Covid-19 Visual Analysis

Data Source: University of Oxford, UK

Oxford COVID-19 Government Response Tracker (OxCGRT)

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Covid-19

Visual analysis of government response

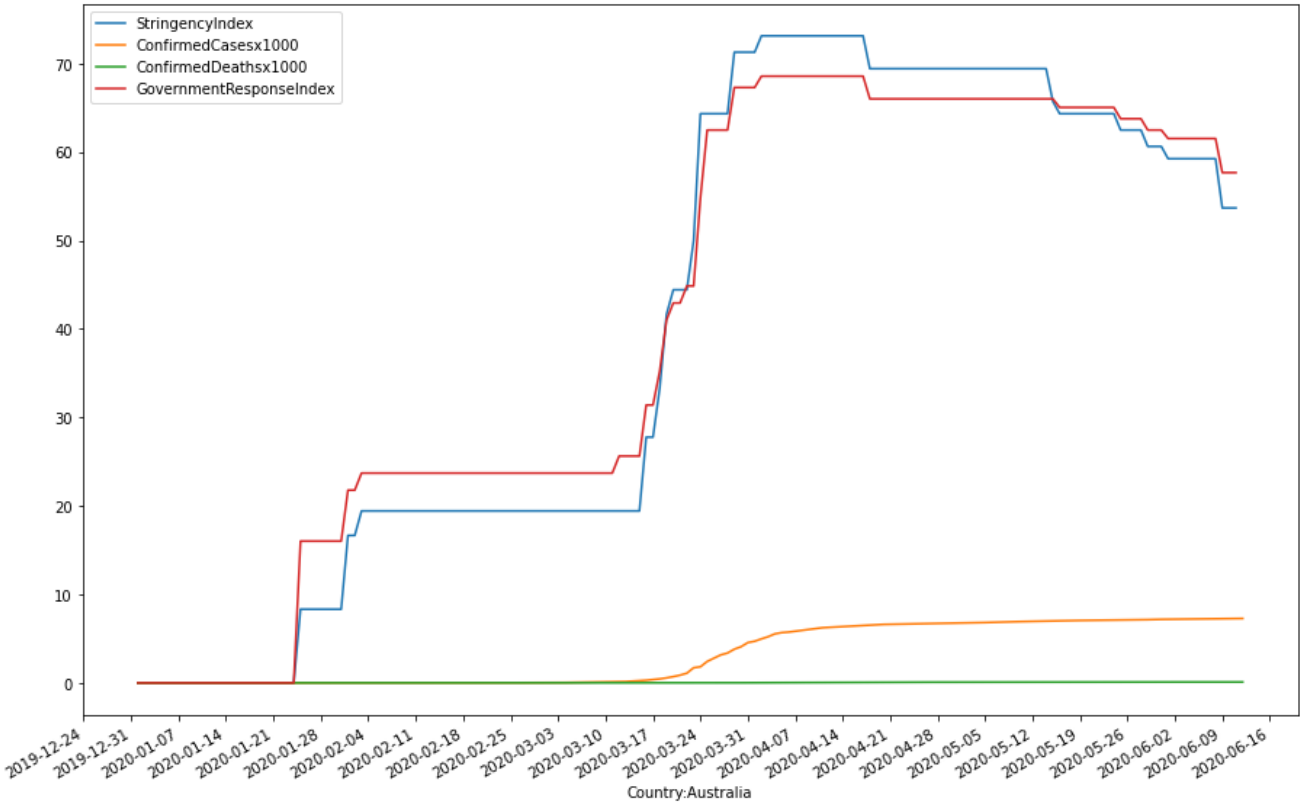
Year 2020 from January (till 12th June as of today) has been roller-coaster ride for entire world, economies have crashes, (s)elected governments accusing each other, while common people have suffered beyond words, philosophically speaking even Gods' doors are shut, real heroes are health care professionals, security agencies, countless volunteers who have stepped forward to fight this uphill battle, all those janitors, food/grocery delivery folks, public servants and so on.

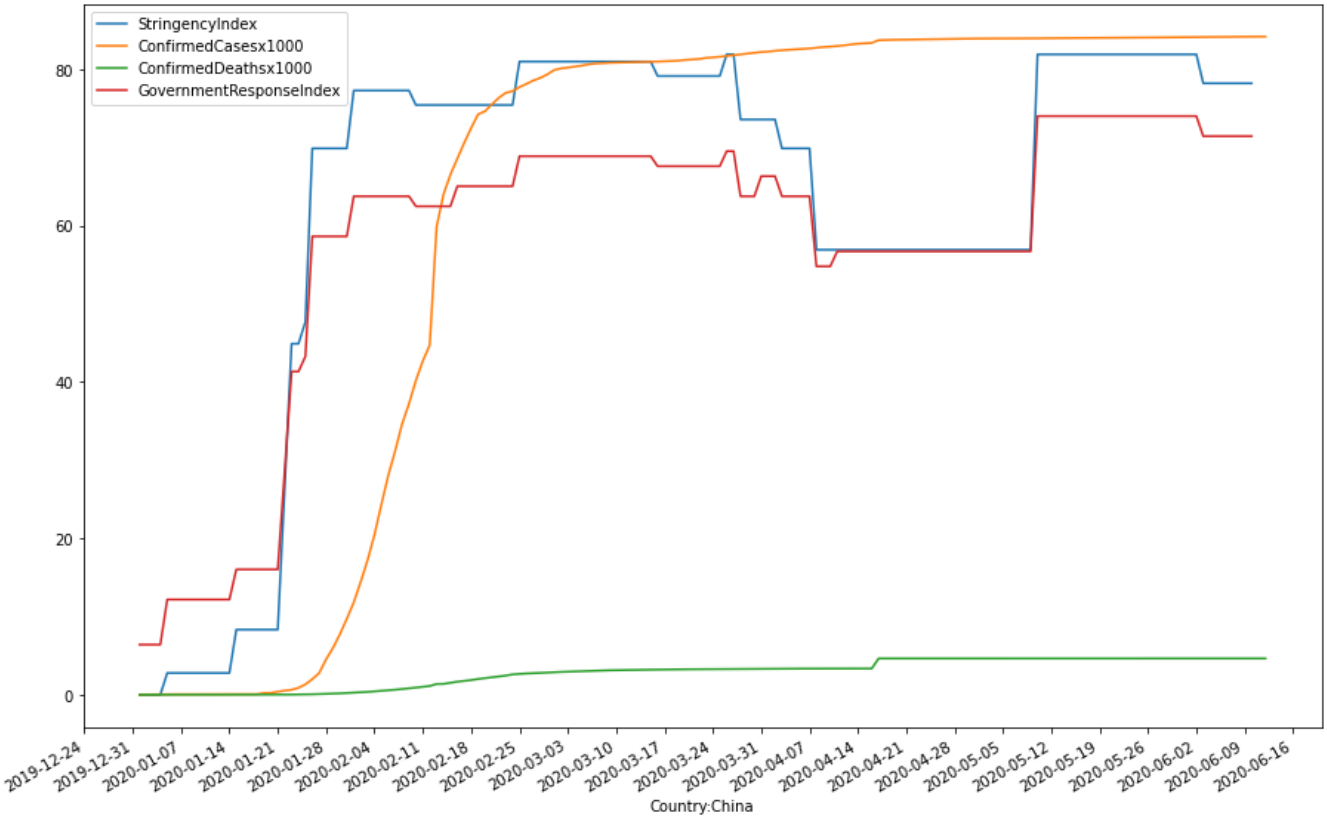
There've been many pretty nice projects to show the impact of covid on economy, death/confirmed cases/recovered cases, government response, contact tracing, the list is huge. One such interesting project is being carried out by Oxford University, titled Government Response Tracker. The team behind the project have done really amazing job in arranging this data and making it public, hats off to you guys.

