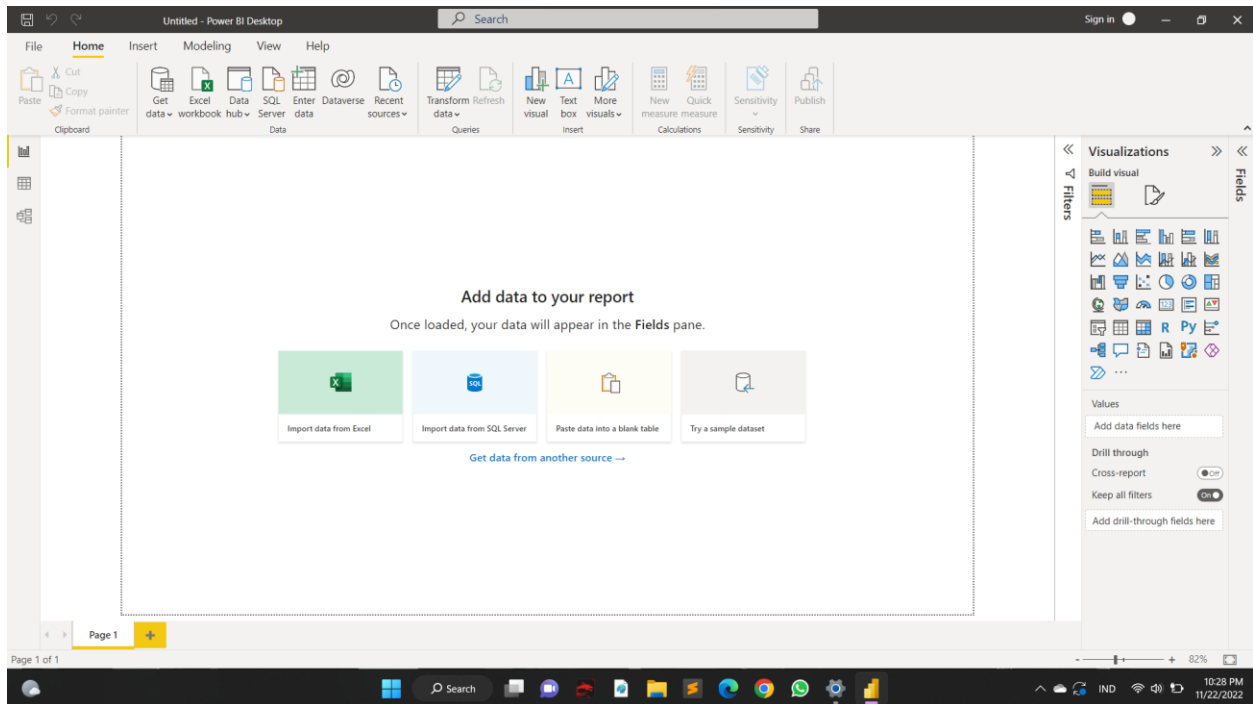


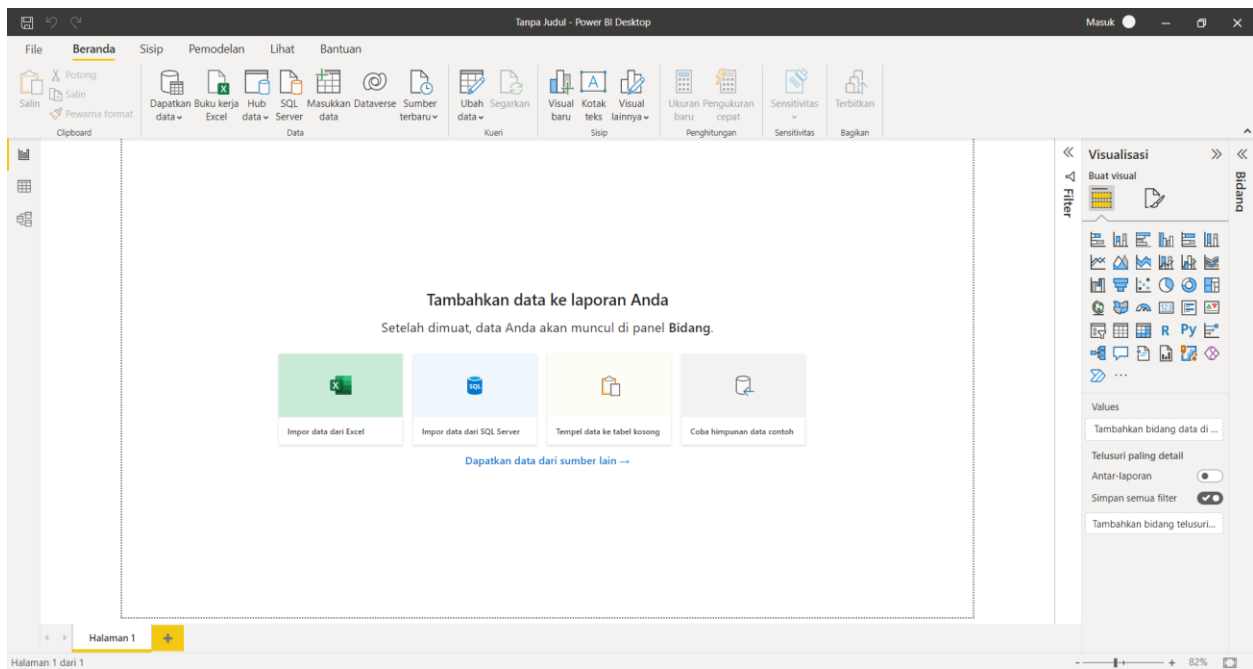
Nama : Monang Limbong
Kelas : 191402082

Tugas 2 Data Warehouse dan Bisnis Intelligence

Unduh PowerBI dan Install.



