

Project description:

Project 1

Problem Statement:

Create a dashboard to do a comparative study on various parameters of different countries using the sample insurance dataset and world development indicators dataset.

Full problem description can be located on simplilearn.com.

Proposed Solution:

Four steps are taken to complete this project:

Step 1: Data connection and Blending

Step 2: Create Calc fields and parameters

Step 3: Creating four worksheets: Income group, KPI (Key performance Indicator), Growth Indicator and Trend Line.

Step 4: Create a dashboard and populate it with the above worksheets, then activate the “Dashboard Actions” to dynamically coordinate calculations and displays in the various worksheets.

I will show my work by copy-paste the Tableau's Sheet Description of each worksheet, as well as the screenshot of the output worksheet. (*Sheet Description is obtained by going to Worksheet == > Describe Sheet, alternatively, Ctrl E for Windows or Cmd E for Mac*)

At the end, the screenshot of the dashboard will also be shown and my Tableau public URL which shows the viz of my work will be provided.

Details description in each step:

Step 1: Data Source connection and Blending

Tableau Public - SimplilearnFinalProject1

File Data Window Help

Connections Add

- Global Financial Database - Jul2018
Microsoft Excel
- Insurance Sample Dataset
Microsoft Excel


Sheets +

- ☐ Use Data Interpreter
Data Interpreter might be able to clean your Microsoft Excel workbook.
- Data - July 2018
- Definitions and Sources









New Union

FinalTableauProject1_InsuranceIndicator

Data - July 2018 is made of 2 tables. ⓘ

Data - July 2018  Insurance Indicators

Join

Join	Inner	Left	Right	Full Outer
				
	Inner	Left	Right	Full Outer
				
	Inner	Left	Right	Full Outer

Data Source		Insurance Indicators
CountryCode3	=	Country Code
CountryName	=	Country
Year	=	Year1

Sort fields: Data source order ▼

Field Name	Table
CountryCode3	Data - July 2018
Iso2	Data - July 2018
Imfn	Data - July 2018
CountryName	Data - July 2018
Region	Data - July 2018
Income	Data - July 2018
Year	Data - July 2018
Bank accounts per 1,000 adults	Data - July 2018
Bank branches per 100,000 adults	Data - July 2018
Firms with a bank loan or line of credit (%)	Data - July 2018
Small firms with a bank loan or line of credit (%)	Data - July 2018

Step 2: Create Calc fields and parameters

Create 5 calculated fields (Right-click then Describe to show calc)

Describe Field

SelectedYYYY

Role: Continuous Measure
Type: Calculated Field
Default aggregation: Sum
Status: Valid

Formula

```
if INT([Year1]) = YEAR([Select YYYY]) then [SelectedCategory] END
```

The domain for this field has not been loaded. Click "Load" to retrieve.

Describe Field

PreviousYYYY

Role: Continuous Measure
Type: Calculated Field
Default aggregation: Sum
Status: Valid

Formula

```
if INT([Year1]) = YEAR([Select YYYY])-1 then [SelectedCategory] END
```

The domain for this field has not been loaded. Click "Load" to retrieve.

Describe Field

SelectedCategory

Role: Continuous Measure
Type: Calculated Field
Default aggregation: Sum
Status: Valid

Formula

```
case [SelectCategory]
when 1 then [Life insurance share]
when 1 then [Market share > Total]
when 3 then [Penetration > Total]
when 4 then [Ratio of reinsurance accepted > Total]
when 5 then [Retention ratio > Total]
END
```

The domain for this field has not been loaded. Click "Load" to retrieve.

Describe Field

Growth%

Role: Continuous Measure
Type: Calculated Field
Status: Valid

Formula

```
avg([SelectedYYYY]) - avg([PreviousYYYY ])
```

The domain for this field has not been loaded. Click "Load" to retrieve.