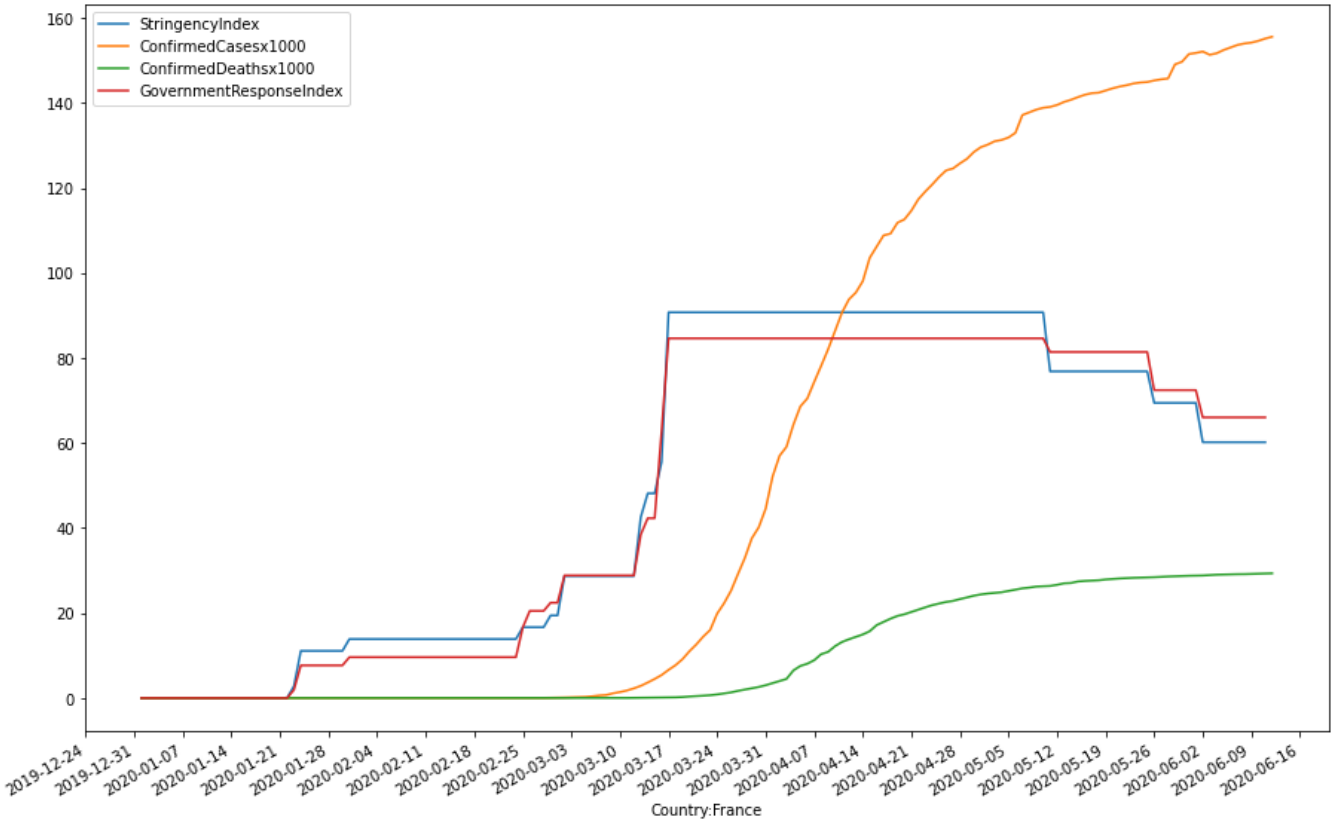
By no means I'd call myself a data analyst/scientist or any of currently hot job titles, I do appreciate data and visual element can bring out real beauty of underlying data. For this small project I wanted to see if there's correlation between stringency index and confirmed cases/deaths values in source data.

