Milestone 1

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Getting to a Flatter Curve 👆

The first 894 days with more than 100 confirmed cases

Show deaths 👆

Asia   Other

US
India
France   Cases
                    000,000
Sri Brazil   0,000,000
Russia th Korea
Australia
Taiwan   1,000,000
New Zealand
Hong Kong
Mainland China
                    100,000
                    10,000
                    1,000
                    100

0   100 200 300 1 y 400 500 600 700 800
Days since 100 confirmed cases
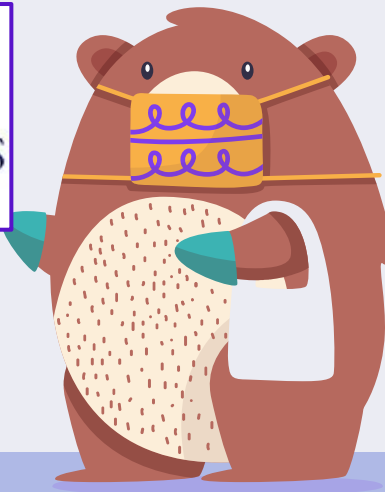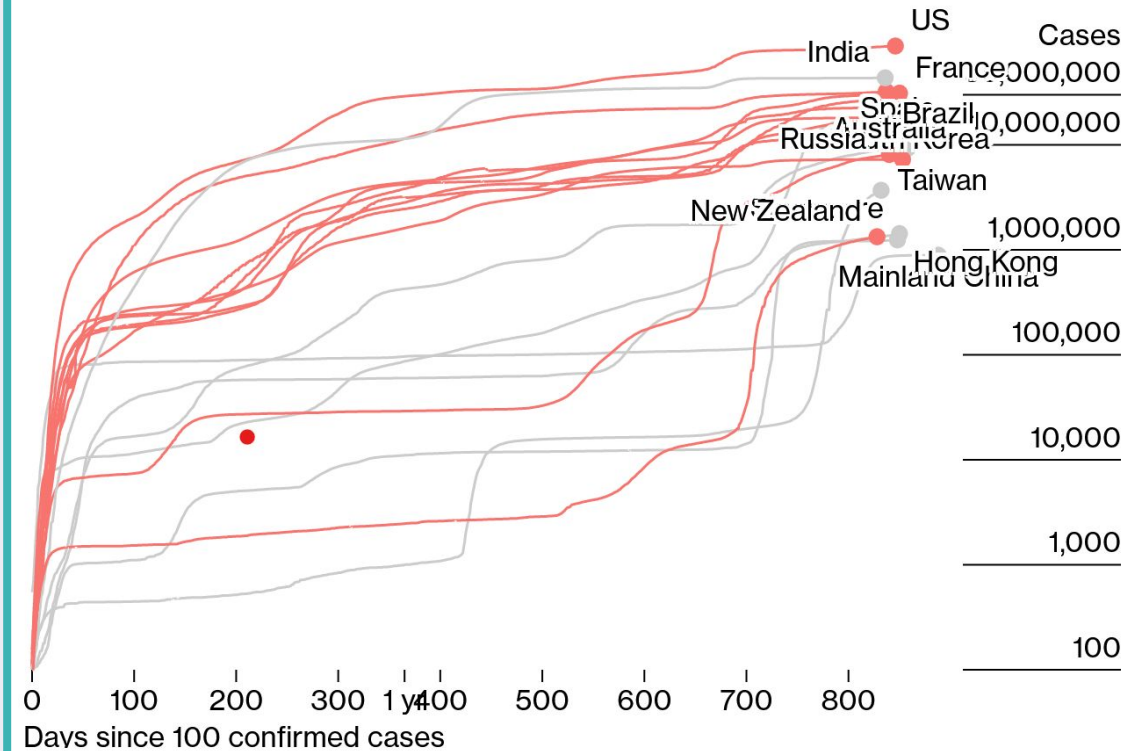
Graph Author (Source):
- Johns Hopkins University Center for Systems Science and Engineering.

About Graph:
- Multi-Line Graph of No. of COVID Cases from Day 0 to 800 After Reaching the 100th COVID Confirmed Case Mark (per Country).

- Days (X-Axis).
- No. of Cases (Y-Axis).

- Color of Lines:
  - **Grey** (for Asia Countries).
  - **Red** (for Non-Asia Countries).

URL: *https://www.bloomberg.com/graphics/2020-coronavirus-cases-world-map/#voronoi-container*