Describe Field

GrowthIndicator

Role: Discrete Measure
Type: Calculated Field
Locale:
Sort flags: Case-sensitive
Status: Valid

Formula

```
if [Growth%] > 0.0001 then "Positive"  
elseif [Growth%] < -0.0001 then "Negative"  
else "No Change"  
END
```

Create 2 parameter (Right-click then Describe to show allowed values)

Describe Field

Select YYYY

Role: Continuous Measure
Type: Parameter (Date List)
Value: 2016
Allowed Values: 2006, 2007, 2008, 2009, 2010 or 6 more
Comment: Parameter for Year selection
Status: Valid

Describe Field

SelectCategory

Role: Continuous Measure
Type: Parameter (Integer List)
Value: Life Insurance Share
Allowed Values: Life Insurance Share, Market Share, Penetration Ratio, Reinsurance Accepted Ratio or Retention Ratio
Comment: Parameter for index category selection
Status: Valid

Step 3: Create four (4) worksheets

Worksheet: income_group_map

Description of "income_group_map"

Map based on Longitude (generated) and Latitude (generated). Color shows details about Income. The marks are labeled by CountryName. The view is filtered on Income, Latitude (generated) and Longitude (generated). The Income filter keeps Null, High income, Low income, Lower middle income and Upper middle income. The Latitude (generated) filter keeps all values. The Longitude (generated) filter keeps non-Null values only.

Marks

The mark type is Map.

The marks are labeled by CountryName.

Stacked marks is off.

Shelves

Rows: Latitude (generated)

Columns: Longitude (generated)

Filters: Income, Latitude (generated), Longitude (generated)

Text: CountryName

Color: Income

Dimensions

CountryName has 213 members on this sheet

Members: Cameroon; Cuba; Grenada; Macedonia, FYR; New Zealand; ...

Income has 4 members on this sheet

Members: High income; Low income; Lower middle income; Upper middle income

Measures

Geometry (generated) has 213 members on this sheet

Members: MULTIPOLYGON(((-61.4376 12.5298, -61.42 12.5, -61.4327 12.4761, -61.43 12.4589, -61.4566 12.4574, -61.4704 12.4453, -61.4991 12.4746, -61.4827 12.472, -61.4541 12.4884, -61.4499 12.5167, -61.4376 12.5298))), (...

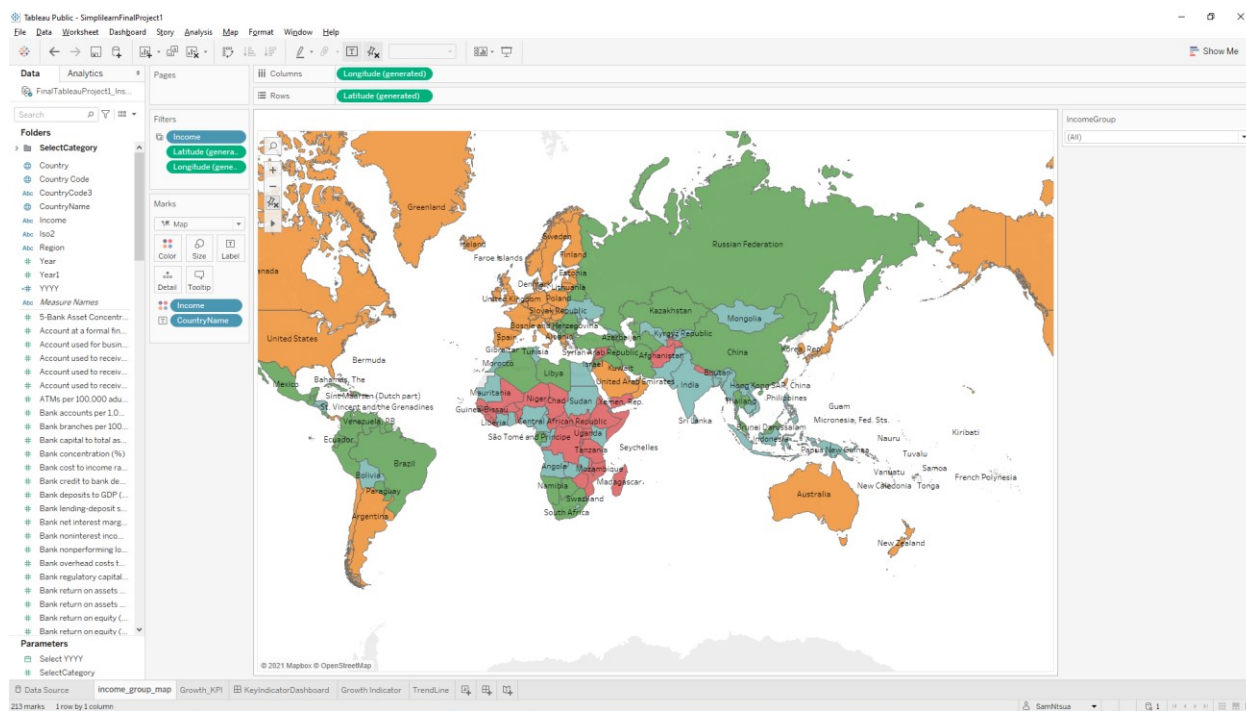
Latitude (generated) ranges from -42.6 to 71.0 on this sheet.