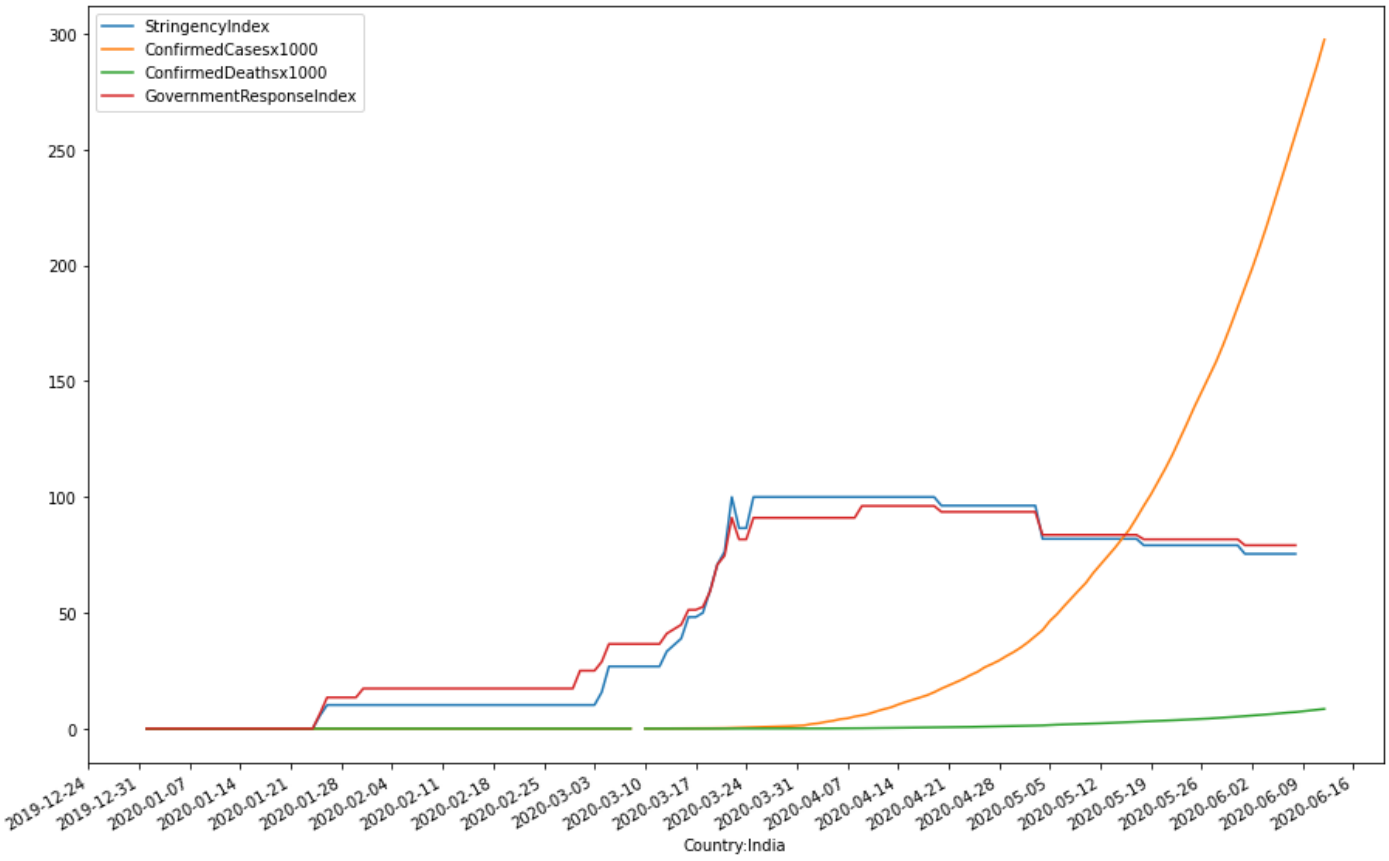
Countries like South Korea, Vietnam, Taiwan, New Zealand, Australia where they put stricter lockdowns early on and for longer duration, strategy seems to have worked out, the number of confirmed cases/deaths has remained lower/ controlled.

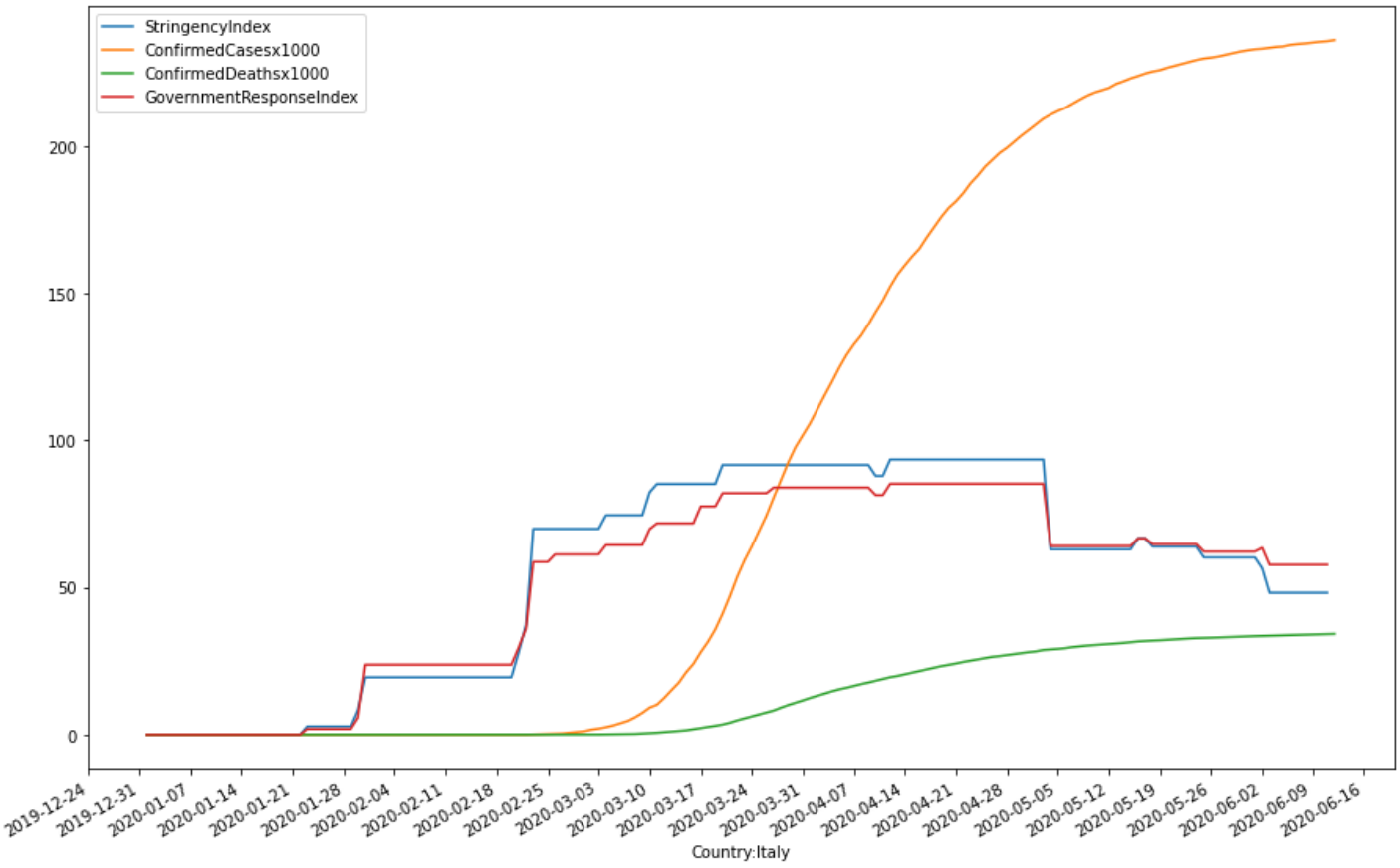
For charts, I focus on data for India, United States, South Korea, China, United Kingdom, Italy, Spain, France, Vietnam, Australia, New Zealand, and Taiwan. The series I picked are StringencyIndex, ConfirmedCases, ConfirmedDeaths, GovernmentResponseIndex


