

The Pursuit of Happiness

World Happiness Report 2019

A Visual Analysis
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Outline

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Introduction/Objective

- Happiness (and not GDP alone) is increasingly becoming a key metric driving public policy decisions
- Analyze global state of happiness as well as the factors behind it
- How the state of happiness has changed over the last 5 years
- How countries measure against the indicators of happiness
- How different regions compare

Data Source

- World Happiness Report
 - Landmark survey on the state of global happiness
 - Publication of the Sustainable Development Solutions Network, powered by data from the Gallup World Poll
 - Gained global recognition as governments, organizations and civil society increasingly use happiness indicators to inform policy-making decisions
- Kaggle :
 - 5 files : 2015,2016,2017,2018,2019
 - 141 Countries
 - 6 happiness indicators
 - Columns : Region, Country, GDP per Capita, 'Happiness Rank', 'Happiness Score', 'Lower Confidence Interval', 'Upper Confidence Interval', 'Economy (GDP per Capita)', Family', Health (Life Expectancy)', 'Freedom', 'Trust (Government Corruption)', 'Generosity', 'Dystopia Residual'

PreProcessing

- Using Python
- Renaming Columns to have consistent names
- Dropping unnecessary columns
- Merging the 5 files to obtain a final dataset
 - 141 rows representing countries
 - 46 columns : representing indicators across different years

```
In [90]: final.head()
```

```
Out[90]:
```

	Country	Region_x	Happiness Rank_2015	Happiness Score_2015	Economy(GDP per Capita)_2015	Family_2015	Health (Life Expectancy)_2015	Freedom_2015	Tr (Governme Corruption)_20
0	Switzerland	Western Europe	1	7.587	1.39651	1.34951	0.94143	0.66557	0.419
1	Iceland	Western Europe	2	7.561	1.30232	1.40223	0.94784	0.62877	0.141
2	Denmark	Western Europe	3	7.527	1.32548	1.36058	0.87464	0.64938	0.483
3	Norway	Western Europe	4	7.522	1.45900	1.33095	0.88521	0.66973	0.365
4	Canada	North America	5	7.427	1.32629	1.32261	0.90563	0.63297	0.329