Tampilan PowerBI setelah di Install



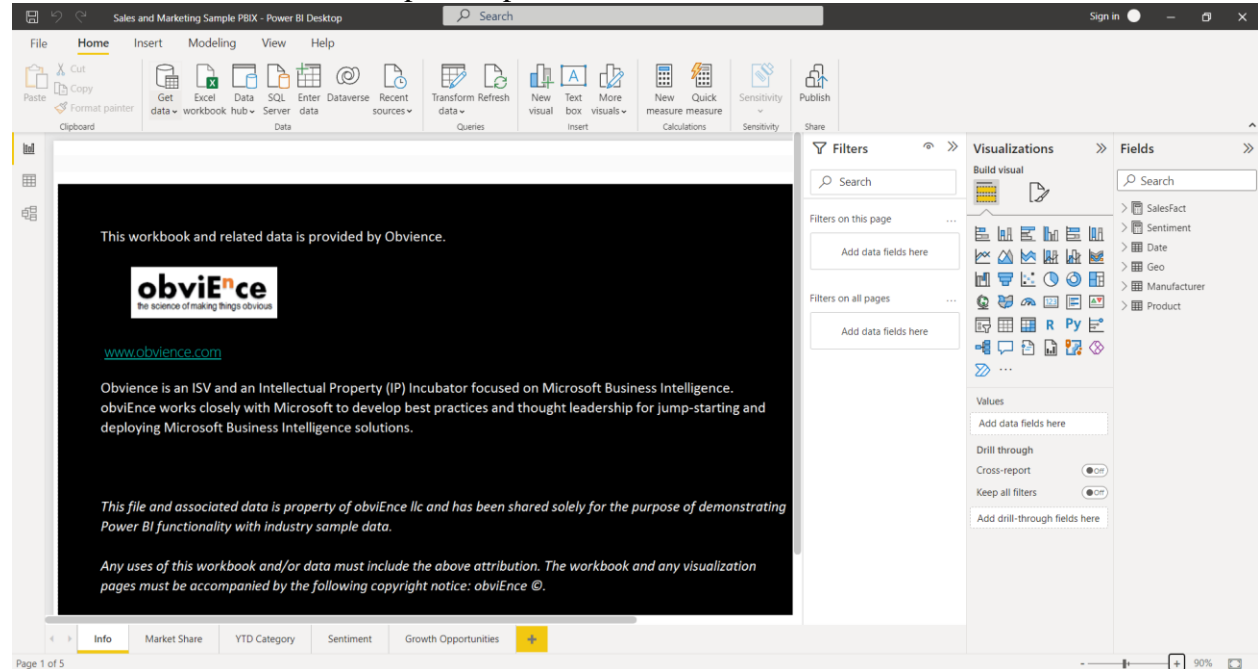
1. BUILDING BLOCKS OF PowerBI

A.VISUALIZATION

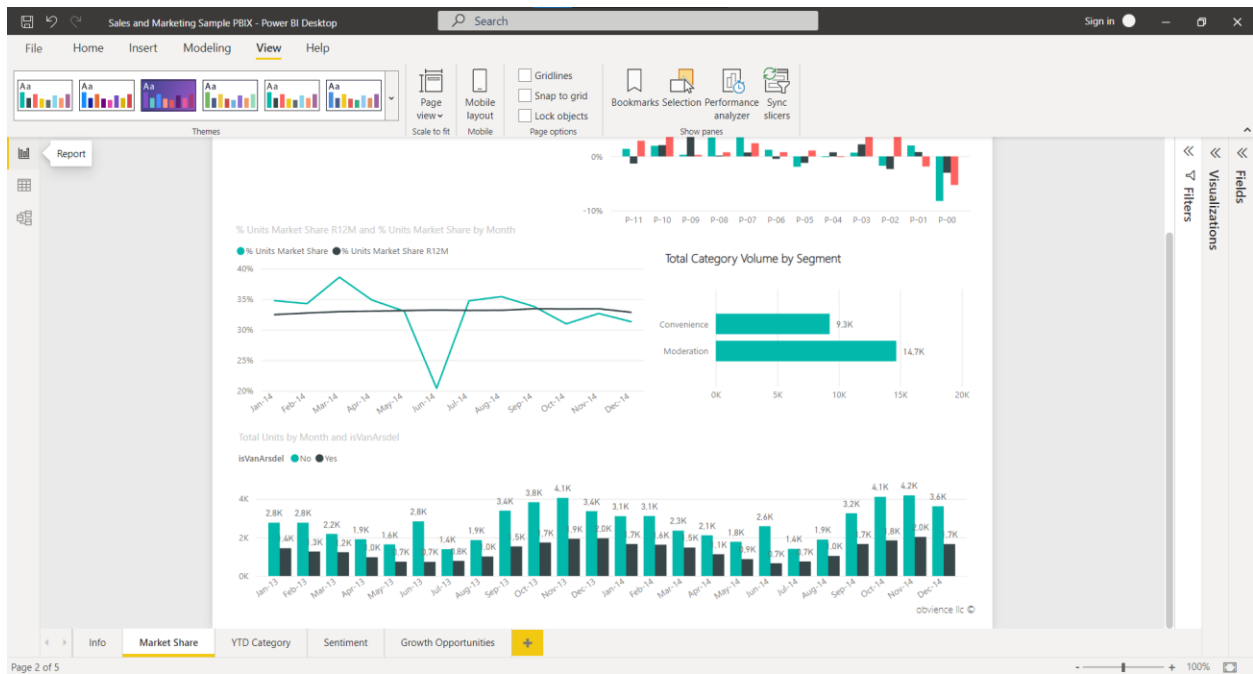
- Open Report file **Sales and Marketing Sample PBIX**

Dengan cara **File > Open Report > Browse reports > This PC** , lalu pilih filenya.