StringencyIndex
ConfirmedCasesx1000
ConfirmedDeathsx1000
GovernmentResponseIndex
Country:Australia


StringencyIndex
ConfirmedCasesx1000
ConfirmedDeathsx1000
GovernmentResponseIndex
Country:China


StringencyIndex
ConfirmedCasesx1000
ConfirmedDeathsx1000
GovernmentResponseIndex
Country:France


StringencyIndex
ConfirmedCasesx1000
ConfirmedDeathsx1000
GovernmentResponseIndex
Country:India


StringencyIndex
ConfirmedCasesx1000
ConfirmedDeathsx1000
GovernmentResponseIndex
200
150
100
50
0
2019-12-24
2019-12-31
2020-01-07
2020-01-14
2020-01-21
2020-01-28
2020-02-04
2020-02-11
2020-02-18
2020-02-25
2020-03-03
2020-03-10
2020-03-17
2020-03-24
2020-03-31
2020-04-07
2020-04-14
2020-04-21
2020-04-28
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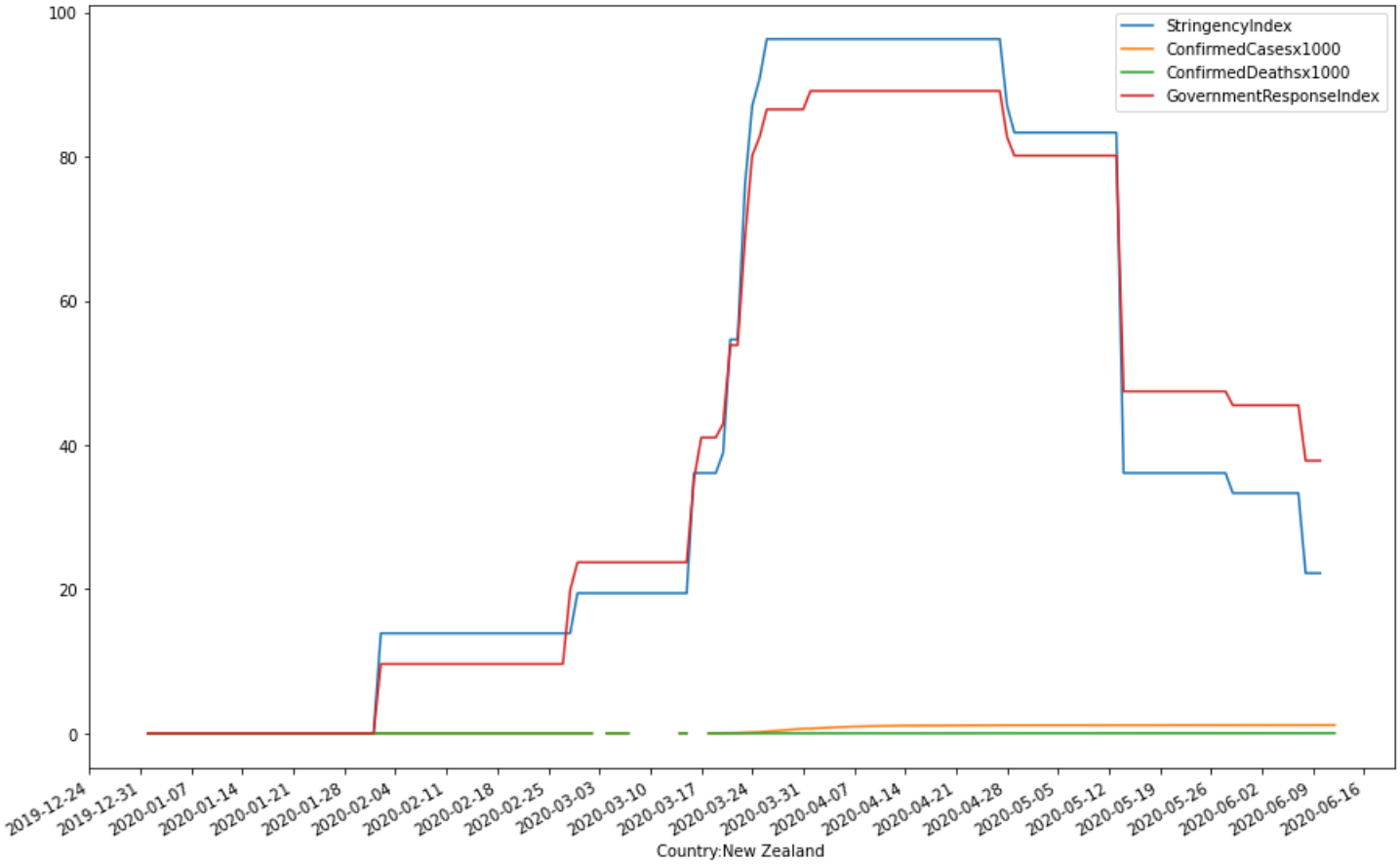
2020-05-19
2020-05-26
2020-06-02
2020-06-09
2020-06-16
Country:Italy