5 rows x 46 columns

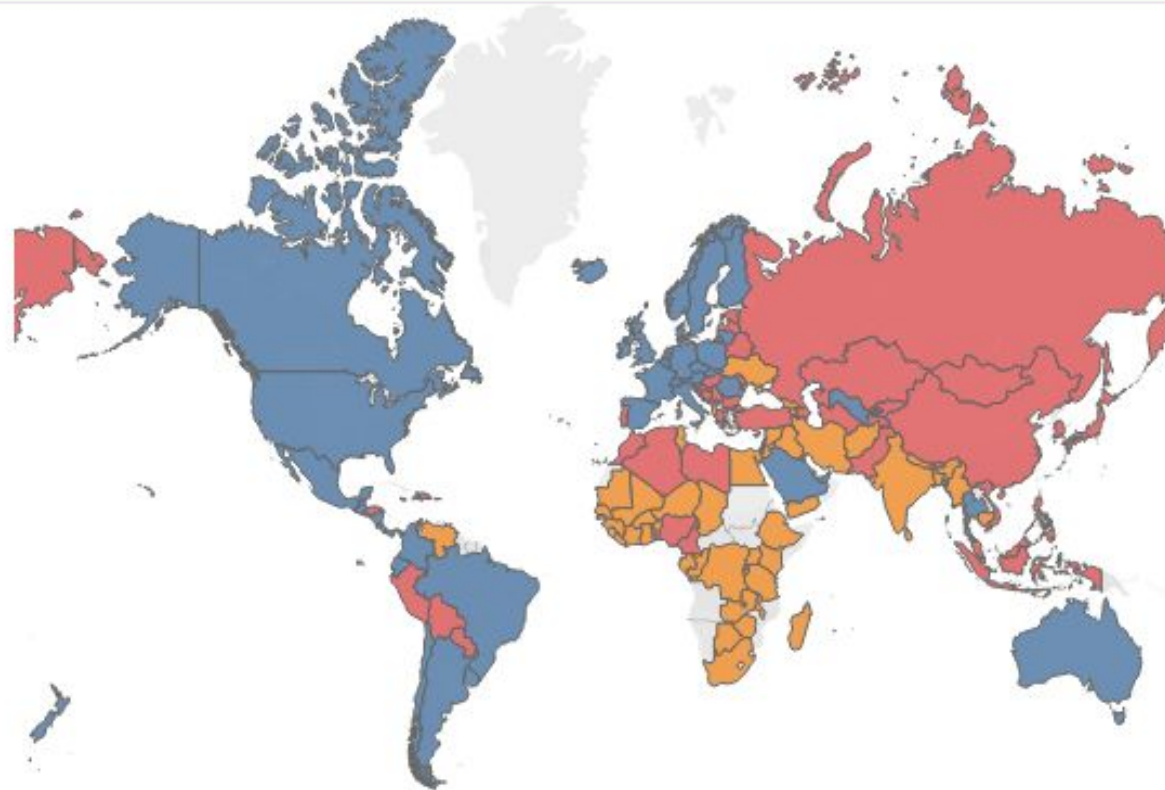
Visualization

- Done for a select few countries including top 10 happiest nations, the bottom 5 (least happy) nations and countries of interest e.g. India, China, USA, UK, Syria, UAE, Spain (using sets)
- Filtering done using tableau : Created parameter called Top N , Bottom N (which can be adjusted) to filter countries based on happiness scores
- Created a “Happiness Spotlight” calculated field

Happiness Spotlight

```
IF SUM([Happiness Score_2019])>6 then 'High'  
ELSEIF SUM([Happiness Score_2019])>5 then 'Medium'  
ELSE 'Low'  
END
```

Global Happiness Map



AGG(Happiness Spotlig...