Kemudian akan beralih ke tampilan seperti berikut



- Pilih **Report View** pada bagian kiri interface PowerBI , dan pilih **Market Share** pada tab Report di bagian bawah. Kemudian Minimize **Filters** , **Visualizations** dan **Fields** agar bisa melihat data pada desktop secara fullscreen



B. DATASETS

Pilih **Data** pada bagian kiri Interface powerBI , dan pada panel **Fields** di sebelah kanan, pilih tabel **Product** untuk menampilkan data pada tabel tersebut.

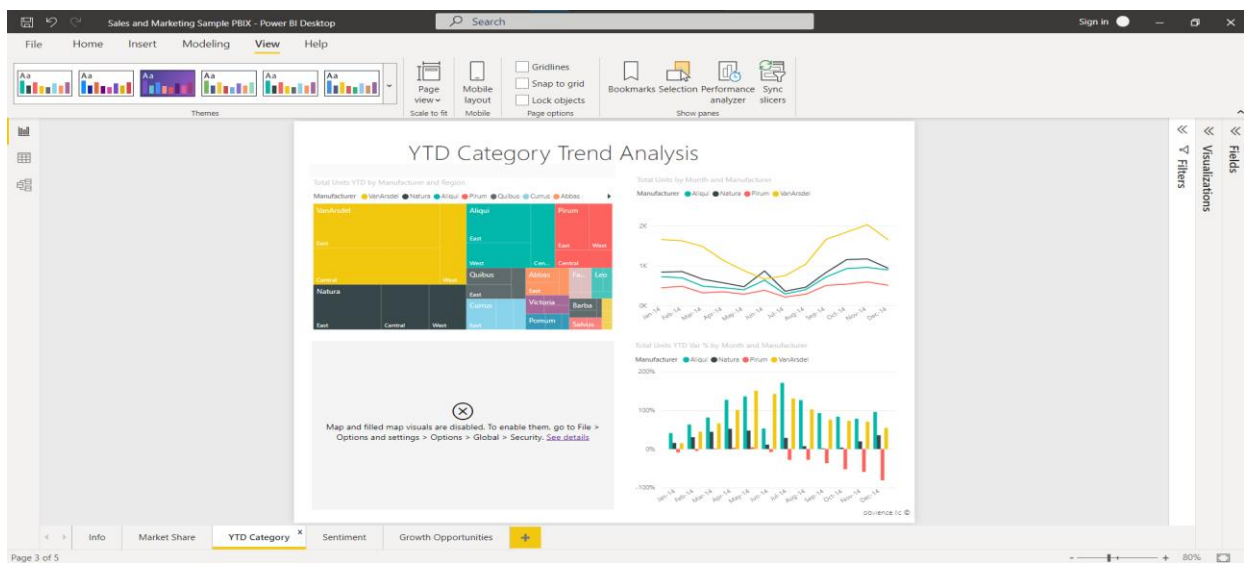
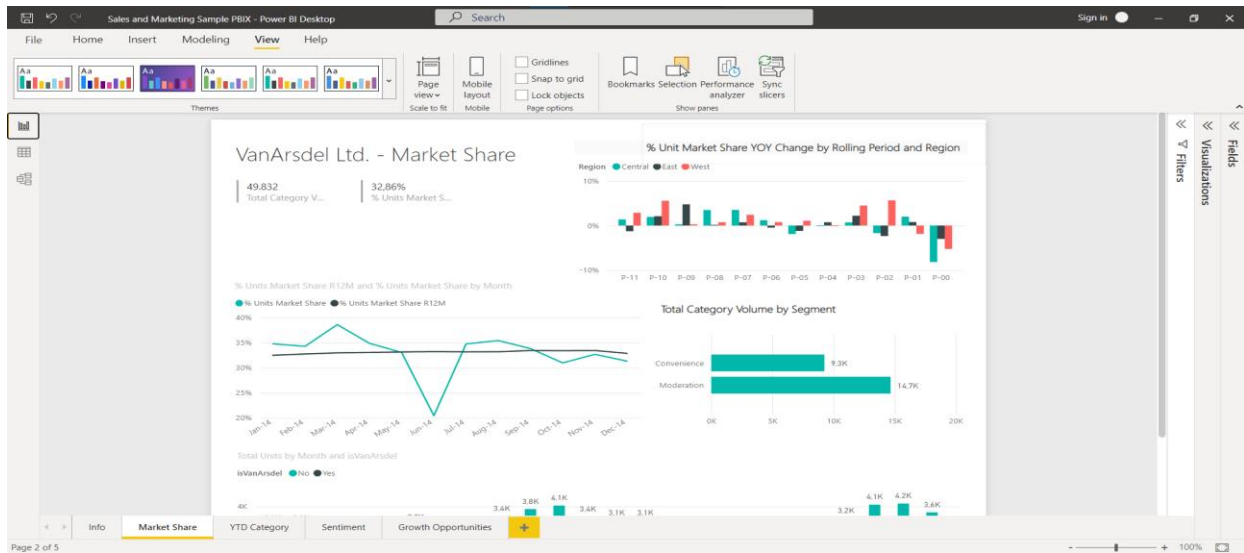
The screenshot displays the Power BI Desktop interface with the 'Table tools' ribbon selected. The 'Table' view is selected, showing a table with the following columns: Manufacturer, Category, Segment, Product, ProductID, isVanArsdel, IsCompetetide, ManufacturerID, and IsCompete. The 'Fields' panel on the right shows the 'Product' table selected.

