










I. DATASET OVERVIEW



1. Data source – Trade_dataset

Source: <https://www.kaggle.com/datasets/unitednations/global-commodity-trade-statistics>

a. 'trade_data.csv'




Type	Field Name	Physical Table	Remote Field Name
	Country	Trade_data.csv	country_or_area
	Year	Trade_data.csv	year
	Comm Code	Trade_data.csv	comm_code
	Commodity	Trade_data.csv	commodity
	Flow	Trade_data.csv	flow
	Trade (\$)	Trade_data.csv	trade_usd
	Weight Kg	Trade_data.csv	weight_kg
	Quantity Na...	Trade_data.csv	quantity_name
	Quantity	Trade_data.csv	quantity

b. 'Commodity_info.csv'

Type	Field Name	Physical Table	Remote Field Name
	Comm code	Commodity_info....	Comm_code
	Category	Commodity_info....	Category

2. Data source – Population

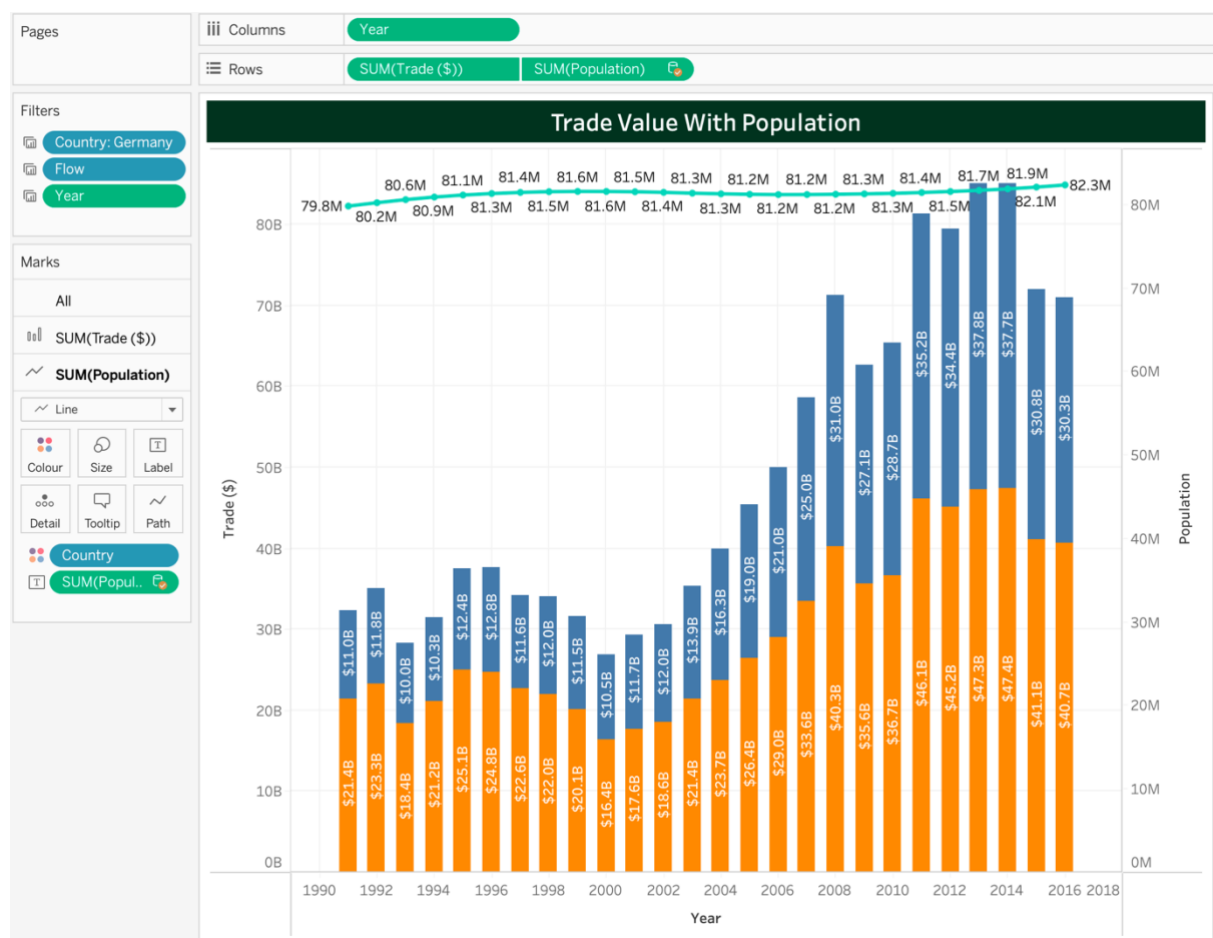
 Source: <https://www.macrotrends.net/global-metrics/countries/ranking/population>