High

Low

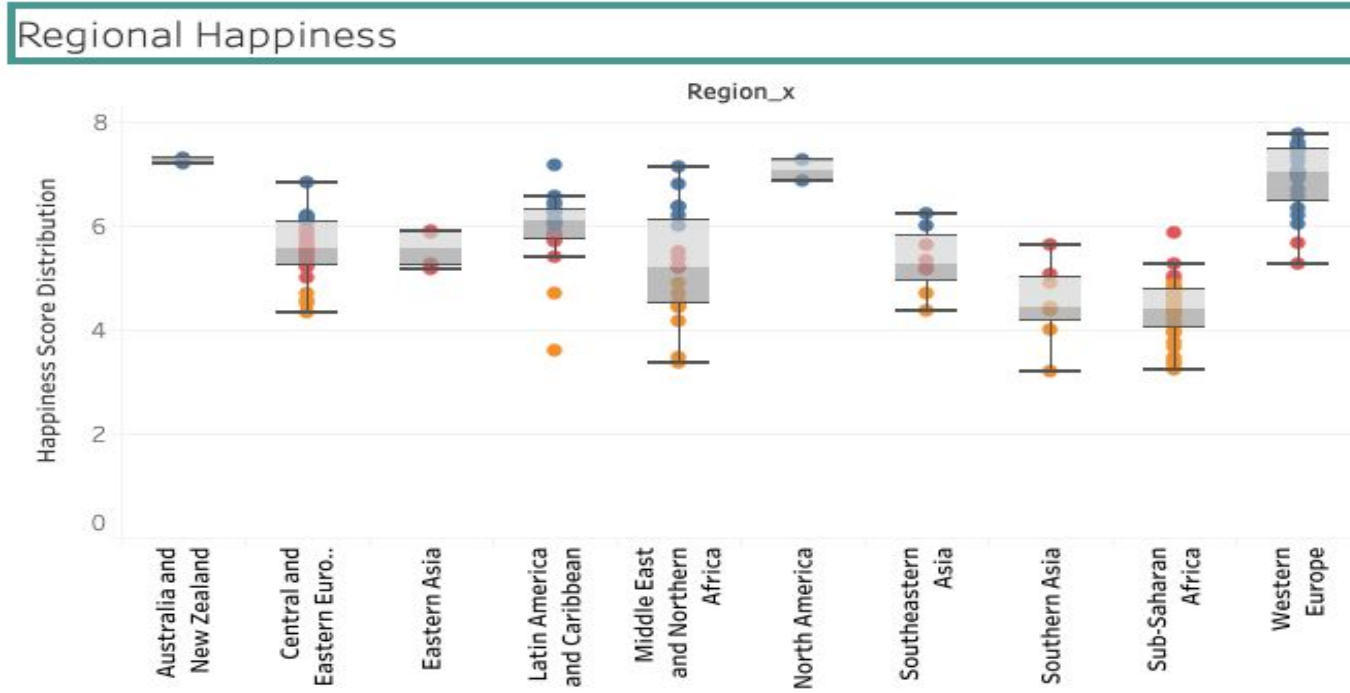
Medium

Top and Bottom 10

Top & Bottom



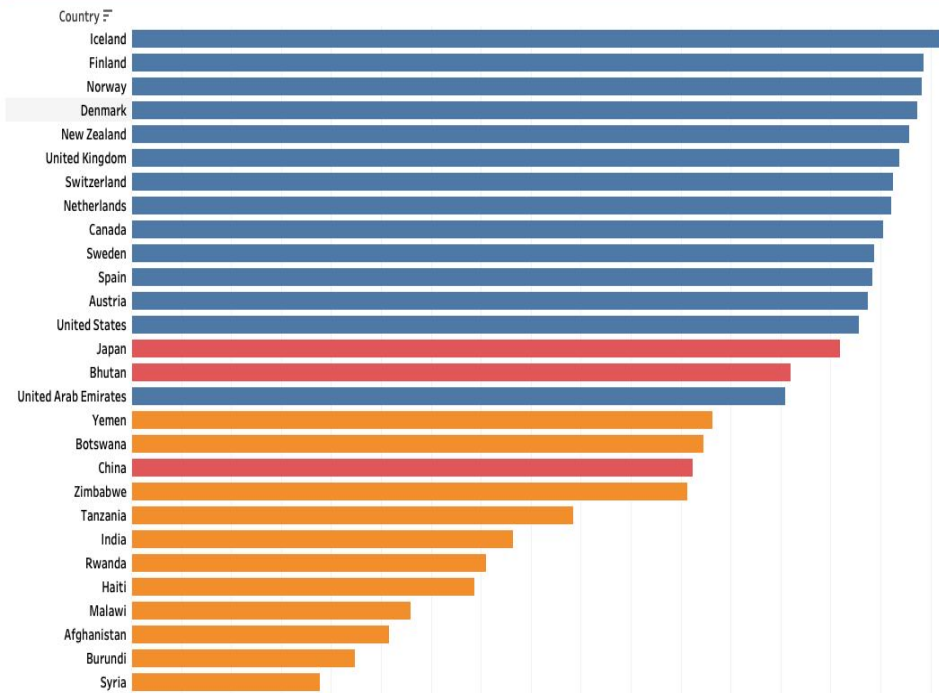
Happiness across Regions



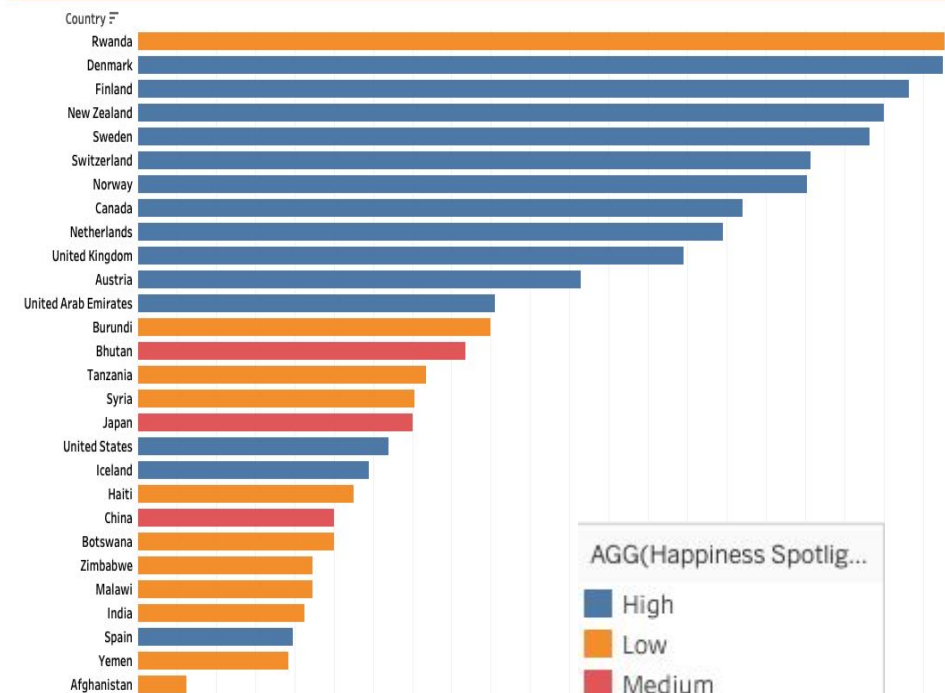
The Happiness Indicators

- GDP per Capita
- Freedom
- Family or social support
- Trust (Government Corruption)
- Generosity
- Health/Life Expectancy