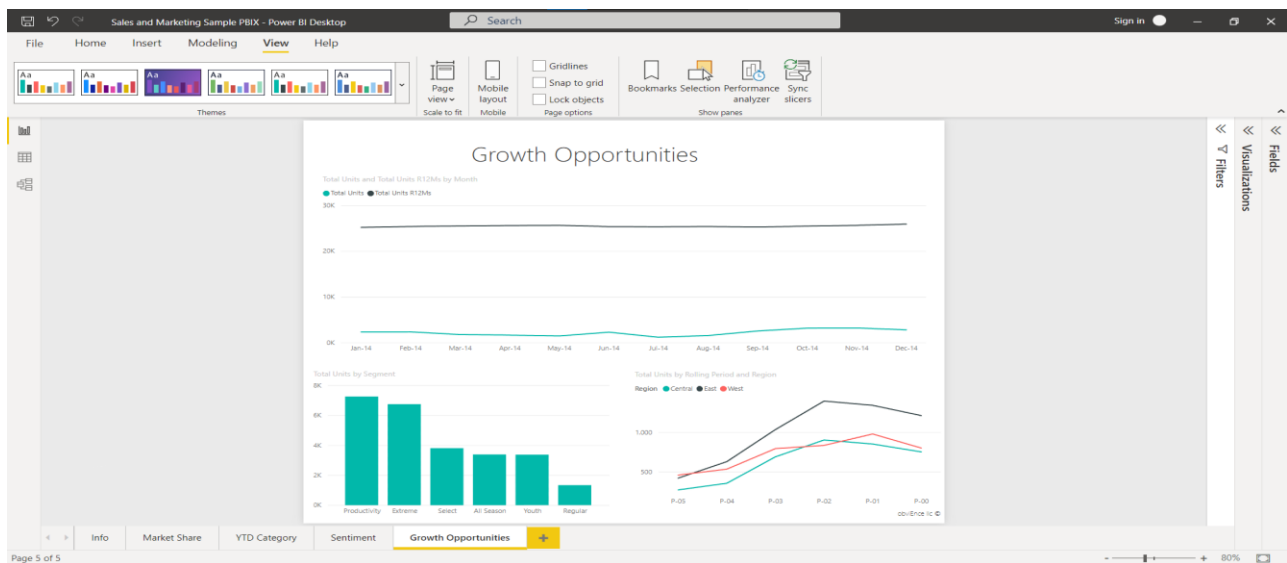
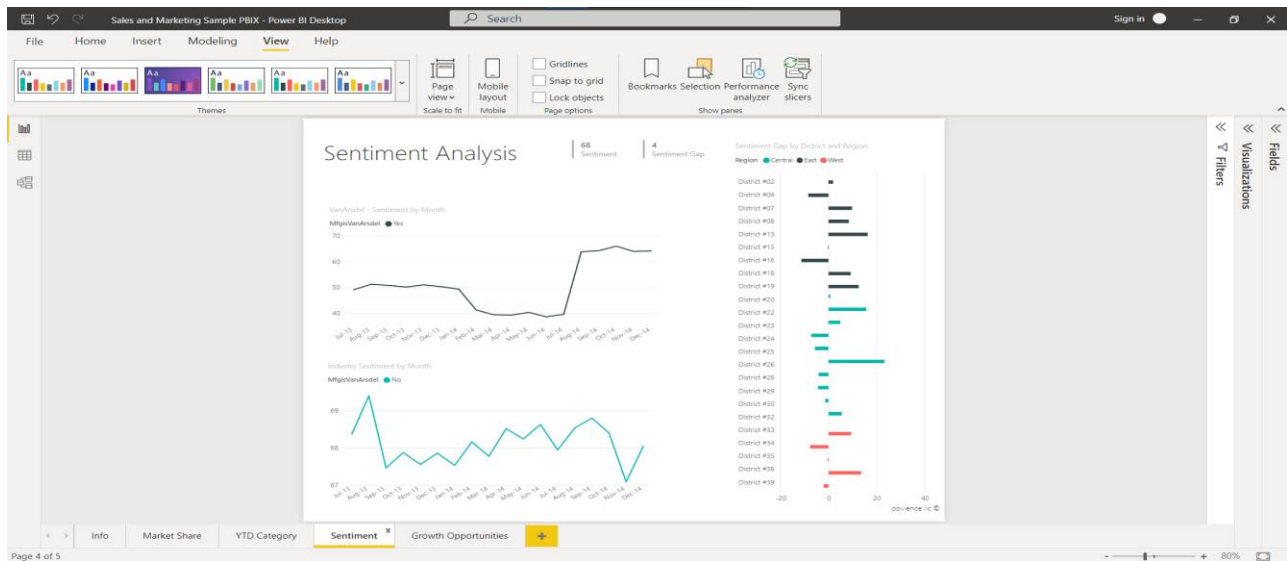
Manufacturer	Category	Segment	Product	ProductID	isVanArsdel	IsCompetetide	ManufacturerID	IsCompete
VanArsdel	Urban	Convenience	Maximus UC-01	536	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-02	537	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-03	538	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-04	539	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-05	540	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-06	541	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-07	542	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-08	543	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-09	544	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-10	545	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-11	546	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-12	547	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-13	548	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-14	549	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-15	550	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-16	551	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-17	552	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-18	553	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-19	554	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-20	555	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-21	556	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-22	557	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-23	558	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-24	559	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-25	560	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-26	561	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-27	562	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-28	563	Yes	N		7 No

Table: Product (2,412 rows)

C. REPORTS

Pilih **Reports** pada bagian kiri Interface powerBI , dan lakukan eksplorasi pada **content** yang tersedia di masing – masing report page yang ada.





Pada setiap **Report** terdapat **Dashboard** dan **Tiles** , misalnya pada **Market Share** sebagai contoh, keseluruhan page Market Share disebut sebagai **Dashboard**, dan Units Market Share R12M and % Units Market Share by Month adalah contoh **Tile**.

VanArsdel Ltd. - Market Share

49,832

Total Category V...

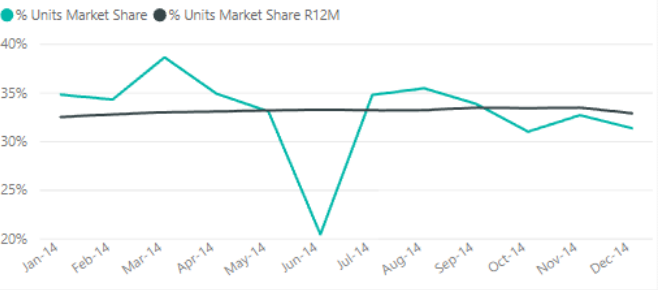
32,86%

% Units Market S...

