

Power BI Tutorial

Veera Muangsin

Power BI

- A business intelligence software by Microsoft
- <https://powerbi.microsoft.com/>
- <https://community.powerbi.com/t5/Data-Stories-Gallery/bd-p/DataStoriesGallery>



Trade in Europe

a9126030767

like 250



Global Super Store

mwadhwani

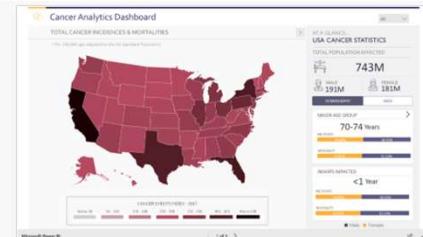
like 235



Climate Change is Real

ravalib

like 228



Cancer Analytics

mmatey

like 208



Meat, to eat or not to eat? Narrative statistics

a9126030767

like 180



Executive Insights by Decisive Data

jolsby

like 179



Pharma Sales Analysis

Anonymous



Inventory Stock Analysis

rkarivalagan

like 153

Power BI Products

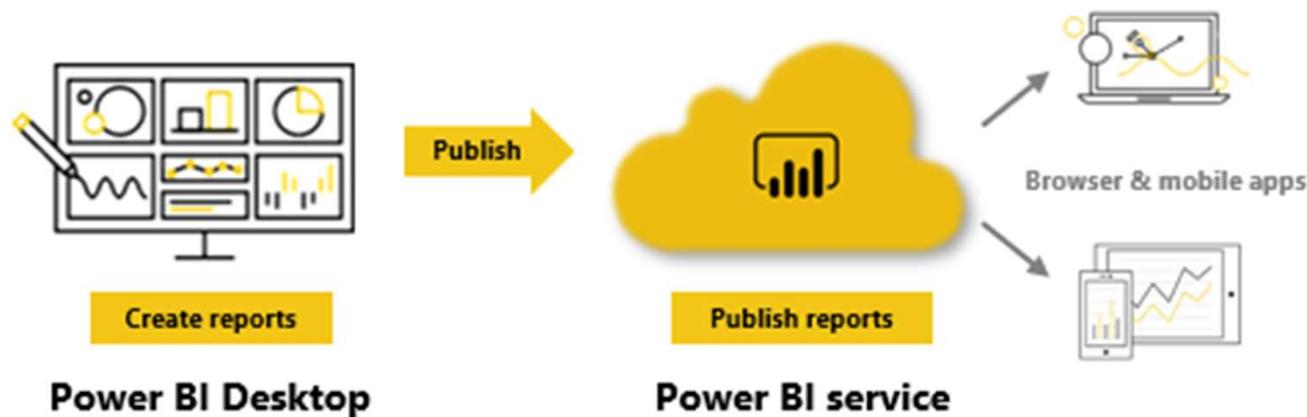
Product Name	Product Type	OS	Main Usage
Power BI Desktop	Installed program	Windows	Creating reports
Power BI Service	Web app	Any (run on browser)	Sharing reports, dashboard
Power BI Mobile	Mobile app	Windows, iOS, Android	Viewing

License

- **Free**
 - Basic cloud services
- **Power BI Pro**
 - Main features: sharing data and reports with other Pro users
 - \$9.99/user/month

Power BI Desktop vs Power BI Service

- Power BI Desktop is for creating content. Power BI Service is for sharing content.
- Power BI Service can also create content, but it lacks data preparation and editing features.
- Most users work with Power BI Desktop to produce reports and make them available to the Power BI Service for collaboration and sharing.



Power BI alternatives

- Tableau
 - Desktop app
 - \$70/month, free for students
 - <https://www.tableau.com/academic/students>
- Google Data Studio
 - Web app
 - Free
 - <https://datastudio.google.com/>

How is this tutorial organized?

- Most contents are based on Power BI Desktop.
- For non-Windows users, some tutorial for Power BI Service is also given.
 - The differences between desktop and online versions are mostly related to storage. The main application is quite the same.
- Due to frequent updates, the screen-captured images may be different from the current version of the program.

Getting Started with Power BI Desktop

For *Getting Started with Power BI Service* [click here](#)

Power BI Desktop

- <https://powerbi.microsoft.com/en-us/desktop/>



Go from data to insight to action with
Power BI Desktop

Create rich, interactive reports with visual analytics at your fingertips—for free.

Download free >

See download or language options >

Power BI Desktop: first page

The screenshot shows the Power BI Desktop application window titled "Untitled - Power BI Desktop". The ribbon bar at the top has tabs for File, Home (which is selected), Insert, Modeling, View, and Help. The Home tab contains several groups of icons: Data (Paste, Cut, Copy, Format painter, Get data from Excel, workbook datasets, Power BI Server, SQL Server, Enter data, Dataverse, Recent sources), Queries (Transform data, Refresh data, New visual, Text box, More visuals), Insert (New measure, Quick measure, Sensitivity, Publish), and Share.

The main workspace is titled "Add data to your report" and includes instructions: "Once loaded, your data will appear in the Fields pane." It features four buttons: "Import data from Excel", "Import data from SQL Server", "Paste data into a blank table", and "Try a sample dataset". Below these buttons is a link "Get data from another source →".

The right side of the screen displays the "Visualizations" pane, which lists various visualization types like Bar chart, Line chart, Map, etc., with a "Build visual" button. The "Fields" pane is also visible on the far right.

At the bottom left, there are navigation buttons for "Page 1" and a plus sign for adding new pages. The bottom status bar shows "Page 1 of 1".

Samples

<https://docs.microsoft.com/en-us/power-bi/create-reports/sample-datasets#download-original-sample-power-bi-files>

Download original sample .pbix Power BI files

Six of the built-in samples are also available as Power BI *.pbix* files. The *.pbix* files are designed to be used with Power BI Desktop.

1. Download the files individually using these links. Selecting these links saves the file automatically to your Downloads folder.

- Customer Profitability Sample PBIX ↗
- Human Resources Sample PBIX ↗
- Procurement Analysis Sample PBIX ↗
- **Retail Analysis Sample PBIX ↗**
- Sales and Marketing Sample PBIX ↗
- Supplier Quality Analysis Sample PBIX ↗

2. In Power BI Desktop, select **File > Open**, navigate to the location where you saved the sample *.pbix* file, and select the *.pbix* file to open it in Power BI Desktop.

Retail Analysis Sample PBIX

This screenshot shows the Power BI Desktop interface for the "Retail Analysis Sample PBIX" file. The ribbon at the top has tabs for File, Home (selected), Insert, Modeling, View, and Help. The Home tab contains various icons for data management (Get data, Excel, Power BI, SQL, Enter data, Dataverse, Recent sources), visualization creation (Transform data, New visual, Text box, More visuals), calculations (New measure, Quick measure), and sharing (Sensitivity, Publish). The left sidebar includes sections for Filters, Visualizations, and Fields, each with search bars and specific icons for different types of data fields and visualizations. The main workspace displays a dark-themed dashboard with a central text area containing attribution information for obviEnce. At the bottom, a page selector shows "Info" (highlighted with a red oval), "Overview" (highlighted with a red oval), "District Monthly Sales", "New Stores", and a plus sign icon.

This workbook and related data is provided by obviEnce.

obviEnce
the science of making things obvious

www.obvience.com

ObviEnce is an ISV and an Intellectual Property (IP) Incubator focused on Microsoft Business Intelligence. obviEnce works closely with Microsoft to develop best practices and thought leadership for jump-starting and deploying Microsoft Business Intelligence solutions.

This file and associated data is property of obviEnce llc and has been shared solely for the purpose of demonstrating Power BI functionality with industry sample data.

Any uses of this workbook and/or data must include the above attribution. The workbook and any visualization pages must be accompanied by the following copyright notice: obviEnce ©.

page selector

Info Overview District Monthly Sales New Stores +

Retail Analysis Sample PBIX

Retail Analysis Sample PBIX - Power BI Desktop

Search

Veera Muangsin

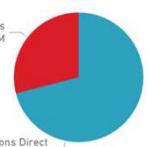
File Home Insert Modeling View Help

Cut Copy Format painter Paste Get data workbook hub Data SQL Server Enter data Dataverse Recent sources Transform Refresh data New visual Text box More visuals New measure Quick measure Sensitivity Publish Share

Clipboard Data

Store Sales Overview

This Year Sales by Chain



104 Total Stores

10 New Stores

This Year Sales by PostalCode and Store Type



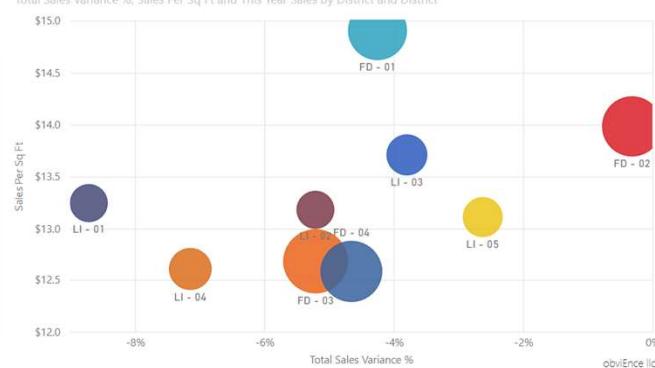
Total Sales Variance by FiscalMonth and District Manager



Legend:

- DM: Allan Guinot, Andrew Ma, Annelie Zubar, Brad Sutton, Carlos Grilo, Chris Gray, Chris McGurk, Tina Lassila, Valery Ushakov

Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District



Filters

Search

Filters on this page

- Chain is (All)
- City is (All)
- District is (All)
- Name is (All)
- Open Month is (All)
- Store Type is (All)

Add data fields here

Values

Drill through

Cross-report Off

Keep all filters On

Add drill-through fields here

Filters on all pages

Add data fields here

Visualizations

Build visual

Sales District Item Store Time

Data

Search

Info Overview District Monthly Sales New Stores +

Page 2 of 4

73%

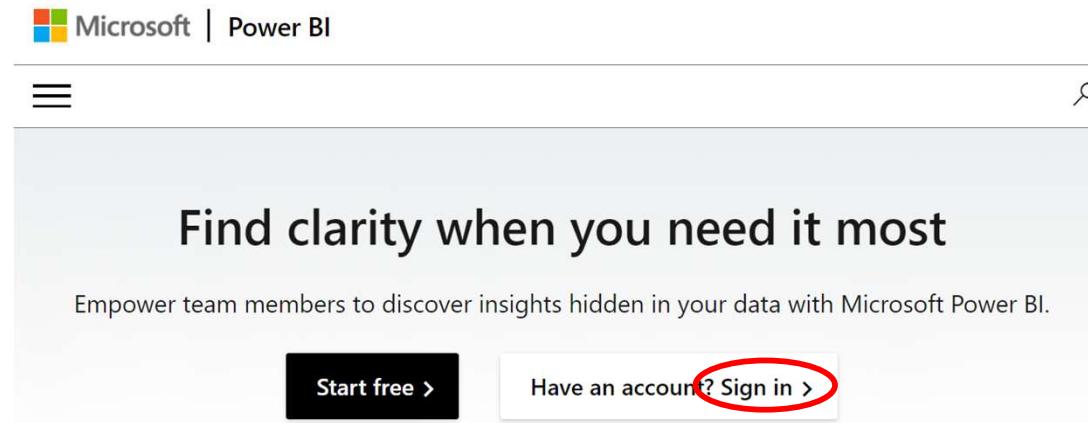
Getting Started with Power BI Service

For *Getting Started with Power BI Desktop* [click here](#)

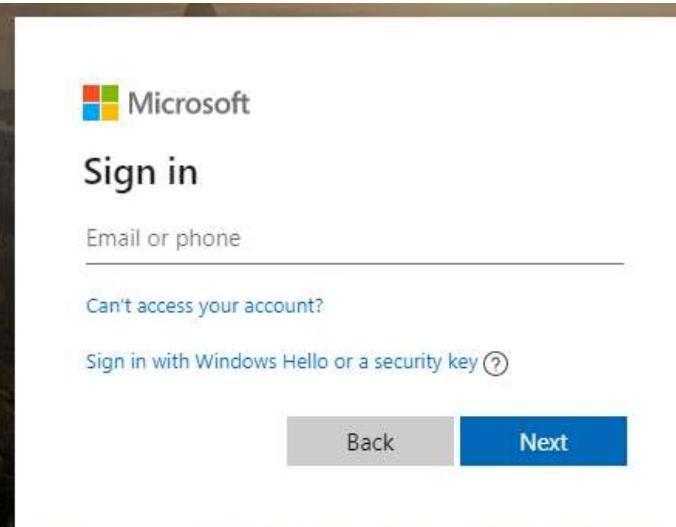
Power BI Service

<https://app.powerbi.com>

<https://powerbi.microsoft.com/en-us/>



Sign-in with Office 365 account



Microsoft Office365 at Chula

- About Microsoft Office365
<https://www.it.chula.ac.th/en/service/en-office365/>
- Sign-in with student account
63xxxxxxxx@student.chula.ac.th
- Same password as CUNET account

Power BI Service: Home

https://app.powerbi.com/home

Power BI Home

+ New report

New items saved to : My workspace

Recommended

You frequently open this

Retail Analysis Sample

You frequently open this

My workspace

Getting started with Power BI

Explore basic Power BI concepts

Explore this data story

Explore the 100 most useful produ...

Cancer statistics

Recent

Favorites

My apps

Filter by keyword

Filter

Icon	Name	Type	Opened	Location	Endorsement	Sensitivity
Report icon	Retail Analysis Sample	Report	now	My workspace	—	—
Dashboard icon	income_vs_lifeexpectancy_table.xlsx	Dashboard	now	My workspace	—	—
Workspace icon	My workspace	Workspace	now	Workspaces	—	—

Get a sample report

https://app.powerbi.com/learn

Power BI Learn

Search

Home

Create

Browse

Data hub

Metrics

Apps

Learn

Workspaces

My workspace

Learning center

Your hub for all Power BI training

Learn how to use Power BI

Dig into the documentation

Join the Power BI community

Start learning

Read docs

Join in

1

2

Sample reports

Retail Analysis Sample

Sales and Marketing Sample

Supplier Quality Analysis Sample

< >

The screenshot shows the Power BI Learning center interface. On the left, there's a vertical sidebar with icons for Home, Create, Browse, Data hub, Metrics, Apps, Learn (which is circled in red and has a red number '1' below it), Workspaces (with a red arrow pointing to it), and My workspace. The main area is titled 'Learning center' and describes it as 'Your hub for all Power BI training'. It features three main sections: 'Learn how to use Power BI' (with a 'Start learning' button), 'Dig into the documentation' (with a 'Read docs' button), and 'Join the Power BI community' (with a 'Join in' button). Below these are 'Sample reports' including 'Retail Analysis Sample' (circled in red and has a red number '2' below it), 'Sales and Marketing Sample', and 'Supplier Quality Analysis Sample'. A navigation arrow at the bottom right is also circled in red.

Report

Power BI My workspace

Retail Analysis Sample | Data updated 4/10/23

Pages

Overview

District Monthly Sales

New Stores

District Sales Report

Metrics

Apps

Learn

Workspaces

My workspace

File Export Share Chat in Teams Get insights Subscribe to report Edit

Search

Filters

This Year Sales by Chain

Lindseys \$6M

Fashions Direct \$16M

Store Sales Overview

10 New Stores

104 Total Stores

Total Sales Variance by FiscalMonth and District Manager

District Manager

- Allan Guinot
- Andrew Ma
- Annelie Zubar
- Brad Sutton
- Carlos Grilo
- Chris Gray
- Chris McGurk
- Tina Lassila
- Valery Ushakov

This Year Sales by PostalCode and Store Type

Store Type

- New Store
- Same Store

UNITED STATES

Sales Per Sq Ft

Total Sales Variance %

FD - 01

LI - 01

LI - 02

LI - 03

LI - 04

LI - 05

FD - 02

FD - 03

FD - 04

80%

Filters on this page

Chain is (All)

City is (All)

District is (All)

Name is (All)

Open Month is (All)

Store Type is (All)

Report: Edit mode

Power BI My workspace

Retail Analysis Sample | Data updated 4/10/23

Search

File View Reading view Mobile layout

Home Create Browse Data hub Metrics Apps Learn Workspaces My workspace

Store Sales Overview

This Year Sales by Chain

Lindseys \$6M Fashions Direct \$16M

10 New Stores 104 Total Stores

This Year Sales by PostalCode and Store Type

Store Type: New Store Same Store

Map of the United States showing store locations by postal code.

Total Sales Variance by Fiscal Month and District Manager

District Manager: Allan Guinot, Andrew Ma, Annelie Zubar, Brad Sutton, Carlos Grilo, Chris Gray, Chris McGurk, Tina Lassila, Valery Ushakov

Jan Feb Mar Apr May Jun Jul Aug

Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District

Sales Per Sq Ft: LI - 01, LI - 02, LI - 03, LI - 04, LI - 05, FD - 01, FD - 02, FD - 03, FD - 04

Total Sales Variance %: -0%, -6%, -4%

Visualizations

Build visual

Filters on this page

Chain is (All)

City is (All)

District is (All)

Name is (All)

Open Month is (All)

Store Type is (All)

Values

Add data fields here

Drill through

Cross-report

Keep all filters On

Add drill-through fields here

Filters on all pages

Add data fields here

Visualizations pane highlighted with a red border.

Overview District Monthly Sales New Stores District Sales Report +

Page 1 of 4

66%

Upload a report file (.pbix)

Power BI My workspace

My workspace

Upload a .pbix, .rdl, or .xlsx file to your workspace

All

Upload a .pbix, .rdl, or .xlsx file to your workspace

OneDrive for Business

SharePoint

Browse

covid19.csv

income_vs_lifeexpectancy.table

Organize New folder

income_vs_lifeexpectancy

RainDaily_Tabu

This PC

Windows-SSD (C:)

Network

Name Date modified Type Size

covid19 4/10/2023 11:33 AM File folder

income_vs_lifeexpectancy 4/10/2023 11:33 AM File folder

covid19.pbix 3/29/2021 11:41 PM Microsoft.MicrosoftP... 1,161 KB

Retail Analysis Sample.pbix 3/27/2021 11:31 PM Microsoft.MicrosoftP... 13,302 KB

File name: Retail Analysis Sample.pbix

Custom files (*.xlsx;*.pbix;*.rdl)

Open Cancel

The screenshot shows the Power BI 'My workspace' interface. In the top left, there's a 'Home' icon, a 'Create' icon, a 'Browse' icon, a 'Data hub' icon, a 'Metrics' icon, an 'Apps' icon, a 'Learn' icon, and a 'Workspaces' icon. The 'My workspace' icon is highlighted with a red circle. In the top right, there's a search bar and a three-dot menu icon. The main area is titled 'My workspace' and shows a list of items: 'covid19.csv' (Dashboard), 'income_vs_lifeexpectancy.table' (Dataset), 'covid19' (File folder), 'income_vs_lifeexpectancy' (File folder), 'covid19.pbix' (Microsoft.MicrosoftP...), and 'Retail Analysis Sample.pbix' (Microsoft.MicrosoftP...). Below this is a file selection dialog with 'File name: Retail Analysis Sample.pbix', a dropdown for 'Custom files (*.xlsx;*.pbix;*.rdl)', and 'Open' and 'Cancel' buttons, all circled in red.

Open a report file in My workspace

The screenshot shows the Power BI 'My workspace' interface. On the left, a vertical navigation bar lists various options: Home, Create, Browse, Data hub, Metrics, Apps, Learn, Workspaces, and My workspace (which is circled in red). The main area displays a table of items under the 'All' tab. The columns are: Name, Type, Owner, Refreshed, Next refresh, Endorsement, and Sensitivity. The items listed are:

Name	Type	Owner	Refreshed	Next refresh	Endorsement	Sensitivity
covid19	Dataset	Veera Muangsin	3/31/22, 11:24:52 AM	N/A	—	—
covid19.csv	Dashboard	Veera Muangsin	—	—	—	—
income_vs_lifeexpectancy_table	Dataset	Veera Muangsin	3/31/22, 11:18:25 AM	N/A	—	—
income_vs_lifeexpectancy_table.xlsx	Dashboard	Veera Muangsin	—	—	—	—
RainDaily_Tabular	Dataset	Veera Muangsin	3/30/22, 11:23:01 PM	N/A	—	—
RainDaily_Tabular.csv	Dashboard	Veera Muangsin	—	—	—	—
Retail Analysis Sample	Dashboard	Veera Muangsin	—	—	—	—
Retail Analysis Sample	Report	Veera Muangsin	3/30/22, 2:59:46 PM	—	—	—
Retail Analysis Sample	Dataset	Veera Muangsin	3/30/22, 2:59:46 PM	N/A	—	—

Right click → Open link in new tab

Learn from Example

Both Power BI Desktop and Power BI Service have similar interface.

The slides are based on Power BI Desktop.

The interface may be a bit different to the current version.

Report Editor Panes

Retail Analysis Sample PBIX - Power BI Desktop

Search Sign in

File Home Insert Modeling View Help

Get data Refresh New visual New measure Sensitivity (preview) Publish

Report Canvas

Store Sales Overview

This Year Sales by Chain

Visual

10 New Stores

104 Total Stores

This Year Sales by PostalCode and Store Type

Total Sales Variance by FiscalMonth and District Manager

DM: Allie Gurret, Andrew Mai, Annette Zuber, Brad Lutten, Camryn Grisp, Chris Gray, Chris McGrath, Tina Cassella, Valerie Uhlirsky

Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District

Filters

Search

Filters on this page

- Chain is (All)
- City is (All)
- District is (All)
- Name is (All)
- Open Month is (All)
- Store Type is (All)

Add data fields here

Values

Drill through

Cross-report Off

Keep all filters On

Add drill-through fields here

Fields

Search

- Sales
- District
- Item
- Store
- Time

Info Overview District Monthly Sales New Stores +

Show/Hide Panes

Retail Analysis Sample PBIX - Power BI Desktop

Search Sign in

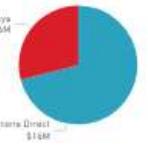
File Home Insert Modeling View Help

Get data Refresh New visual New measure Sensitivity (preview) Publish

Filters Visualizations Fields

Store Sales Overview

This Year Sales by Chain

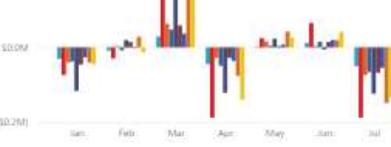


Laptops \$1M Software Direct \$1.8M

10 New Stores

104 Total Stores

Total Sales Variance by Fiscal Month and District Manager



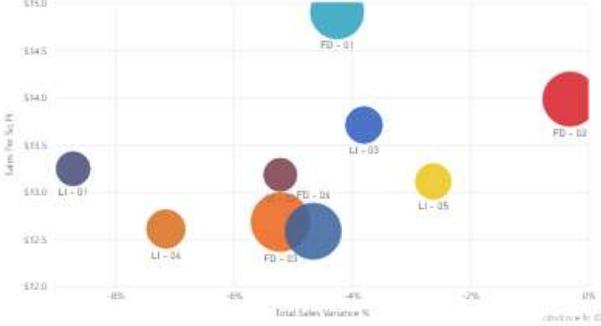
DM: Allie Gurret, Andrew Ma, Annette Zuber, Brad Sutton, Camille Grisep, Chris Gray, Chris McGuire, Tina Cassella, Valerie Uebeloy

This Year Sales by Postal Code and Store Type



Store Type: New Store Game Store

Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District



Item per Sq Ft Total Sales Variation % District

FD - 01 FD - 02 LI - 01 LI - 02 LI - 03 LI - 04 LI - 05 FD - 06 FD - 07

Drill through

Cross-report Off

Keep all filters On

Add drill-through fields here

Filters on all pages Add data fields here

Info Overview District Monthly Sales New Stores +

The screenshot shows the Power BI Desktop interface with several panes visible. The top navigation bar includes File, Home (highlighted), Insert, Modeling, View, and Help. Below the ribbon are standard icons for Get data, Refresh, New visual, New measure, Sensitivity (preview), and Publish. The main workspace displays four visualizations: a pie chart of sales by chain, a bar chart of monthly sales variance, a map of store locations by postal code, and a bubble chart of total sales variance. To the right are three floating panes: 'Filters' (with a red circle around the close button), 'Visualizations' (with a red circle around the close button), and 'Fields' (with a red circle around the close button). The 'Filters' pane contains sections for 'Filters on this page' (Chain, City, District, Name, Open Month, Store Type) and 'Drill through' options. The 'Visualizations' pane lists various visualization types. The 'Fields' pane shows a tree view of data fields under Sales, District, Item, Store, and Time.