The filter associated with this field keeps all values.

Longitude (generated) ranges from -175.2 to 178.7 on this sheet.

The filter associated with this field keeps non-Null values only.

Screenshot of "income_group_map"



Worksheet: Growth_KPI

Description of "Growth KPI"

Selected Period Value, Comparison Period Value and Growth%. The data is filtered on Income, which keeps Null, High income, Low income, Lower middle income and Upper middle income.

Marks

The mark type is Text (Automatic).
Stacked marks is on.

Shelves

Rows: Measure Names

Filters: Measure Names, Income

Text: Measure Values

Dimensions

Measure Names has 3 members on this sheet

Members: Comparison Period Value; Growth%; Selected Period Value

Measure Names is sorted manually.

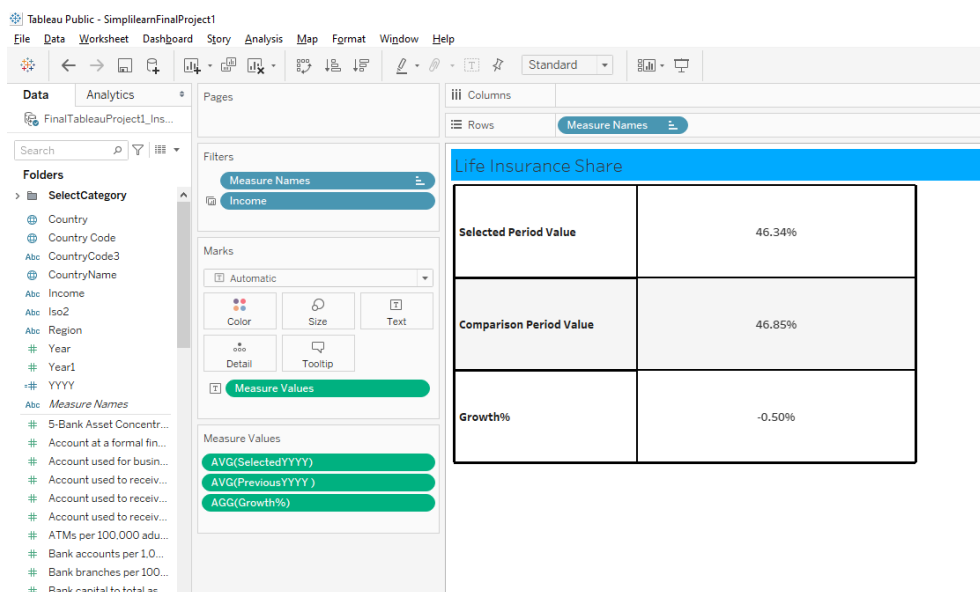
Income has 5 members on this sheet

Members: High income; Low income; Lower middle income; Null; Upper middle income

Measures

Measure Values ranges from -0.0050 to 0.4685 on this sheet.

