

# Steps to Build your Dashboard Using SDMX-DG

## Step 1: Identify Data and Indicators.

### Find the data

- Find the best available data from an SDMX API.
- For global population statistics, the International Labour Organisation (ILO) is a good resource.

### Identify indicators of interest

- Earlier we identified labour market indicators of interest.

### A note on the API call:

[https://sdmx ilo.org/rest/data/DF\\_POP\\_XWAP\\_SEX\\_AGE\\_NB/CAN+FRA+DEU+ITA+JPN+GBR+USA.A.POP\\_XWAP\\_NB.SEX\\_T.AGE\\_AGGREGATE\\_TOTAL](https://sdmx ilo.org/rest/data/DF_POP_XWAP_SEX_AGE_NB/CAN+FRA+DEU+ITA+JPN+GBR+USA.A.POP_XWAP_NB.SEX_T.AGE_AGGREGATE_TOTAL)

|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sdmx.ILO.org</b>                                                        | <b>Give me all data from the api:</b>                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>DF_POP_XWAP_SEX_AGE_NB</b>                                              | Working age population statistics dataflow                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>CAN+FRA+DEU+ITA+JPN+GBR+USA.A.POP_XWAP_NB.SEX_T.AGE_AGGREGATE_TOTAL</b> | <p>A period "." separates each dimension concept. Dimension values are optional but if provided, they act as a dataset filter.</p> <p>In this example, the filters are:</p> <ul style="list-style-type: none"> <li>• Reference Area: "CAN+...+USA" (ie. the G7 countries)</li> <li>• Frequency: "A" (annual)</li> <li>• Measure: "POP_XWAP_NB" (working age population)</li> <li>• Sex: "SEX_T" (total)</li> <li>• Age: "AGE_AGGREGATE_TOTAL" (total)</li> </ul> |

## Step 2: Add charts to your dashboard.

### Create a YAML file

- Create a new YAML file
- Name it appropriately (in this example: ex\_labour\_statistics\_dashboard.yaml)
- Specify the Title and Footer information

## Code

```
---
DashID: ex_labour_statistics_dashboard
Rows:
-
  Row: 0
  chartType: TITLE
  Title: "Dashboard on Labour Statistics"
  Subtitle: "A sample dashboard the ILO SDMX API"
-
  Row: 0
  chartType: FOOTER
  Title: "Copyright xyz. No adaptation or use is permitted without prior consent."
  Subtitle: "The views expressed are those of the authors."
```

## Add a chart

- The chart is added to the first row of the YAML file.

## Code

```
-
  Row: 1
  chartType: VALUE
  Title:
  Subtitle: "Youth unemployment rate, World, Total"
  Unit: "%"
  UnitShow: "Yes"
  UnitIcon: "bi bi-people-fill h1"
  unitLoc: SUFFIX
  Decimals: 2
  LabelsYN: No
  legendConcept: REF_AREA
  legendLoc:
  xAxisConcept: TIME_PERIOD
  yAxisConcept: OBS_VALUE
  downloadYN: "Yes"
  dsdLink:
https://sdmx.ilo.org/rest/datastructure/ILO/DF\_SDG\_0852\_SEX\_AGE\_RT/1.0?detail=full
  metadataLink:
https://sdmx.ilo.org/rest/dataflow/ILO/DF\_SDG\_0852\_SEX\_AGE\_RT/1.0?detail=full
  DATA:
https://sdmx.ilo.org/rest/data/DF\_SDG\_0852\_SEX\_AGE\_RT/X01.A.SDG\_0852\_RT.SEX\_T.AGE\_YTHADULT\_Y15-24?lastNObservations=1
```

|                                                |                                                                                                 |
|------------------------------------------------|-------------------------------------------------------------------------------------------------|
| chartType: VALUE<br>yAxisConcept:<br>OBS_VALUE | For this chart, the goal is to show a single value for the youth unemployment rate.             |
| Unit: "%"                                      | We want to display the percent (%) symbol to illustrate that the value represents a percentage. |
| UnitShow: "Yes"                                | We want the value to be displayed on the chart:                                                 |

### Add a second chart

- Add a chart to the second row of the YAML file.