Page Selection

Retail Analysis Sample PBIX - Power BI Desktop

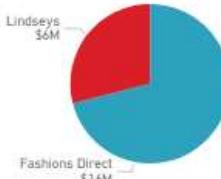
Search Sign in

File Home Insert Modeling View Help

Get data Refresh New visual New measure Sensitivity (preview) Publish

Store Sales Overview

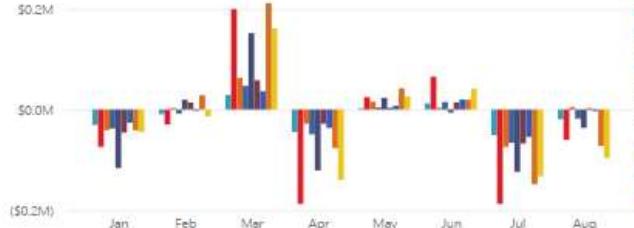
This Year Sales by Chain



10 New Stores

104 Total Stores

Total Sales Variance by FiscalMonth and District Manager



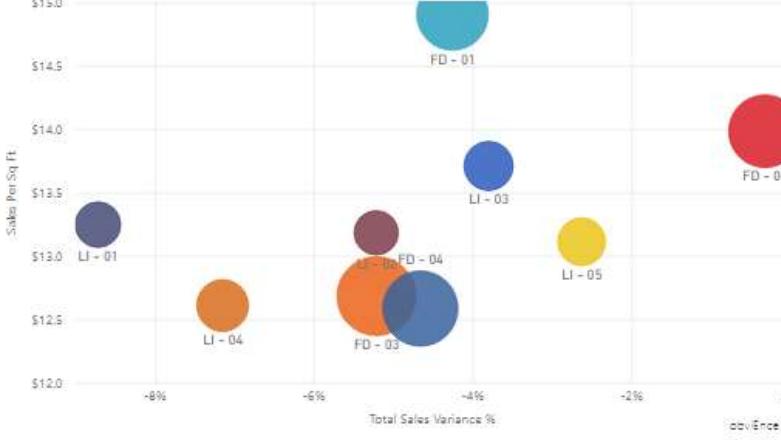
DM: Allan Guinot, Andrew Ma, Annalie Zubar, Brad Sutton, Carlos Grilo, Chris Gray, Chris McGurk, Tina Lassila, Valery Ushakov

This Year Sales by PostalCode and Store Type

Store Type: New Store (Blue), Same Store (Red)



Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District



Overview **District Monthly Sales** New Stores

Page 2 of 4

Page Selection

Retail Analysis Sample PBIX - Power BI Desktop

Search Sign in

File Home Insert Modeling View Help

Get data Refresh New visual New measure Sensitivity (preview) Publish

District Monthly Sales

This Year Sales by StoreNumberName

District Manager

- Allan Guinot
- Andrew Ma
- Annelie Zubar
- Brad Sutton
- Carlos Grilo
- Chris Gray
- Chris McGurk
- Tina Lassila
- Valery Ishakov

Total Sales Variance % by FiscalMonth

Last Year Sales and This Year Sales by FiscalMonth

Total Sales Variance %, Avg \$/Unit TY and This Year Sales by Category and Category

Category 010-Womens 020-Mens 030-Kids 040-Junior 050-Shoes 060-Intimate 070-Hosiery 080-Accessori...

Info Overview District Monthly Sales New Stores +

Page 3 of 4

Creating a New Page

Retail Analysis Sample PBIX - Power BI Desktop

Search Sign in

File Home Insert Modeling View Help

Get data Refresh New visual New measure Sensitivity (preview) Publish

New Stores Analysis

This Year Sales by City and Chain

Bing © 2021 TomTom / © 2021 Microsoft Corporation. Terms

Open Store Count by Open Month and Chain

Month	Fashions Direct	Lindseys
Jan	1	1
Feb	2	0
Mar	1	0
Apr	1	0
May	0	2
Jun	1	0
Jul	0	1

Sales Per Sq Ft by Name

Name	Sales Per Sq Ft
Cincinnati 2 Fashions Direct	\$12.86
Ft. Oglethorpe Lindseys	\$12.26
Knoxville Lindseys	\$14.75
Monroeville Fashions Direct	\$14.93
Pasadena Lindseys	\$10.92
Sharonville Fashions Direct	\$17.92
Washington Fashions Direct	\$14.25
Wilson Lindseys	\$13.08
Winchester Fashions Direct	\$21.22
York Fashions Direct	\$15.14

This Year Sales by Fiscal Month

Month	Sales
Jan	\$0.05M
Feb	\$0.15M
Mar	\$0.35M
Apr	\$0.32M
May	\$0.35M
Jun	\$0.4M
Jul	\$0.32M
Aug	\$0.4M

Name

- Cincinnati 2 Fashions Direct
- Ft. Oglethorpe Lindseys
- Knoxville Lindseys
- Monroeville Fashions Direct
- Pasadena Lindseys
- Sharonville Fashions Direct
- Washington Fashions Direct
- Wilson Lindseys
- Winchester Fashions Direct
- York Fashions Direct

Info Overview District Monthly Sales New Stores

A red circle highlights the "New Stores" tab, which is currently selected.

New Page

Retail Analysis Sample PBIX - Power BI Desktop

Search Sign in

File Home Insert Modeling View Help

Get data Refresh New visual New measure Publish

Sensitivity (preview)

Visualizations Fields

Filters

Build visuals with your data

Select or drag fields from the Fields pane onto the report canvas.

Values

Add data fields here

Drill through

Cross-report

Off

Keep all filters

On

Add drill-through fields here

Info Overview District Monthly Sales New Stores Page 1 +

Open a visual in Focus Mode

Retail Analysis Sample PBIX - Power BI Desktop

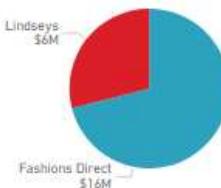
Search Sign in

File Home Insert Modeling View Help

Get data Refresh New visual New measure Sensitivity (preview) Publish

Store Sales Overview

This Year Sales by Chain

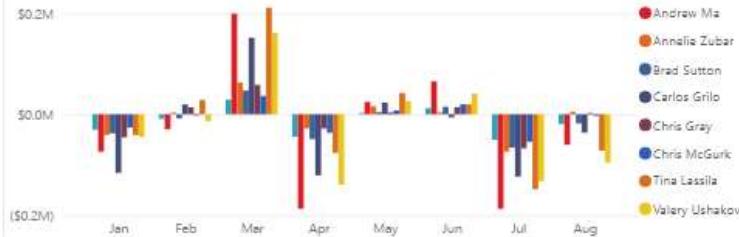


10 New Stores

104 Total Stores

Move your mouse over a visual and these buttons will appear.

Total Sales Variance by FiscalMonth and District Manager



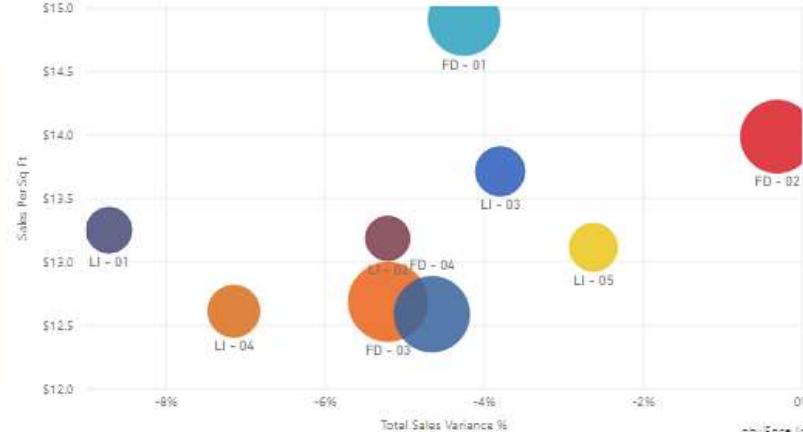
DM Allan Guinot, Andrew Ma, Annelie Zuber, Brad Sutton, Carlos Grilo, Chris Gray, Chris McGuirk, Tina Lassila, Valery Ushakov

This Year Sales by PostalCode and Store Type

Store Type • New Store • Same Store



Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District

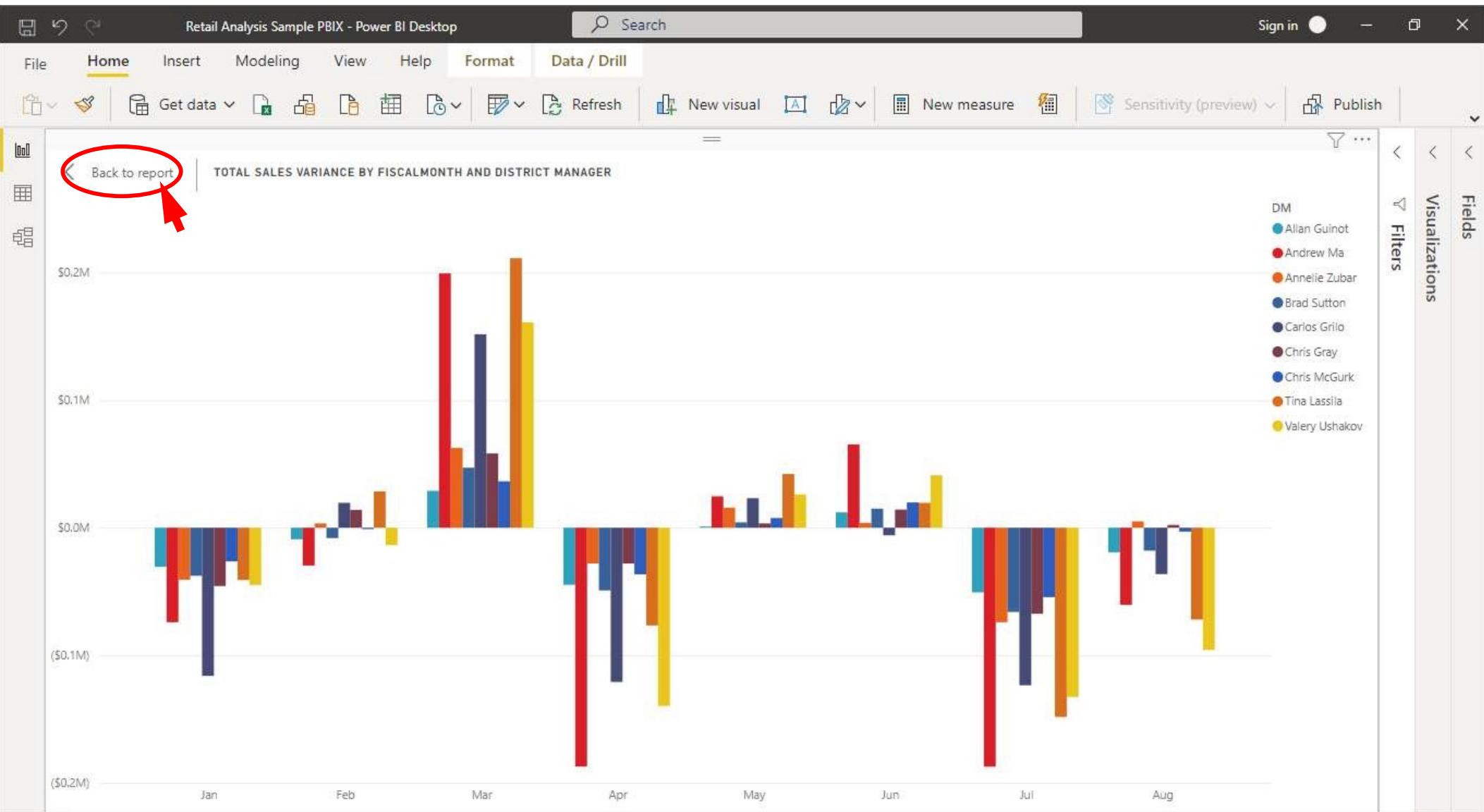


Focus mode icon (highlighted with a red circle)

Visualizations Fields Filters

Overview District Monthly Sales New Stores +

Back to report



Interactive Highlighting

Retail Analysis Sample PBIX - Power BI Desktop

File Home Insert Modeling View Help Format Data / Drill

Get data Refresh New visual New measure Sensitivity (preview) Publish

Store Sales Overview

This Year Sales by Chain

Lindseys \$6M
Chain Lindseys
This Year Sales \$6,393,844 (28.99%)
Fashions Direct \$16M

10 Stores
67 Total Stores

Total Sales Variance by FiscalMonth and District Manager

DM Allan Guinot Andrew Ma Annalisa Zubair Brad Sutton Carlos Grilo Chris Gray Chris McGurk Tina Lassila Valery Ushakov

\$0.0M (\$0.2M) Jan Feb Mar Apr May Jun Jul Aug

This Year Sales by PostalCode and Store Type

Store Type New Store Same Store

ILLINOIS Indianapolis Columbus WEST VIRGINIA Philadelphia INDIANA Louisville DELAWARE JEFFERSON COUNTY TENNESSEE Memphis ALABAMA GEORGIA MISSISSIPPI

Bing

Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District

LI - 01 LI - 02 LI - 03 LI - 04 LI - 05

\$13.8 \$13.6 \$13.4 \$13.2 \$13.0 \$12.8 \$12.6

-9% -8% -7% -6% -5% -4% -3% -2%

LI - 01 LI - 02 LI - 03 LI - 04 LI - 05

Info Overview District Monthly Sales New Stores +

Interactive Highlighting

Retail Analysis Sample PBIX - Power BI Desktop

File Home Insert Modeling View Help Format Data / Drill

Get data Refresh New visual New measure Sensitivity (preview) Publish

Store Sales Overview

This Year Sales by Chain

Lindseys \$6M Fashions Direct \$16M

Chain Fashions Direct This Year Sales \$15,658,108 (71.01%)

10 37 Total Stores

Total Sales Variance by FiscalMonth and District Manager

DM Allan Guinot Andrew Ma Annalise Zubair Brad Sutton Carlos Grilo Chris Gray Chris McGurk Tina Lassila Valery Ushakov

\$0.2M \$0.0M (\$0.2M)

Jan Feb Mar Apr May Jun Jul Aug

This Year Sales by PostalCode and Store Type

Store Type New Store Same Store

MILWAUKEE CHICAGO DETROIT TORONTO NEW YORK BOSTON PHILADELPHIA NEW JERSEY NEW YORK CITY NEW YORK STATE NEW HAMPSHIRE MASSACHUSETTS CONNECTICUT R.I. BING ILLINOIS INDIANA COLUMBUS CINCINNATI LOUISVILLE KENTUCKY PENNSYLVANIA WASHINGTON D.C. VIRGINIA DELAWARE TENNESSEE NORTH CAROLINA SOUTH CAROLINA GEORGIA ALABAMA MISSISSIPPI LOUISIANA

Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District

FD - 01 FD - 02 FD - 03 FD - 04

\$15.0 \$14.5 \$14.0 \$13.5 \$13.0 \$12.5 \$12.0

-5% -4% -3% -2% -1% 0%

Info Overview District Monthly Sales New Stores +

Visuals

Visual: Pie Chart



Retail Analysis Sample PBIX - Power BI Desktop

Search Sign in

File Home Insert Modeling View Help Format Data / Drill

Get data Refresh New visual New measure Sensitivity (preview) Publish

Store Sales Overview

This Year Sales by Chain

Lindseys \$6M Fashions Direct \$16M

Total Sales Variance by Fiscal Month and District Manager

10 New Stores 104 Total Stores

DM Allan Guinot Andrew Ma Annalie Zuber Brad Sutton Carlos Grilo Chris Gray Tina Lassila Valery Ushakov

This Year Sales by PostalCode and Store Type

Store Type New Store Same Store

UNITED STATES

Map showing store locations across the United States.

Select a visual in report canvas and the corresponding icon in visualizations pane will be highlighted

Visualizations

Filters

Legend

Chain

Details

Add data fields here

Values

This Year Sales

Toolips

Add data fields here

Drill through

Cross-report

Off

Keep all filters

Info Overview District Monthly Sales New Stores +

Visual: Column Chart



Retail Analysis Sample PBIX - Power BI Desktop

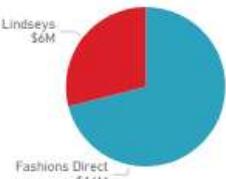
Sign in

File Home Insert Modeling View Help Format Data / Drill

Get data Refresh New visual New measure Sensitivity (preview) Publish

Store Sales Overview

This Year Sales by Chain



Lindseys \$6M
Fashions Direct \$16M

10 New Stores

104 Total Stores

Total Sales Variance by FiscalMonth and District Manager



A column chart titled "Total Sales Variance by FiscalMonth and District Manager". The Y-axis ranges from -\$0.2M to \$0.2M. The X-axis shows months from Jan to Aug. The legend lists District Managers (DM) with corresponding color-coded bars: Allan Guinot (blue), Andrew Ma (red), Annella Zubar (orange), Brad Sutton (dark blue), Carlos Grilo (purple), Chris Gray (brown), Chris McGurk (light blue), Tina Lassila (yellow), and Valery Ushakov (yellow-green). A red arrow points to the chart area.

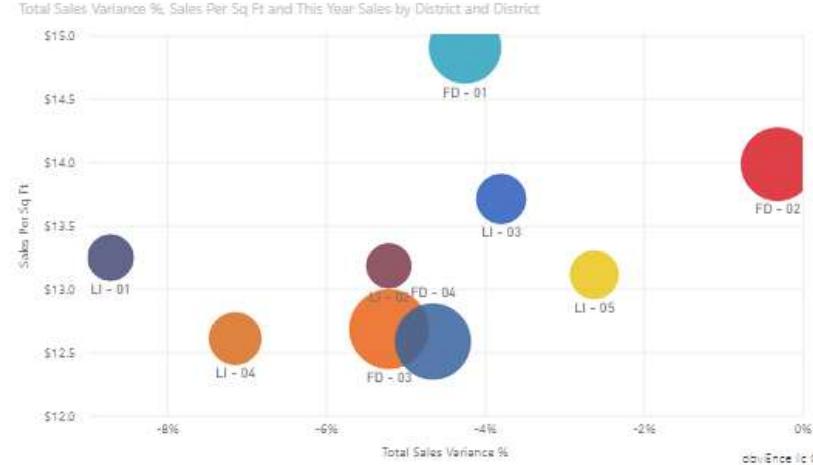
This Year Sales by PostalCode and Store Type

Store Type: New Store (blue), Same Store (red)



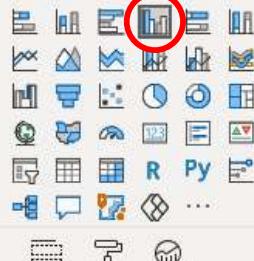
A bubble map of the United States where bubbles represent store locations. Bubbles are colored blue for New Stores and red for Same Stores. The size of the bubbles varies by location.

Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District



A bubble chart showing data for districts LI and FD across various metrics. The Y-axis is "Sales Per Sq Ft" ranging from \$12.0 to \$15.0. The X-axis is "Total Sales Variance %" ranging from -8% to 0%. Bubbles are labeled with codes like LI - 01, LI - 02, FD - 01, etc., and are colored according to the legend.

Visualizations



FiscalMonth

Legend

Values

Total Sales Variance

Tooltips

Add data fields here

Drill through

Cross-report

Off

Keep all filters

Info Overview District Monthly Sales New Stores +

Visual: Map



The screenshot shows a Power BI Desktop interface with a dashboard titled "Store Sales Overview". The dashboard contains several visualizations:

- A pie chart titled "This Year Sales by Chain" showing sales for Lindsey's (\$6M) and Fashions Direct (\$16M).
- A large number "10" representing "New Stores".
- A large number "104" representing "Total Stores".
- A bar chart titled "Total Sales Variance by FiscalMonth and District Manager" showing monthly sales variance from January to August, grouped by district manager.
- A map titled "This Year Sales by PostalCode and Store Type" showing store locations across the United States and Canada, color-coded by store type (New Store or Same Store).
- A bubble chart titled "Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District" showing sales variance, square footage, and total sales for different districts.

The "Visualizations" pane on the right side of the interface is open, displaying a grid of visualization icons. One icon, a magnifying glass, is highlighted with a red circle. The pane also includes sections for "Filters", "Location", "PostalCode", "Legend", "Store Type", "Latitude", "Longitude", "Size", "This Year Sales", "Toolips", and "Drill through".

Visual: Scatter Chart



Retail Analysis Sample PBIX - Power BI Desktop

Search Sign in

File Home Insert Modeling View Help Format Data / Drill

Get data Refresh New visual New measure Sensitivity (preview) Publish

Store Sales Overview

This Year Sales by Chain

10 New Stores

104 Total Stores

Total Sales Variance by Fiscal Month and District Manager

DM

- Allan Guinot
- Andrew Ma
- Annelie Zubar
- Brad Sutton
- Carlos Grilo
- Chris Gray
- Chris McGuirk
- Tina Lassila
- Valery Ushakov

This Year Sales by PostalCode and Store Type

Store Type: New Store (Blue), Same Store (Red)

UNITED STATES

Bing

District

StoreNumber

Legend

District

X Axis

Total Sales Variance %

Y Axis

Sales Per Sq Ft

Size

This Year Sales

Play Axis

Add data fields here

Overview District Monthly Sales New Stores +

Page 2 of 4

A scatter chart titled "Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District" is displayed. The X-axis is labeled "Total Sales Variance %" and ranges from -8% to 0%. The Y-axis is labeled "Sales Per Sq Ft" and ranges from \$12.0 to \$15.0. Data points are represented by bubbles, each labeled with a code such as FD - 01, FD - 02, LI - 01, LI - 02, LI - 03, LI - 04, LI - 05, and FD - 03. A red arrow points to the bottom right corner of the chart area.

Visual: Slicer



Retail Analysis Sample PBIX - Power BI Desktop

Search Sign in

File Home Insert Modeling View Help Format Data / Drill

Get data Refresh New visual New measure Sensitivity (preview) Publish

District Manager

- Allan Guinot
- Andrew Ma
- Annelie Zubar
- Brad Sutton
- Carlos Grilo
- Chris Gray
- Chris McGuirk
- Tina Lassila
- Valery Ishaknay

This Year Sales by StoreNumberName

Total Sales Variance % by FiscalMonth

Last Year Sales and This Year Sales by FiscalMonth

Total Sales Variance %, Avg \$/Unit TY and This Year Sales by Category and Category

Visualizations

Filters

Fields

DM

Drill through

Cross-report

Keep all filters

On

Add drill-through fields here

Info Overview District Monthly Sales New Stores +

Page 3 of 4

Visual: Area Chart



Retail Analysis Sample PBIX - Power BI Desktop

Search Sign in

File Home Insert Modeling View Help Format Data / Drill

Get data Refresh New visual New measure Sensitivity (preview) Publish

District Manager

- Allan Guinot
- Andrew Ma
- Annelie Zubar
- Brad Sutton
- Carlos Grilo
- Chris Gray
- Chris McGurk
- Tina Lassila
- Valerie Ishakova

This Year Sales by StoreNumberName

Store Number	Sales (\$)
10 - St...	\$0.41M
11 - Ce...	\$0.49M
12 - Ke...	\$0.41M
13 - Ch...	\$0.64M
14 - Ha...	\$0.57M
15 - Yo...	\$0.32M
16 - Wi...	\$0.50M
18 - Wa...	\$0.52M
19 - Bel...	\$0.37M
21 - Za...	\$0.45M
22 - Wi...	\$0.49M
23 - Er...	\$0.50M
24 - No...	\$0.32M
25 - Ma...	\$0.39M
26 - Akr...	\$0.40M
27 - Bo...	\$0.57M
28 - Hu...	\$0.40M
31 - Pack...	\$0.35M
32 - Me...	\$0.35M
33 - Alt...	\$0.40M
34 - Mo...	\$0.40M
35 - Sh...	\$0.14M
36 - Be...	

Total Sales Variance % by FiscalMonth

Fiscal Month	Variance (%)
Jan	-10%
Feb	0%
Mar	30%
Apr	-10%
May	0%
Jun	0%
Jul	-10%
Aug	0%

Last Year Sales and This Year Sales by FiscalMonth

Fiscal Month	Last Year Sales (\$)	This Year Sales (\$)
Jan	\$2.0M	\$1.8M
Feb	\$2.2M	\$2.5M
Mar	\$2.5M	\$3.5M
Apr	\$2.8M	\$2.5M
May	\$2.5M	\$2.2M
Jun	\$2.8M	\$3.0M
Jul	\$2.5M	\$2.0M
Aug	\$2.8M	\$3.2M

Total Sales Variance %, Avg \$/Unit TY and This Year Sales by Category and Category

Category	Total Sales Variance %	Avg \$/Unit TY
010-Womens	-30%	\$10
020-Mens	0%	\$8
030-Kids	-10%	\$5
040-Junior	0%	\$5
050-Shoes	0%	\$12
060-Intimate	-10%	\$3
070-Hosiery	-20%	\$2
080-Accessories	0%	\$8
090-Home	0%	\$5
100-Groceries	0%	\$2

Info Overview District Monthly Sales New Stores +

Visualizations

Filters

Fields

FiscalMonth

Legend

Add data fields here

Values

Last Year Sales

This Year Sales

Secondary values

Add data fields here

Tooltips

Add data fields here

Drill through

Cross-report

Visual: Clustered Column Chart



Retail Analysis Sample PBIX - Power BI Desktop

Search Sign in

File Home Insert Modeling View Help Format Data / Drill

Get data Refresh New visual New measure Sensitivity (preview) Publish

New Stores Analysis

This Year Sales by City and Chain

NORTH AMERICA EUROPE ASIA AFRICA SOUTH AMERICA AUSTRALIA

Pacific Ocean Atlantic Ocean Indian Ocean

Bing © 2021 TomTom, © 2021 Microsoft Corporation. All rights reserved.