Screenshot of Growth KPI



Worksheet: Growth_Indicator

Description of "Growth Indicator"

Shape shows details about GrowthIndicator. The data is filtered on Income, which keeps Null, High income, Low income, Lower middle income and Upper middle income.

Marks

The mark type is Shape.
Stacked marks is on.

Shelves

Filters: Income

Shape: GrowthIndicator

Dimensions

Income has 5 members on this sheet

Members: High income; Low income; Lower middle income; Null; Upper middle income

Measures

GrowthIndicator has 1 members on this sheet

Members: Negative

The formula is

if [Growth%] > 0.0001 then "Positive"

elseif [Growth%] < -0.0001 then "Negative"

else "No Change"

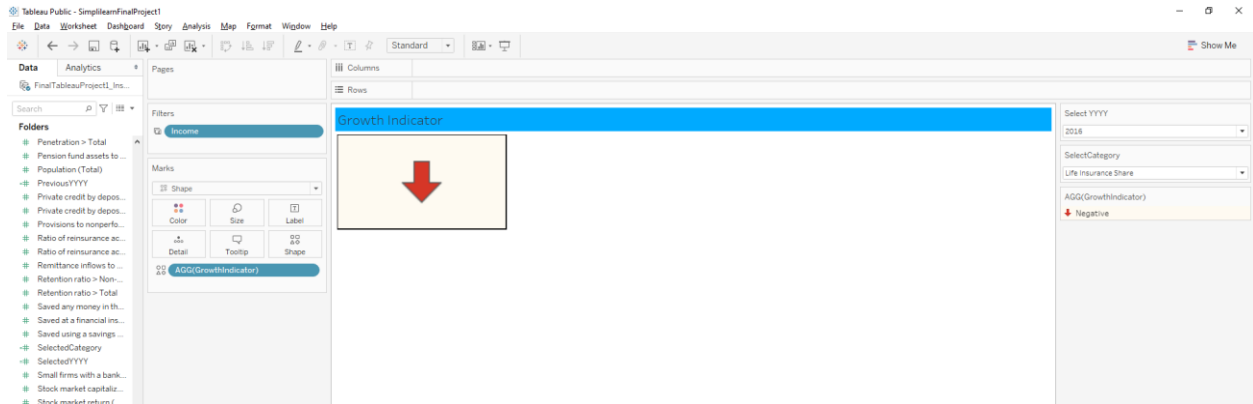
END

Parameters

Select YYYY (Parameters) has the value 2016.

SelectCategory (Parameters) has the value Life Insurance Share.

Screenshot of Growth Indicator



Worksheet: TrendLine

Description of "TrendLine"

The plot of average of SelectedCategory for Year1. The data is filtered on Income, which keeps Null, High income, Low income, Lower middle income and Upper middle income.

Marks

The mark type is Shape.
Stacked marks is off.

Shelves

Pages: Year1
Rows: Avg. SelectedCategory
Columns: Year1
Filters: Income

Dimensions

Year1 has 12 members on this sheet
Members: 2007; 2009; 2010; 2013; 2015; ...
Year1 ranges from 2006 to 2016 on this sheet.
Income has 5 members on this sheet
Members: High income; Low income; Lower middle income; Null; Upper middle income

Measures

Average of SelectedCategory ranges from 0.46344 to 0.53488 on this sheet.