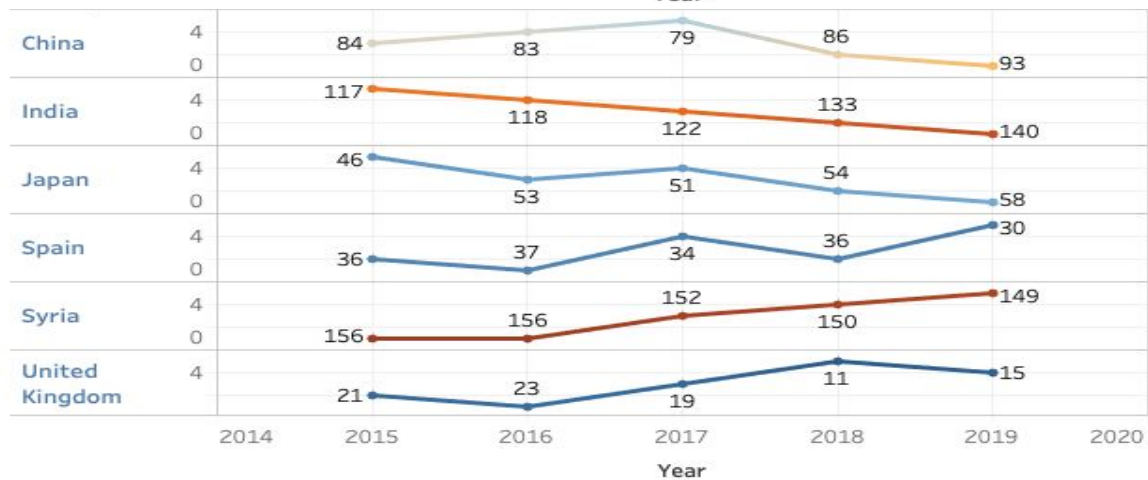
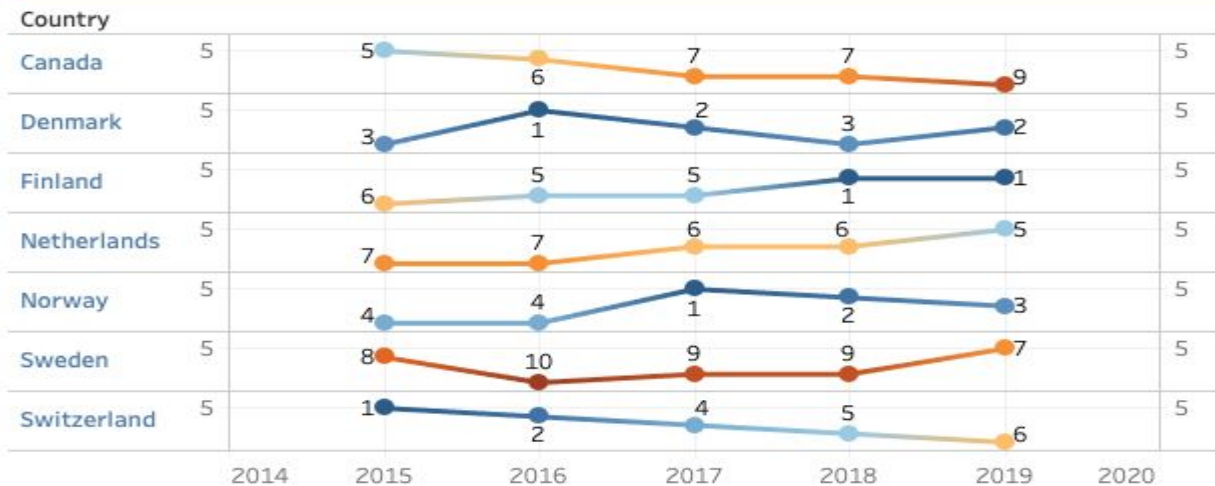
Family Support