Open Store Count by Open Month and Chain

Month	Fashions Direct	Lindseys
Jan	1	1
Feb	2	0
Mar	1	0
Apr	1	0
May	0	2
Jun	1	0
Jul	0	1

Sales Per Sq Ft by Name

Name	Sales Per Sq Ft
Cincinnati 2 Fashions Direct	\$12.86
Ft. Oglethorpe Lindseys	\$12.26
Knoxville Lindseys	\$14.75
Monroeville Fashions Direct	\$14.93
Pasadena Lindseys	\$10.92
Sharonville Fashions Direct	\$17.92
Washington Fashions Direct	\$14.25
Wilson Lindseys	\$13.08
Winchester Fashions Direct	\$21.22
York Fashions Direct	\$15.14

This Year Sales by Fiscal Month

Month	Sales
Jan	\$0.0M
Feb	\$0.0M
Mar	\$0.0M
Apr	\$0.0M
May	\$0.0M
Jun	\$0.0M
Jul	\$0.0M
Aug	\$0.0M

Info Overview District Monthly Sales New Stores +

Visualizations

Filters

Fields

Axis

Open Month

Legend

Chain

Values

Open Store Count

Tooltips

Add data fields here

Drill through

Cross-report

Off

Keep all filters

Visual: Line Chart



Retail Analysis Sample PBIX - Power BI Desktop

Search Sign in

File Home Insert Modeling View Help Format Data / Drill

Get data Refresh New visual New measure Sensitivity (preview) Publish

New Stores Analysis

This Year Sales by City and Chain

NORTH AMERICA EUROPE ASIA AFRICA SOUTH AMERICA AUSTRALIA

Bing © 2021 TomTom, © 2021 Microsoft Corporation. Términos

Open Store Count by Open Month and Chain

Month	Fashions Direct	Lindsey's
Jan	1	1
Feb	2	0
Mar	1	0
Apr	1	0
May	0	2
Jun	1	0
Jul	0	1

Sales Per Sq Ft by Name

Name	Sales Per Sq Ft
Cincinnati 2 Fashions Direct	\$12.86
Ft. Oglethorpe Lindsey's	\$12.26
Knoxville Lindsey's	\$14.75
Monroeville Fashions Direct	\$14.93
Pasadena Lindsey's	\$10.92
Sharonville Fashions Direct	\$17.92
Washington Fashions Direct	\$14.25
Wilson Lindsey's	\$13.08
Winchester Fashions Direct	\$21.22
York Fashions Direct	\$15.14

This Year Sales by FiscalMonth

Fiscal Month	Total Sales
Jan	\$0.1M
Feb	\$0.15M
Mar	\$0.2M
Apr	\$0.2M
May	\$0.25M
Jun	\$0.35M
Jul	\$0.3M
Aug	\$0.4M

Name

- Cincinnati 2 Fashions Direct
- Ft. Oglethorpe Lindsey's
- Knoxville Lindsey's
- Monroeville Fashions Direct
- Pasadena Lindsey's
- Sharonville Fashions Direct
- Washington Fashions Direct
- Wilson Lindsey's
- Winchester Fashions Direct
- York Fashions Direct

Visualizations

Filters

Fields

Axis

FiscalMonth

Legend

Add data fields here

Values

This Year Sales

Secondary values

Add data fields here

Tooltips

Add data fields here

Drill through

Cross-report

Info Overview District Monthly Sales New Stores +

Page 4 of 4

Fields

Visualizations and Fields

- Each visualization type requires different fields.

Field Names	Used as
Axis, X Axis, Y Axis	Dimension
Value, Size	Measure
Legend, Group, Details	Category breakdown
Location, Latitude, Longitude	Geographic
Tooltips	Pop-up information
Play Axis	Animation

Dimensions: qualitative values (such as names, dates, or geographical data) that give the context of collected data (measures).

Measures: numeric, quantitative values that you can measure. Measures can be aggregated by dimensions.

Pie Chart

Retail Analysis Sample PBIX - Power BI Desktop

Search

Sign in

File Home Insert Modeling View Help Format Data / Drill

Get data Refresh New visual New measure Publish

Sensitivity (preview)

Visualizations Fields

Search

Legend

Chain

Details

Add data fields here

Values

This Year Sales

Tooltips

Add data fields here

Drill through

Cross-report

Off

Keep all filters

Used fields have a yellow tick symbol.

Store Sales Overview

This Year Sales by Chain

Lindseys \$6M

Fashions Direct \$16M

10 New Stores

37 Total Stores

Total Sales Variance by Fiscal Month and District Manager

DM

- Allan Guinot
- Andrew Ma
- Annette Zubar
- Brad Sutton
- Carlos Grin
- Chris Gray
- Chris McGurk
- Tina Lessila
- Valery Ushakov

Total Sales Variance % Sales Per Sq Ft and This Year Sales by District and District

Bing

Map showing store locations across the US and Canada, with markers for New Stores (blue) and Same Store (red).

FD - 01

FD - 02

FD - 03

FD - 04

5% 4% 3% 2% -1% 0%

Page 2 of 4

The screenshot displays the Power BI Desktop interface with several visualizations:

- Store Sales Overview:** A pie chart titled "This Year Sales by Chain" showing segments for "Lindseys" (\$6M) and "Fashions Direct" (\$16M).
- New Stores:** A bar chart showing 10 New Stores.
- Total Stores:** A bar chart showing 37 Total Stores.
- Total Sales Variance by Fiscal Month and District Manager:** A bar chart showing monthly variance from January to August, grouped by District Manager (e.g., Allan Guinot, Andrew Ma).
- Total Sales Variance % Sales Per Sq Ft and This Year Sales by District and District:** A bubble chart showing sales variance percentages (5%, 4%, 3%) and total sales for four districts (FD - 01, FD - 02, FD - 03, FD - 04).
- Map:** A map of the Eastern United States and Canada showing the locations of new stores (blue dots) and same-store locations (red dots).

The ribbon menu includes File, Home, Insert, Modeling, View, Help, Format, Data / Drill, and various icons for Get data, Refresh, New visual, New measure, and Publish.

The right-hand pane shows the **Fields** pane with a tree view of available fields, including:

- Legend:** Contains "Chain" (selected).
- Details:** Contains "Add data fields here".
- Values:** Contains "This Year Sales" (selected).
- Tooltips:** Contains "Add data fields here".
- Drill through:** Contains "Cross-report" and "Off".
- Keep all filters:** Contains "Chain" (selected), "City", and "Count of O...".

A red arrow points from the "Chain" field in the Values section to the "Chain" field in the Legend section. Another red arrow points from the "This Year Sales" field in the Values section to the "This Year Sales" field in the Details section.

Column Chart

Retail Analysis Sample PBIX - Power BI Desktop

Search Sign in

File Home Insert Modeling View Help Format Data / Drill

Get data Refresh New visual New measure Publish

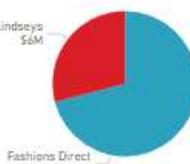
Sensitivity (preview)

Visualizations Fields

Filters

Store Sales Overview

This Year Sales by Chain



10 New Stores

104 Total Stores

This Year Sales by PostalCode and Store Type



FiscalMonth

Legend

Total Sales Variance

Toolips

Add data fields here

Drill through

Cross-report

Off

Keep all filters

On

DM Allan Guinot
Andrew Ma
Annelie Zubor
Brad Sutton
Carlos Grin
Chris Gray
Chris McGurk
Tina Lassila
Valery Ushakov

Total Sales Variance by FiscalMonth and District Manager

Total Sales Variance % Sales Per Sq Ft and This Year Sales by District and District

LI - 01
LI - 02
LI - 03
LI - 04
LI - 05
FD - 01
FD - 02
FD - 03
FD - 04

150
145
140
135
130
125
120

8%
6%
-6%
-4%
2%
0%

Total Sales Variance %

Page 2 of 4

The screenshot shows a Power BI desktop interface with a "Store Sales Overview" report. The report includes a pie chart of sales by chain, a map of store locations, and two bubble charts. The top chart, "Total Sales Variance by FiscalMonth and District Manager", displays monthly variance for different district managers. The bottom chart, "Total Sales Variance % Sales Per Sq Ft and This Year Sales by District and District", is a bubble chart showing sales per square foot and total sales variance across districts. The Power BI ribbon is visible at the top, and the "Fields" pane on the right shows the data source structure, with red arrows pointing to the "FiscalMonth" field and the "Total Sales Variance" field.

Map

Retail Analysis Sample PBIX - Power BI Desktop

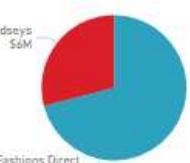
Sign in

File Home Insert Modeling View Help Format Data / Drill

Get data Refresh New visual New measure Publish Sensitivity (preview)

Store Sales Overview

This Year Sales by Chain



10 New Stores

104 Total Stores

Total Sales Variance by Fiscal Month and District Manager



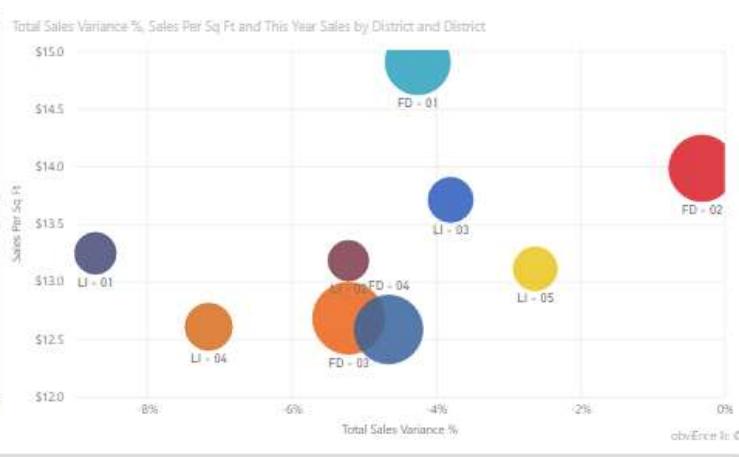
DM: Allan Guinot, Andrew Ma, Annelie Zubar, Brad Sutton, Carlos Grilo, Chris Gray, Chris McGurk, Tina Lasila, Valery Ushakov

This Year Sales by PostalCode and Store Type



Store Type: New Store (blue), Same Store (red)

Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District



Legend: FD - 01, LI - 01, LI - 02, LI - 03, LI - 04, LI - 05, FD - 02, FD - 03, FD - 04, FD - 05

PostalCode

Store Type

Latitude

Longitude

Size

This Year Sales

Toolips

Drill through

Filters

Visualizations

Fields

Sales

District

Item

Store

Average Sel...

Chain

Count of O...

DistrictID

DM

DM_Pic

Name

New Stores

New Stores ...

Open Month

Open Mont...

Open Store...

Open Year

OpenDate

PostalCode

SellingArea...

Store Type

Info Overview District Monthly Sales New Stores

Page 2 of 4

Scatter Chart

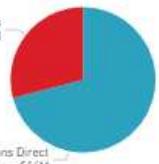
Retail Analysis Sample PBIX - Power BI Desktop

File Home Insert Modeling View Help Format Data / Drill Table tools

Name Store Mark as date table Manage relationships New measure Quick measure New column New table

Store Sales Overview

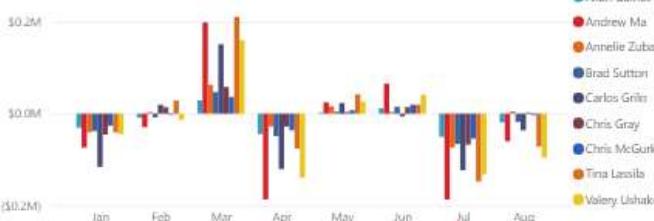
This Year Sales by Chain



10 New Stores

104 Total Stores

Total Sales Variance by Fiscal Month and District Manager



DM: Allan Guinot, Andrew Ma, Annelie Zubar, Brad Sutton, Carlos Grilo, Chris Gray, Chris McGurk, Tina Lassila, Valery Ushakov

This Year Sales by PostalCode and Store Type

Store Type: New Store (Blue), Same Store (Red)



Details

- District
- StoreNumber

Legend

- District

X Axis

- Total Sales Variance %

Y Axis

- Sales Per Sq Ft

Size

- This Year Sales

Play Axis

Add data fields here

Visualizations

Fields

Search

Annotations:

- A red arrow points from the "This Year Sales" checkbox in the "Details" section of the Fields pane to the "This Year Sales" checkbox in the "X Axis" section of the Visualizations pane.
- A red arrow points from the "Sales Per Sq Ft" checkbox in the "Y Axis" section of the Visualizations pane to the "Sales Per Sq Ft" checkbox in the "Y Axis" section of the Fields pane.
- A red arrow points from the "This Year Sales" checkbox in the "Size" section of the Visualizations pane to the "This Year Sales" checkbox in the "Size" section of the Fields pane.

Filter

Filters

Retail Analysis Sample PBIX - Power BI Desktop

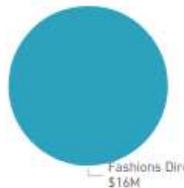
Search Sign in

File Home Insert Modeling View Help

Get data Refresh New visual New measure Sensitivity (preview) Publish

Store Sales Overview

This Year Sales by Chain



Total Stores: 37
New Stores: 10
Fashions Direct: \$16M

Total Sales Variance by FiscalMonth and District Manager



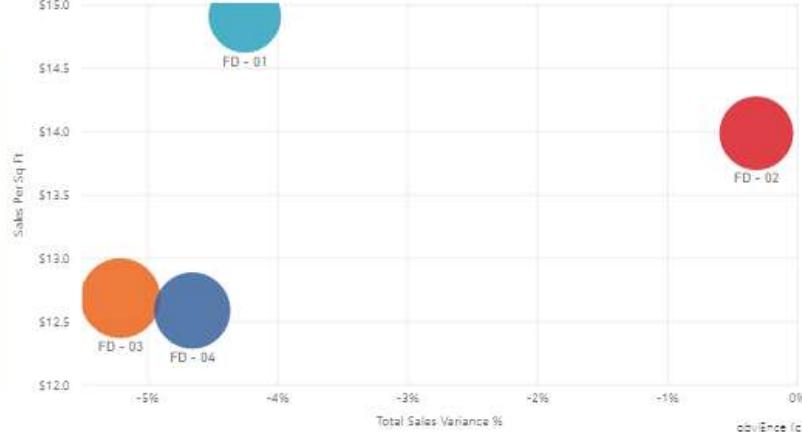
DM: Andrew Ma, Carlos Grilo, Tina Lassila, Valery Ushakov

This Year Sales by PostalCode and Store Type



Store Type: New Store, Same Store

Total Sales Variance %: Sales Per Sq Ft and This Year Sales by District and District



Sales per Sq Ft: FD-01 (~\$14.5M), FD-02 (~\$14.0M), FD-03 (~\$12.5M), FD-04 (~\$12.0M)

Filters

Search

Filters on this page

Chain is Fashions Direct

Filter type Basic filtering

Search

Select all Fashions Direct 37

Lindsey's 67

Require single selection

City is (All)

District is (All)

Name is (All)

Visualizations Fields

Info Overview District Monthly Sales New Stores +

Data and Model Views

(Only in Power BI Desktop, not in Power BI Service)

Data View

Retail Analysis Sample PBIX - Power BI Desktop

Search Sign in

File Home Help Table tools

Name Sales

Mark as date table Manage relationships New measure Quick measure New column New table

Data Table

MonthID	ItemID	LocationID	Sum_GrossMarginAmount	Sum-Regular_Sales_Dollars	Sum_Markdown_Sales_Dollars	ScenarioID	ReportingPeriodID	Sum-Regular_Sales_Units	Sum	
201408	256441	568	4.99	9.99	0	1	20140801		1	
201408	289471	24	4.99	9.99	0	1	20140801		1	
201408	289471	27	4.99	9.99	0	1	20140801		1	
1	201408	292637	530	4.99	9.99	0	1	20140801		1
201408	292637	565	4.99	9.99	0	1	20140801		1	
201408	277477	583	4.99	9.99	0	1	20140801		1	
201408	294718	40	4.99	9.99	0	1	20140801		1	
201408	310225	15	4.99	9.99	0	1	20140801		1	
201408	310226	531	4.99	9.99	0	1	20140801		1	
201408	310226	557	4.99	9.99	0	1	20140801		1	
201408	310228	526	4.99	9.99	0	1	20140801		1	
201408	300832	535	4.99	9.99	0	1	20140801		1	
201408	300832	558	4.99	9.99	0	1	20140801		1	
201408	312168	514	4.99	9.99	0	1	20140801		1	
201408	301760	28	4.99	9.99	0	1	20140801		1	
201408	313094	15	4.99	9.99	0	1	20140801		1	
201408	313094	41	4.99	9.99	0	1	20140801		1	
201408	313096	518	4.99	9.99	0	1	20140801		1	
201408	249519	4	4.99	9.99	0	1	20140801		1	
201408	305400	32	4.99	9.99	0	1	20140801		1	
201408	305414	18	4.99	9.99	0	1	20140801		1	
201408	317040	12	4.99	9.99	0	1	20140801		1	
201408	317040	18	4.99	9.99	0	1	20140801		1	
201408	317041	14	4.99	9.99	0	1	20140801		1	
201408	317047	34	4.99	9.99	0	1	20140801		1	
201408	318401	10	4.99	9.99	0	1	20140801		1	
201408	318401	13	4.99	9.99	0	1	20140801		1	

Fields

Search

Sales

District

Item

Store

Time

Select table

1

2

Table: Sales (923,371 rows)

Model View

Retail Analysis Sample PBIX - Power BI Desktop

File Home Help

Get data Refresh Manage relationships Publish

Properties Fields

District

- BusinessUnitID
- District
- DistrictID
- DM
- DM_Pic
- DM_Pic_fl
- DMIImage

Store

- Chain
- City
- City Name
- DistrictID
- DistrictName
- DM
- DM_Pic
- LocationID
- Name
- Open Month
- Open Month No

Sales

- ItemID
- LocationID
- MonthID
- ReportingPeriodID
- ScenarioID
- Sum_GrossMarginAmou
- Sum_Markdown_Sales_D
- Sum_Markdown_Sales_U
- Sum-Regular_Sales_Doll
- Sum-Regular_Sales_Unit
- Average Unit Price

Time

- FiscalMonth
- FiscalYear
- Month
- Period
- ReportingPeriodID

Item

- Buyer
- Category
- FamilyName
- ItemID
- Segment

Relationships between fields in different tables

All tables +

Update available (click to download)

Edit relationship

Retail Analysis Sample PBIX - Power BI Desktop

File Home Help

Get data Refresh Manage relationships Publish

Search Sign in

Edit relationship

Select tables and columns that are related.

Store

	DM_Pic	DistrictID	Open Year	Store Type	Open Month No	Op
1	https://obvience-public.sharepoint.com/SiteAssets/ima...	4	2010	Same Store	5	M
	https://obvience-public.sharepoint.com/SiteAssets/ima...	2	2008	Same Store	2	Fe
	https://obvience-public.sharepoint.com/SiteAssets/ima...	1	2006	Same Store	10	Oc

District

DistrictID	District	DM	DM_Pic_fi	DM
1	FD - 01	Valery Ushakov	http://farm6.staticflickr.com/5502/11550929204_d49a...	https://obvience-public.sh
2	FD - 02	Tina Lassila	http://farm3.staticflickr.com/2811/11551022076_9260...	https://obvience-public.sh
3	FD - 03	Carlos Grilo	http://farm4.staticflickr.com/3682/11550895504_4cfa...	https://obvience-public.sh

Cardinality: Many to one (*:1)

Cross filter direction: Single

Make this relationship active

Apply security filter in both directions

Assume referential integrity

OK Cancel

All tables +

Update available (click to download)

The screenshot shows the 'Edit relationship' dialog in Power BI Desktop. It highlights several key components with red circles: the 'Store' table dropdown, the 'District' table dropdown, the cardinality dropdown set to 'Many to one (*:1)', and the cross-filter direction dropdown set to 'Single'. A red arrow points to the 'double click' icon on the relationship line between the District and Store tables. The District table also has its 'DistrictID' column highlighted in yellow.

Manage relationships

The screenshot shows the 'Manage relationships' feature in Power BI Desktop. The interface includes a ribbon with 'Home' selected, a search bar, and various navigation icons. A red circle highlights the 'Manage relationships' button in the ribbon, labeled '1'. The main area displays a table of existing relationships between tables like Sales, Item, Store, and Time. Below this is a 'Create relationship' section with two dropdown menus. The top dropdown, labeled '2', shows the 'District' table with its columns: DistrictID, District, DM, and DM_Pic_fi. The bottom dropdown, labeled '5', shows the 'Store' table with its columns: Item, Sales, Store, and Time. Red circles highlight specific fields: 'DistrictID' in the District dropdown (labeled '3'), 'DistrictID' in the Store dropdown (labeled '6'), and the 'Autodetect...' button in the 'Create relationship' section (labeled '4'). A red arrow points from the 'Create relationship' section towards the dropdowns. On the right side, there are properties and fields panes.

1

2

3

4

5

6

Learning by Doing

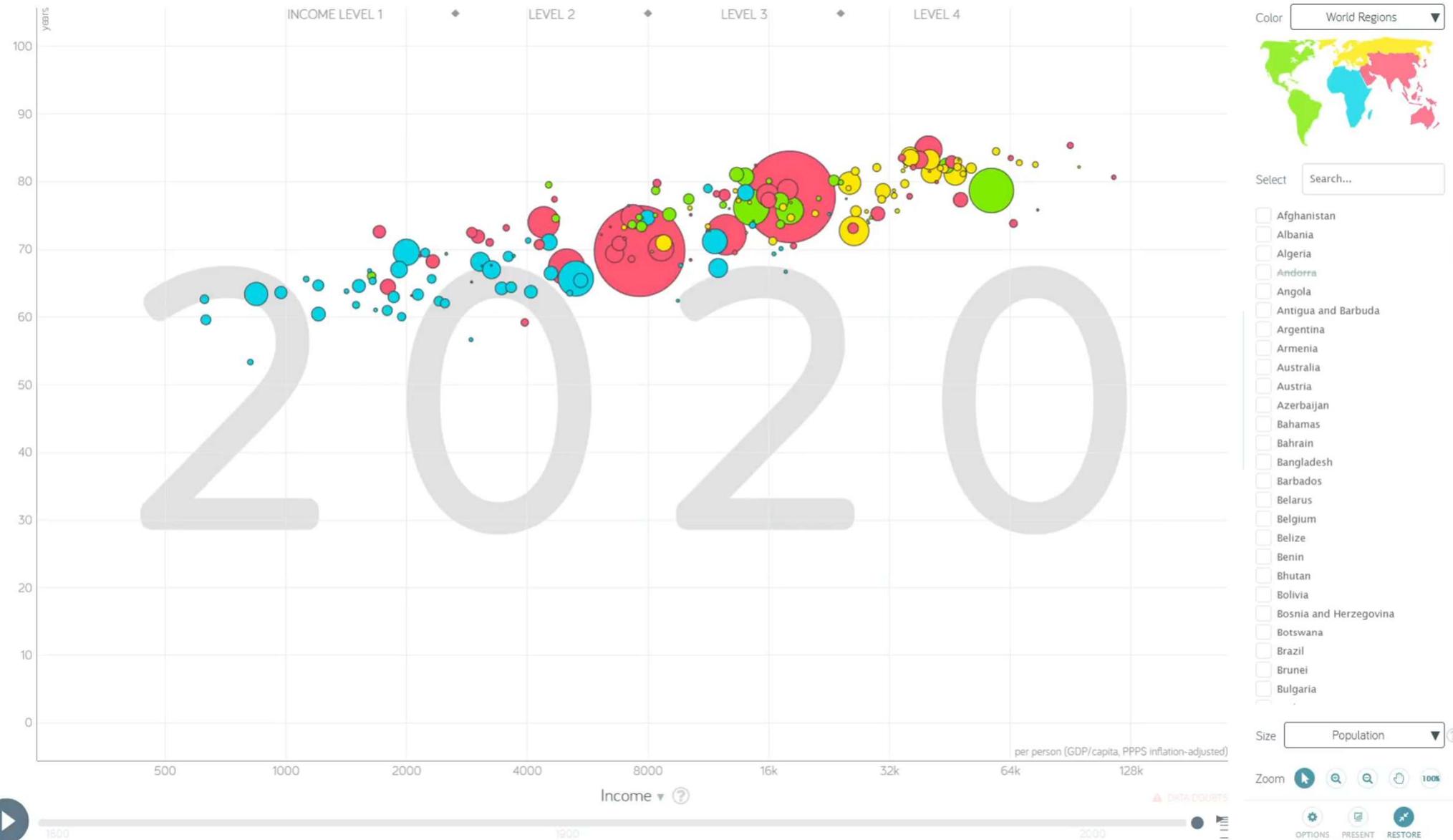
Example: Income vs Life Expectancy

For Power BI Desktop

For Power BI Service [click here](#)

Gap Minder

<https://www.gapminder.org/tools/>



Get Data: Excel File

The screenshot shows the Power BI Desktop interface with the title bar "Untitled - Power BI Desktop". The ribbon menu is visible with "Home" selected. The main area displays the message "Add data to your report" and "Once loaded, your data will appear in the Fields pane." Below this, there are four buttons: "Import data from Excel" (highlighted with a red circle and a red arrow), "Import data from SQL Server", "Paste data into a blank table", and "Try a sample dataset". A link "Get data from another source →" is also present. To the right, the "Visualizations" pane shows various chart icons, and the "Fields" pane shows settings for "Values" (with "Add data fields here"), "Drill through" (with "Cross-report Off"), and "Keep all filters" (with "On"). The bottom navigation bar includes "Page 1" and a yellow "+" button.