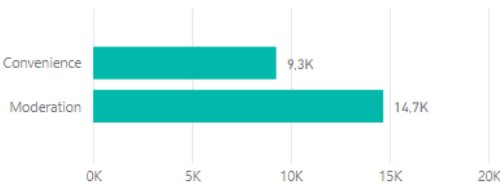
% Unit Market Share YOY Change by Rolling Period and Region



% Units Market Share R12M and % Units Market Share by Month

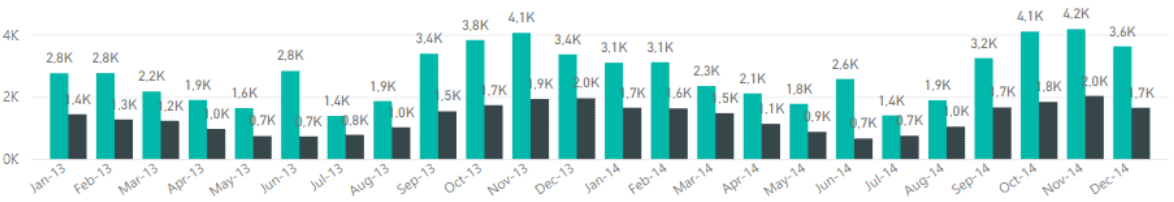


Total Category Volume by Segment



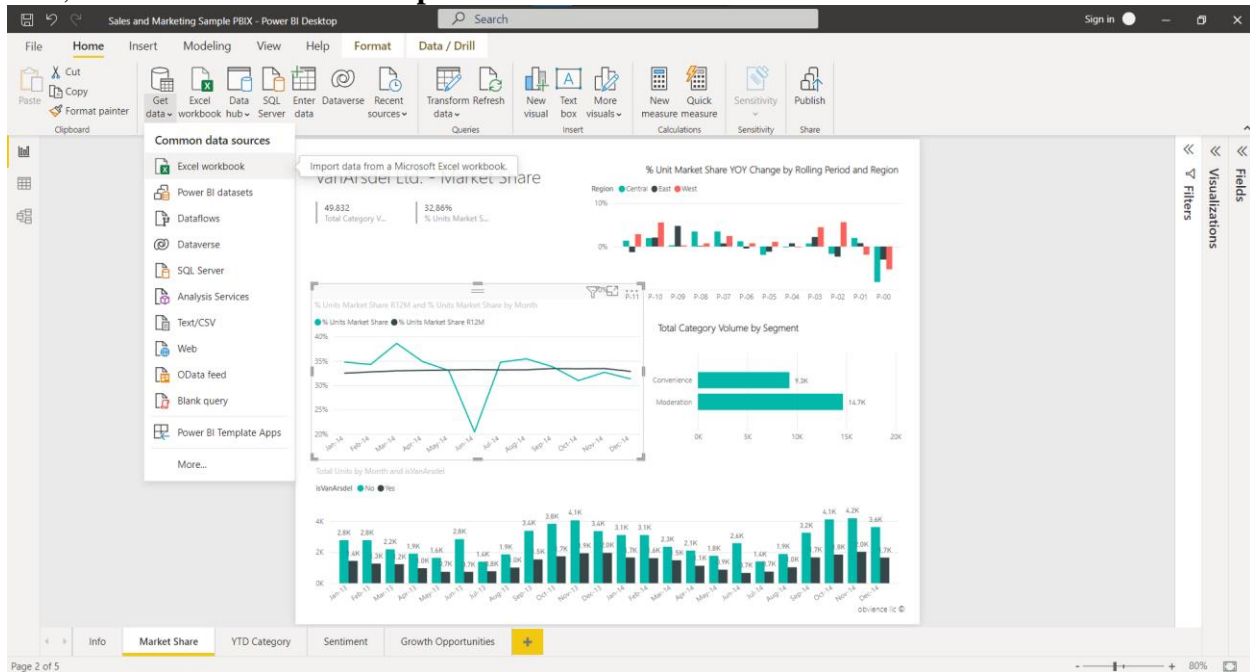
Total Units by Month and isVanArsdel

isVanArsdel ● No ● Yes



2. Load, Clean, and Transform Data in Power BI

Pada Tab **Home** , pilih **Get Data > Excel workbook** , kemudian pilih **Home Folder Support files**, dan **Select Financial Sample To Clean.xlsx**.



Kemudian centang to clean kemudian pilih **Transform Data** untuk melakukan load data ke **Power Query Editor**.

The screenshot shows the 'Transform Data' dialog box in the Power BI Desktop interface. The 'to clean' checkbox is checked. The dialog box displays a table with the following data:

Column1	Column2	Column3	Column4	Column5
Segment	Country	Product	Discount Band	
Government	Canada	Carretera	None	
Government	Germany	Carretera	None	
Midmarket	France	Carretera	None	
Midmarket	Germany	Carretera	None	
Midmarket	Mexico	Carretera	None	
Government	Germany	Carretera	None	
Midmarket	Germany	Montana	None	
Channel Partners	Canada	Montana	None	
Government	France	Montana	None	
Channel Partners	Germany	Montana	None	
Midmarket	Mexico	Montana	None	
Enterprise	Canada	Montana	None	
Small Business	Mexico	Montana	None	
Government	Germany	Montana	None	
Midmarket	United States of America	Montana	None	
Government	Canada	Paseo	None	
Midmarket	Mexico	Paseo	None	
Channel Partners	Canada	Paseo	None	
Government	Germany	Paseo	None	
Channel Partners	Germany	Paseo	None	

File yang terlihat disini masih kurang rapi, Maka kita perlu membuat row 2 menjadi Headers.

Disebelah kiri Column 1 Klik tanda panah dan pilih **Use First Row as Headers** dan ulangi lagi sampai row 2 sebelumnya , menjadi Headers.