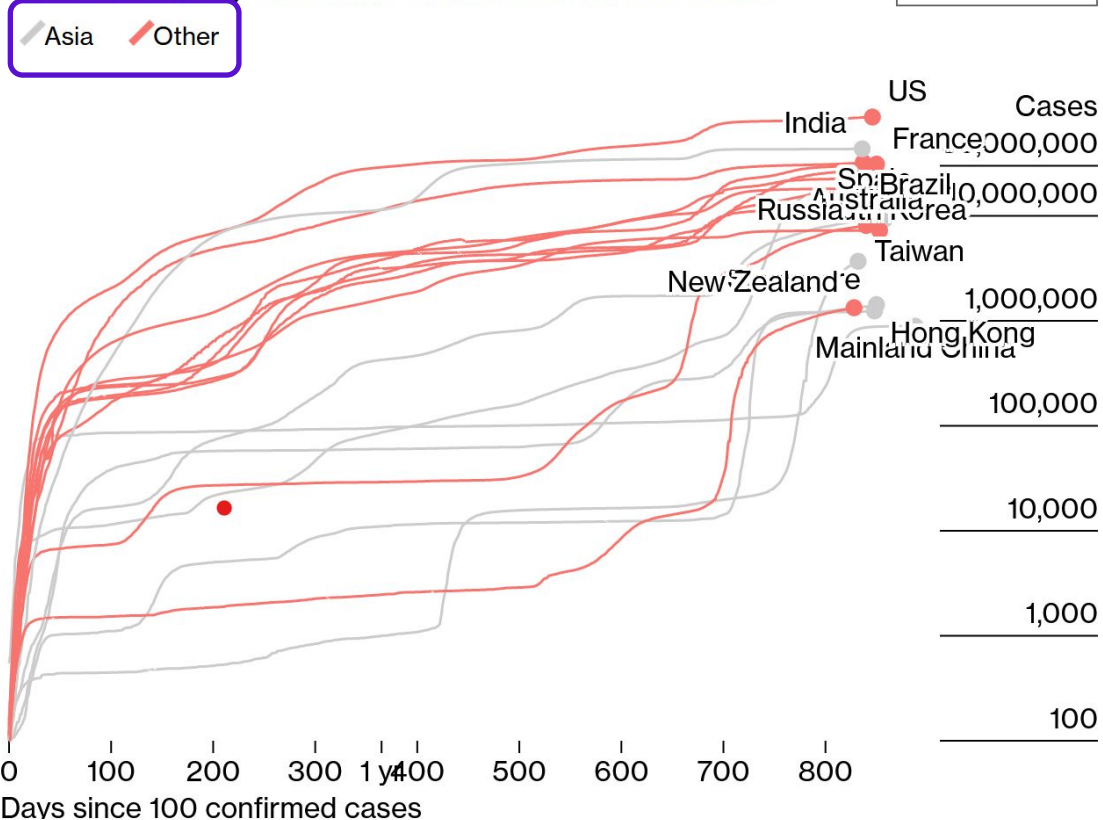# Critique

(John Hopkins University)

Data

- The Author used **Red** (Color) for Non-Asian and **Grey** for 'Other' Non-Asian Countries within the Legend:
  - However, Red tends to be associated to Countries in Asia.
  - Also, the word 'Other' may be Confusing to Some Viewers, where Some Back-Tracing is Needed to Realize that Apart from Asia, the 'Other' refers to Non-Asian Countries.

Getting to a Flatter Curve 👆
The first 894 days with more than 100 confirmed cases

Show deaths 👆

Asia   Other

US
India
France
Sri Brazil
Australia
Russia Korea
Taiwan
New Zealand
Hong Kong
Mainland China

Cases
100,000,000
10,000,000
1,000,000
100,000
10,000
1,000
100

0   100   200   300   1 yr 400   500   600   700   800
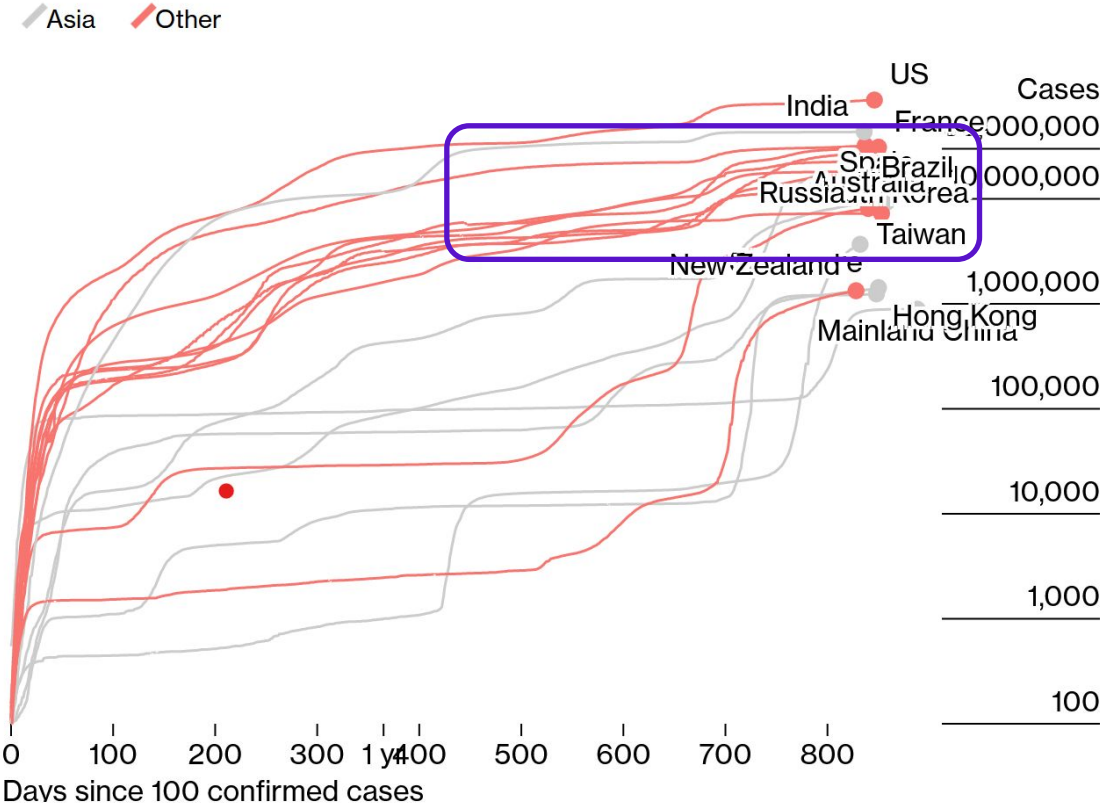Days since 100 confirmed cases