Untitled - Power BI Desktop

File Home Insert Modeling View Help

Get data New visual Refresh New measure Publish

Visualizations

Fields

Add data to your report

Once loaded, your data will appear in the Fields pane.

Import data from Excel Import data from SQL Server Paste data into a blank table Try a sample dataset

Get data from another source →

Values

Add data fields here

Drill through

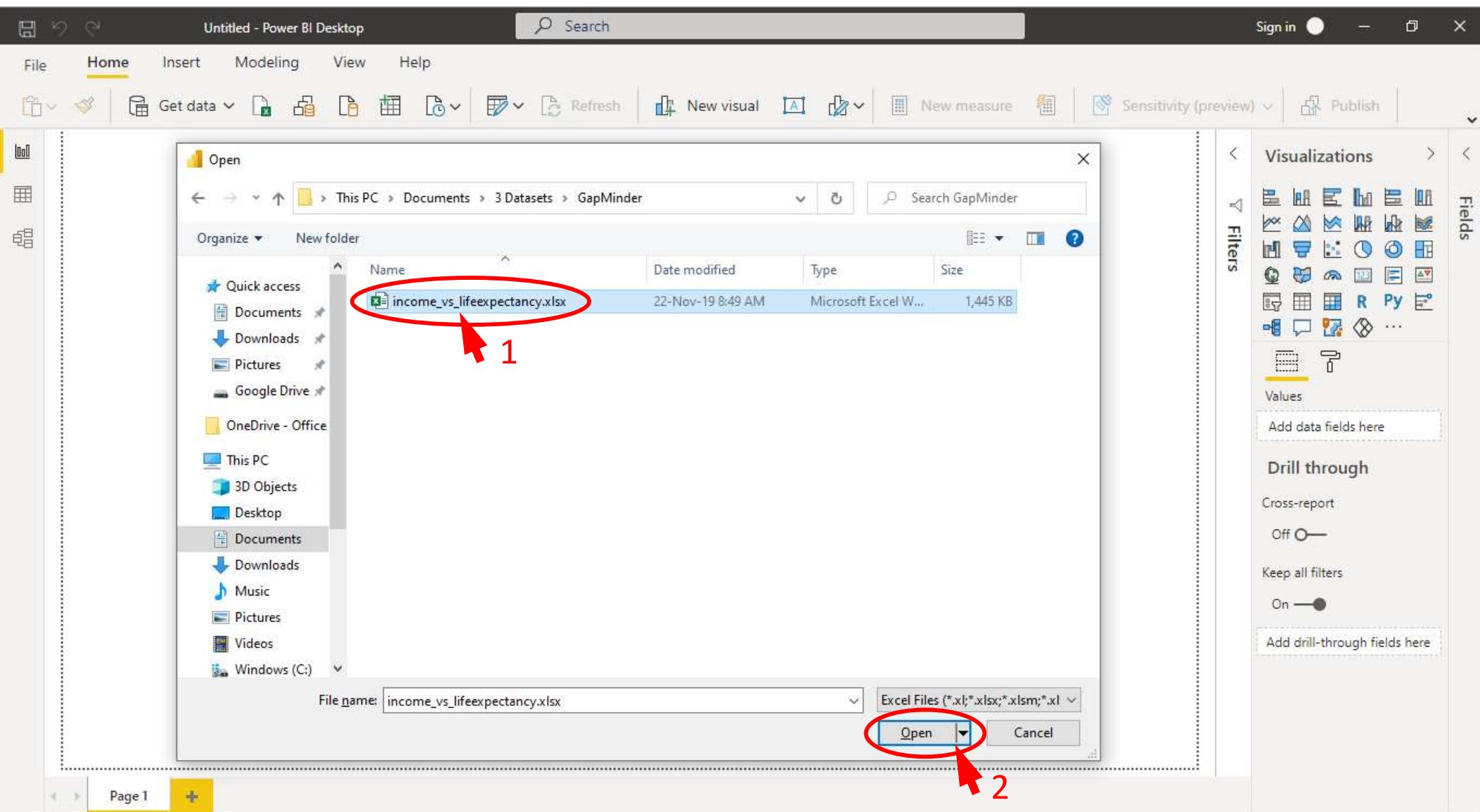
Cross-report Off

Keep all filters

On

Add drill-through fields here

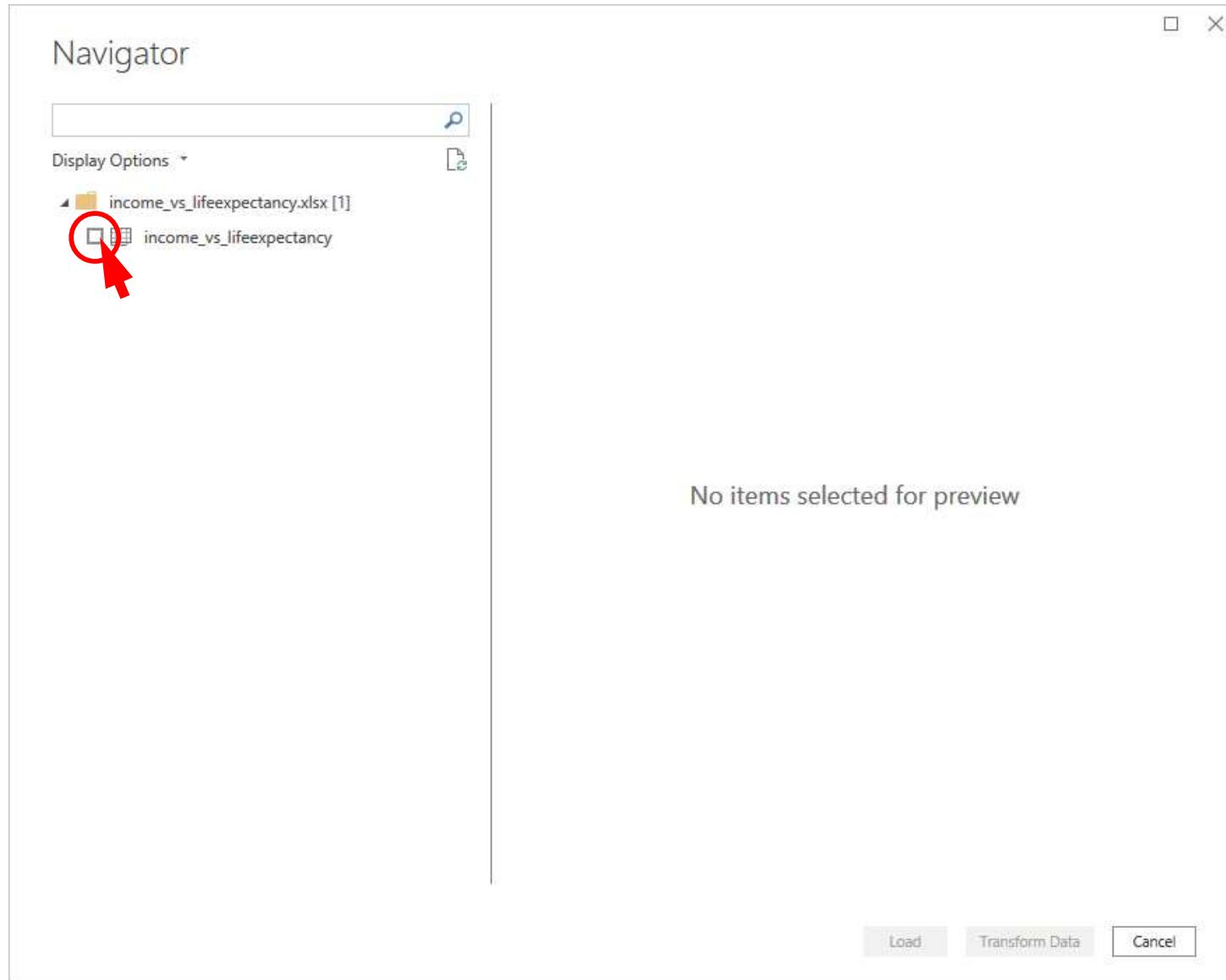
Page 1 +



Get Data: income_vs_lifeexpectancy.xlsx

A screenshot of the Microsoft Power BI Desktop application. The window title is "Income and Life Expectancy - Power BI Desktop". The ribbon menu at the top includes File, Home, View, Modeling, and Help. The Home tab is selected, showing various icons for data management (Cut, Copy, Paste, Format Painter, Clipboard) and visualization creation (New Page, New Visual, Ask A Question, Buttons, Text box, Image, Shapes, From Marketplace, From File, Switch Theme, Manage Relationships, Relationships, Calculations, Share). On the left, a sidebar lists data sources: Excel, Power BI datasets, Power BI dataflows, SQL Server, Analysis Services, Text/CSV, Web, OData feed, Blank Query, and More... In the center, a modal dialog titled "Open" shows a file selection interface. The path is "GDBI > gapminder". The file "income_vs_lifeexpectancy.xlsx" is selected. The "File name:" dropdown shows "income_vs_lifeexpectancy.xlsx" and the "File type:" dropdown shows "Excel Files (*.xl;*.xlsx;*.xlsm;*.xl". At the bottom are "Open" and "Cancel" buttons. To the right of the modal, there are three panes: "Visualizations" (with a search bar), "Fields" (with a search bar), and "Filters" (with options for Drillthrough, Cross-report, Keep all filters, and Add drillthrough fields here).

Select Excel Sheet



Transform Data

Navigator

Display Options ▾

- income_vs_lifeexpectancy.xlsx [1]
- income_vs_lifeexpectancy

income_vs_lifeexpectancy

year	country	region	income per person
1800	Afghanistan	asia_west	60
1800	Albania	europe_east	66
1800	Algeria	africa_north	71
1800	Angola	africa_sub_saharan	61
1800	Antigua and Barbuda	america_north	75
1800	Argentina	america_south	151
1800	Armenia	europe_east	51
1800	Australia	east_asia_pacific	81
1800	Austria	europe_west	185
1800	Azerbaijan	europe_east	77
1800	Bahamas	america_north	145
1800	Bahrain	asia_west	124
1800	Bangladesh	asia_west	87
1800	Barbados	america_north	91
1800	Belarus	europe_east	60
1800	Belgium	europe_west	241
1800	Belize	america_north	57
1800	Benin	africa_sub_saharan	59
1800	Bhutan	asia_west	62
1800	Bolivia	america_south	85
1800	Bosnia and Herzegovina	europe_east	66
1800	Botswana	africa_sub_saharan	39
1800	Brazil	america_south	111

Load Transform Data Cancel



Power Query Editor: check type

Screenshot of the Power Query Editor showing a query named "income_vs_lifeexpectancy". The "Home" tab is selected. The "Data Type" dropdown for the first column, "year", is set to "Whole Number". The "Transform" ribbon tab is visible.

The table contains 27 rows of data:

	year	country	region	income per person	life expectancy	population
1	1800	Afghanistan	asia_west	603	28.2	3280000
2	1800	Albania	europe_east	667	35.4	410000
3	1800	Algeria	africa_north	715	28.8	2500000
4	1800	Angola	africa_sub_saharan	618	27	1570000
5	1800	Antigua and Barbuda	america_north	757	33.5	37000
6	1800	Argentina	america_south	1510	33.2	534000
7	1800	Armenia	europe_east	514	34	413000
8	1800	Australia	east_asia_pacific	814	34	351000
9	1800	Austria	europe_west	1850	34.4	3210000
10	1800	Azerbaijan	europe_east	775	29.2	880000
11	1800	Bahamas	america_north	1450	35.2	27400
12	1800	Bahrain	asia_west	1240	30.3	64500
13	1800	Bangladesh	asia_west	876	25.5	19200000
14	1800	Barbados	america_north	913	32.1	81700
15	1800	Belarus	europe_east	608	36.2	2360000
16	1800	Belgium	europe_west	2410	40	3140000
17	1800	Belize	america_north	579	26.5	25500
18	1800	Benin	africa_sub_saharan	597	31	637000
19	1800	Bhutan	asia_west	629	28.8	90000
20	1800	Bolivia	america_south	854	33	1100000
21	1800	Bosnia and Herzegovina	europe_east	669	35.1	852000
22	1800	Botswana	africa_sub_saharan	397	33.6	121000
23	1800	Brazil	america_south	1110	32	3640000
24	1800	Brunei	east_asia_pacific	1510	29.2	2130
25	1800	Bulgaria	europe_east	1090	35.8	1990000
26	1800	Burkina Faso	africa_sub_saharan	480	29.2	1670000
27	1800	Burundi	africa_sub_saharan	418	31.5	899000

Query Settings pane shows "Changed Type" under Applied Steps.

Bottom status bar: 6 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows PREVIEW DOWNLOADED AT 1:42 PM

Change data type if incorrect

In this example, every column has a correct type.

The screenshot shows the Microsoft Power Query Editor interface. A context menu is open over the 'region' column header, which contains the value 'europe_west'. The menu options include:

- 1.1 Decimal Number
- \$ Fixed decimal number
- 1.2 Whole Number
- % Percentage
- Date/Time
- Date
- Time
- Date/Time/Timezone
- Duration
- A^BC Text
- X True/False
- Binary
- Using Locale...

The 'Text' option is highlighted with a red arrow. The rest of the interface shows a table with columns: year, country, region, income per person, life expectancy, and population. The 'income_vs_lifeexpe...' query is selected in the Queries list. The 'Transform' tab is active. The 'Properties' pane on the right shows the query name as 'income_vs_lifeexpectancy'.

Close & Apply Changes

Screenshot of the Power Query Editor interface showing a query named "income_vs_lifeexpectancy".

The ribbon menu is visible at the top, with the "File" tab selected. The "Close & Apply" button is highlighted with a red circle and a red arrow pointing to it.

The main area displays a table with the following columns:

	year	country	region	income per person	life expectancy	population
1	1800	Afghanistan	asia_west	603	28.2	3280000
2	1800	Albania	europe_east	667	35.4	410000
3	1800	Algeria	africa_north	715	28.8	2500000
4	1800	Angola	africa_sub_saharan	618	27	1570000
5	1800	Antigua and Barbuda	america_north	757	33.5	37000
6	1800	Argentina	america_south	1510	33.2	534000
7	1800	Armenia	europe_east	514	34	413000
8	1800	Australia	east_asia_pacific	814	34	351000
9	1800	Austria	europe_west	1850	34.4	3210000
10	1800	Azerbaijan	europe_east	775	29.2	880000
11	1800	Bahamas	america_north	1450	35.2	27400
12	1800	Bahrain	asia_west	1240	30.3	64500
13	1800	Bangladesh	asia_west	876	25.5	19200000
14	1800	Barbados	america_north	913	32.1	81700
15	1800	Belarus	europe_east	608	36.2	2360000
16	1800	Belgium	europe_west	2410	40	3140000
17	1800	Belize	america_north	579	26.5	25500
18	1800	Benin	africa_sub_saharan	597	31	637000
19	1800	Bhutan	asia_west	629	28.8	90000
20	1800	Bolivia	america_south	854	33	1100000
21	1800	Bosnia and Herzegovina	europe_east	669	35.1	852000
22	1800	Botswana	africa_sub_saharan	397	33.6	121000
23	1800	Brazil	america_south	1110	32	3640000
24	1800	Brunei	east_asia_pacific	1510	29.2	2130
25	1800	Bulgaria	europe_east	1090	35.8	1990000
26	1800	Burkina Faso	africa_sub_saharan	480	29.2	1670000
27	1800	Burundi	africa_sub_saharan	418	31.5	899000

The "Query Settings" pane on the right shows the following applied steps:

- Source
- Navigation
- Promoted Headers
- Changed Type

At the bottom left, it says "6 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows". At the bottom right, it says "PREVIEW DOWNLOADED AT 1:42 PM".

Data is ready.

Screenshot of Power BI Desktop showing the Home tab selected. The interface includes a ribbon bar with File, Home, Insert, Modeling, View, and Help tabs. Below the ribbon are various icons for data import, visualization creation, and report navigation. The main workspace displays a placeholder message: "Build visuals with your data" and "Select or drag fields from the Fields pane onto the report canvas." A cursor is hovering over a small icon on the canvas. To the right, the Fields pane is open, showing a list of fields under the category "income_vs_lifeex...". A red box highlights this list. Other sections in the Fields pane include Visualizations, Filters, Values, Drill through, Cross-report, and Keep all filters. At the bottom left, there are page navigation buttons for "Page 1" and a plus sign, along with a status bar indicating "Page 1 of 1".

Create a Scatter Chart

The screenshot shows the Power BI Desktop interface with the title bar "income_vs_lifeexpectancy - Power BI Desktop". The ribbon menu is visible with "Home" selected. On the left, there's a scatter chart visual with some data points. The ribbon also includes "Get data", "Refresh", "New visual", "New measure", "Sensitivity (preview)", and "Publish". The "Visualizations" pane on the right is open, showing various chart types like Scatter chart (circled with red number 1), Line chart, Bar chart, etc. A red arrow labeled "2" points to the "Add data fields here" button in the "X Axis" section of the "Visualizations" pane. Another red arrow labeled "3" points to the "Add data fields here" button in the "Y Axis" section. The "Fields" pane on the far right lists fields such as country, income per ..., life expectancy, population, region, and year.

Assign fields to X and Y Axes

The screenshot shows the Power BI Desktop interface with the title bar "income_vs_lifeexpectancy - Power BI Desktop". The ribbon menu is visible with "Home" selected. On the left, there's a visualization area with a bubble chart and a message "Select or drag fields to populate this visual". The main workspace contains a scatter plot with several gray bubbles of varying sizes. To the right is the "Fields" pane, which lists fields from the data source "income_vs_lifeexpectancy": country, income per person, life expectancy, population, region, and year. The "Visualizations" pane is also open, showing various chart types like bar charts, line charts, and pie charts. A red arrow points from the text "Drag & Drop" to the "X Axis" section in the Fields pane, indicating where a field should be dragged to assign it to the X-axis.

income_vs_lifeexpectancy - Power BI Desktop

File Home Insert Modeling View Help Format Data / Drill

Get data Refresh New visual New measure Sensitivity (preview) Publish

Back to report

Select or drag fields to populate this visual

Visualizations

Filters

Details

Add data fields here

Legend

Add data fields here

X Axis

Add data fields here

Y Axis

Add data fields here

Size

Add data fields here

Play Axis

Add data fields here

Toolips

Search

income_vs_lifeexpectancy

- country
- income per person
- life expectancy
- population
- region
- year

Drag & Drop

Assign fields to X and Y Axes

The screenshot shows the Power BI Desktop interface with a scatter plot titled "INCOME PER PERSON AND LIFE EXPECTANCY". The plot displays a single data point at approximately (income per person: 0.1bn, life expectancy: 2M). The Y-axis is labeled "life expectancy" and the X-axis is labeled "income per person". Both axes have logarithmic scales with major ticks at 0.1bn, 1M, and 2M.

The ribbon menu is visible at the top, showing "Home" is selected. The "Fields" pane on the right lists fields from the data source "income_vs_lifeexpectancy": country, Σ income per person (selected), Σ life expectancy (selected), Σ population, region, and Σ year.

The "Visualizations" pane shows various chart types, and the "Details" section of the "Fields" pane indicates the current assignments:

- X Axis: income per person
- Y Axis: life expectancy

Red circles highlight the Y-axis label "life expectancy" on the left, the X-axis label "income per person" at the bottom, and the data point itself.

Change calculation of income

The screenshot shows the Power BI Desktop interface with a report titled "INCOME PER PERSON AND LIFE EXPECTANCY". A scatter plot is displayed with "life expectancy" on the Y-axis and "income per person" on the X-axis. A context menu is open over the X-axis, specifically over the label "income per person". The menu options include:

- Remove field
- Rename for this visual
- Move to
- Don't summarize
- Sum** (selected)
- Average (highlighted with red arrow 1)
- Minimum
- Maximum
- Count (Distinct)
- Count
- Standard deviation
- Variance
- Median
- Show value as
- New quick measure

Red arrows labeled 1 and 2 point to the "Average" option and the menu itself, respectively.

Change calculation of life expectancy

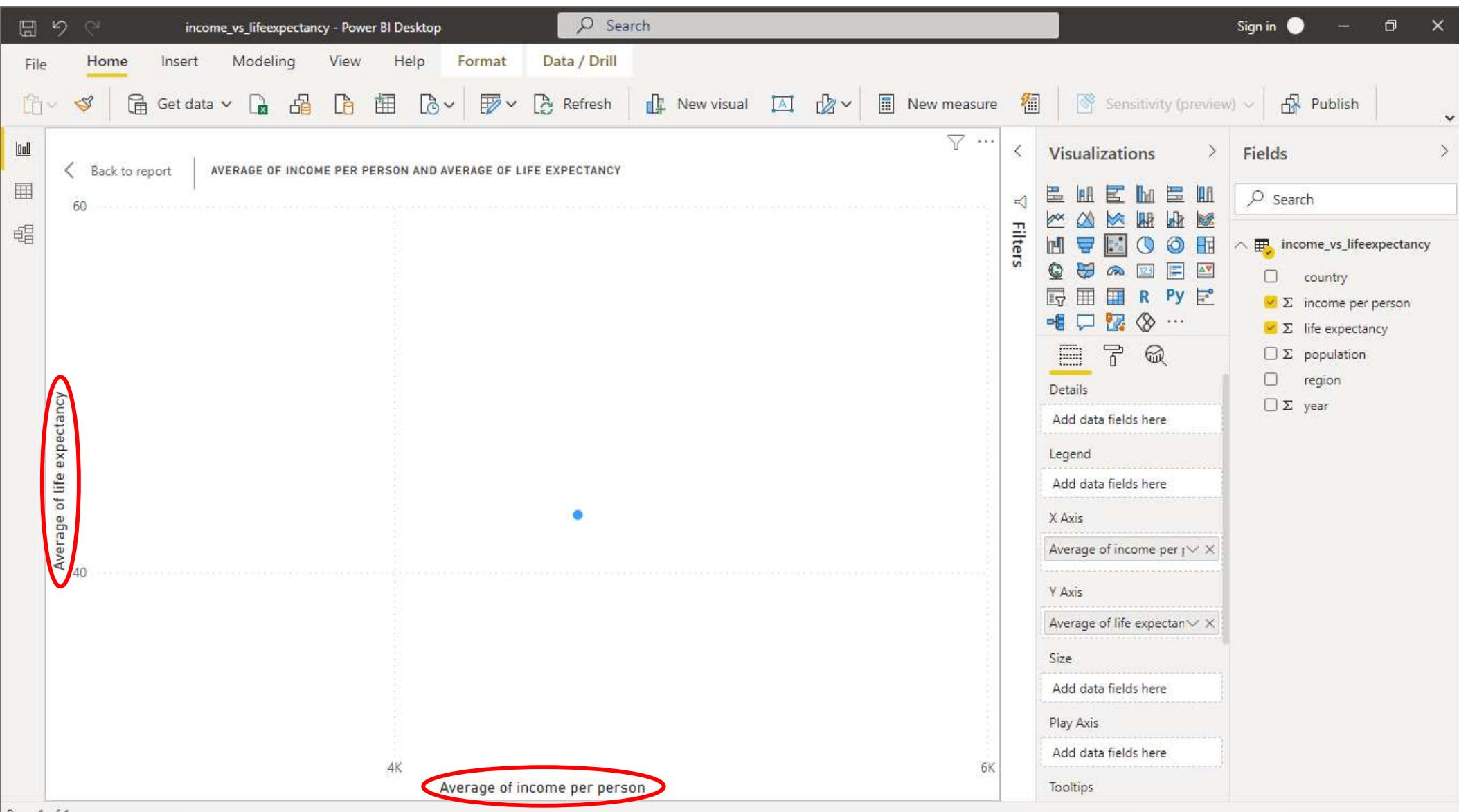
The screenshot shows the Power BI Desktop interface with a scatter plot titled "AVERAGE OF INCOME PER PERSON AND LIFE EXPECTANCY". The X-axis is labeled "Average of income per person" and ranges from 4K to 6K. The Y-axis is labeled "life expectancy" and ranges from 1M to 2M. A single data point is visible at approximately (5K, 1.5M).

A context menu is open over the Y-axis, specifically over the "life expectancy" field. The menu is titled "Visualizations" and includes options for "Details", "Legend", "X Axis", "Y Axis", "Size", "Play Axis", and "Tooltips".

The "Y Axis" section of the menu is expanded, showing various aggregation functions:

- Sum (selected)
- Average (highlighted with a red arrow labeled "2")
- Minimum
- Maximum
- Count (Distinct)
- Count
- Standard deviation
- Variance
- Median
- Show value as
- New quick measure

Red arrows labeled "1" and "2" indicate the current selection steps: "1" points to the "Y Axis" section, and "2" points to the "Average" option in the list.