StringencyIndex
ConfirmedCasesx1000
ConfirmedDeathsx1000
GovernmentResponseIndex
100
80
60
40
20
0
2019-12-24
2019-12-31
2020-01-07
2020-01-14
2020-01-21
2020-01-28
2020-02-04
2020-02-11
2020-02-18
2020-02-25
2020-03-03
2020-03-10
2020-03-17
2020-03-24
2020-03-31
2020-04-07
2020-04-14
2020-04-21
2020-04-28
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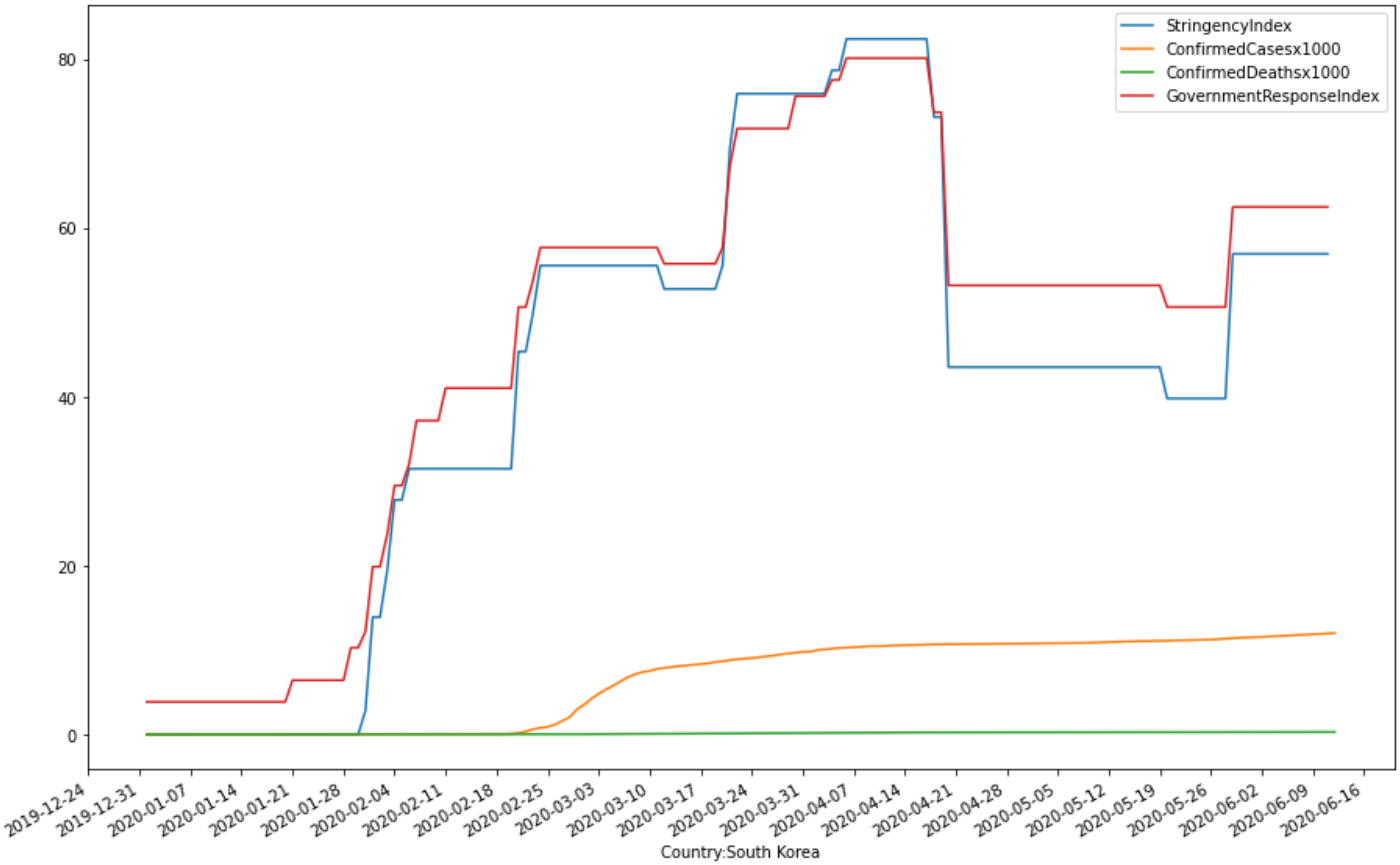
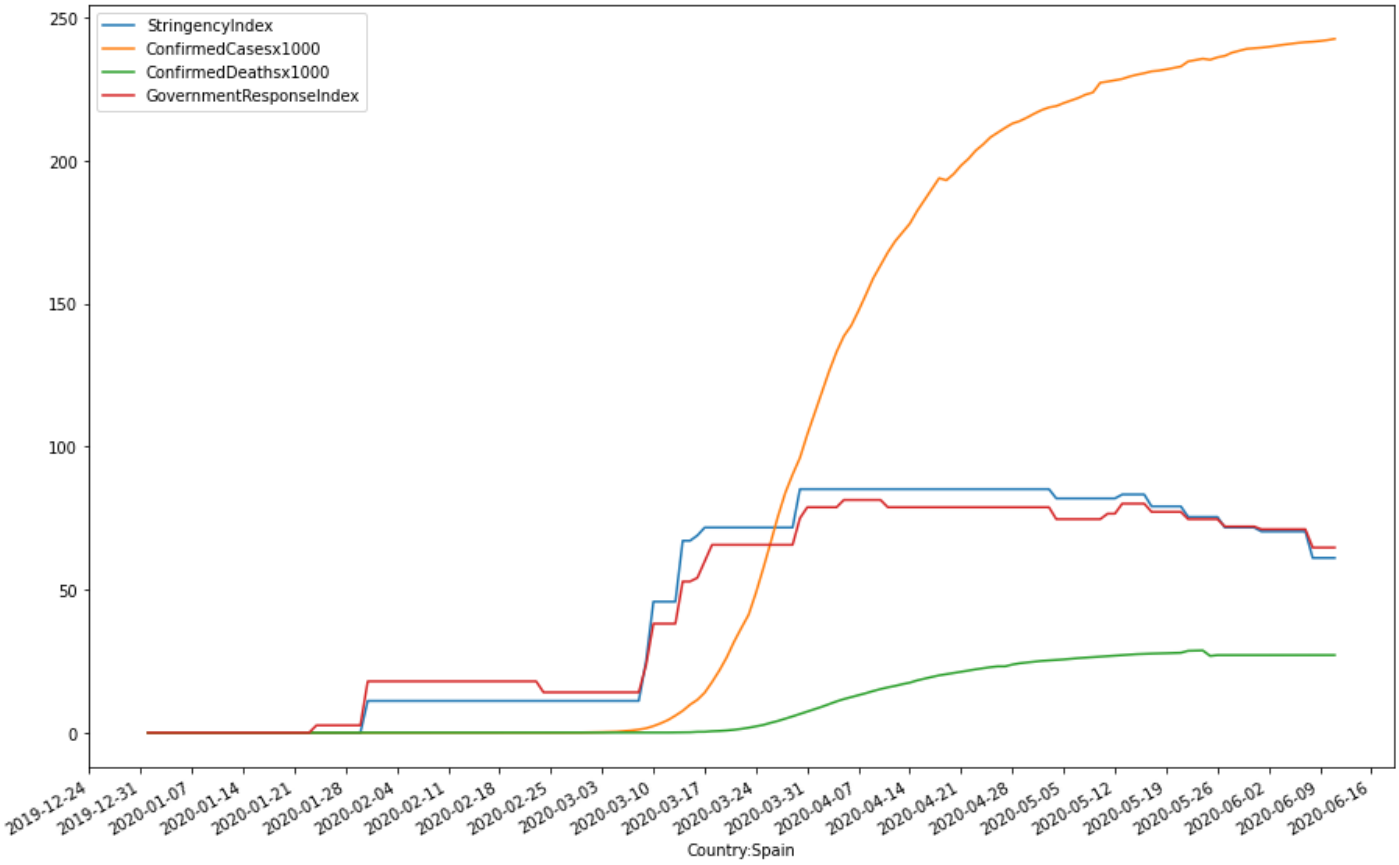
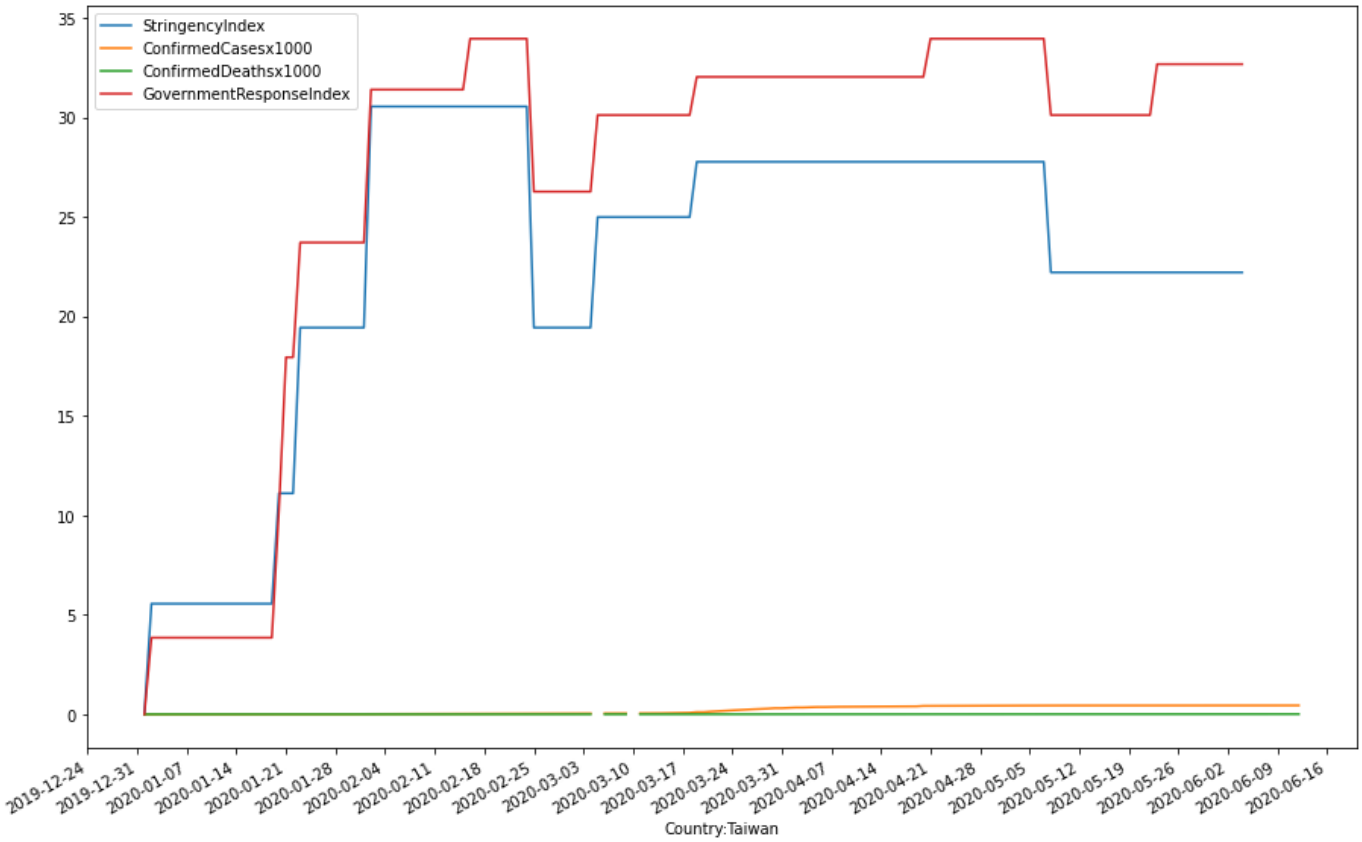
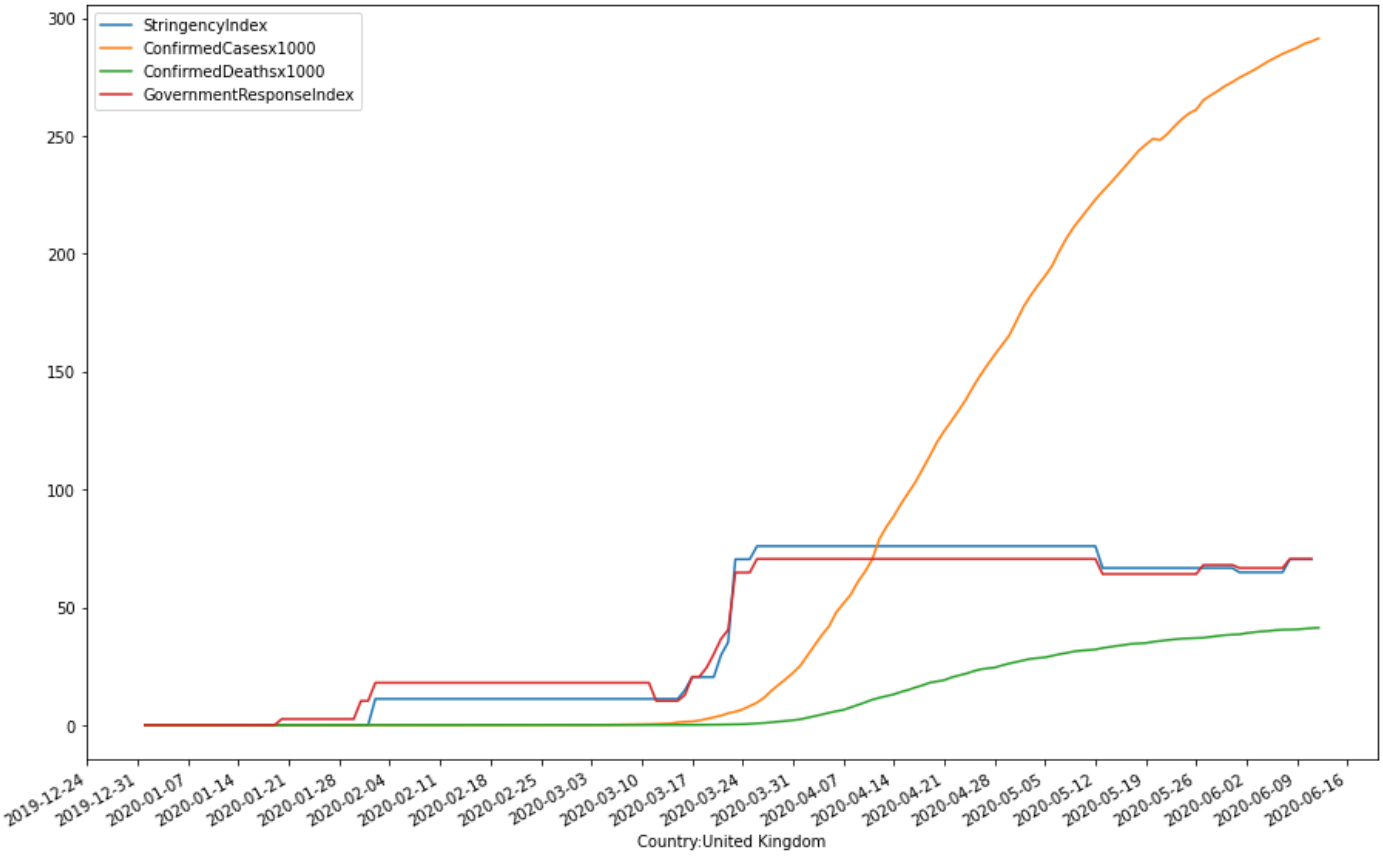
2020-06-02
2020-06-09
2020-06-16
Country:New Zealand