Idiom

- The Authors Wanted to Visually Compare Each Country's COVID Cases Against the Other Ones (Asia and Non-Asia/Others), **thus** a Multi-Line Graph was Used.
  - However, Due to the Unproportionate 'Cases' Scale, Some Countries nearing the 10,000,000 and 100,000,000 Marks, on a Given No. Of Days, Results in Noticeable Overlaps of Lines/Country-Labels that Could Cause Confusion to the Viewer(s) as to which of Those Represents which Country.

Getting to a Flatter Curve ☝
The first 894 days with more than 100 confirmed cases

Show deaths ☝

Asia   Other

US
India   France 0,000,000
Sri Brazil
Australia
Russia S. Korea 0,000,000
Taiwan

New Zealand e
Hong Kong 1,000,000
Mainland China

100,000

10,000

1,000

100

Cases

0   100   200   300   1 y 400   500   600   700   800
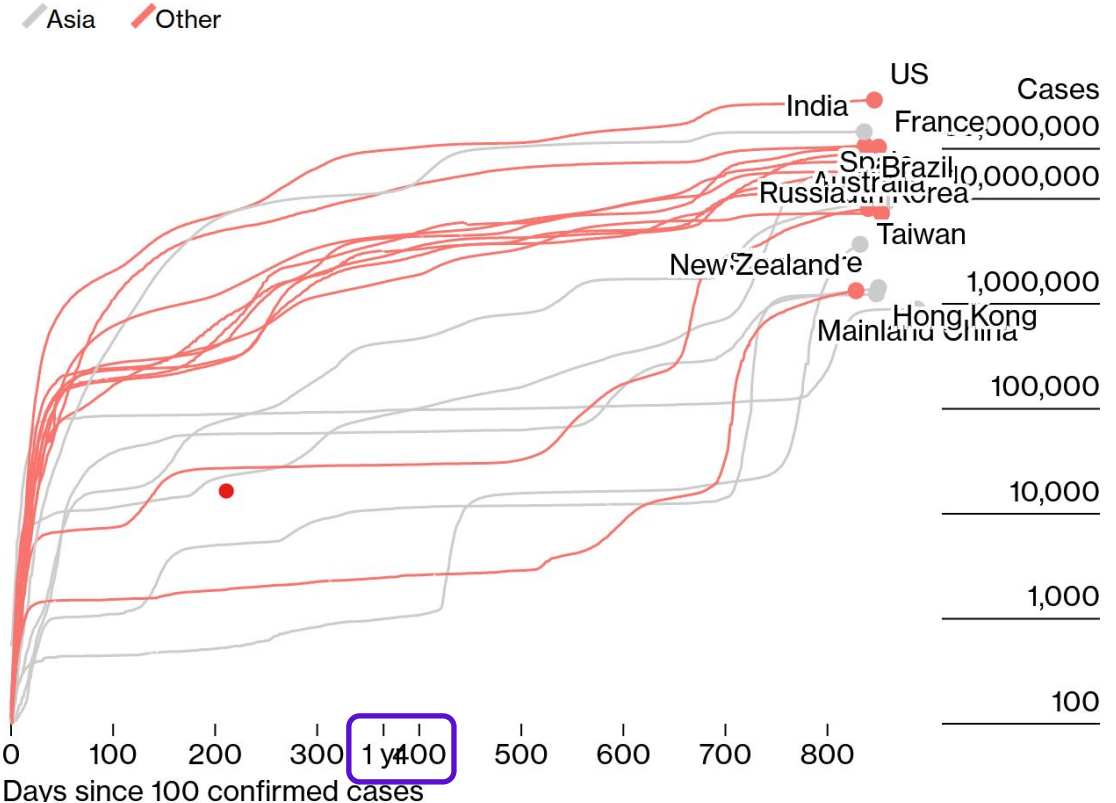Days since 100 confirmed cases

Idiom

- The Authors Wanted to Visually Compare Each Country's COVID Cases Against the Other Ones (Asia and Non-Asia/Others), **thus** a Multi-Line Graph was Used.
  - Also, the X-Axis' '1 yr' Mark is Overlapping the '400' Day Mark, Making it More Inconvenient to Review the Respective (Country) Line's Day Mark on the X-Axis.