Use Country as Legend

The screenshot shows the Power BI Desktop interface with a report titled "AVERAGE OF INCOME PER PERSON AND AVERAGE OF LIFE EXPECTANCY". The report contains a scatter plot with "Average of life expectancy" on the Y-axis and "Average of income per person" on the X-axis. A single blue dot is plotted at approximately (4500, 55).

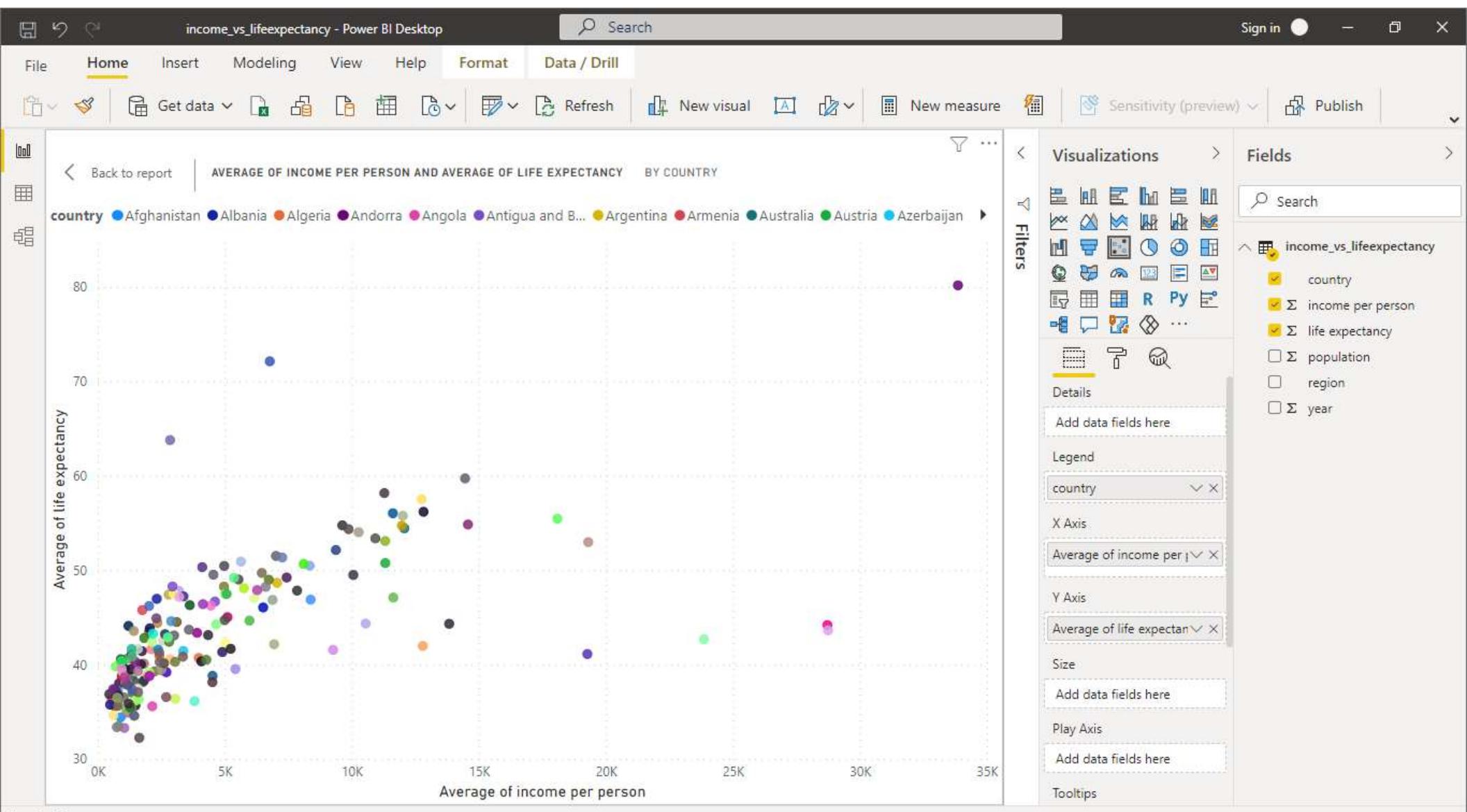
The Fields pane on the right side of the interface lists fields from the data source "income_vs_lifeexpectancy". The visible fields are:

- country (checkbox)
- Σ income per person (checkbox, selected)
- Σ life expectancy (checkbox, selected)
- Σ population (checkbox)
- region (checkbox)
- Σ year (checkbox)

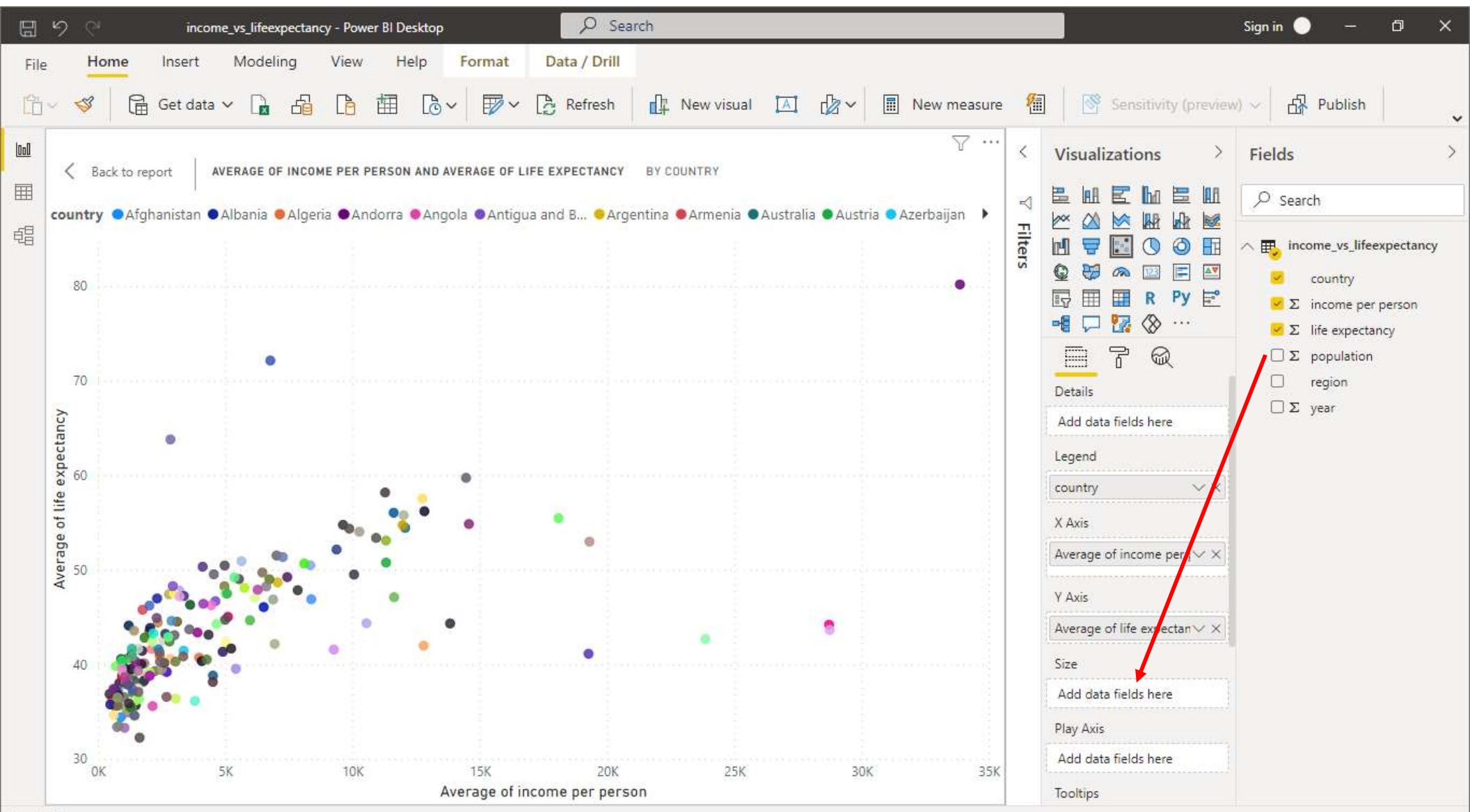
A red arrow points to the "Legend" section in the Fields pane, which contains the instruction "Add data fields here".

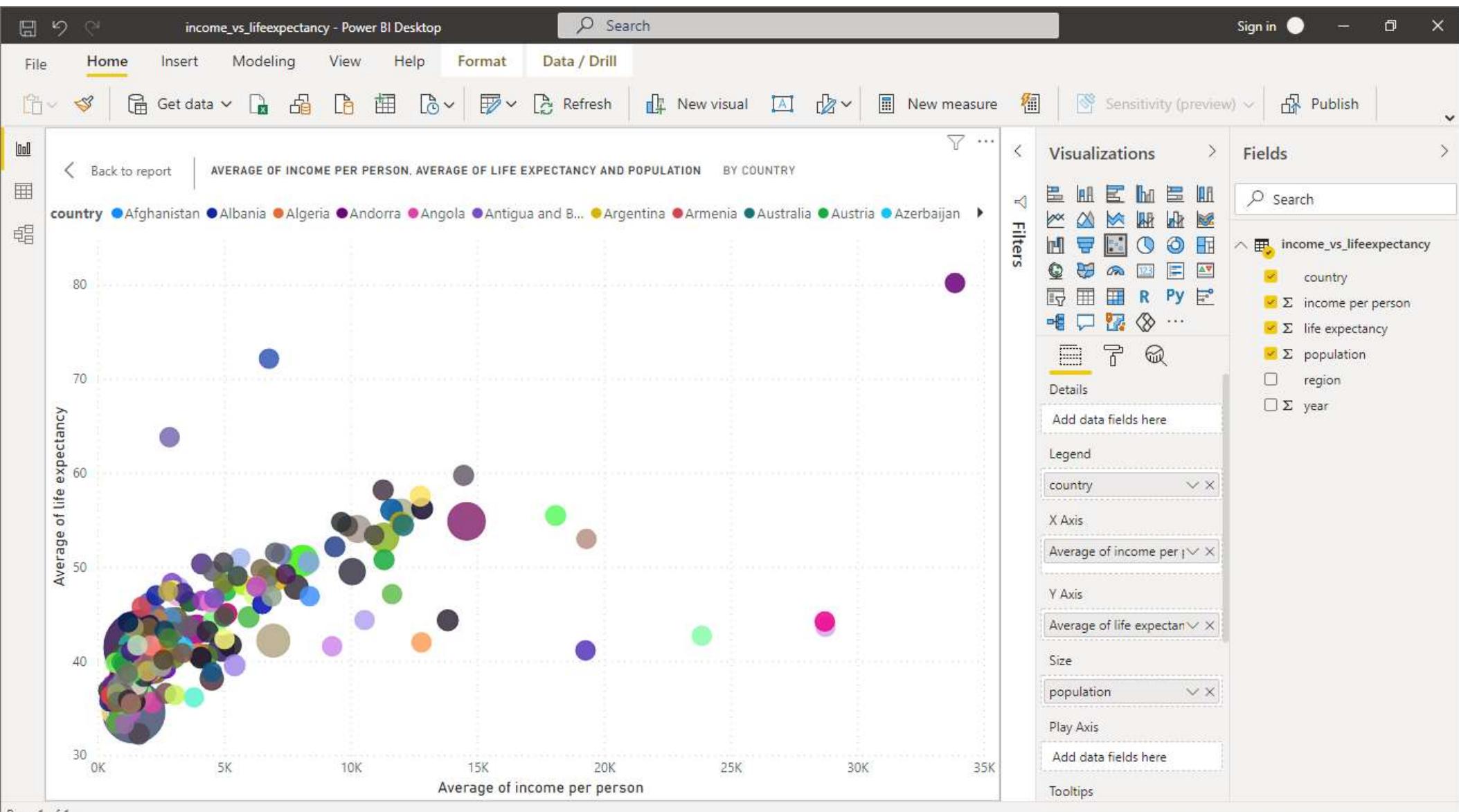
Page 1 of 1

Income vs Life Expectancy by Country



Size by population





Change X axis scale

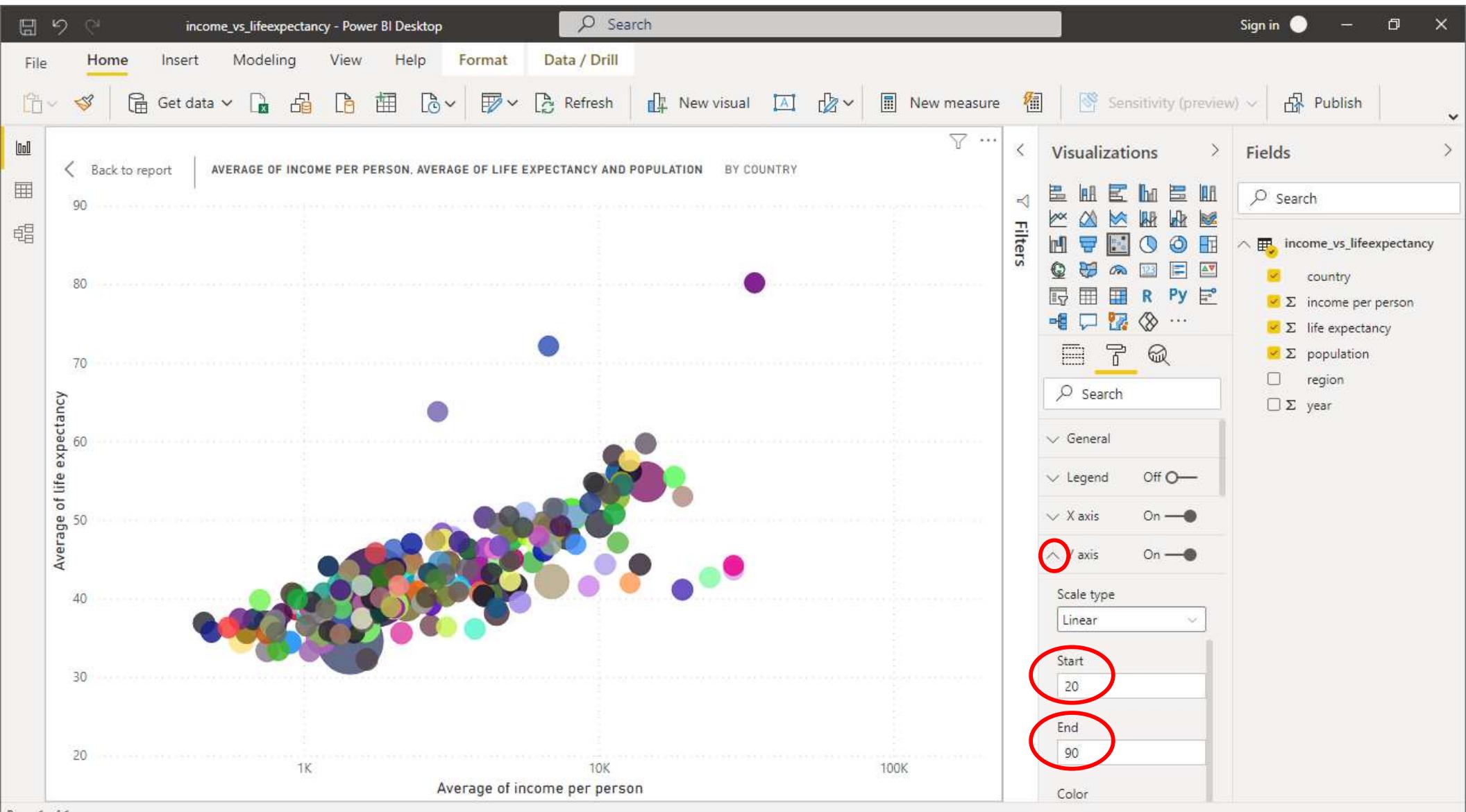
The screenshot shows a Power BI Desktop interface with a bubble chart titled "AVERAGE OF INCOME PER PERSON, AVERAGE OF LIFE EXPECTANCY AND POPULATION BY COUNTRY". The chart displays a positive correlation between average income per person (X-axis) and average life expectancy (Y-axis). The X-axis is logarithmic, with major ticks at 1K, 10K, and 100K. The Y-axis ranges from 30 to 80. Data points are represented by colored bubbles of varying sizes.

The ribbon menu is visible at the top, showing "income_vs_lifeexpectancy - Power BI Desktop" and various tabs like File, Home, Insert, Modeling, View, Help, Format, and Data / Drill. The "Home" tab is selected.

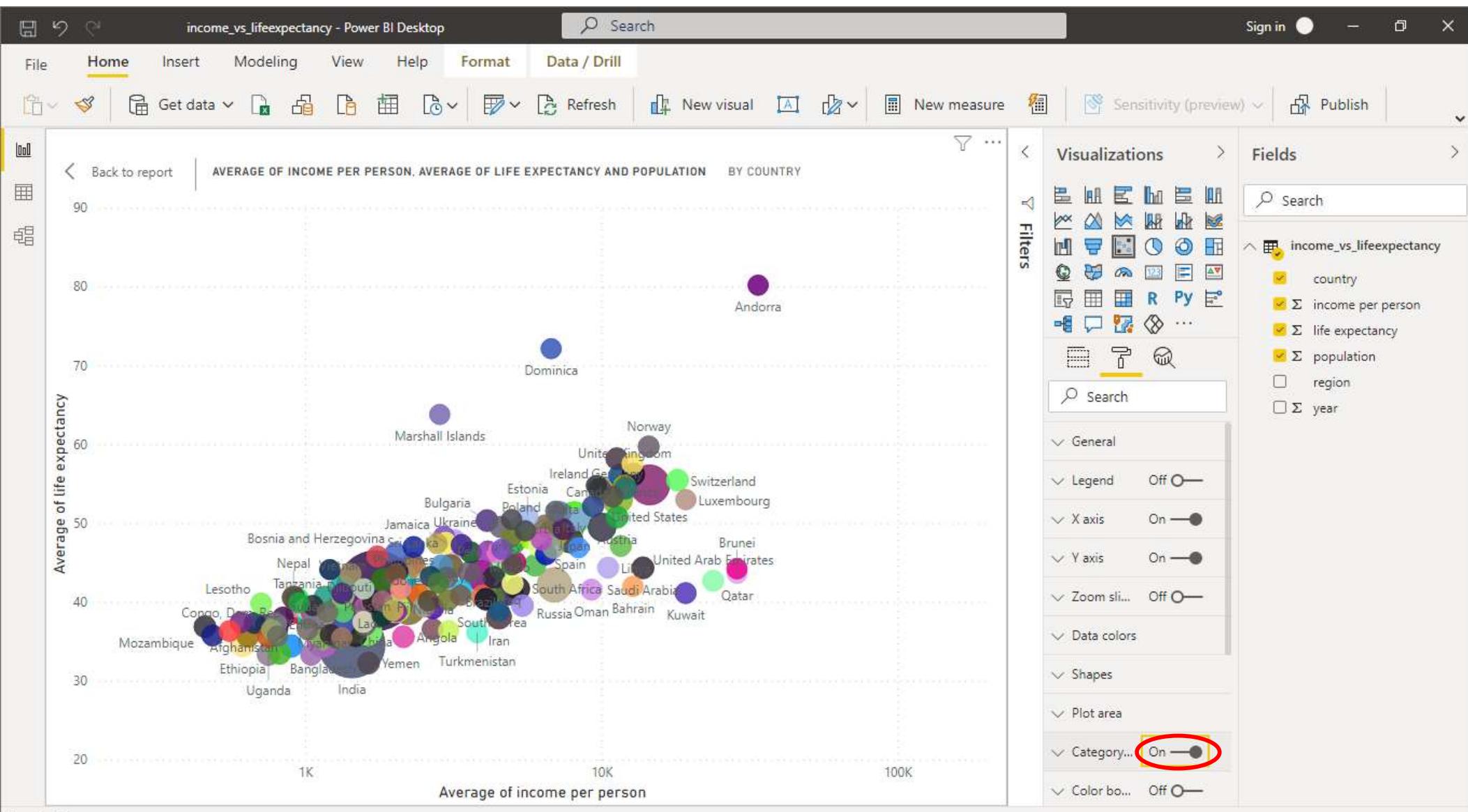
The "Visualizations" pane on the right lists various chart types, and the "Fields" pane shows the data source structure with checked fields: country, Σ income per person, Σ life expectancy, Σ population, and uncheckable fields region and Σ year.

The "Format" pane on the right is open, specifically the "X axis" section. It includes settings for "Scale type" (set to "Log"), "Start" (set to 200), and "End" (set to 200000). A red circle highlights the "Scale type" dropdown, and another red circle highlights the "Start" and "End" input fields. A red arrow labeled "1" points to the "Search" input field at the top of the pane.