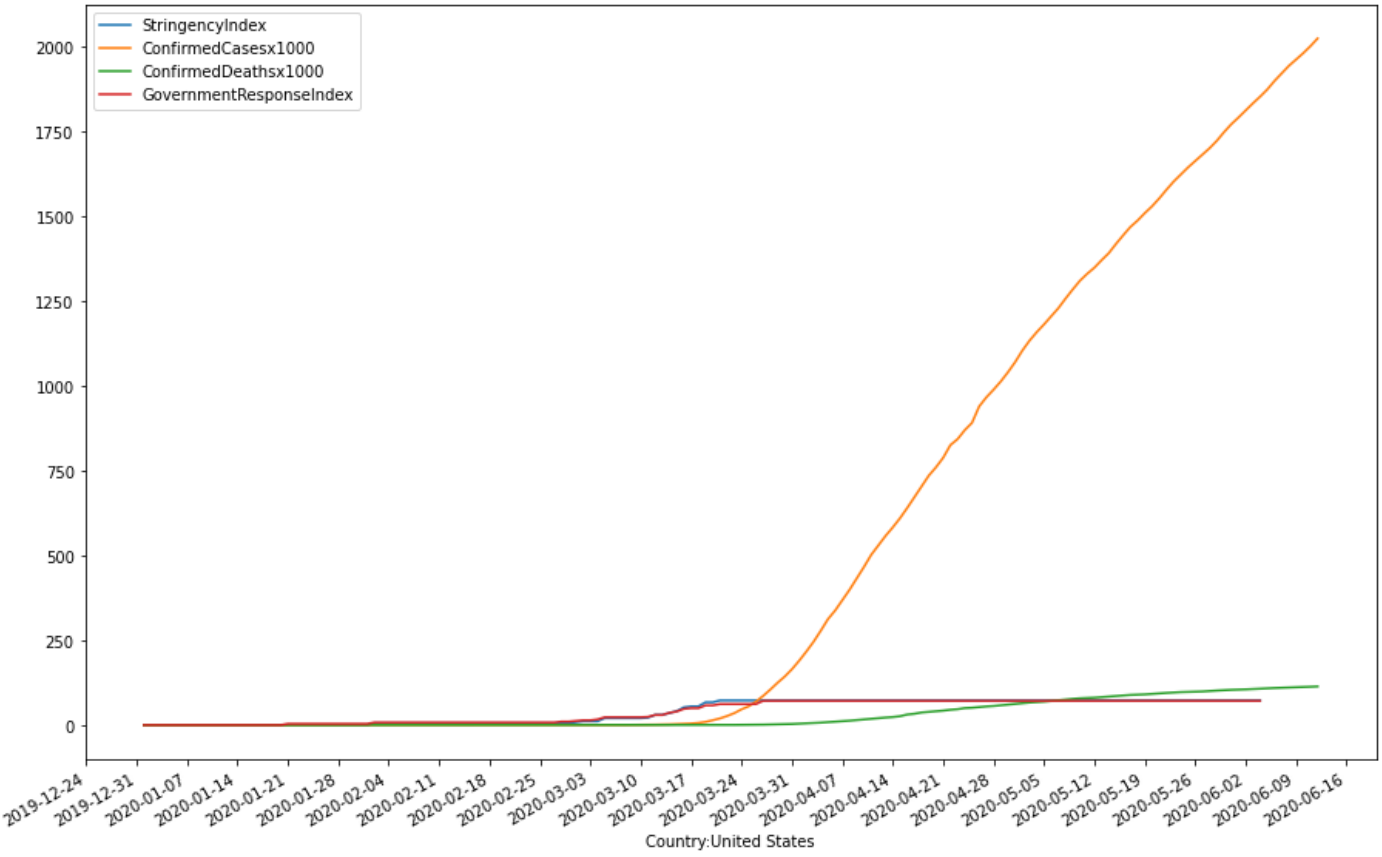

StringencyIndex
ConfirmedCasesx1000
ConfirmedDeathsx1000
GovernmentResponseIndex
Country:South Korea