Queries [1] | to clean | = Source{[Item="to clean",Kind="Sheet"]}[Data]

Column1	Column2	Column3	Column4	Column5	Column6	Column7
		Product	Discount Band	Units Sold	Manufacturing Price	Sale Price
		Carretera	None	1618,5	3	
		Carretera	None	1321	3	
		Carretera	None	2178	3	
		Carretera	None	888	3	
		Carretera	None	2470	3	
		Carretera	None	1513	3	
		Montana	None	921	5	
		Montana	None	2518	5	
		Montana	None	1899	5	
		Montana	None	1545	5	
		Montana	None	2470	5	
		Montana	None	2665,5	5	
		Montana	None	958	5	
		Montana	None	2146	5	
		Montana	None	615	5	
		Paseo	None	292	10	
		Paseo	None	974	10	
		Paseo	None	2518	10	
		Paseo	None	1006	10	
		Paseo	None	367	10	
		Paseo	None	883	10	
		Paseo	None	2472	10	
		Paseo	None	1143	10	
		Paseo	None	1817	10	
		Paseo	None	1513	10	

17 COLUMNS. 999+ ROWS | Column profiling based on top 1000 rows

Kemudian hasilnya seperti ini:

Query Settings | Name: to clean | All Properties | APPLIED STEPS: Source, Navigation, Changed Type, Promoted Headers, Changed Type1, Promoted Headers1, Changed Type2

Segment	Country	Product	Discount Band	Units Sold	Manufacturing Price	Sale Price
Government	Canada	Carretera	None	1618,5	3	
Government	Germany	Carretera	None	1321	3	
Midmarket	France	Carretera	None	2178	3	
Midmarket	Germany	Carretera	None	888	3	
Midmarket	Mexico	Carretera	None	2470	3	
Government	Germany	Carretera	None	1513	3	
Midmarket	Germany	Montana	None	921	5	
Channel Partners	Canada	Montana	None	2518	5	
Government	France	Montana	None	1899	5	
Channel Partners	Germany	Montana	None	1545	5	
Midmarket	Mexico	Montana	None	2470	5	
Enterprise	Canada	Montana	None	2665,5	5	
Small Business	Mexico	Montana	None	958	5	
Government	Germany	Montana	None	2146	5	
Midmarket	United States of America	Montana	None	615	5	
Government	Canada	Paseo	None	292	10	
Midmarket	Mexico	Paseo	None	974	10	
Channel Partners	Canada	Paseo	None	2518	10	
Government	Germany	Paseo	None	1006	10	
Channel Partners	Germany	Paseo	None	367	10	
Government	Mexico	Paseo	None	883	10	
Midmarket	Mexico	Paseo	None	2472	10	
Government	United States of America	Paseo	None	1143	10	
Government	Canada	Paseo	None	1817	10	
Government	Germany	Paseo	None	1513	10	
Government	Mexico	Velo	None	1493	120	
Enterprise	France	Velo	None	1804	120	

mn profiling based on top 1000 rows | PREVIEW DOWNLOADED AT 10:46

Scroll kanan , ke kolom **Month Info** , rename Column name menjadi **Date**.

ABC 123	Month Info
	Date
	1 Jan 2014
	1 Jan 2014
	1 Jun 2014
	1 Jun 2014
	1 Jun 2014
	1 Jun 2014
	1 Des 2014
	1 Mar 2014
	1 Jun 2014
	1 Jun 2014
	1 Jun 2014
	1 Jun 2014
	1 Jul 2014
	1 Agu 2014
	1 Sep 2014
	1 Des 2014
	1 Feb 2014
	1 Feb 2014
	1 Jun 2014
	1 Jun 2014
	1 Jul 2014
	1 Agu 2014



ABC 123	Date
	Date
	1 Jan 2014
	1 Jan 2014
	1 Jun 2014
	1 Jun 2014
	1 Jun 2014
	1 Jun 2014
	1 Des 2014
	1 Mar 2014
	1 Jun 2014
	1 Jun 2014
	1 Jun 2014
	1 Jun 2014
	1 Jul 2014
	1 Agu 2014
	1 Sep 2014
	1 Des 2014
	1 Feb 2014
	1 Feb 2014
	1 Jun 2014
	1 Jun 2014
	1 Jul 2014
	1 Agu 2014
	1 Sep 2014
	1 Okt 2014
	1 Des 2014
	1 Des 2014
	1 Jan 2014

Pada **Column16** juga, rename Column menjadi **Year**.

[illegible][illegible]

Kemudian **Remove Top Row**, karena datanya **null**.

FileHomeTransformAdd ColumnViewToolsHelp

Close & Apply

New

Recent

Enter Data

Data source settings

Manage Parameters

Refresh Preview

Advanced Editor

Choose Columns

Remove Columns

Keep Rows

Remove Rows

Remove Top Rows

Remove Bottom Rows

Remove Alternate Rows

Remove Duplicates

Remove Blank Rows

Remove Errors

Properties

Query

Manage Columns

Reduce

Split Column

Group By

Data Type: Text

Use First Row as Headers

Replace Values

Merge Queries

Append Queries

Combine Files

Text Analytics

Vision

Azure Machine Learning

Queries [7]

Product

SalesFact

Date

Geo

Sentiment

Manufacturer

to clean

fx

= Table.RenameColumns(#"Changed Type2",{{"Month Info"

Remove Top Rows

Remove Bottom Rows

Remove Alternate Rows

Remove Duplicates

Remove Blank Rows

Remove Errors

1.2 Units Sold

1.2 Manufacturing Price

1.2 Sale Price

1.2 Units Sold	1.2 Manufacturing Price	1.2 Sale Price
null	null	null
1618,5	3	
1321	3	
2178	3	
888	3	
2470	3	
1513	3	
921	5	
2518	5	
1899	5	
1545	5	
2470	5	
2665,5	5	
958	5	
2146	5	
615	5	
292	10	