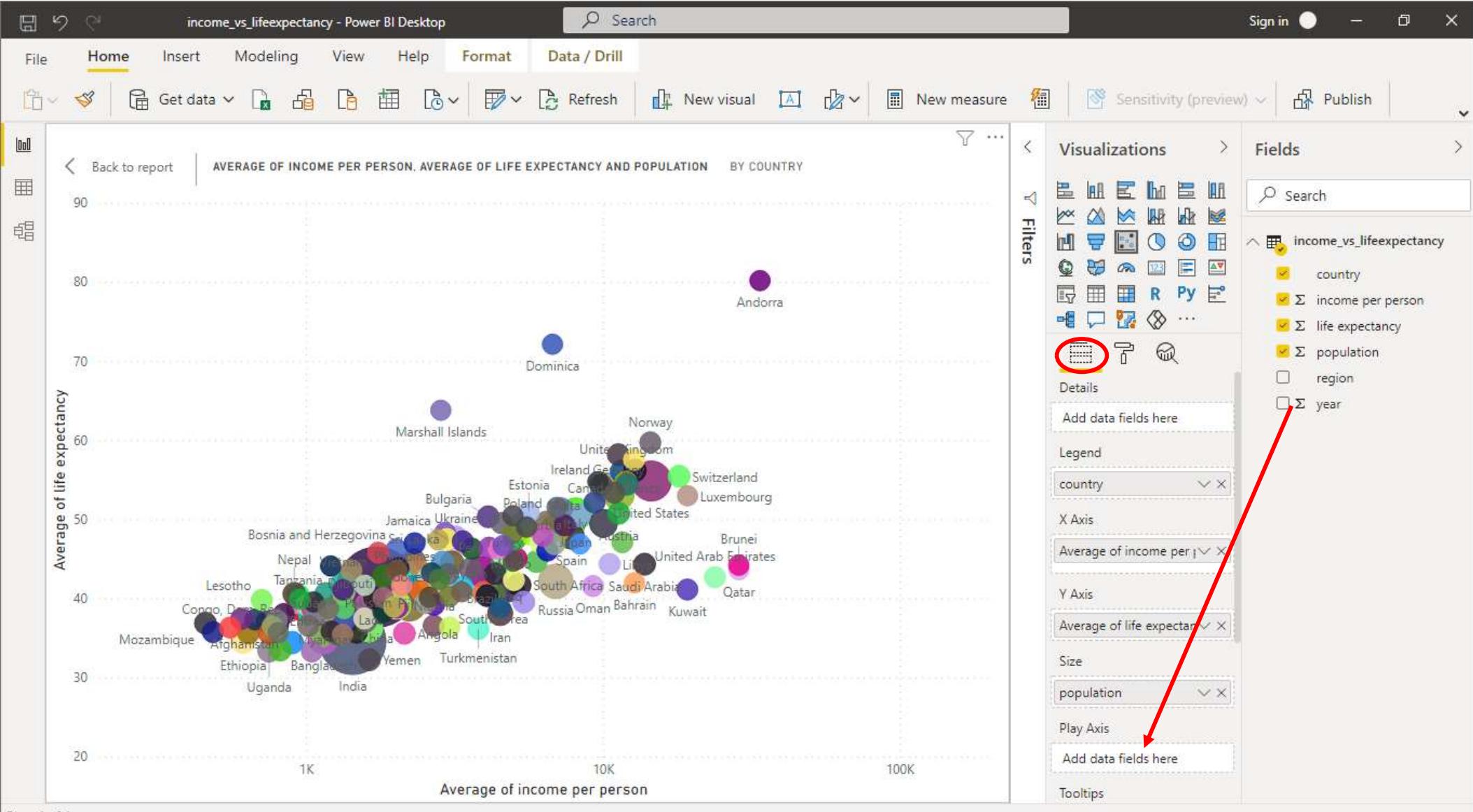
Change Y axis range



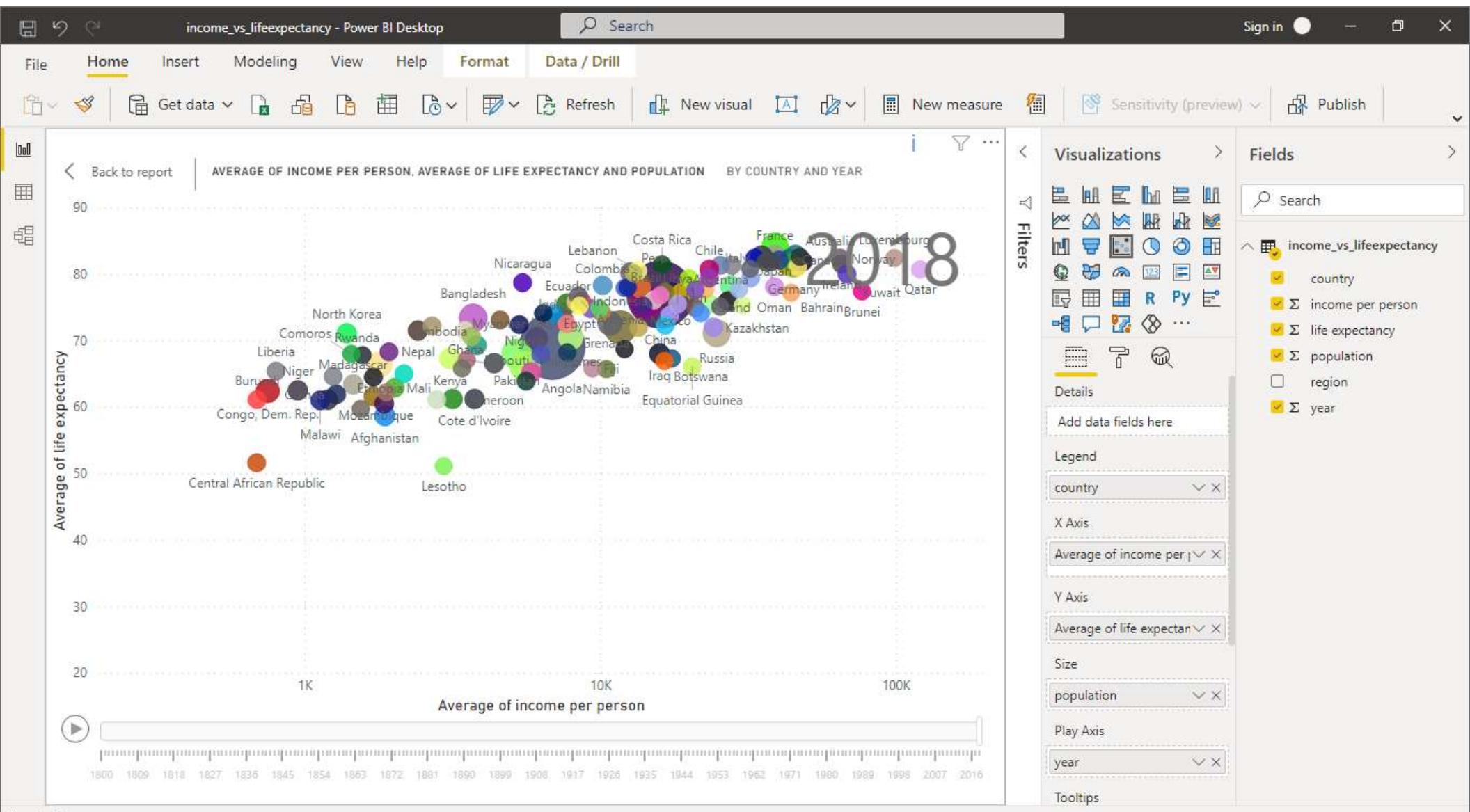
Show country names



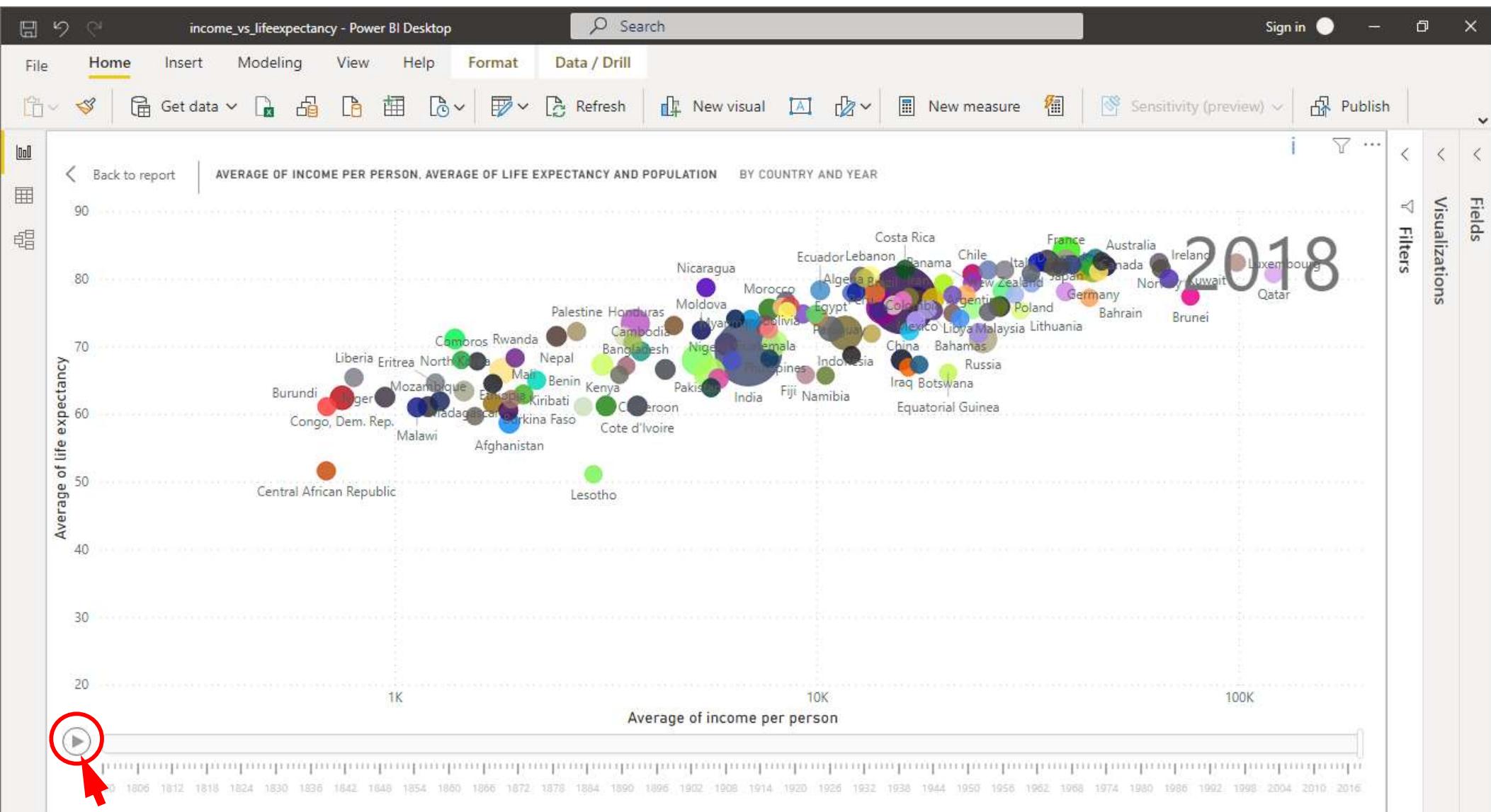
Play Axis



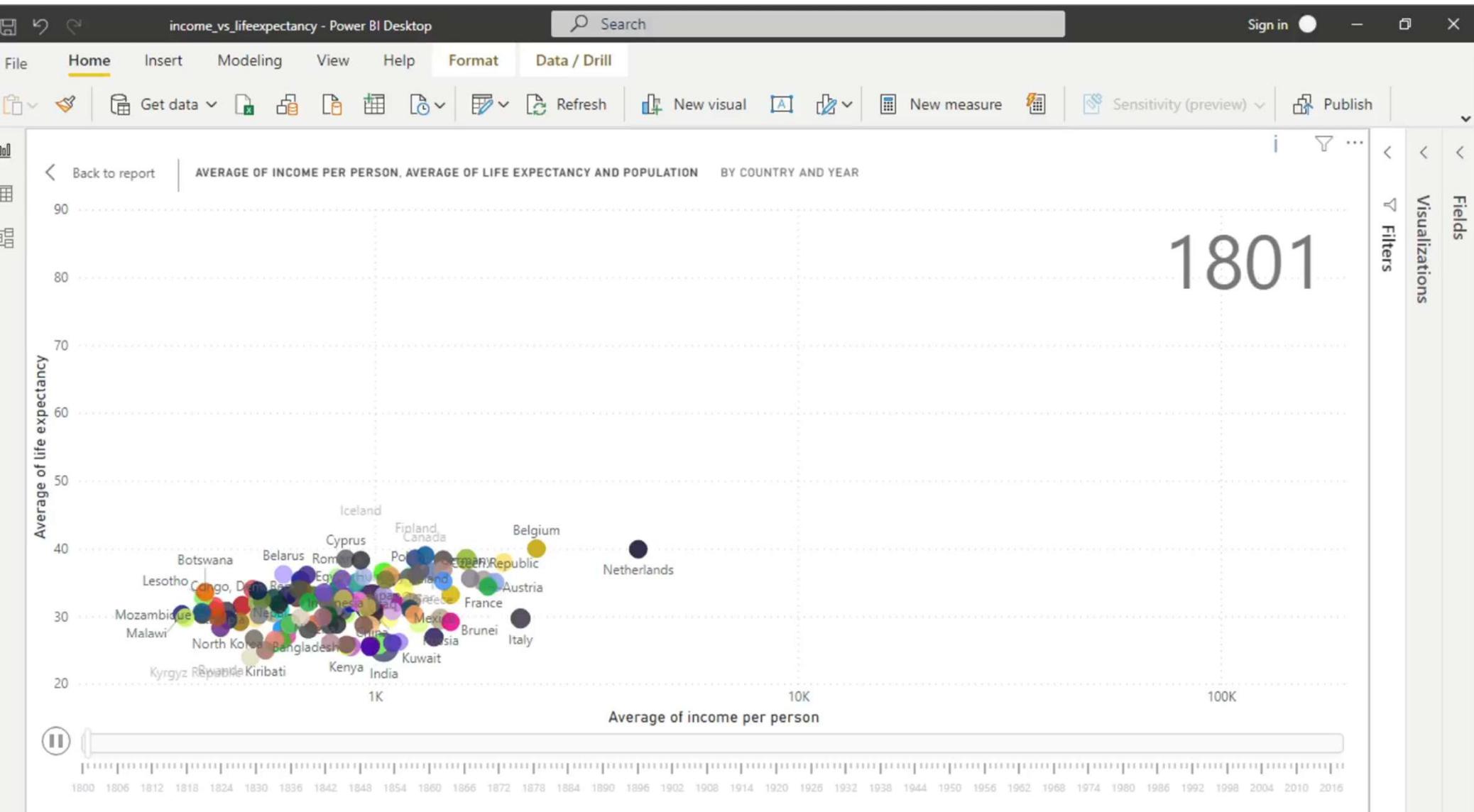
Play Axis



Play



Play



Example: Income vs Life Expectancy

For Power BI Service

For Power BI Desktop [click here](#)

Prepare an Excel File

The Excel file must be in **Table format** to work with Power BI Online.
In Excel, select a cell and do Home → Format as Table

This screenshot shows the Microsoft Excel ribbon with the 'Home' tab selected. In the 'Cells' group of the ribbon, the 'Format as Table' button is highlighted with a red circle. Below the ribbon, a table of data is displayed. The first row contains column headers: 'year', 'country', 'region', 'income_per_capita', 'life_expectancy', and 'population'. The second row contains data for Afghanistan in 1800. The third row contains data for Albania in 1800. The fourth row contains data for Algeria in 1800. The fifth row contains data for Angola in 1800.

year	country	region	income_per_capita	life_expectancy	population
1800	Afghanistan	asia_west	603	28.2	3280000
1800	Albania	europe_e	667	35.4	410000
1800	Algeria	africa_nor	715	28.8	2500000
1800	Angola	africa_sub	618	27	1570000

This screenshot shows the Microsoft Excel ribbon with the 'Home' tab selected. A dialog box titled 'Format As Table' is open in the foreground. It asks 'Where is the data for your table?' with a dropdown menu showing the range '\$A\$1:\$F\$40438'. There is a checked checkbox 'My table has headers'. At the bottom of the dialog box are 'OK' and 'Cancel' buttons. The background shows the same table of data as the previous screenshot, with rows 1 through 8 visible.

year	country	region	income_per_capita	life_expectancy	population
1800	Afghanistan	asia_west	603	28.2	3280000
1800	Albania	europe_e	667	35.4	410000
1800	Algeria	africa_nor	715	28.8	2500000
1800	Angola	africa_sub	618	27	1570000
1800	Antigua and Barbuda	america_r	757	33.5	370000
1800	Argentina	america_s	1510	33.2	5340000
1800	Armenia	europe_e	514	34	413000

Save file

income_vs_lifeexpectancy.xlsx

Veera Muangsin VM

File Home Insert Page Layout Formulas Data Review View Developer Help Acrobat Power Pivot Team Share Comments

year	country	region	income per person	life expectancy	population
1800	Afghanista	asia_west	603	28.2	3280000
1800	Albania	europe_e	667	35.4	410000
1800	Algeria	africa_nor	715	28.8	2500000
1800	Angola	africa_sub	618	27	1570000
1800	Antigua and	america_r	757	33.5	37000
1800	Argentina	america_s	1510	33.2	534000
1800	Armenia	europe_e	514	34	413000
1800	Australia	east_asia	814	34	351000
1800	Austria	europe_w	1850	34.4	3210000
1800	Azerbaijan	europe_e	775	29.2	880000
1800	Bahamas	america_r	1450	35.2	27400
1800	Bahrain	asia_west	1240	30.3	64500
1800	Bangladesh	asia_west	876	25.5	19200000
1800	Barbados	america_r	913	32.1	81700
1800	Belarus	europe_e	608	36.2	2360000
1800	Belgium	europe_w	2410	40	3140000
1800	Belize	america_r	579	26.5	25500
1800	Benin	africa_sub	597	31	637000
1800	Bhutan	asia_west	629	28.8	90000
1800	Bolivia	america_s	854	33	1100000
1800	Bosnia and	europe_e	669	35.1	852000
1800	Botswana	africa_sub	397	33.6	121000
1800	Brazil	america_s	1110	32	3640000
1800	Brunei	east_asia	1510	29.2	2130
1800	Bulgaria	europe_e	1090	35.8	1990000
1800	Burkina Faso	africa_sub	480	29.2	1670000
1800	Burundi	africa_sub	418	31.5	899000
1800	Cambodia	east_asia	903	35	2090000

Create Dataset from Excel file

My workspace → New → Dataset
Add data to get started → Excel

The screenshot illustrates the process of creating a dataset from an Excel file in Power BI.

Left Panel (Power BI Home Screen):

- Header: Power BI My workspace
- Left sidebar icons: Home, Create, Browse, Data hub, Metrics, Apps, Learn, Workspaces.
- Main area: "My workspace" section with a "New" button (circled in red).
- Sub-menu under "New": Report, Paginated report, Scorecard, Dashboard, Dataset (circled in red), Streaming dataset.
- Bottom left: "My workspace" icon (circled in red).

Right Panel (Add data to get started screen):

- Header: Add data to get started
- Options: Excel (circled in red), CSV.
- Text: Paste or manually enter data.
- Message: Don't see the source you're looking for? [Download the desktop app](#).
- File preview: income_vs_lifeexpectancy_table.xlsx (4/27/2021 6:49 PM, Microsoft Excel Worksheet (*.xls), 1,446 KB).
- File dialog buttons: Open (circled in red), Cancel.

Create Report from the Dataset

The screenshot shows the Power BI 'My workspace' interface. On the left is a vertical navigation bar with icons for Home, Create, Browse, Data hub, Metrics, Apps, Deployment pipelines, Learn, Workspaces, and 'My workspace', which is circled in red. The main area is titled 'My workspace' and contains sections for '+ New' and 'Upload'. Below these are tabs for 'All', 'Content', and 'Datasets + dataflows', with 'All' selected. A table lists items: 'covid19' (Dataset), 'covid19.csv' (Dashboard), 'income_vs_lifeexpectancy_table' (Workbook), and another entry for 'income_vs_lifeexpectancy_table' (Dataset). The dataset row has a context menu open, with the 'Create report' option highlighted by a red circle and a red arrow pointing to it. Other options in the menu include 'Analyze in Excel', 'Auto-create report', 'Create operational report', and 'Delete'.

	Name	Type
	covid19	Dataset
	covid19.csv	Dashboard
	income_vs_lifeexpectancy_table	Workbook
	income_vs_lifeexpectancy_table	Dataset

An open context menu for the last dataset row shows the following options:

- Analyze in Excel
- Create report (highlighted)
- Auto-create report
- Create operational report
- Delete

Data is ready

File View Reading view Mobile layout

Home Create Browse Data hub Metrics Apps Deployment pipelines Learn Workspaces My workspace

Filters Search Filters on this page Add data fields here Filters on all pages Add data fields here

Visualizations Build visual

Values Add data fields here

Drill through Cross-report Off Keep all filters On Add drill-through fields here

Data Search income_vs_lifeexpect... country Σ income per pers... Σ life expectancy Σ population region Σ year

Build visuals with your data
Select or drag fields from the Data pane onto the report canvas.

Create a Scatter Chart

The screenshot shows the Power BI desktop interface. On the left, the ribbon menu includes Home, Favorites, Recent, Create, Datasets, Apps, Shared with me, Learn, Workspaces, and My workspace. Under My workspace, there are three dashboards listed: Retail Analysis Sample, Retail Analysis Sample, and Retail Analysis Sample. At the bottom, there are buttons for Get data, Page 1, and a plus sign.

The main area displays a scatter chart with several gray circular data points. A red circle with the number '2' highlights the '...' button at the bottom right of the chart area. To the right of the chart is the 'Visualizations' pane, which contains a grid of icons for different chart types. One icon, a scatter plot, is circled in red with the number '1'. Below the grid, sections for Details, Legend, X Axis, Y Axis, Size, Play Axis, and Tooltips are visible, each with an 'Add data fields here' placeholder.

At the top of the screen, the browser address bar shows `app.powerbi.com/groups/me/datasets/db7bd68d-e790-4431-99ec-759f124c9ac9`. The browser toolbar includes back, forward, search, and other standard controls.

Assign fields to X and Y Axes

The screenshot shows the Power BI desktop application interface. On the left is the navigation pane with options like Home, Favorites, Recent, Create, Datasets, Apps, Shared with me, Learn, Workspaces, and My workspace. The main area displays a bubble chart with several gray bubbles of varying sizes scattered across a grid. Above the chart, a message says "Select or drag fields to populate this visual". To the right is the Fields pane, which lists data fields from a dataset named "income_vs_lifeexp...". The fields include country, income per ..., life expecta..., population, region, and year. The Fields pane also contains sections for Visualizations, Filters, Details, Legend, X Axis, Y Axis, Size, Play Axis, and Tooltips. A red arrow points from the text "Drag & Drop" to the "Add data fields here" section under the X Axis.

Power BI My workspace

File Reading view Mobile layout

Explore Refresh Save

Visualizations

Filters

Details

Add data fields here

Legend

Add data fields here

X Axis

Add data fields here

Y Axis

Add data fields here

Size

Add data fields here

Play Axis

Add data fields here

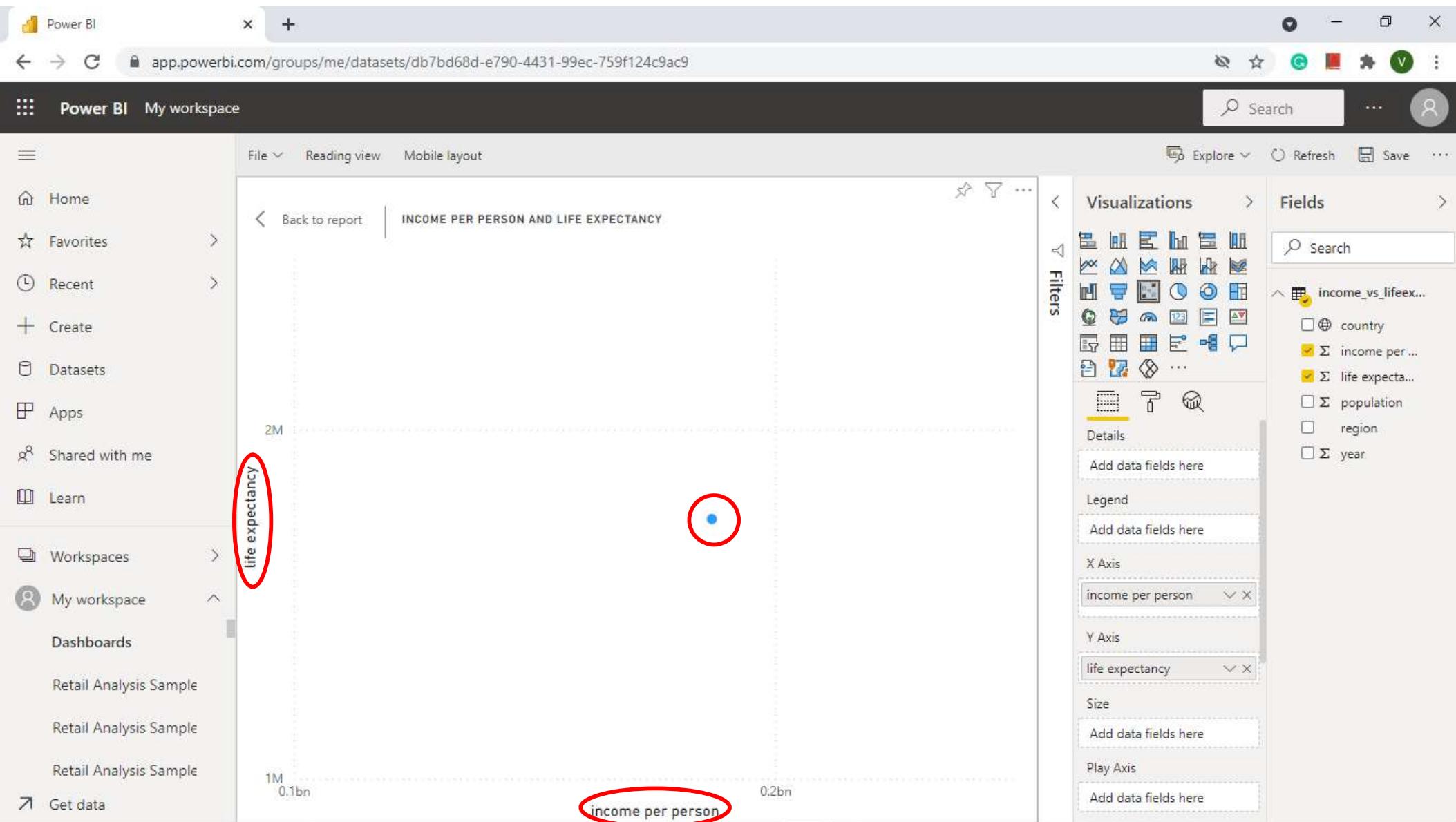
Tooltips

Search

income_vs_lifeexp...

- country
- income per ...
- life expecta...
- population
- region
- year

Drag & Drop



Change calculation of income

The screenshot shows a Power BI report titled "INCOME PER PERSON AND LIFE EXPECTANCY". The report contains a scatter plot with "income per person" on the X-axis and "life expectancy" on the Y-axis. A context menu is open over the Y-axis, specifically under the "Visualizations" section. The menu lists various aggregation functions: Sum (checked), Average (selected), Minimum, Maximum, Count (Distinct), Count, Standard deviation, Variance, Median, and Show value as. Red arrows labeled 1 and 2 point to the "income per person" field in the X-axis details and the "Average" option in the context menu, respectively.

Power BI My workspace

File Reading view Mobile layout

INCOME PER PERSON AND LIFE EXPECTANCY

Back to report

life expectancy

income per person

Visualizations

Filters

Remove field

Rename for this visual

Move to

Don't summarize

Sum

Average (selected)

Minimum

Maximum

Count (Distinct)

Count

Standard deviation

Variance

Median

Show value as

income per person

life expectancy

1

2

Change calculation of life expectancy

The screenshot shows a Power BI report titled "AVERAGE OF INCOME PER PERSON AND LIFE EXPECTANCY". The report contains a scatter plot with "Average of income per person" on the X-axis and "life expectancy" on the Y-axis. A single data point is visible at approximately (4K, 2M). On the right side of the screen, the "Visualizations" pane is open, displaying various chart and map types. A context menu is open over the Y-axis, specifically under the "Details" section. The menu lists several aggregation options: Sum (checked), Average (highlighted with a red arrow labeled 2), Minimum, Maximum, Count (Distinct), Count, Standard deviation, Variance, Median, and Show value as. Arrows labeled 1 and 2 point to the "Sum" and "Average" options respectively.