Getting to a Flatter Curve 🖱
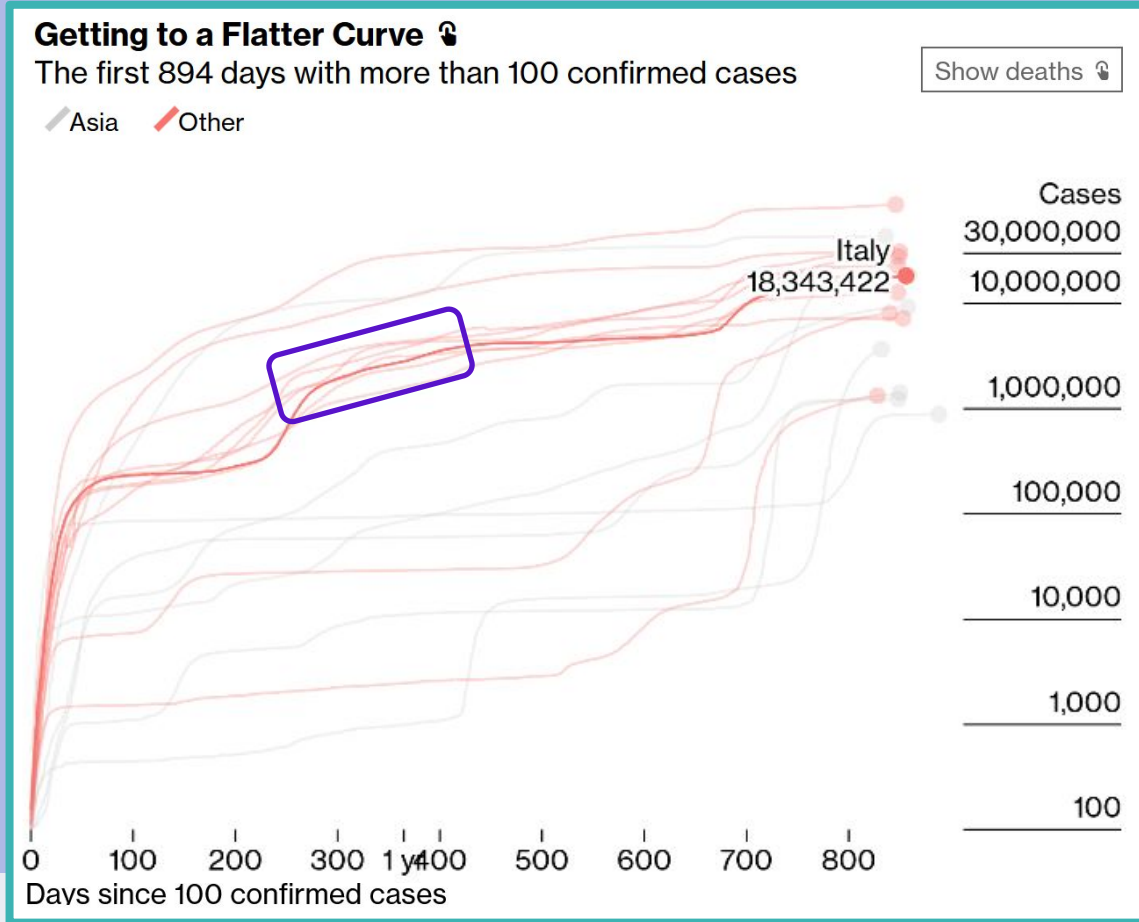The first 894 days with more than 100 confirmed cases

Show deaths 🖱

Asia   Other

US
India
France
Sri Brazil
Australia Korea
Russia
Taiwan
New Zealand e
Hong Kong
Mainland China

Cases
,000,000
10,000,000
1,000,000
100,000
10,000
1,000
100

0   100   200   300   1 yr 400   500   600   700   800
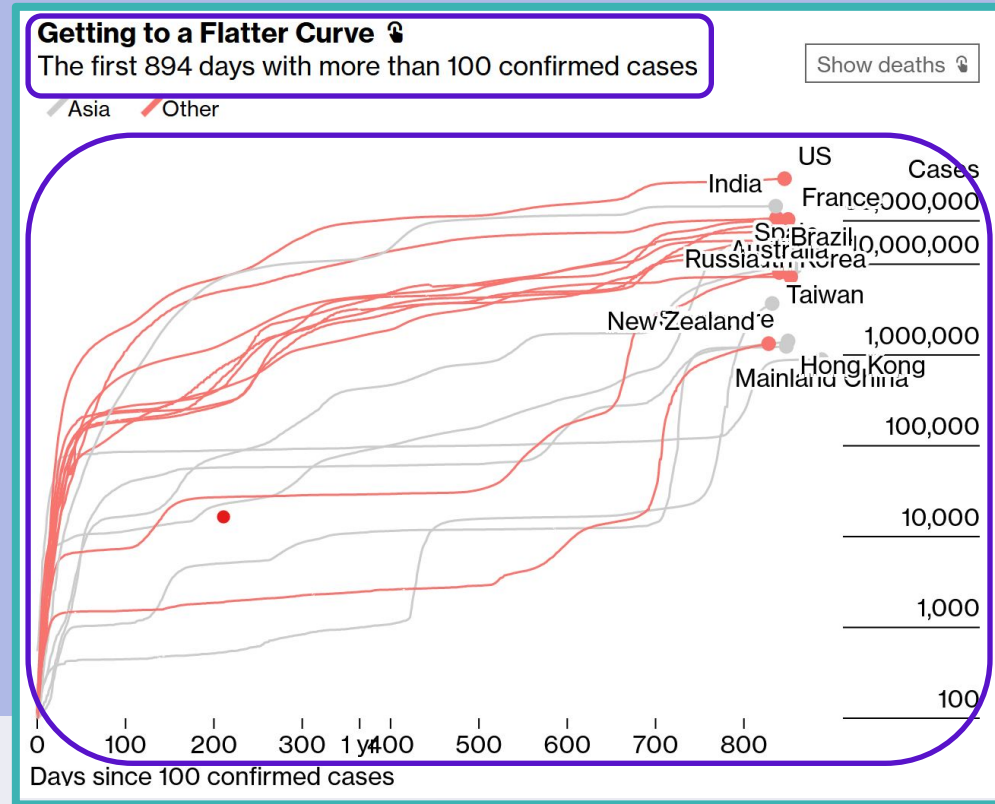Days since 100 confirmed cases