The formula is

case [SelectCategory]

when 1 then [Life insurance share]

when 1 then [Market share > Total]

when 3 then [Penetration > Total]

when 4 then [Ratio of reinsurance accepted > Total]

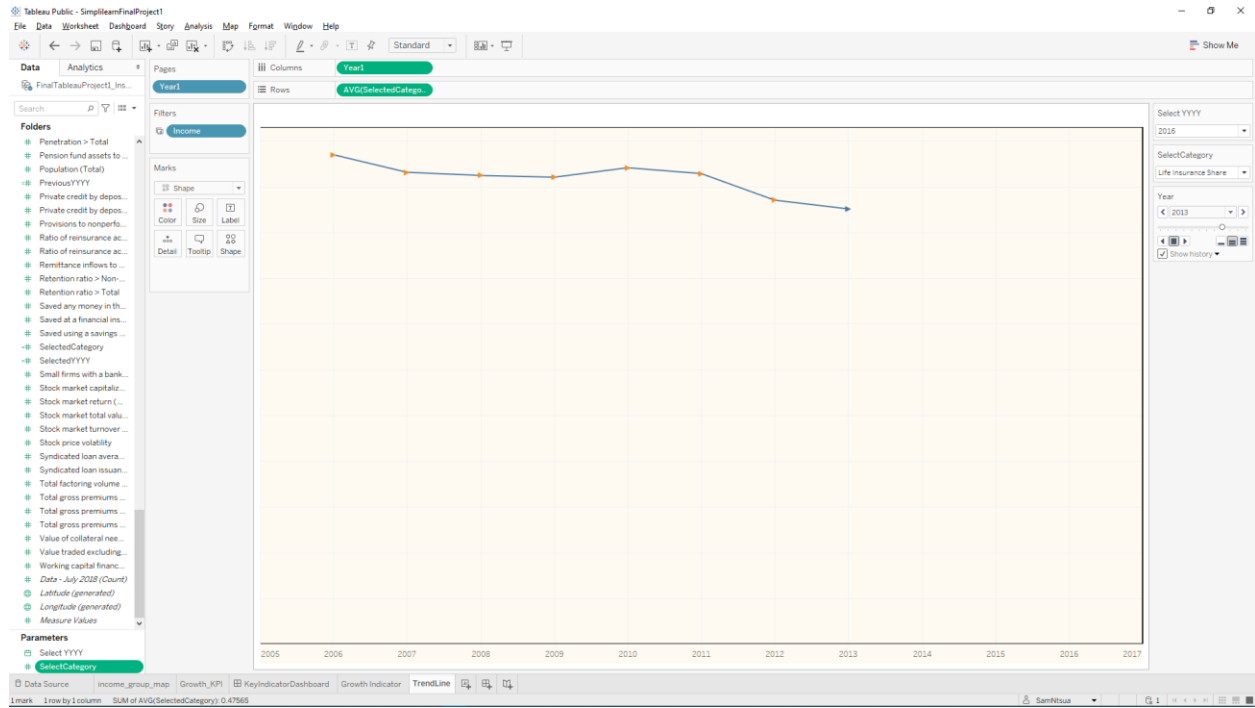
when 5 then [Retention ratio > Total]

END

Parameters

SelectCategory (Parameters) has the value Life Insurance Share.

Screenshot of TrendLine



Step 4: Create a dashboard and activating various worksheets

Actions activations

Edit Filter Action

Name:

Source Sheets

KeyIndicatorDashboard

☐ Growth Indicator

☐ Growth_KPI

☒ income_group_map

☐ TrendLine

Run action on:

Hover

Select

Menu

☐ Single-select only

Target Sheets

KeyIndicatorDashboard

☒ Growth Indicator

☒ Growth_KPI

☒ income_group_map

☒ TrendLine

Clearing the selection will:

☐ Keep filtered values

☒ Show all values

☐ Exclude all values

Target Filters

☐ Selected Fields

☒ All Fields

Source Field	Target Field	Target Data Source

Add Filter...

Edit...

Remove

OK

Cancel

Dashboard