Type	Field Name	Physical Table	Remote Field Name
	Country	Population.csv	Country
	Year	Population.csv	Year
	Population	Population.csv	Population

II. REQUIRED FUNCTIONS PRESENTATION

1. Aggregation function (sum, avg, max, min, countd, count, etc.)

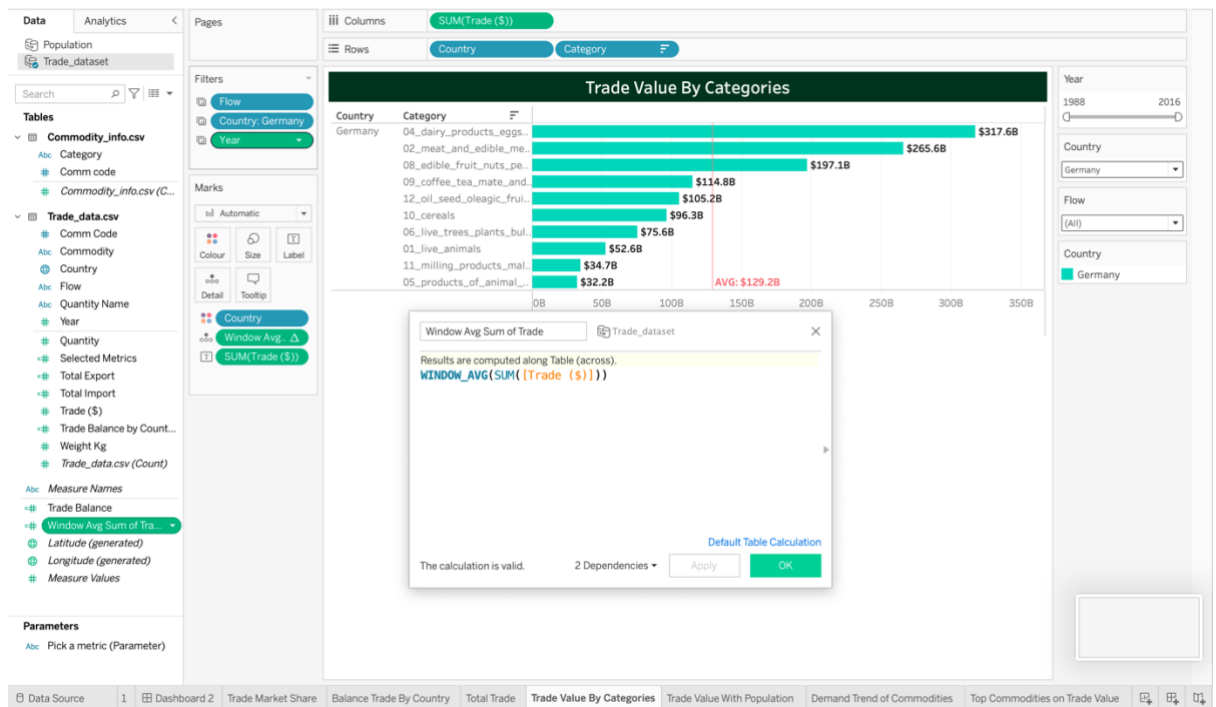
- Function: **SUM()**
- Sheet: **Trade Value With Population**



- Description: Using SUM() function to calculated **the total amount** of both Import and Export Value (in USD) for each Year.

2. **Table calculation** (first, last, lookup, rank, window avg, running total, etc.)

- Function: **WINDOW_AVG(SUM([Trade (\$)]))**
- Sheet: **Trade Value By Categories**