Task

The Authors Have also Implemented a Mouse Hover-Over Feature to Highlight the preferred Country in which the Viewer would Like to Focus On.

- Despite this, due to the Extreme Closeness Between the Overlapping of (Country) Lines, Users With Mobility/Varying Impairments (e.g. Hand Tremors, Larger Fingers) and/or Utilizes this Feature in Differing Environments (e.g. On Public Transportation, On Their Device Using One-Hand) Would Be Affected to a Large Extent.

Getting to a Flatter Curve 👆
The first 894 days with more than 100 confirmed cases

Show deaths 👆

Asia   Other

Cases
30,000,000
Italy
18,343,422   10,000,000

1,000,000

100,000

10,000

1,000

100

0   100   200   300   1 y400   500   600   700   800

Days since 100 confirmed cases

Task

The Authors Added a Main Title for the Graph as '**Getting to a Flatter Curve**' with a Sub-Title of
'The first 894 days with more than 100 confirmed cases'.

- However, the Main Title had a slightly bigger Font Size and a Bold Text Style, it was assumed that it would be related to the Sub-Title and the Graph, which is not true in this instance, making it confusing to the Viewer.
- Also, the Main Title is Not Descriptive Enough in conveying what was Meant by 'Getting to a Flatter Curve' with respect to the Graph.

Getting to a Flatter Curve 👆
The first 894 days with more than 100 confirmed cases

Show deaths 👆

Asia   Other

US
India
France
Sp. Brazil
Australia orea
Russia n rea
Taiwan
New Zealand e
Hong Kong
Mainland China

Cases
,000,000
10,000,000
1,000,000
100,000
10,000
1,000
100

0   100   200   300 1 y 400   500   600   700   800
Days since 100 confirmed cases

Solution

- Remove the Legend (with 'Asia' / 'Other' Variables).
- Remove the '1 yr' Mark from the Days Scale (X-Axis).

- Add a DropDown List, Containing the List of Countries with More Than 100 Confirmed Cases, such that on Selecting a Country within it, that Country (Line) will be Highlighted in **Red**, on the Graph, while the Remaining Ones are **Greyed** Out.
- Allow the No. of Cases (Y-Axis) to Scale Proportionally.

Countries COVID Cases Comparison within 894 Days (After Reaching 100th Confirmed Cases Mark)

Focus On [Singapore ▾]
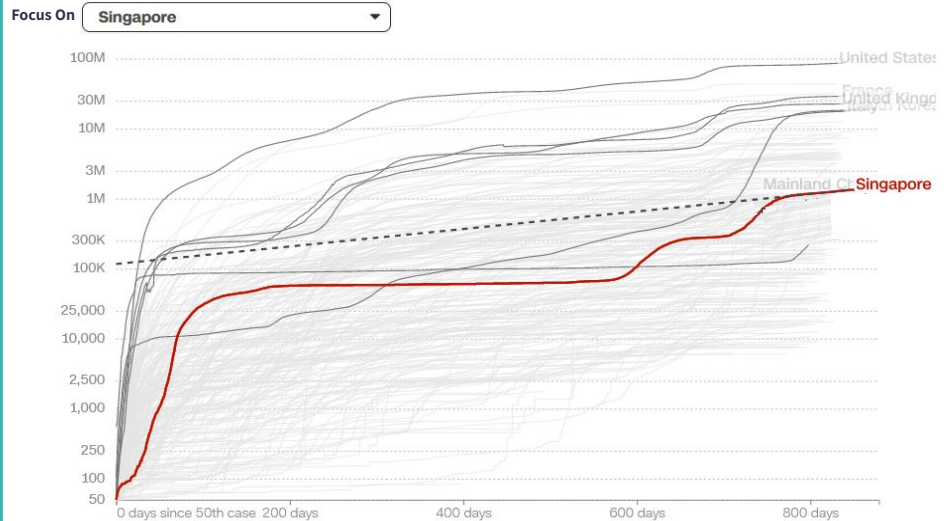
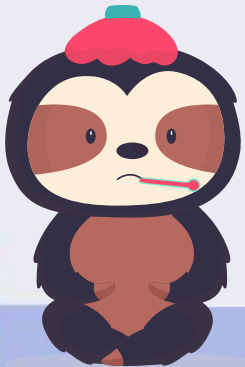# Visualisation 02