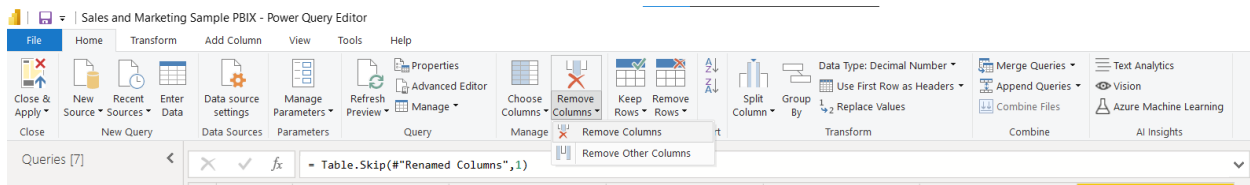
Hasilnya

fx

= Table.Skip(#"Renamed Columns",1)

1.2 Units Sold	1.2 Manufacturing Price	1.2 Sale Price
1618,5	3	
1321	3	
2178	3	
888	3	
2470	3	
1513	3	
921	5	
2518	5	
1899	5	
1545	5	
2470	5	
2665,5	5	
958	5	
2146	5	
615	5	
292	10	
974	10	
2518	10	
1006	10	
367	10	
883	10	
2472	10	
1143	10	
1817	10	
1513	10	
1493	120	
1804	120	
2161	120	

Kemudian pilih **Column17** , pada **Home** , pilih **Remove Columns**.



Maka **Column17** sudah tidak ada lagi pada data di Power Query Editor tersebut.

A ^B _C Month Name	A ^B _C Year	1.2 Column17
January	2014	814028,68
January	2014	814028,68
June	2014	1473753,82
June	2014	1473753,82
June	2014	1473753,82
December	2014	2717329,98
March	2014	669866,87
June	2014	1473753,82
June	2014	1473753,82
June	2014	1473753,82
June	2014	1473753,82
July	2014	923865,68
August	2014	791066,42
September	2014	1786735,27
December	2014	2717329,98
February	2014	1148547,39
February	2014	1148547,39
June	2014	1473753,82
June	2014	1473753,82
July	2014	923865,68
August	2014	791066,42
September	2014	1786735,27
October	2014	3439781,02
December	2014	2717329,98
December	2014	null
January	2014	null
February	2014	null
March	2014	null



A ^B _C Month Name	A ^B _C Year
January	2014
January	2014
June	2014
June	2014
June	2014
December	2014
March	2014
June	2014
June	2014
June	2014
June	2014
July	2014
August	2014
September	2014
December	2014
February	2014
February	2014
June	2014
June	2014
July	2014
August	2014
September	2014
October	2014
December	2014
December	2014
January	2014
February	2014
March	2014

Sekarang dengan cara yang sama seperti sebelumnya Lakukan Remove Columns lagi, tapi sisakan 3 Column yaitu **Segment**, **Country** dan **Sales**.

= Table.RemoveColumns(#"Removed Top Rows",{ "Column17", "Product", "Discount Band", "Units Sold", "Manufacturing Price", "Sale Price", "Gross

	AB_C Segment	AB_C Country	1.2 Sales
1	Government	Canada	32370
2	Government	Germany	26420
3	Midmarket	France	32670
4	Midmarket	Germany	13320
5	Midmarket	Mexico	37050
6	Government	Germany	529550
7	Midmarket	Germany	13815
8	Channel Partners	Canada	30216
9	Government	France	37980
10	Channel Partners	Germany	18540
11	Midmarket	Mexico	37050
12	Enterprise	Canada	333187,5
13	Small Business	Mexico	287400
14	Government	Germany	15022
15	Midmarket	United States of America	9225
16	Government	Canada	5840
17	Midmarket	Mexico	14610
18	Channel Partners	Canada	30216
19	Government	Germany	352100
20	Channel Partners	Germany	4404
21	Government	Mexico	6181
22	Midmarket	Mexico	37080
23	Government	United States of America	8001
24	Government	Canada	36340
25	Government	Germany	529550
26	Government	Mexico	10451
27	Enterprise	France	225500
28	Channel Partners	Germany	25932

Kemudian pilih **Remove Blank Rows**.

ng Sample PBIX - Power Query Editor

er ta

Add Column View Tools Help

Data source settings Manage Parameters Refresh Preview Properties Advanced Editor Manage Choose Columns Remove Columns Keep Rows Remove Rows Split Column Group By Data Type: Text Use First Row Replace Value

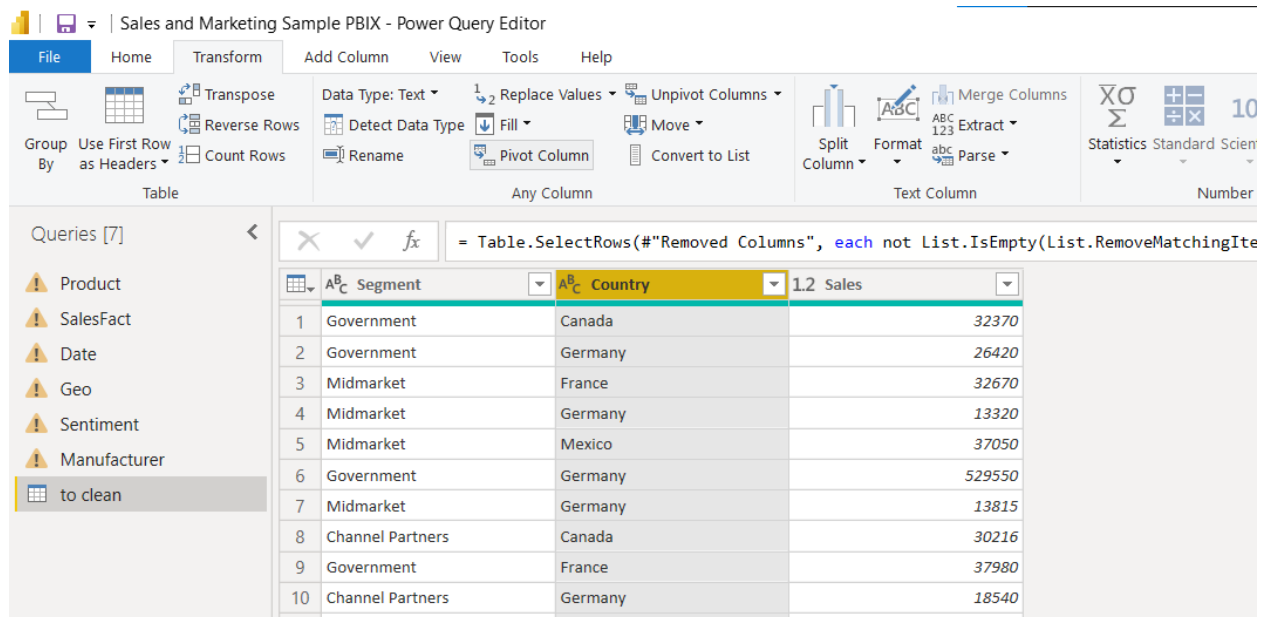
Data Sources Parameters Query Manage Columns Reduce