StringencyIndex
ConfirmedCasesx1000
ConfirmedDeathsx1000
GovernmentResponseIndex
Country:Spain





Here's output of above mentioned countries


StringencyIndex
ConfirmedCasesx1000
ConfirmedDeathsx1000
GovernmentResponseIndex
2000
1750
1500
1250
1000
750
500
250
0
2019-12-24
2019-12-31
2020-01-07
2020-01-14
2020-01-21
2020-01-28
2020-02-04
2020-02-11
2020-02-18
2020-02-25
2020-03-03
2020-03-10
2020-03-17
2020-03-24
2020-03-31
2020-04-07
2020-04-14
2020-04-21
2020-04-28
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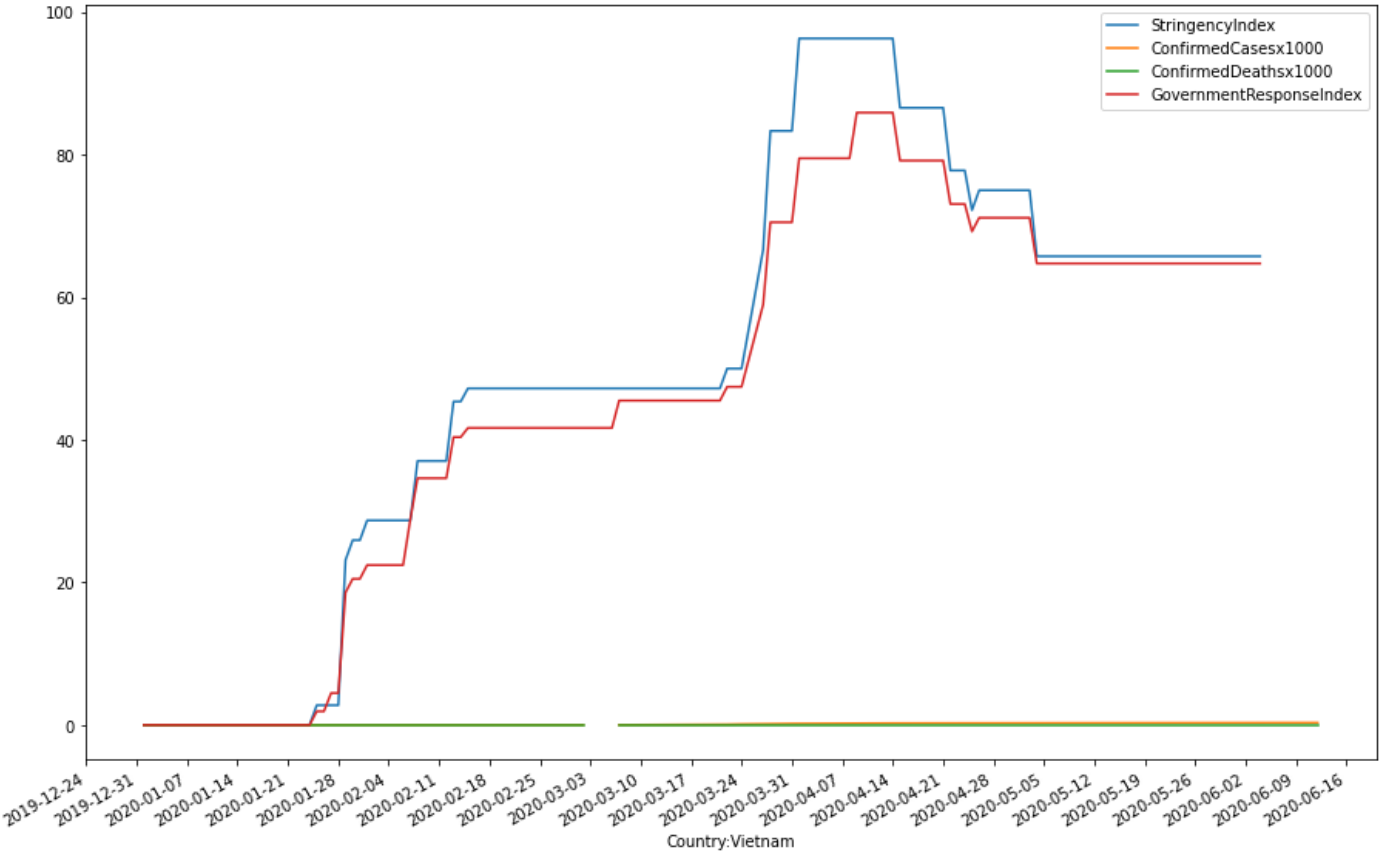
2020-05-19
2020-05-26
2020-06-02
2020-06-09
2020-06-16
Country:United States


StringencyIndex
ConfirmedCasesx1000
ConfirmedDeathsx1000
GovernmentResponseIndex
100
80
60
40
20
0
2019-12-24
2019-12-31
2020-01-07
2020-01-14
2020-01-21
2020-01-28
2020-02-04
2020-02-11
2020-02-18
2020-02-25
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2020-03-17
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2020-03-31
2020-04-07
2020-04-14
2020-04-21
2020-04-28
2020-05-05
2020-05-12
2020-05-19
2020-05-26
2020-06-02
2020-06-09
2020-06-16
Country:Vietnam

The link to source data is : https://www.bsg.ox.ac.uk/

Charts generated using : Python 3.8

PS: Confirmed cases and deaths for some countries is in thousands while stringency index and government response index values are under 100, so I divided cases/deaths by 1000, so as to show in plot.