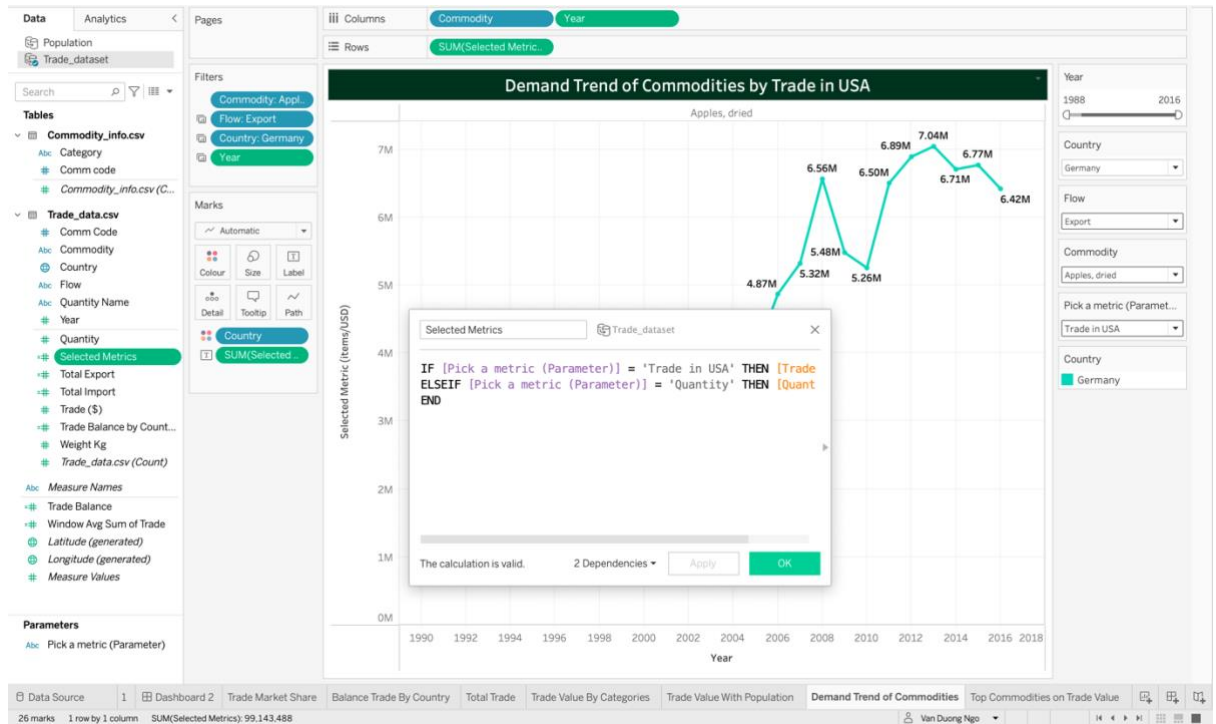
- Description: to **average over the data** in each subset of each kind of Flow (Import or Export) by Country. **A reference line** based on Window average value was also determined.

3. **Logical function** (*if, elseif, case, ifnull, etc.*)

- Function:

IF [Pick a metric (Parameter)] = 'Trade in USA' THEN [Trade (\$)]
ELSEIF [Pick a metric (Parameter)] = 'Quantity' THEN [Quantity]
END

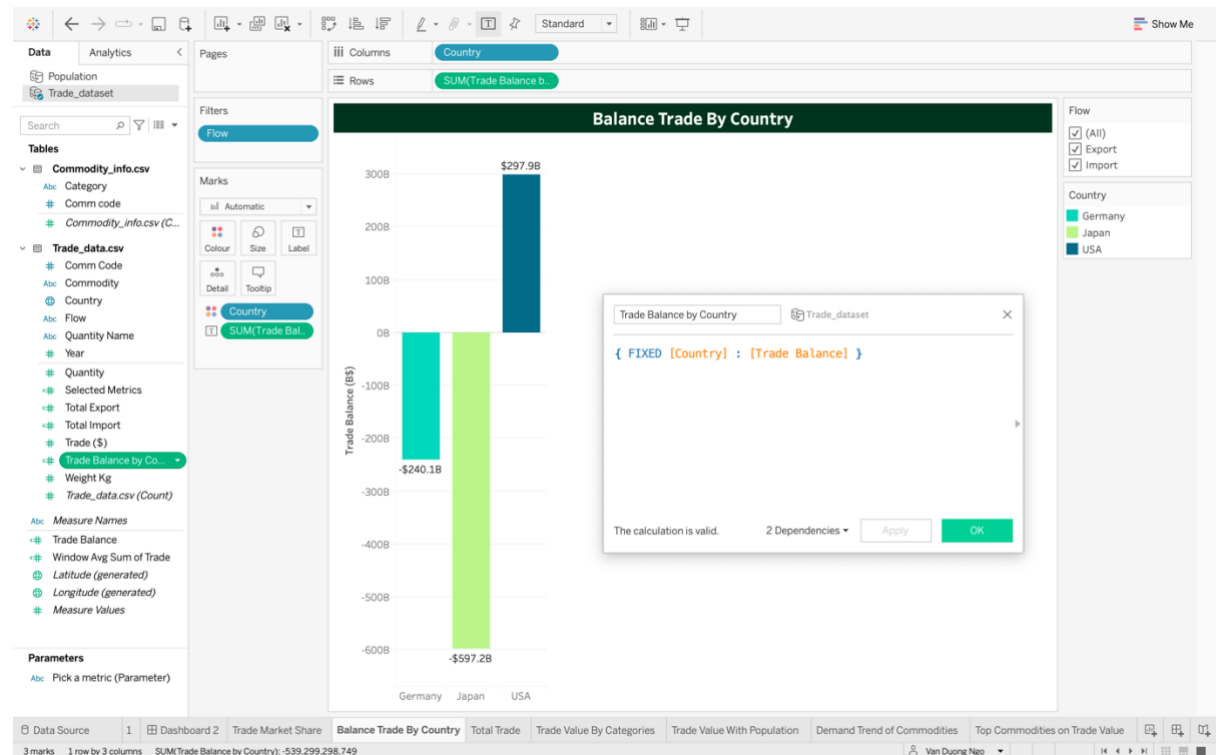
- The calculated field: **Selected Metrics**