Remove Top Rows Remove Bottom Rows Remove Alternate Rows Remove Duplicates Remove Blank Rows Remove Errors

fx = Table.SelectRows("#Removed Errors", each not List.I

	Segment	Country	Sales
1	Government	Canada	
2	Government	Germany	
3	Midmarket	France	32670
4	Midmarket	Germany	13320
5	Midmarket	Mexico	37050

Berikutnya Pilih Column **Country** , dan Pada tab **Transform** pilih **Pivot Column**.



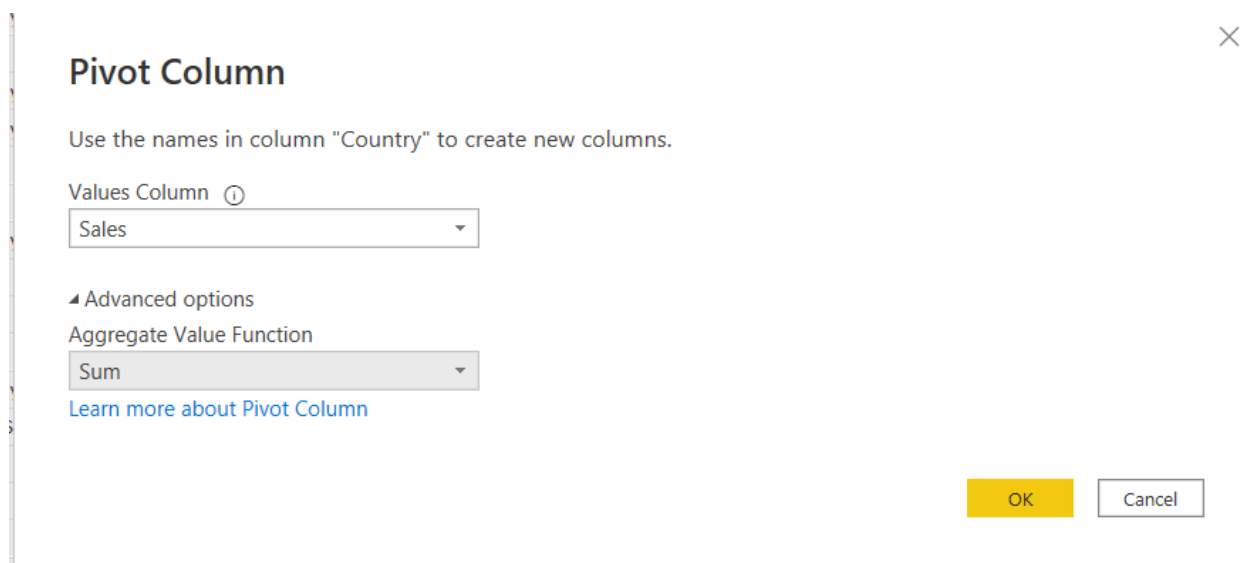
Queries [7]

- Product
- SalesFact
- Date
- Geo
- Sentiment
- Manufacturer
- to clean

Formula Bar: `= Table.SelectRows(#"Removed Columns", each not List.IsEmpty(List.RemoveMatchingItems(`

	Segment	Country	Sales
1	Government	Canada	32370
2	Government	Germany	26420
3	Midmarket	France	32670
4	Midmarket	Germany	13320
5	Midmarket	Mexico	37050
6	Government	Germany	529550
7	Midmarket	Germany	13815
8	Channel Partners	Canada	30216
9	Government	France	37980
10	Channel Partners	Germany	18540

Pada tab berikut, Pilih **Sales** sebagai Values Column dan **Sum** sebagai Aggregate Value Function , kemudian OK.



Pivot Column

Use the names in column "Country" to create new columns.

Values Column ⓘ

Sales

Advanced options

Aggregate Value Function

Sum

[Learn more about Pivot Column](#)

OK Cancel

Kemudian Hasilnya kita dapat melihat Total Sales dari setiap Segment, berdasarkan negara yang merupakan data dari Column “Country”.

✕ ✓ fx		= Table.Pivot(#"Removed Blank Rows", List.Distinct(#"Removed Blank Rows"[Country]), "Country", " Sales", List.Sum)					▼
AB	Segment	1.2 Canada	1.2 Germany	1.2 France	1.2 Mexico	1.2 United States of America	
1	Channel Partners	491164,14	336425,88	372090,36	234379,08	366534,18	
2	Enterprise	3967491,25	4086826,25	3890890,625	3315881,25	4350605	
3	Government	10741236,52	11452895,94	12127782,72	9791599,38	8390746,11	
4	Midmarket	510213,975	301344,75	593802,075	511136,4	465385,875	
5	Small Business	9177549	7327848	7369606,5	7096356	11456559	