Average of income per person

life expectancy

Visualizations

Fields

Sum

Average

Minimum

Maximum

Count (Distinct)

Count

Standard deviation

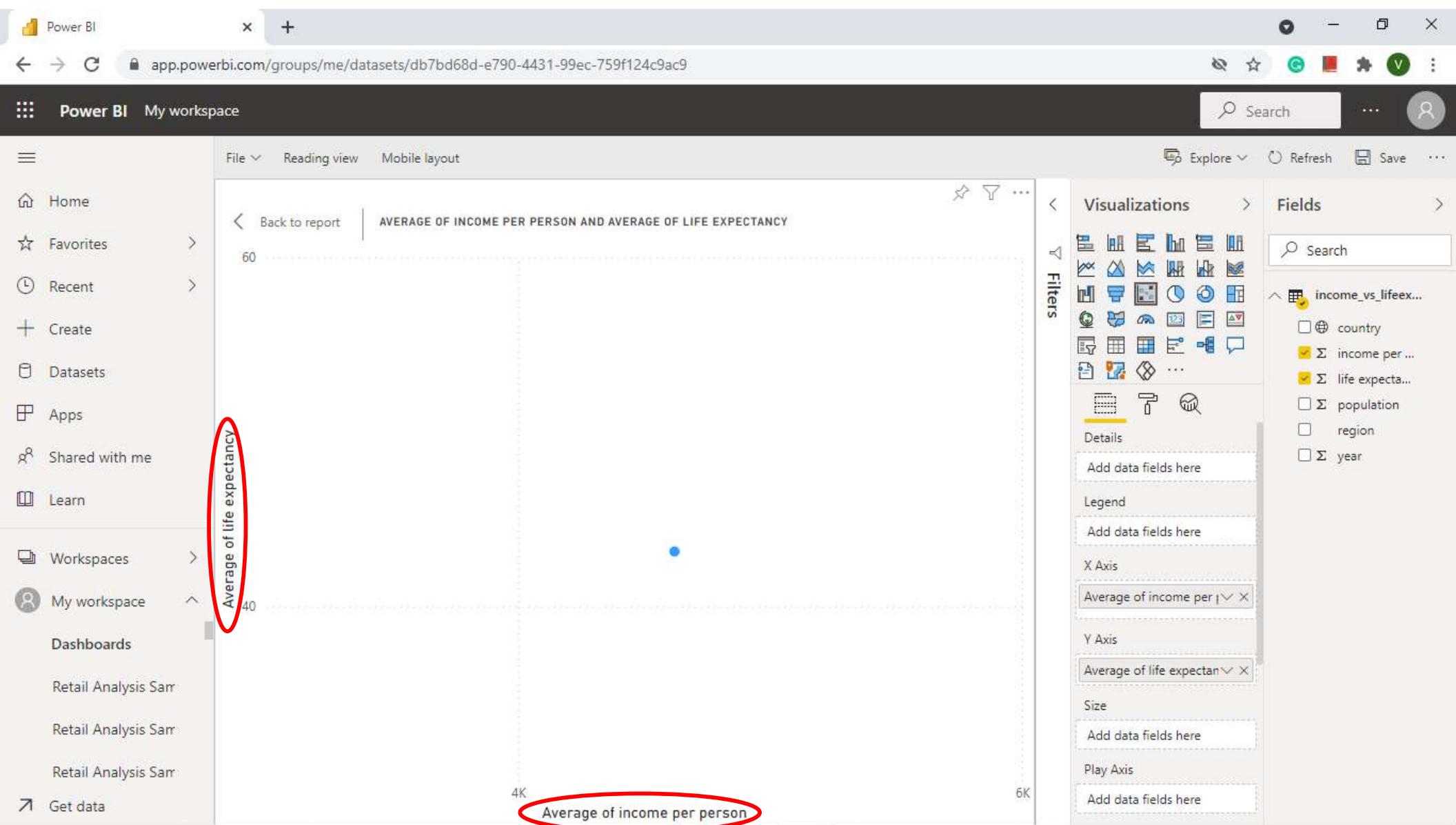
Variance

Median

Show value as

1

2



Use Country as Legend

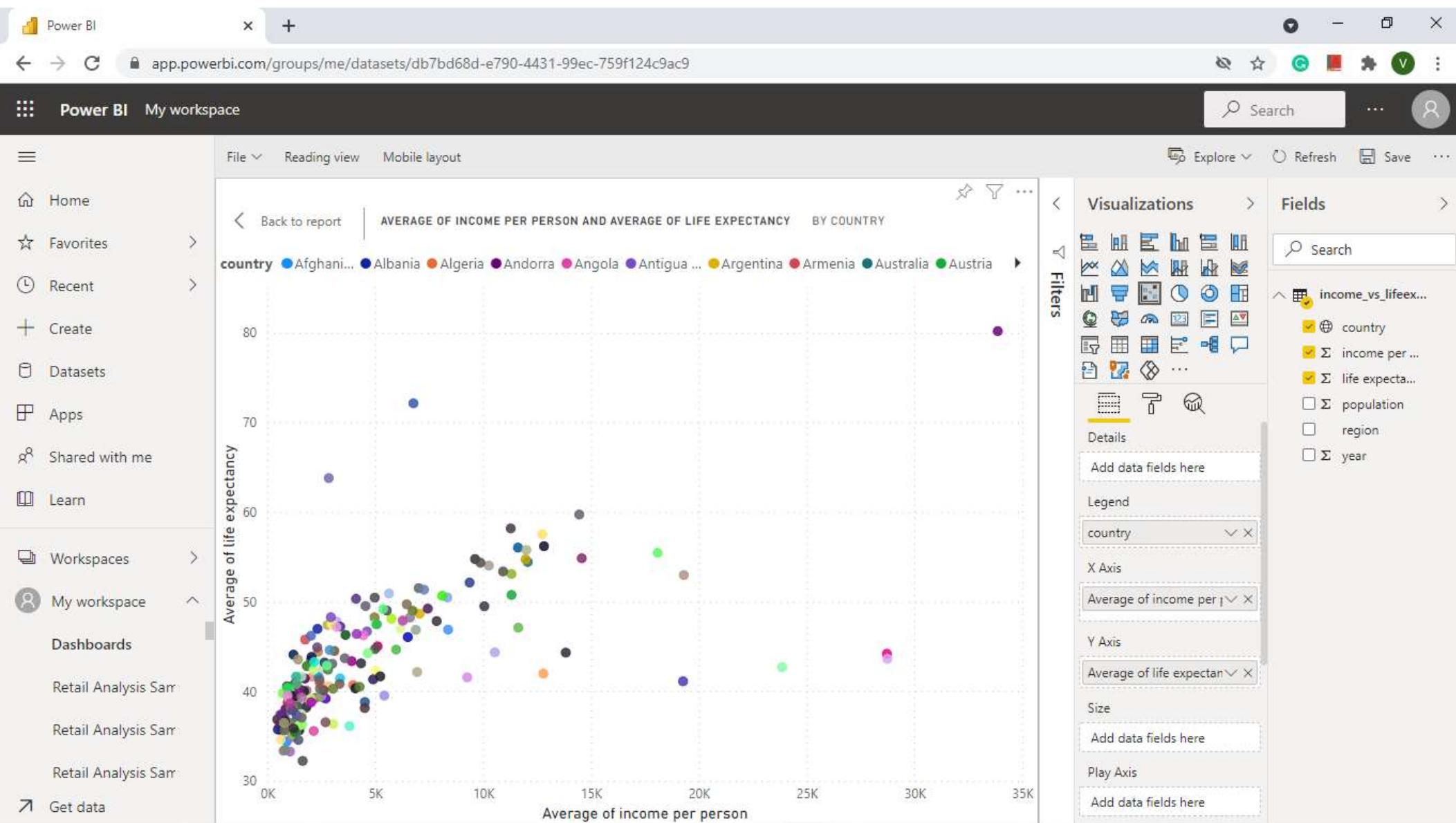
The screenshot shows the Power BI desktop interface with a report titled "AVERAGE OF INCOME PER PERSON AND AVERAGE OF LIFE EXPECTANCY". The report contains a scatter plot with "Average of life expectancy" on the Y-axis and "Average of income per person" on the X-axis. Both axes have scale markers at 40, 4K, 60, and 6K.

The Fields pane on the right side of the interface is open, displaying a list of fields from the dataset "income_vs_lifeex...". The fields listed are:

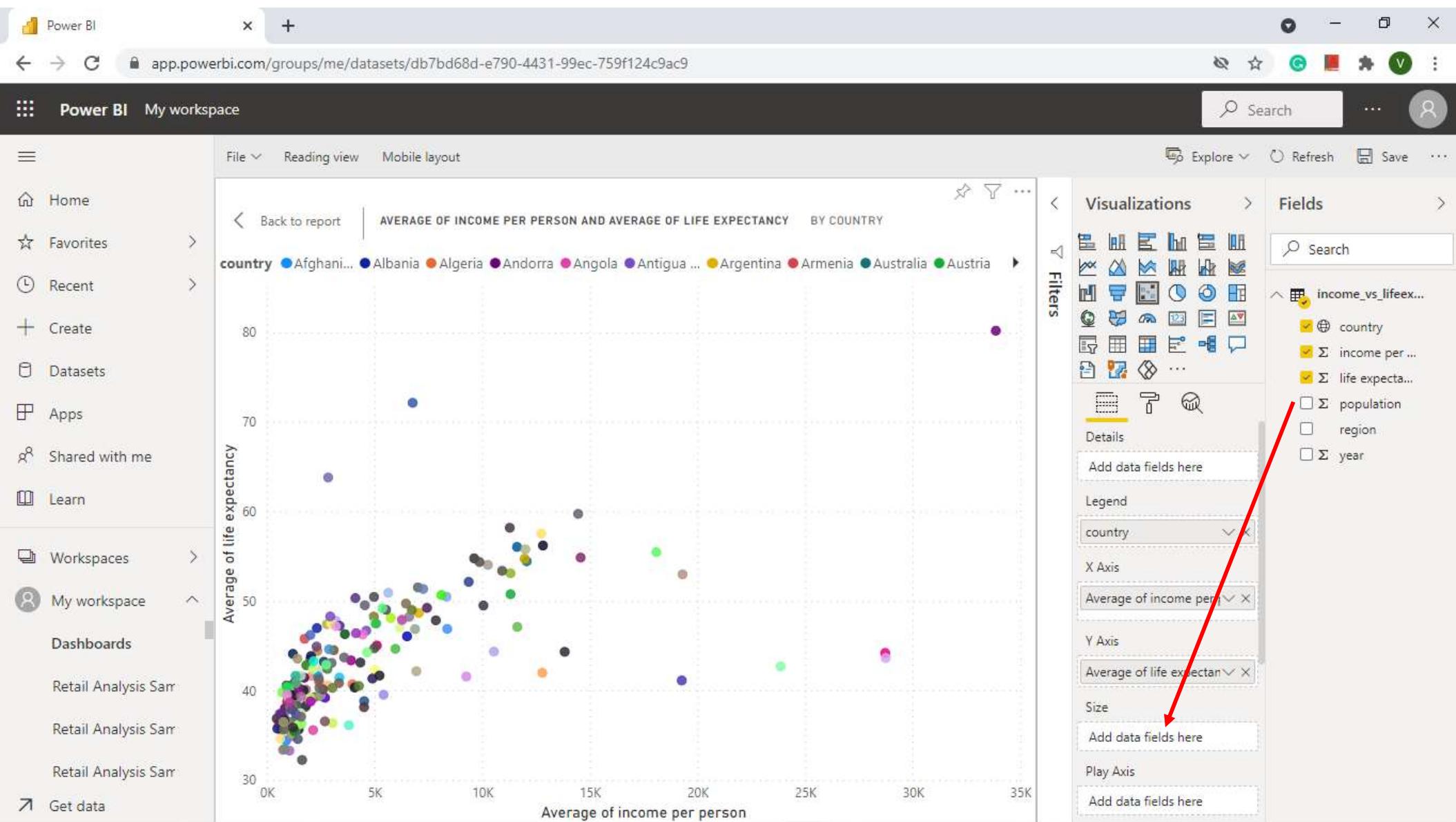
- country
- Σ income per ...
- Σ life expecta...
- Σ population
- region
- Σ year

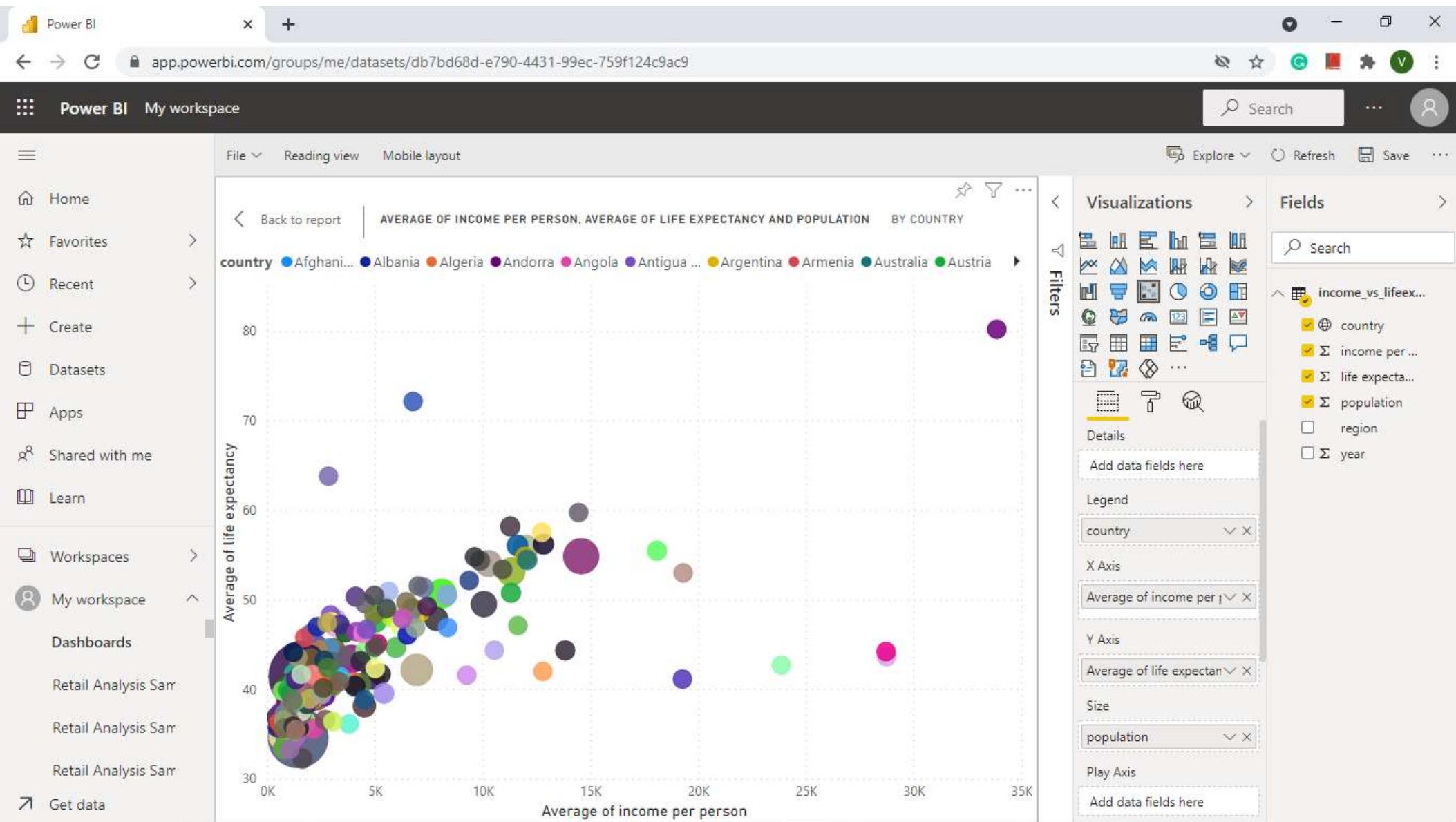
A red arrow points to the "Legend" section in the Fields pane, indicating where the "country" field should be added to define the legend for the scatter plot.