From: **UNCTAD**
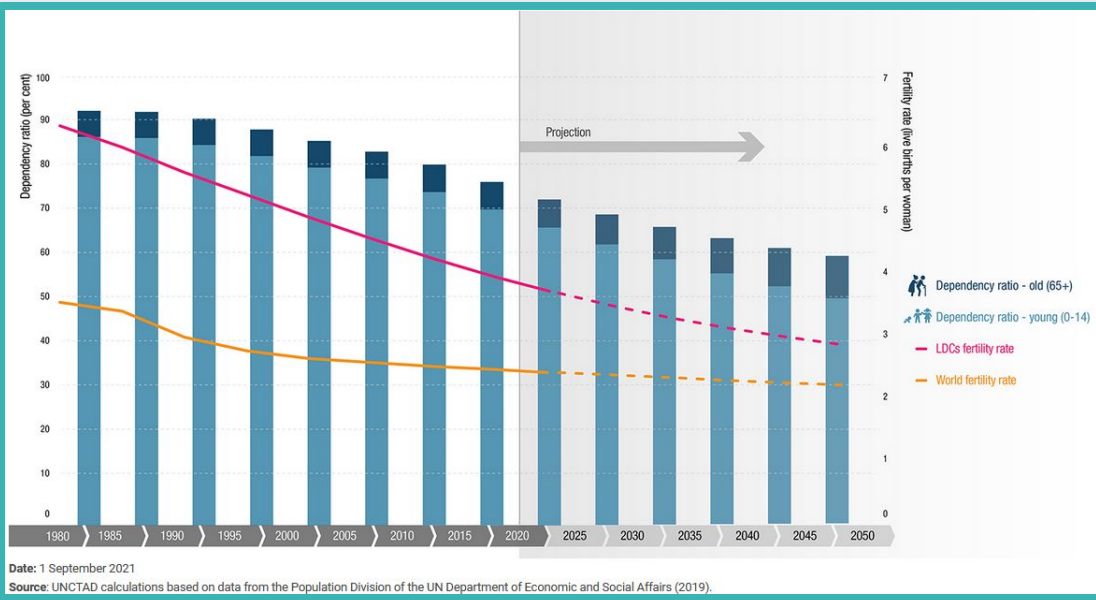
Graph Author (Source):
- United Nations Conference on Trade and Development (UNCTAD)

About Graph:
- Calculations Based On Data From the Population Division of the UN Department of Economic and Social Affairs .
- Stacked-Bar and Multi-Line Graph from *Historical* Year 1980 to 2020 and *Projected* Year 2020 to 2050.

- Year (X-Axis)
- Dependency-Ratio / Fertility-Rate (Y-Axis)

- Colors:
  - **Bar: Light Blue** (for Age 0 to 14 Dependency Rate).
  - **Bar: Dark Blue** (for Dependency Rates of Age 65 Onwards).
  - **Line: Orange** (for **World** Fertility Rate).
  - **Line: Pink** (for **LCD's** Fertility Rate).

URL: https://unctad.org/topic/least-developed-countries/chart-september-2021
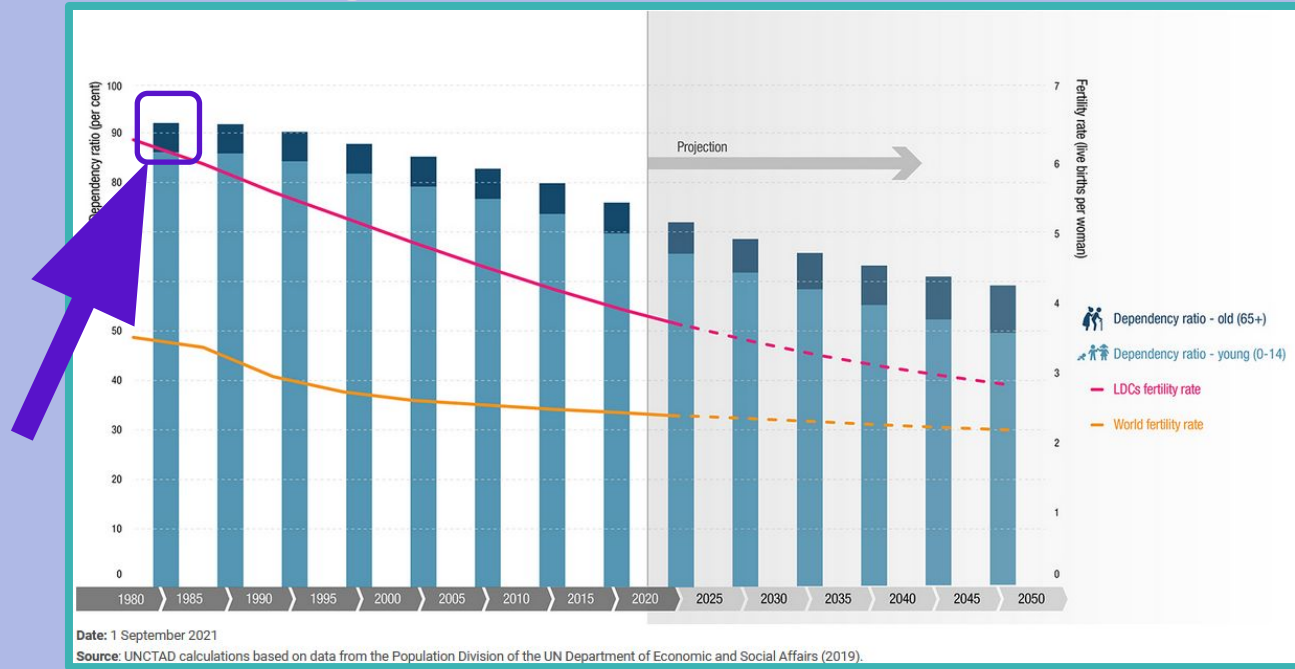
Critique