- Description:** Using IF and ELSEIF to perform a **logical conjunction** on two expressions for 2 different results of the parameter.

4. **Level of details** (fixed, include, exclude, etc.)

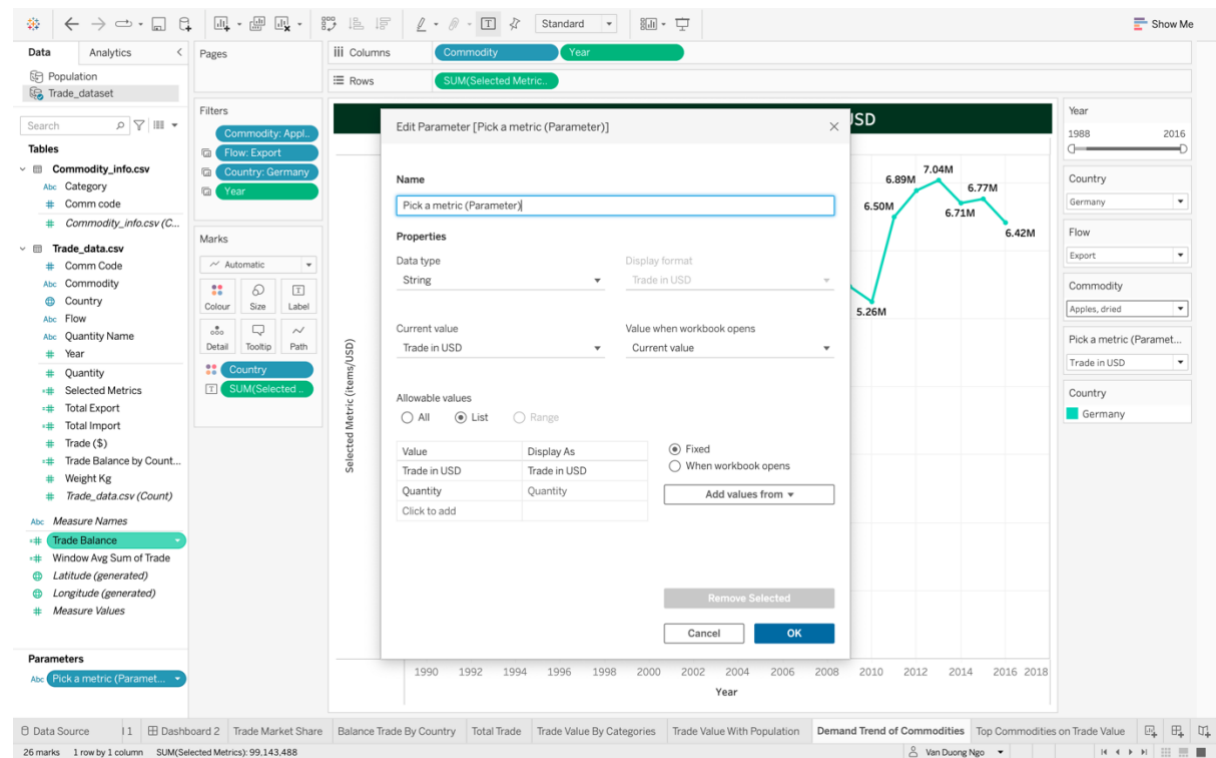
- Function: **{ FIXED [Country] : [Trade Balance] }**
- Worksheet: **Balance Trade by Country**