Income vs Life Expectancy by Country

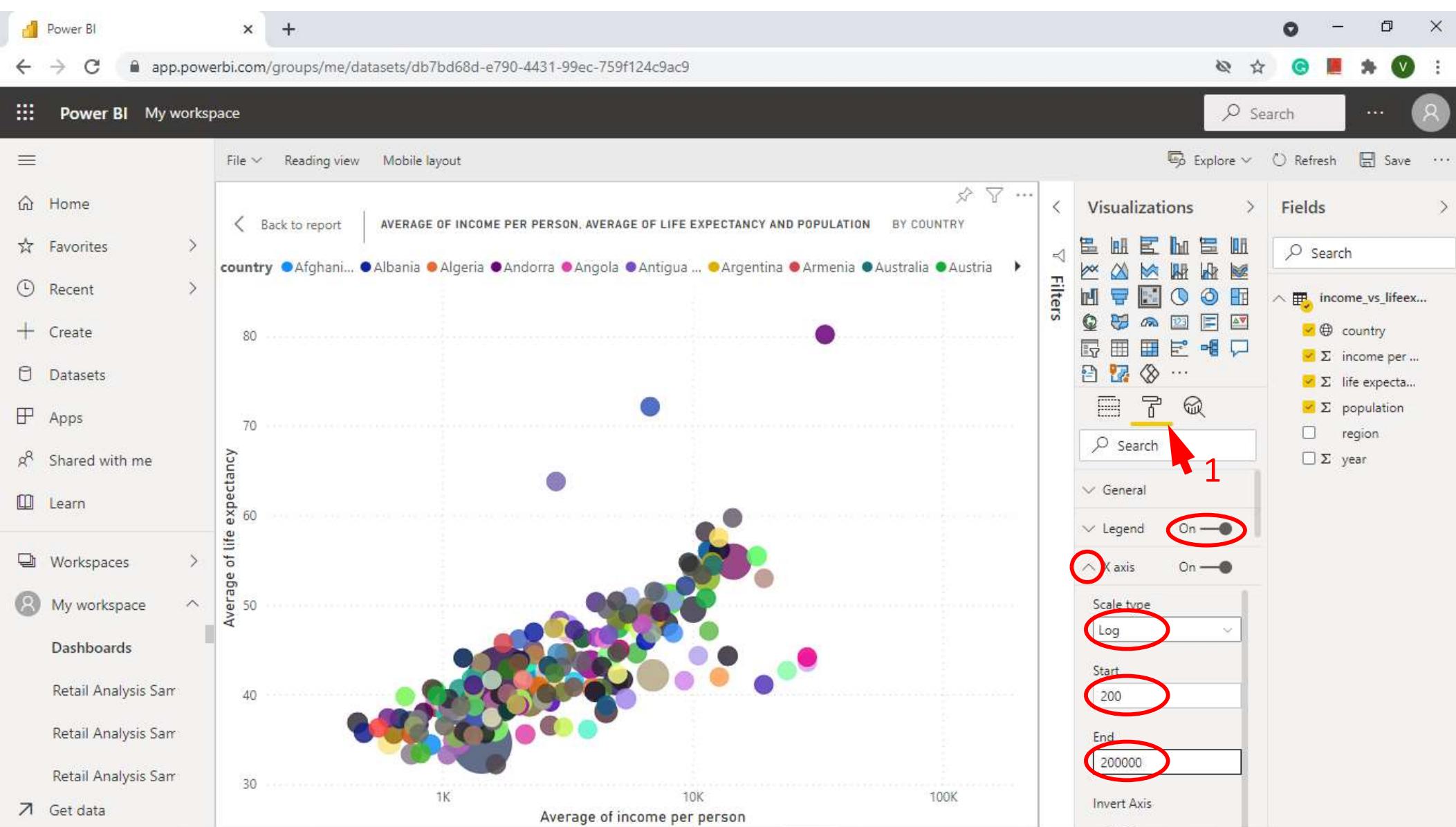


Size by population

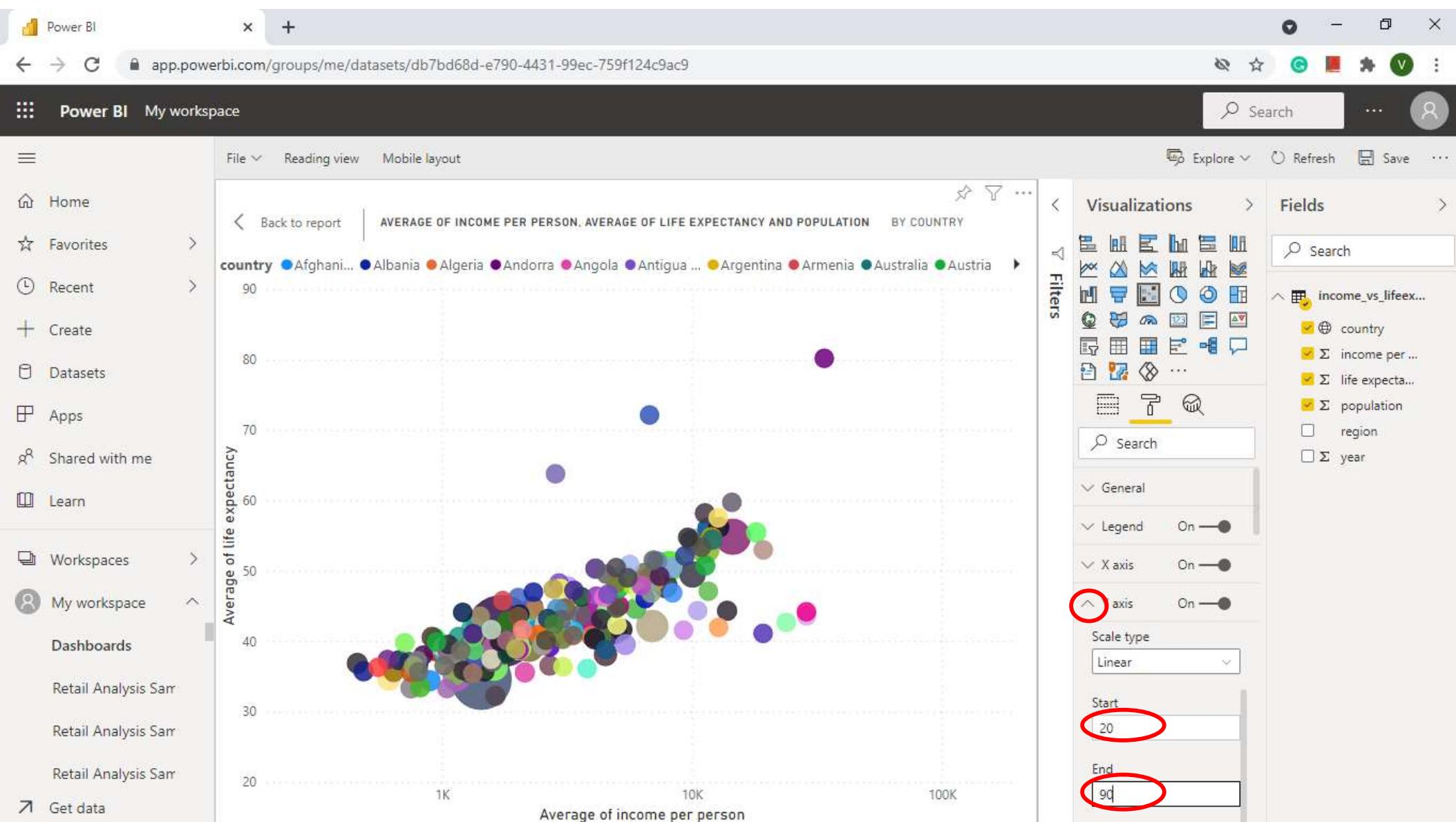




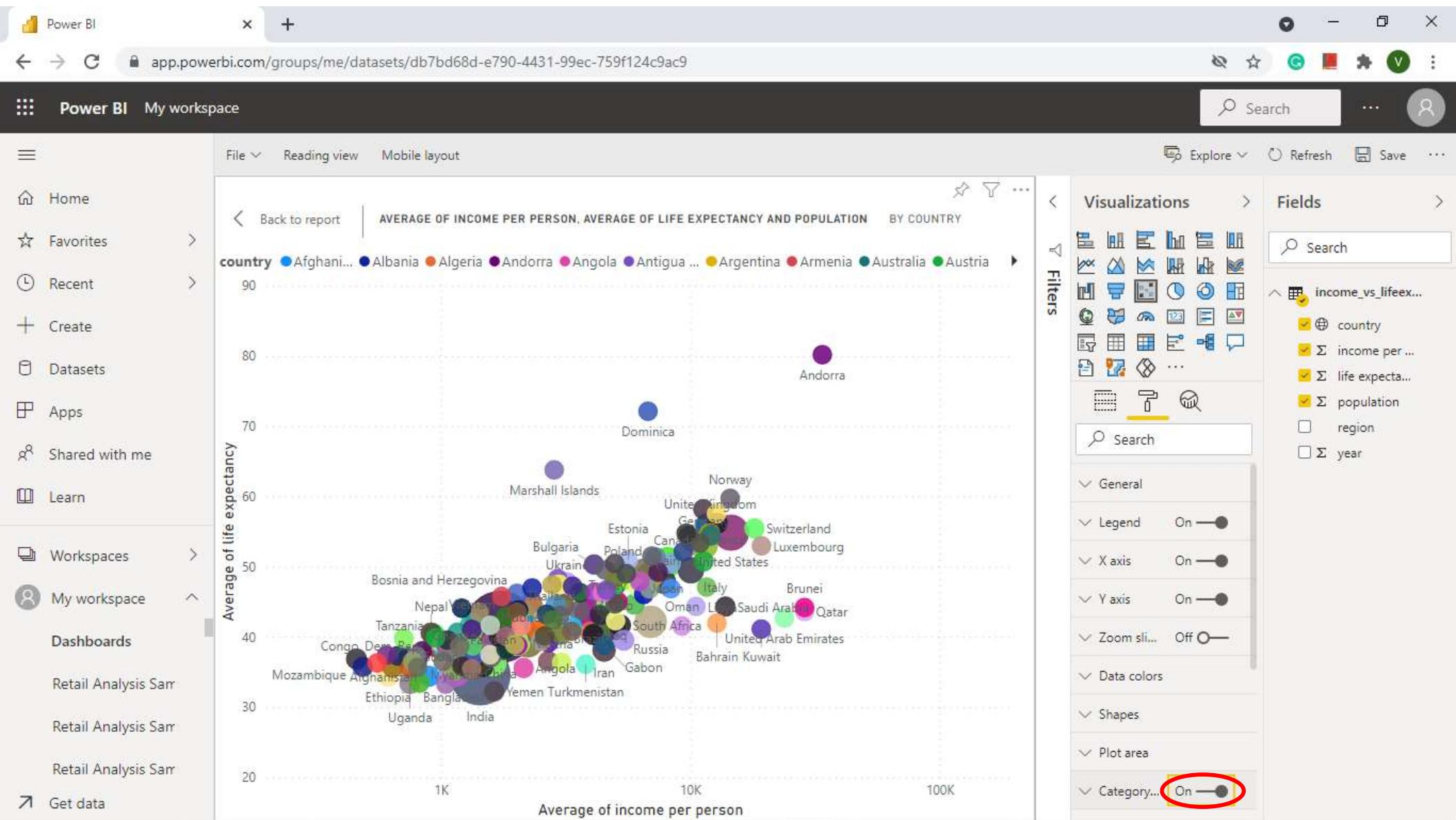
Change X axis scale



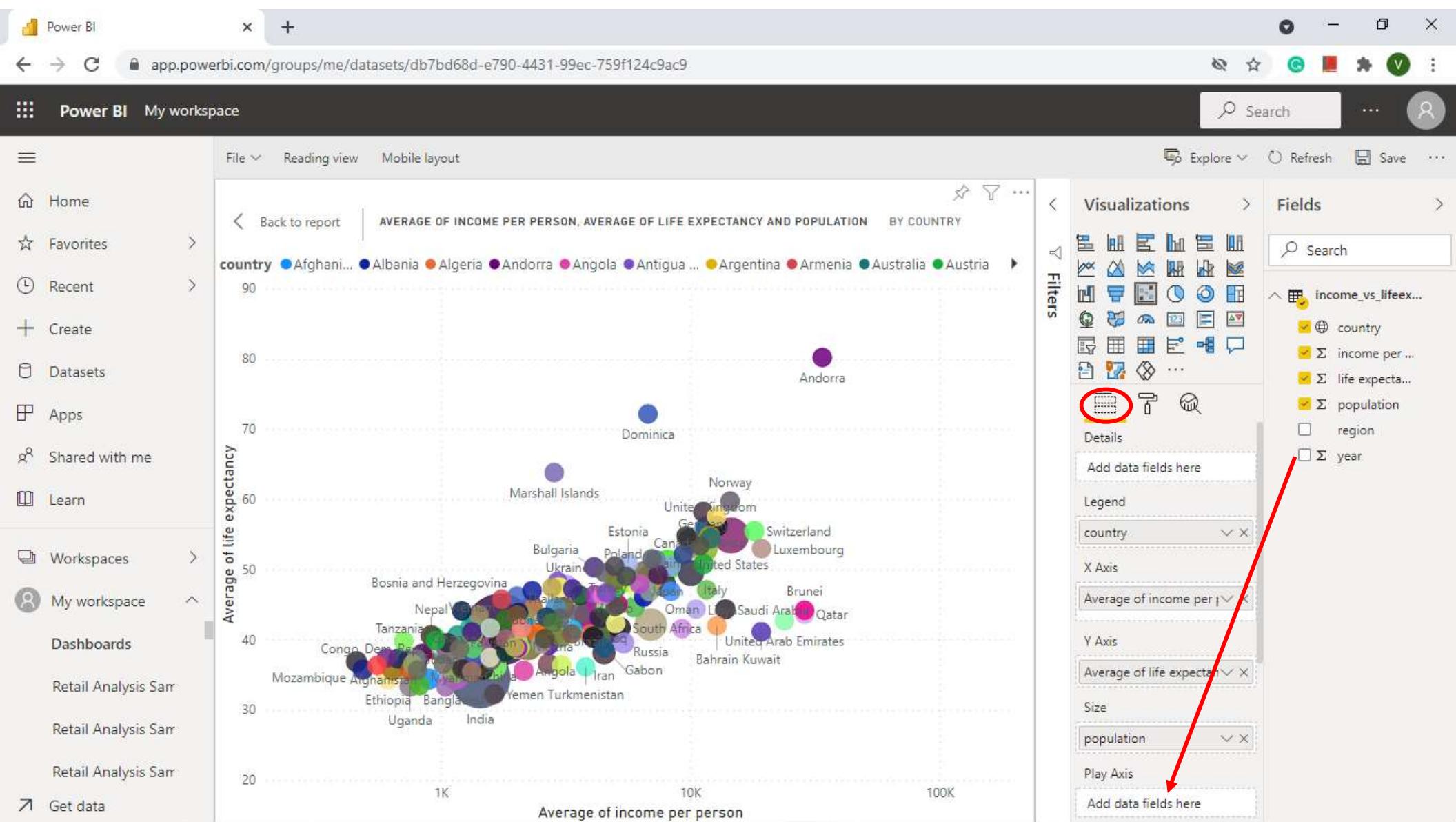
Change Y axis range



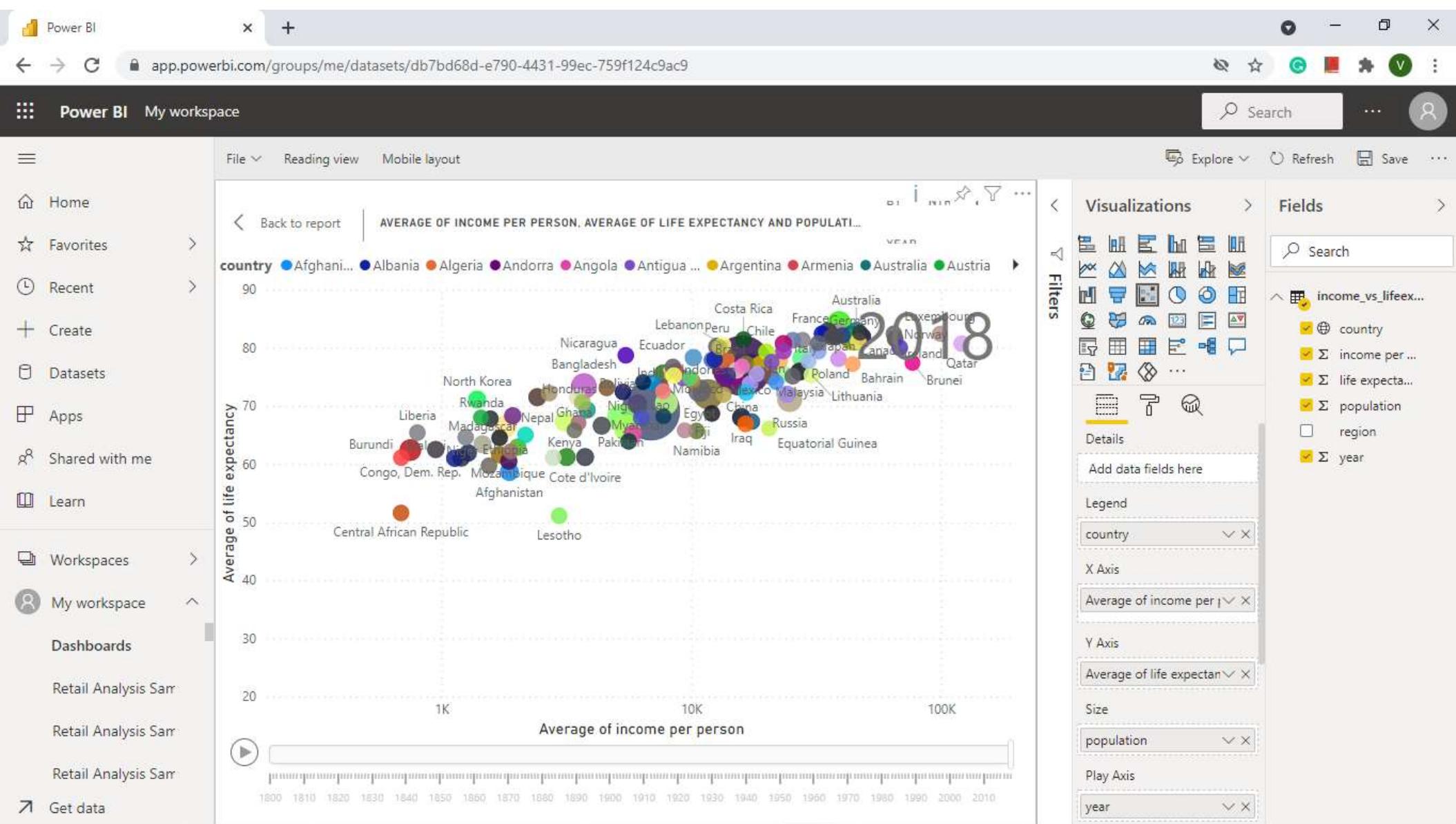
Show country names



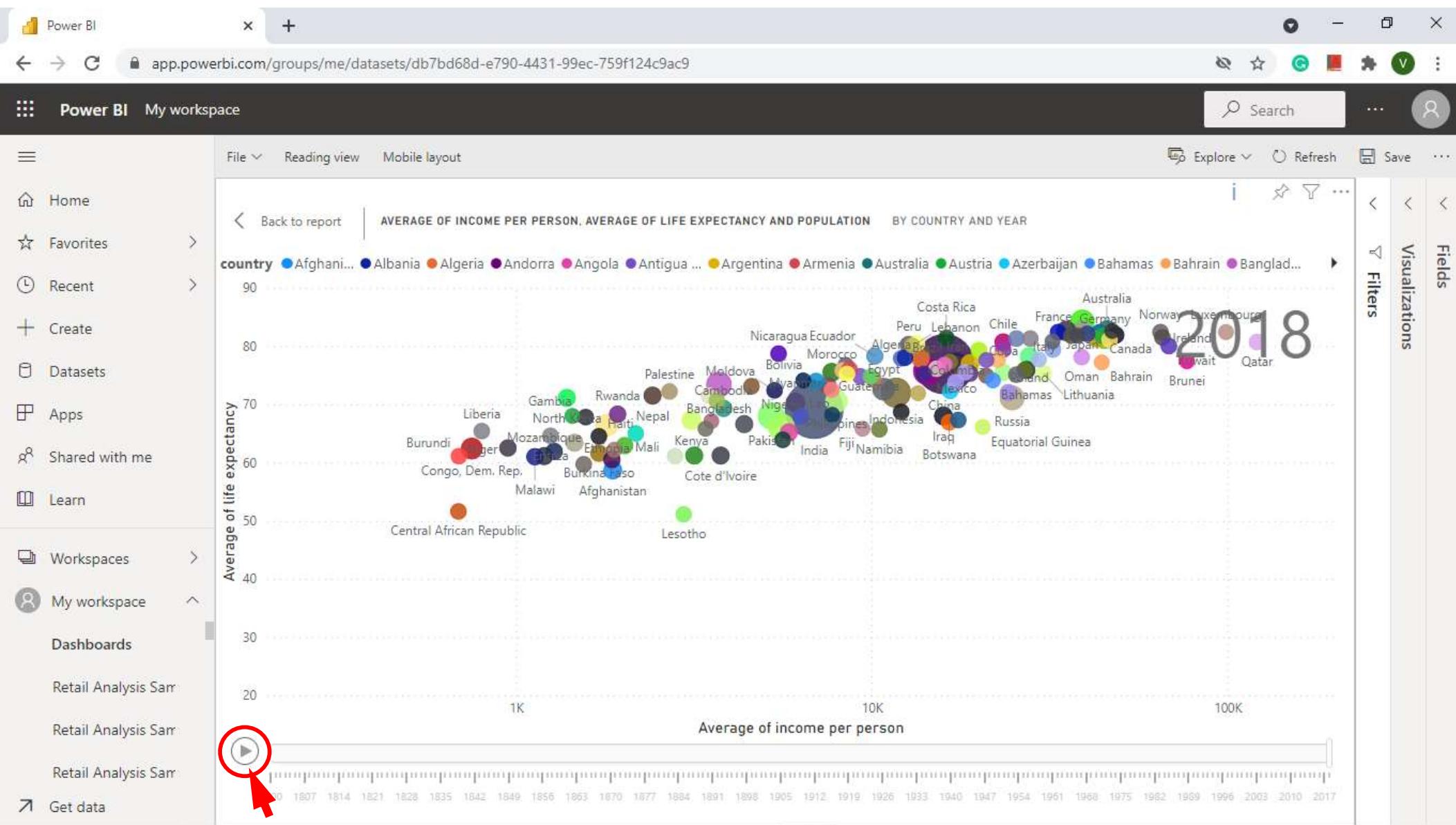
Play Axis



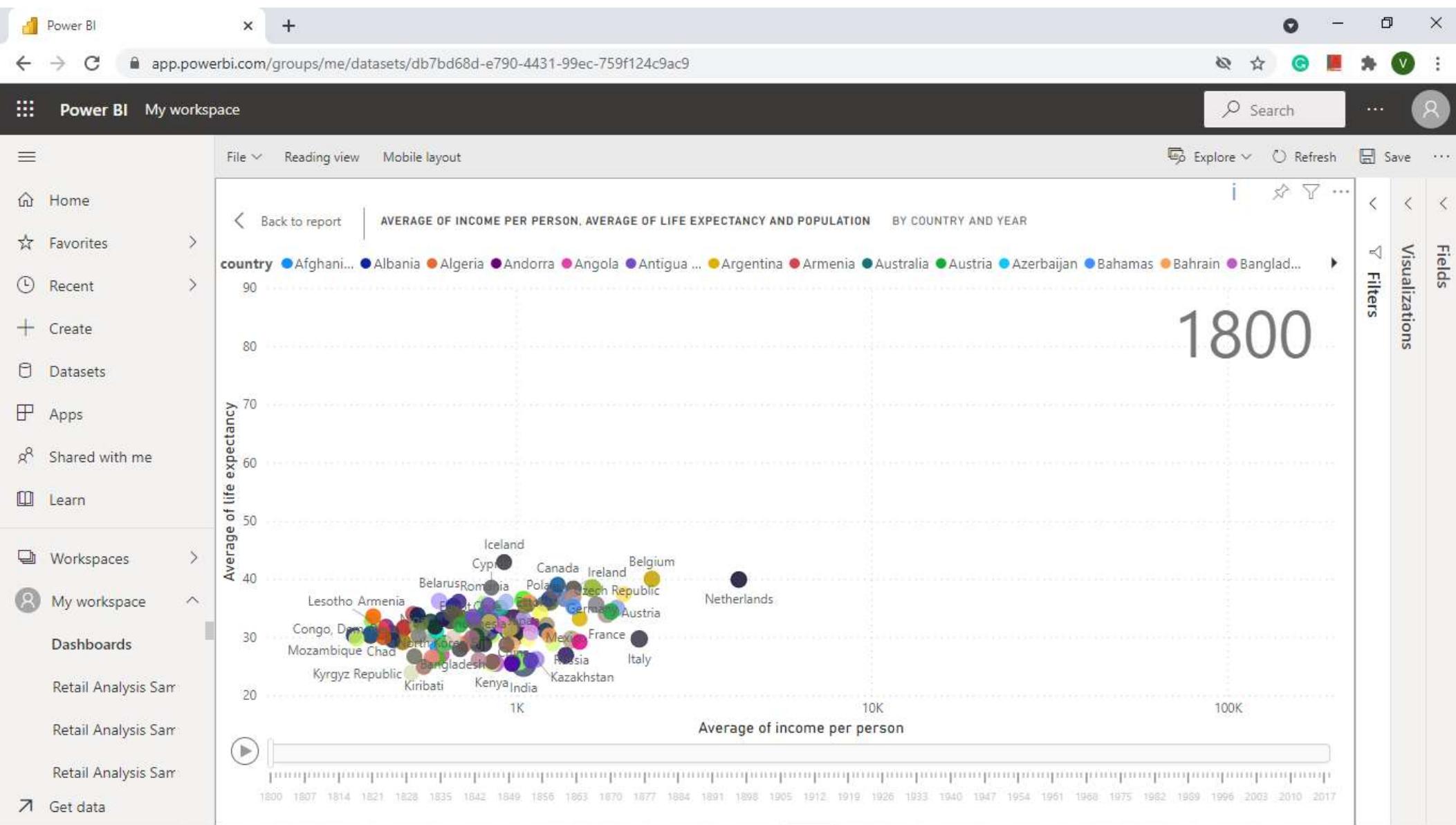
Play Axis

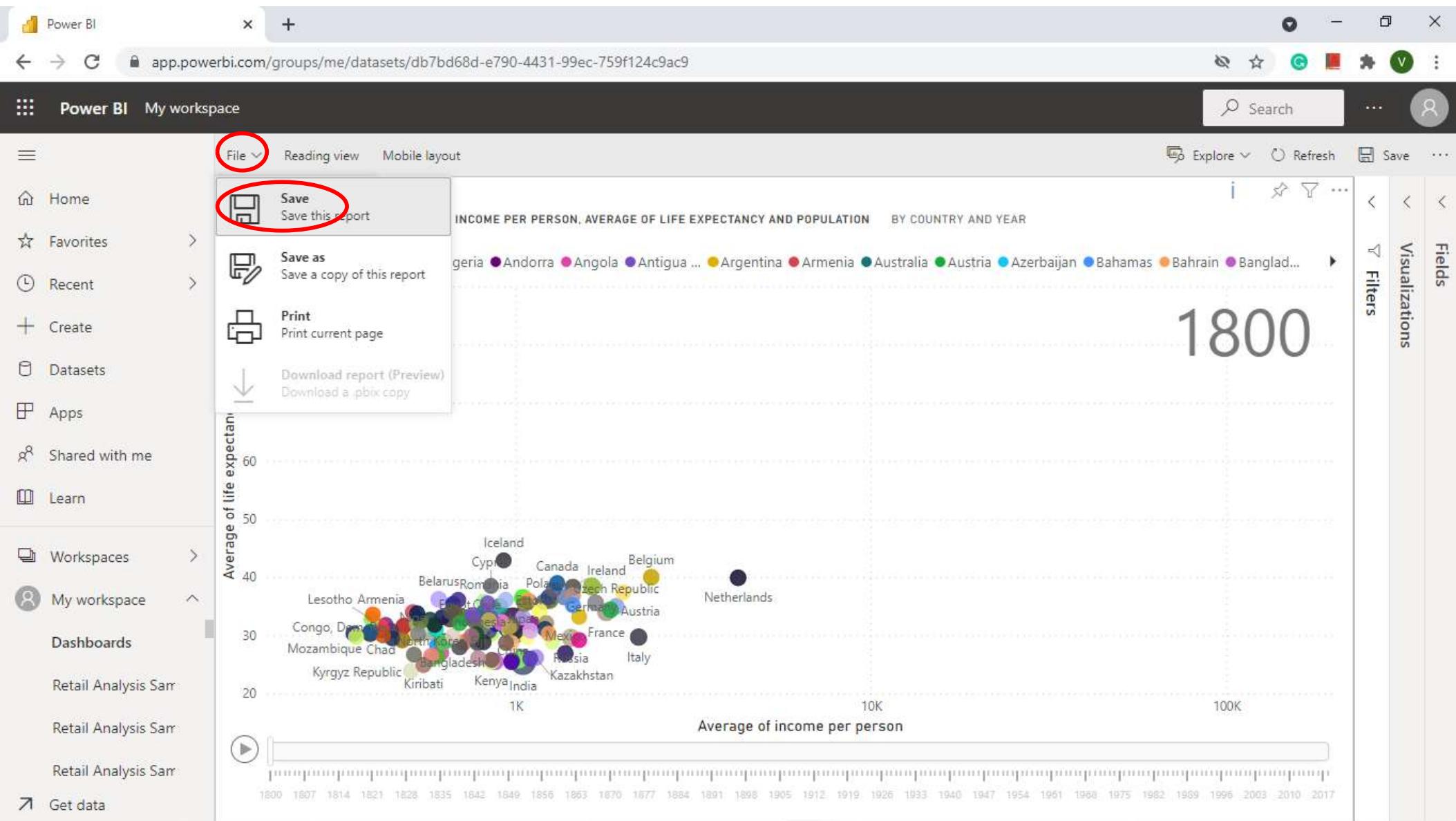


Play



Play





Power BI

app.powerbi.com/groups/me/list/dashboards

Power BI My workspace

My workspace

+ New

All Content Datasets + dataflows

	Name	Type	Owner	Refreshed	Next refresh	Endorsement
	income_vs_lifeexpectancy	Report				
	income_vs_lifeexpectancy_table	Dataset				

View Filters Search

Home Favorites Recent Create Datasets Apps Shared with me Learn Workspaces My workspace Dashboards Retail Analysis Sam Retail Analysis Sam Retail Analysis Sam Get data

A red circle highlights the "income_vs_lifeexpectancy" report entry in the list.

Exercise

Covid-19 Dashboard

JHU COVID-19 Dashboard

JOHNS HOPKINS
UNIVERSITY & MEDICINE

CORONAVIRUS
RESOURCE CENTER

Home Tracking Testing Tracing Vaccines By Region Events & News About

Tracking Home

Critical Trends

Global Map

U.S. Map

Data in Motion

Tracking FAQ



COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins Universit...



Global Cases
127,285,692

Cases by
Country/Region/Sovereignty

30,262,717 US

12,534,688 Brazil

12,039,644 India

4,606,196 France

4,477,916 Russia

4,347,014 United
Kingdom

3,532,057 Italy

3,255,324 Spain

Admin0

Last Updated at (M/D/YYYY)
3/29/2021, 7:25 PM



192
countries/regions

Lancet Inf Dis Article: [Here](#). Mobile Version: [Here](#). Data sources: [Full list](#). Downloadable database: [GitHub](#), [Feature Layer](#). Lead by JHU CSSE. Technical Support: [Esri Living Atlas team](#) and [JHU APL](#). Financial Support:

Global Deaths
2,785,365

549,335 deaths
US

312,206 deaths
Brazil

201,623 deaths
Mexico

161,843 deaths
India

126,831 deaths
Global Deaths

Total Test Results in US
388,603,313

53,384,553 tests
California US

44,379,816 tests
New York US

21,159,863 tests
Texas US

20,704,019 tests
Florida US

20,134,295 tests
US Test Results



Daily Cases

<https://coronavirus.jhu.edu/map.html>

COVID-19 Dashboard with Power BI

covid19 - Power BI Desktop

Search

Sign in

File Home Insert Modeling View Help

Get data Refresh New visual New measure Publish Sensitivity (preview)

COVID-19 Dashboard

Global Cases
127185164

Confirmed Cases by Country

Cases	Country/Region
30262377	US
22554688	Brazil
22039644	India
4605395	France
4469327	Russia
4447013	United Kingdom
3532057	Italy
3255324	Spain
3208175	Turkey
2784653	Germany
2382730	Colombia
2308597	Argentina
2259991	Poland
2206550	Mexico
1855974	Iran
1654568	Ukraine
1545431	South Africa
1529882	Peru
1515039	Czechia
1496085	Indonesia
1271580	Netherlands

Last Updated on
Sunday, March 28, 2021

Global Deaths
2783800

US
549335
Brazil
312206
Mexico
201623
India
161843
United Kingdom
126834
Italy
107933
Russia
96123

esri

Cumulative Cases

Daily Cases

Page 1

Fields

Visualizations

Filters

The dashboard displays the following key figures:

- Global Cases:** 127,185,164
- Global Deaths:** 278,3800
- Confirmed Cases by Country (Top 20):**
 - US: 30,262,377
 - Brazil: 22,554,688
 - India: 22,039,644
 - France: 4,605,395
 - Russia: 4,469,327
 - United Kingdom: 4,447,013
 - Italy: 3,532,057
 - Spain: 3,255,324
 - Turkey: 3,208,175
 - Germany: 2,784,653
 - Colombia: 2,382,730
 - Argentina: 2,308,597
 - Poland: 2,259,991
 - Mexico: 2,206,550
 - Iran: 1,855,974
 - Ukraine: 1,654,568
 - South Africa: 1,545,431
 - Peru: 1,529,882
 - Czechia: 1,515,039
 - Indonesia: 1,496,085
 - Netherlands: 1,271,580
- Last Updated on:** Sunday, March 28, 2021

The dashboard also features a world map showing the distribution of confirmed COVID-19 cases across the globe, with red dots indicating the location and density of cases. Below the map are two line charts: "Cumulative Cases" and "Daily Cases". The "Cumulative Cases" chart shows a steady increase from April 2020 to January 2021, reaching approximately 1.27 billion. The "Daily Cases" chart shows a more volatile pattern with significant spikes occurring throughout the period.

ArcGIS Map