(UNCTAD)

Data

- With the Use of Stacked-Bar Charts
  - Some Viewers May be Required to Move-Closer/Zoom-In on the Smaller (Valued) Stacked **Dark Blue Bar** and Mentally Calculate its Estimated Dependency Ratio.
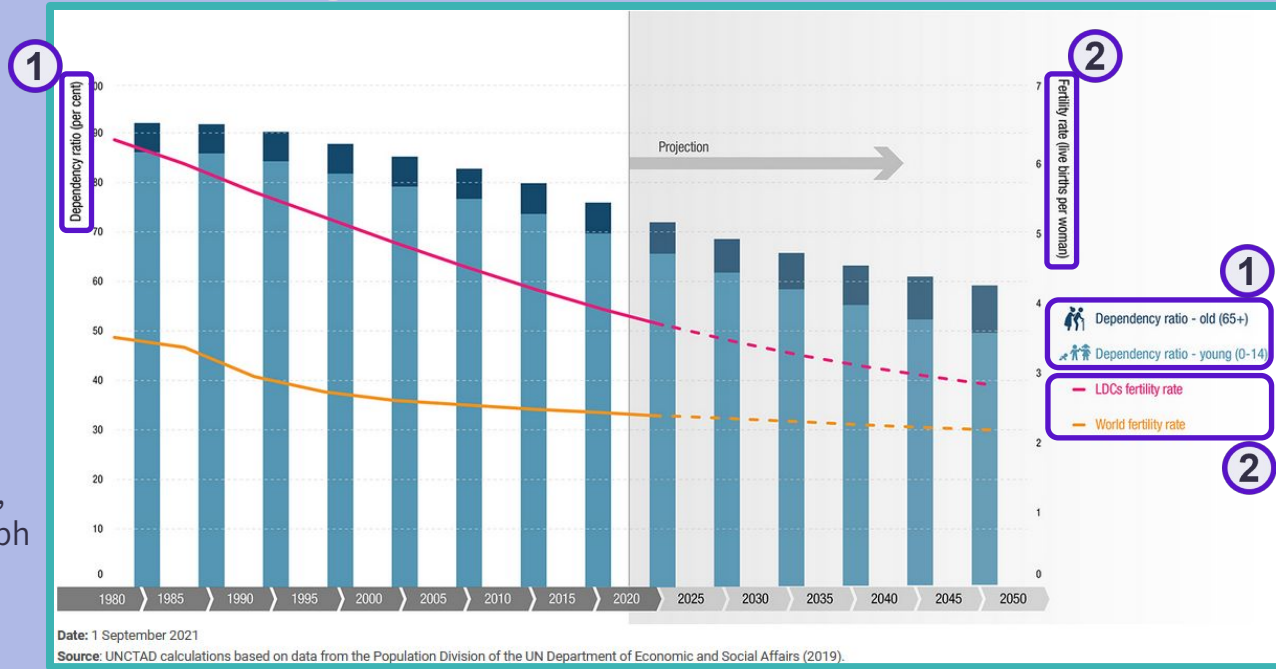
Idiom

