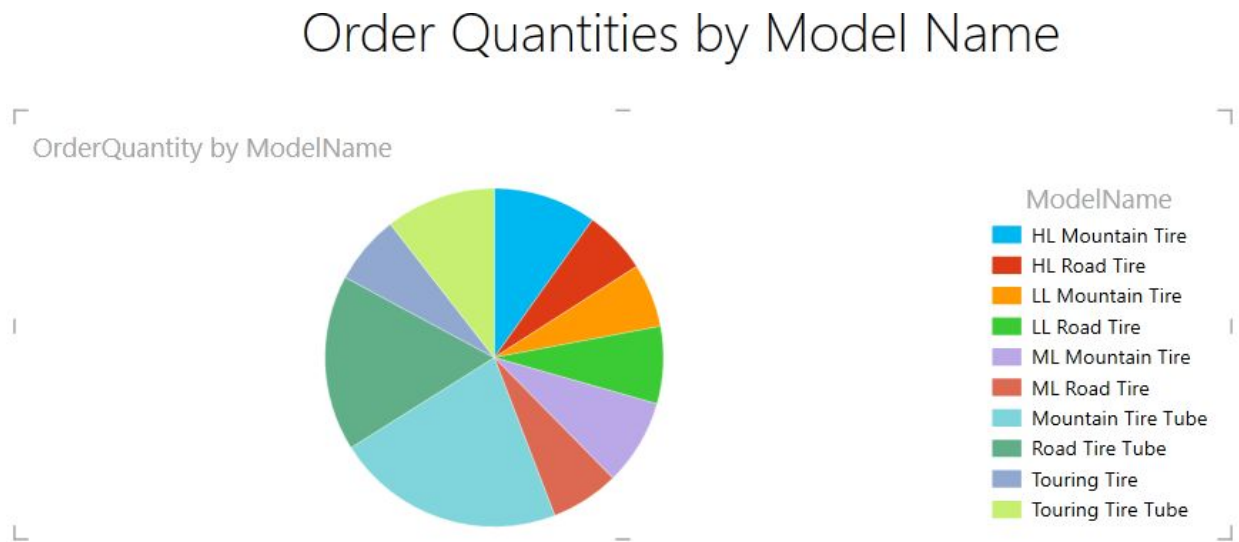
ModelName	OrderQuantity ▲
HL Road Tire	858
LL Mountain Tire	862
ML Road Tire	926
Touring Tire	935
LL Road Tire	1044
ML Mountain Tire	1161
HL Mountain Tire	1396
Touring Tire Tube	1488
Road Tire Tube	2376
Mountain Tire Tube	3095
Total	14141

Visualize your Data

1. Click the table
2. Go to the **Design** tab in the **Ribbon**
3. In the **Switch Visualization** section, click the **Other Chart** button



4. The table changes to a chart with a legend



5. **Right click** the chart and select the **Copy** option
6. **Right click** the chart and select the **Paste** button
 - a. A duplicate chart is created
7. Click on one of the charts and then using the top **Ribbon**:
 - a. select the **Column Chart** button in the **Switch Visualization** section
 - b. Select **Stacked Column**, which changes the visualization to a different chart type

Note: Interactivity: By clicking on any part of either chart, the visualization will interact and react to your selection by highlighting/emphasizing your specific

Note: Interactivity: Direct your mouse/pointer to any portion of your chart - PowerView will display additional data about that specific section

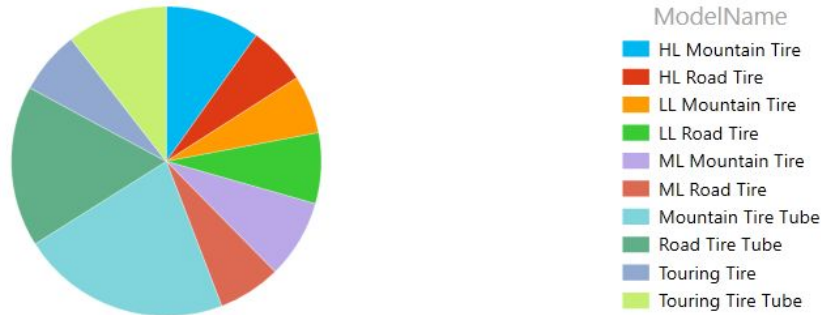
Note: Use the **Filters** pane to change data is displayed in your visualization what is displayed in your charts

Note: You can change or add to the view by making additional selection from the **Power View Fields** pane

8. Click the **Save** button
9. Complete, you've created a **Power View** visualization of your analyzed data

Order Quantities by Model Name

OrderQuantity by ModelName

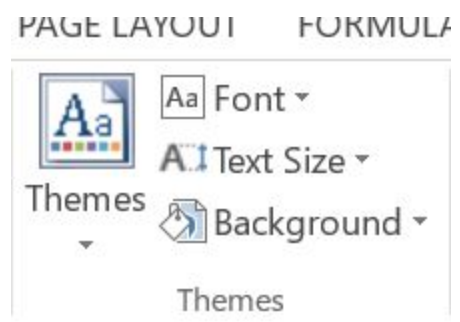


OrderQuantity by ModelName

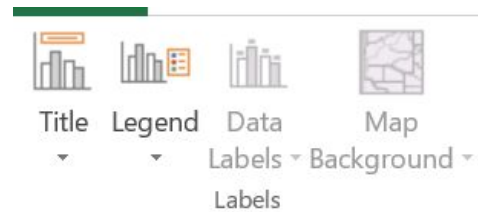


Optional: Power View Themes

8. Using the top Ribbon, click on the **Power View** tab
9. In the **Themes** section there are several options that allow you to further change your visualization
 - a. Themes
 - b. Fonts
 - c. Text Size
 - d. Background
10. Utilize each option to further enhance your Power View Visualization



11. Using the top Ribbon, click on the **Layout** tab
12. In the **Labels** section there are several options that allow you to further change your visualization



- a. Title
 - b. Legend
 - c. Data Labels
 - d. Mao Background
13. Utilize each option to further enhance your Power View Visualization
14. Complete, you've further enhanced your **Power View** report