- Description: compute a total amount of Trade Balance (in USD) using the specified dimension – Country

5. Parameter

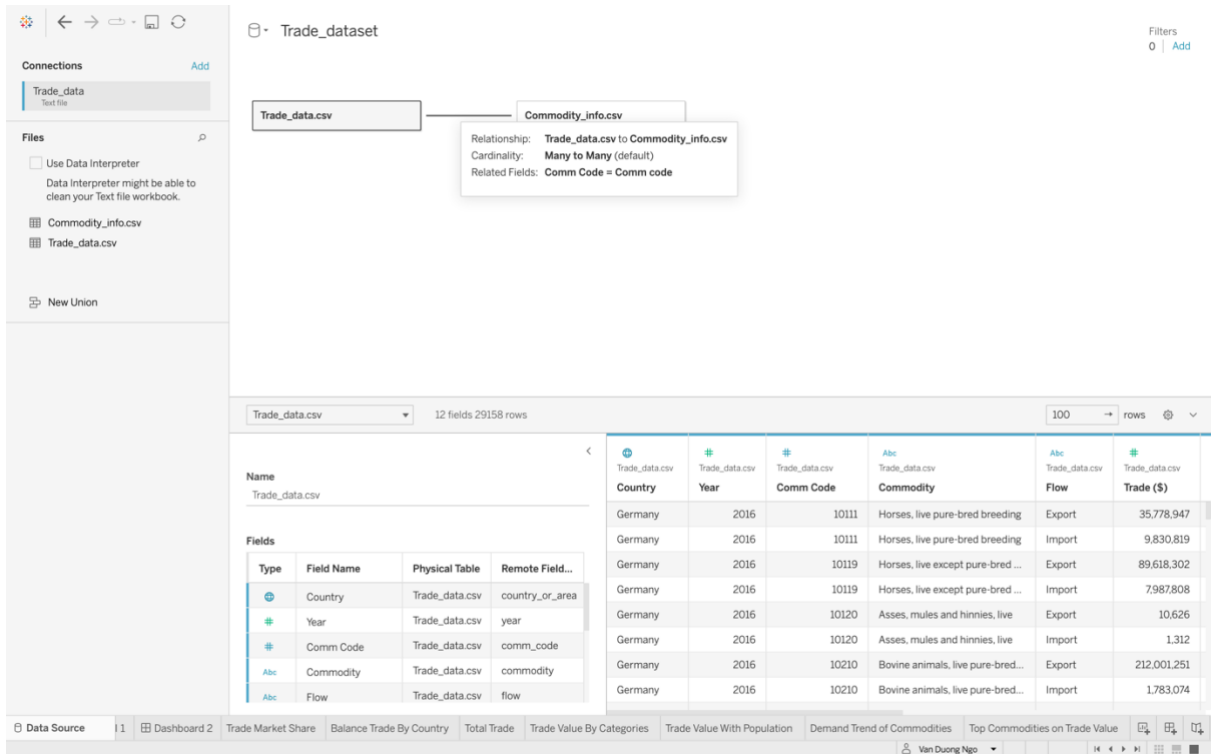
- Parameter: **Pick a metric**
- Sheet: **Demand Trend of Commodities by <Parameter>**



- Description: A parameter was created for 2 measurements: **Trade Value (in USA) and Quantity (in items)**. This parameter allows users to track the Trade Demand in 2 different aspects within the same chart.

6. **Data joining** (join 2 data sources)

- Description: Joined 2 tables in the same data source (**Trade_dataset**) using the shared **Comm_code**



Connections

- Trade_data (Text file)

Files

- Commodity_info.csv
- Trade_data.csv

Relationship: Trade_data.csv to Commodity_info.csv
Cardinality: Many to Many (default)
Related Fields: Comm Code = Comm code

Trade_dataset

Trade_data.csv | 12 fields 29158 rows

Country	Year	Comm Code	Commodity	Flow	Trade (\$)
Germany	2016	10111	Horses, live pure-bred breeding	Export	35,778,947
Germany	2016	10111	Horses, live pure-bred breeding	Import	9,830,819
Germany	2016	10119	Horses, live except pure-bred ...	Export	89,618,302
Germany	2016	10119	Horses, live except pure-bred ...	Import	7,987,808
Germany	2016	10120	Asses, mules and hinnies, live	Export	10,626
Germany	2016	10120	Asses, mules and hinnies, live	Import	1,312
Germany	2016	10210	Bovine animals, live pure-bred...	Export	212,001,251
Germany	2016	10210	Bovine animals, live pure-bred...	Import	1,783,074