- The Author used two Y-Axis:
  1. (Left-Side) Dependency Ratio
  2. (Right-Side) Fertility Rate
  to refer to the Correlation between the Dependency and Fertility Rates/Ratios, **thus** a Stacked-Bar and Multi-Line Graph was Used.
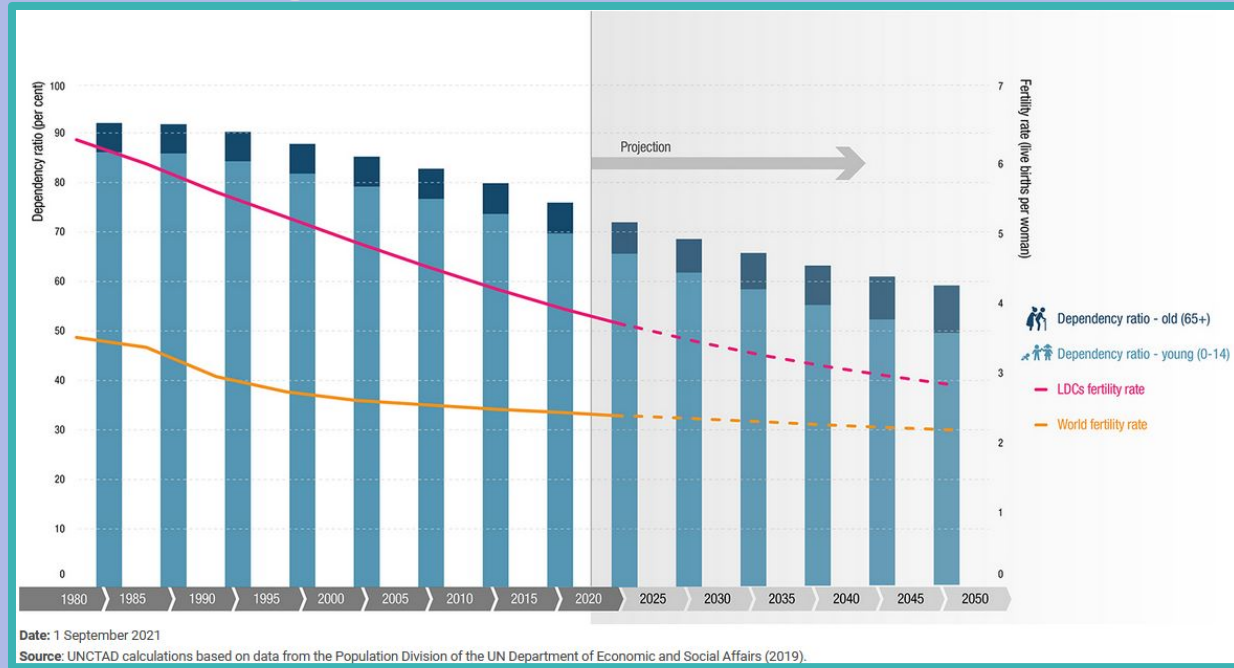 - However, Some Viewers May be confused by which Side of the Y-Axis (Left/Right) should the Bar(s)/Line(s) be referred to.
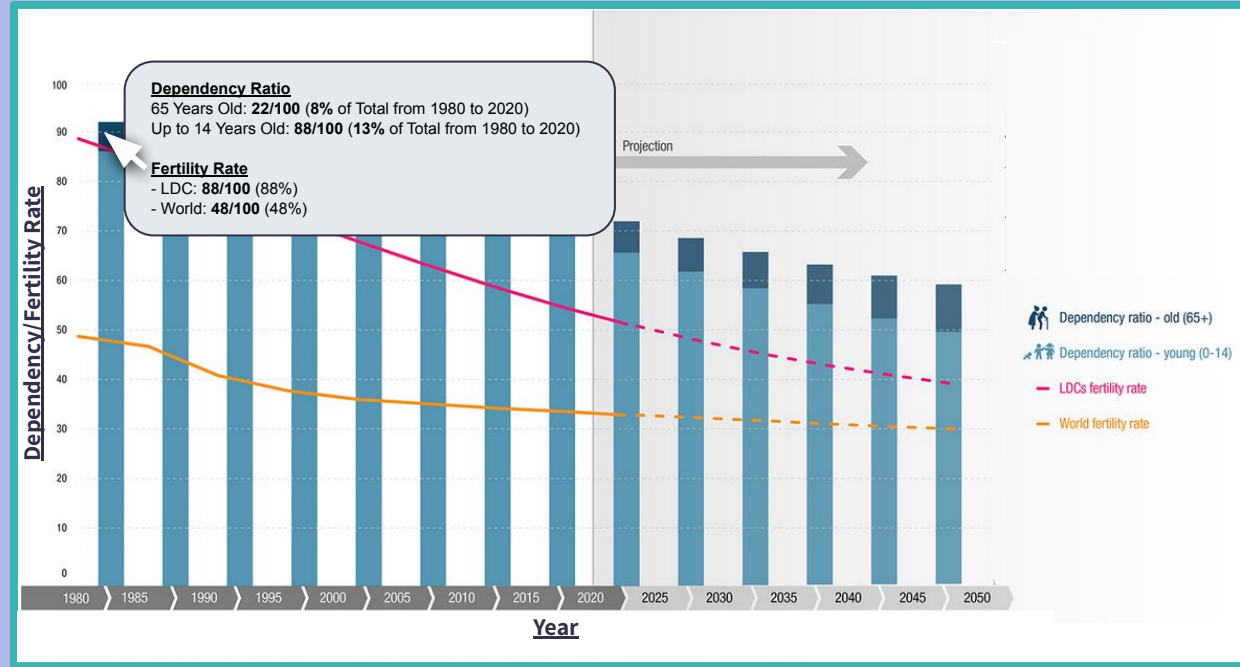
Date: 1 September 2021
Source: UNCTAD calculations based on data from the Population Division of the UN Department of Economic and Social Affairs (2019).

Task

- Being a Static Graph, there are No Options to Further Analyse the Graph's Properties (e.g. Hover-Over, Selection).

Date: 1 September 2021
Source: UNCTAD calculations based on data from the Population Division of the UN Department of Economic and Social Affairs (2019).

Solution

- Add a Mouse Hover-Over ToolTip, that would Display a Pop-up Containing the Dependency Ratios and Fertility Rates.
- Merge the 2 Y-Axis into 1 Y-Axis Scale, Where the Fertility Rate is Automatically Transformed *(from a Total of 7 to Total of 100)*
- Reform the X and Y Axis to Reflect the Relevant Changes Above (with the Inclusion of the Y-Axis' Label 'Year')

Thank you

QnA!