#### Code

```
-
  Row: 2
  chartType: BAR
  Title: Working Age Population, Total, BRICS countries
  Subtitle: "auto"
  Decimals: 0
  LabelsYN: No
  legendConcept: REF_AREA
  legendLoc: BOTTOM
  xAxisConcept: REF_AREA
  yAxisConcept: OBS_VALUE
  downloadYN: "Yes"
  dsdLink:
https://sdmx.ilo.org/rest/datastructure/ILO/DF\_POP\_XWAP\_SEX\_AGE\_NB/1.0?detail=full
  metadataLink:
https://sdmx.ilo.org/rest/dataflow/ILO/DF\_POP\_XWAP\_SEX\_AGE\_NB/1.0?detail=full
  DATA:
https://sdmx.ilo.org/rest/data/DF\_POP\_XWAP\_SEX\_AGE\_NB/BRA+RUS+IND+CHN+ZAF.A\_POP\_XWAP\_NB.SEX\_T.AGE\_AGGREGATE\_TOTAL?lastNObservations=1
```

**NOTE:** UnitShow is not present in the YAML file because we do not want to show the actual values.

|                                         |                                                                                                       |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------|
| chartType: BAR                          | For this chart, the goal is to show a bar chart where the latest value for each country is displayed. |
| yAxisConcept:<br>OBS_VALUE              | YAxis to be "working age population":                                                                 |
| <b>xAxisConcept:</b><br><b>REF_AREA</b> | XAxis to be "REF_AREA" (ie. Countries):                                                               |

### Add a third chart

- Add a chart to the third row of the YAML file.

#### Code

```
---
Row: 3
chartType: BAR
Title: Working Age Population, Total, G7 countries
Subtitle: "auto"
Unit: "%"
Decimals: 0
LabelsYN: No
legendConcept: REF_AREA
legendLoc: BOTTOM
xAxisConcept: TIME_PERIOD
yAxisConcept: OBS_VALUE
downloadYN: "Yes"
dsdLink:
https://sdmx.ilo.org/rest/datastructure/ILO/DF\_POP\_XWAP\_SEX\_AGE\_NB/1.0?detail=full
metadataLink:
https://sdmx.ilo.org/rest/dataflow/ILO/DF\_POP\_XWAP\_SEX\_AGE\_NB/1.0?detail=full
DATA:
https://sdmx.ilo.org/rest/data/DF\_POP\_XWAP\_SEX\_AGE\_NB/CAN+FRA+DEU+ITA+JPN+GBR+USA.A.POP\_XWAP\_NB.SEX\_T.AGE\_AGGREGATE\_TOTAL
```

|                           |                                                                                                                    |
|---------------------------|--------------------------------------------------------------------------------------------------------------------|
| chartType: BAR            | For this chart, the goal is to show a stacked bar chart where the values for each country are displayed over time. |
| yAxisConcept: OBS_VALUE   | YAxis to be "working age population":                                                                              |
| xAxisConcept: TIME_PERIOD | XAxis to be years:                                                                                                 |

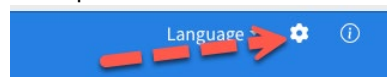
### Step 3: Finalize your dashboard.

#### Load the YAML file

- Load the YAML file into SDMX-DG by moving the labour\_statistics\_dashboard.yaml into the SDMX-DG yaml/ directory.

#### Load the dashboard

- Start SDMX and load the dashboard using these steps:
  - Select the 'gear' icon (on top of the dashboard)
  - Select labour\_statistics\_dashboard.yaml. The dashboard will now get loaded.



### Verify the API URL

- If data does not load, check the API URLs.

### Adjust colours

- Adjust colours as required using this code.

#### Code

```
theme:  
color: "blue"
```