Fields

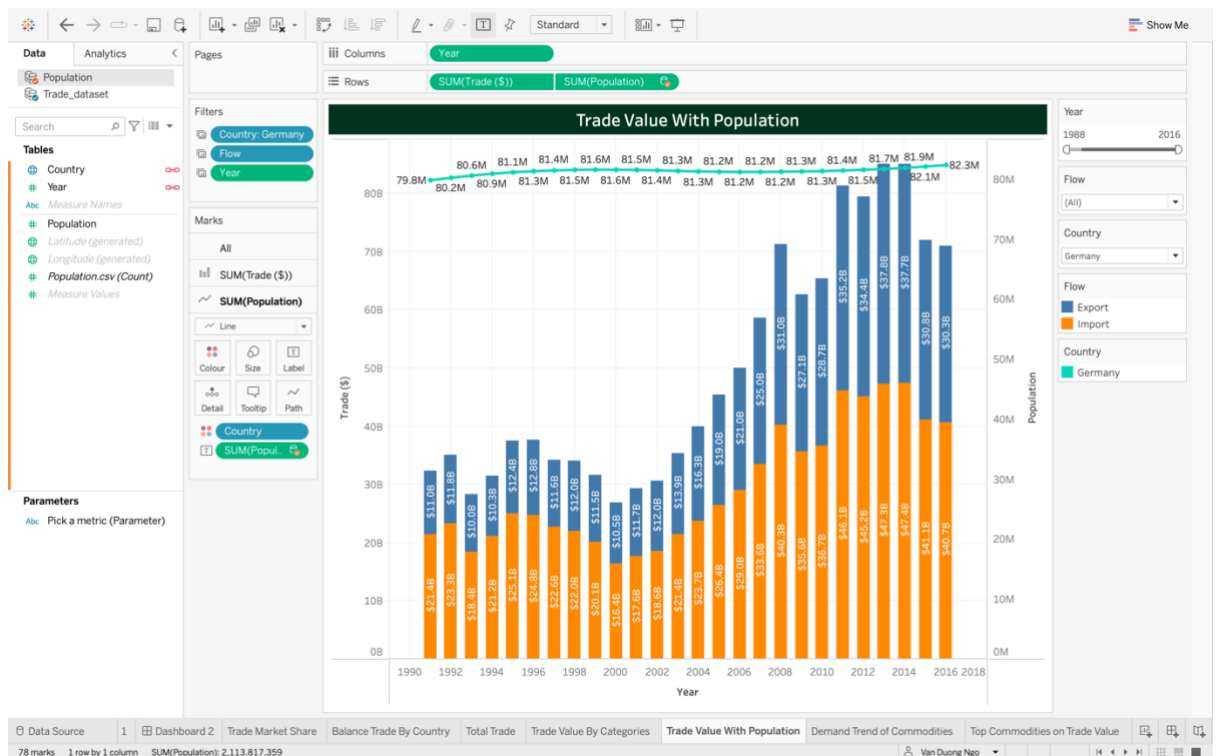
Type	Field Name	Physical Table	Remote Field...
Country	Country	Trade_data.csv	country_or_area
Year	Year	Trade_data.csv	year
Comm Code	Comm Code	Trade_data.csv	comm_code
Commodity	Commodity	Trade_data.csv	commodity
Flow	Flow	Trade_data.csv	flow

Data Source | 1 | **Dashboard 2** | Trade Market Share | Balance Trade By Country | Total Trade | Trade Value By Categories | Trade Value With Population | Demand Trend of Commodities | Top Commodities on Trade Value

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7. Data blending (blend 2 data sources)

Description: Blending the table '**Trade_data.csv**' (from Trade_dataset data source) with the table '**population.csv**' (from Population data source)



Blending relationship brings in additional information from a secondary data source (**population**) and displays it with data from the primary data source directly in the view (**the amount of flows (in USD) by year**).

8. Actions

- Description: In Dashboard 2, an action was created to **use a single view** in the chart of Top Commodities on Trade Value to **filter other views** in the table of demand trend of commodities by <parameter>. That means the commodity plays a role as the filter to view data in the below table.