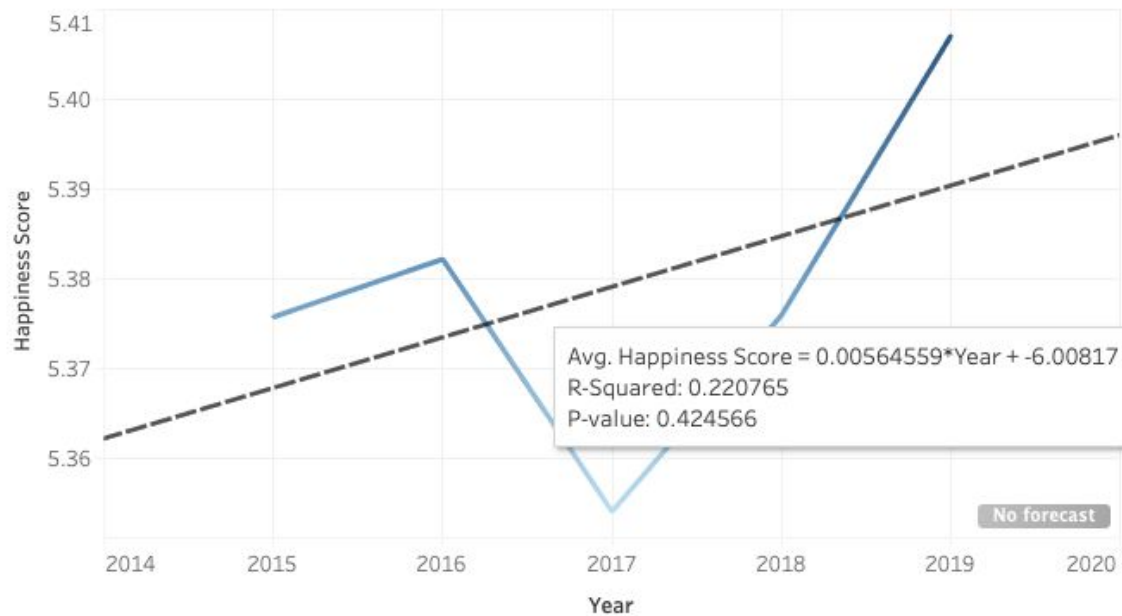
Govt. Trust



Happiness across Time

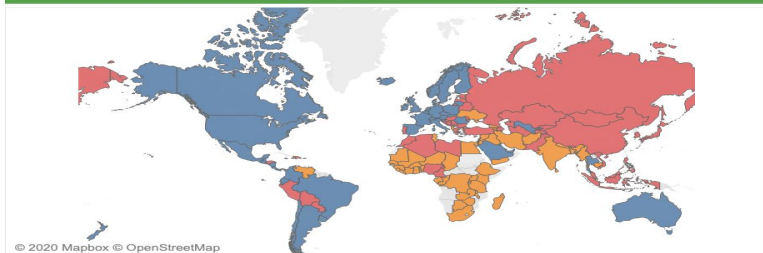


World Happiness across Time

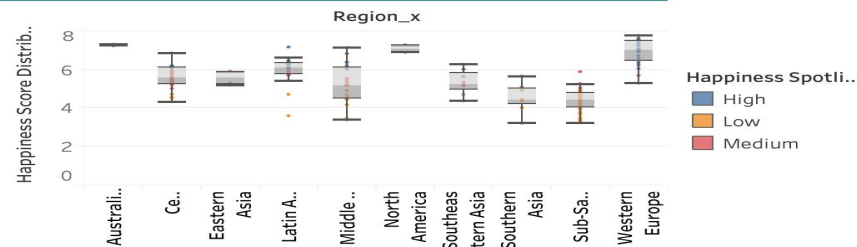


Dashboard

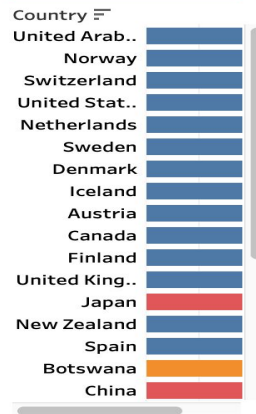
Global Happiness Map



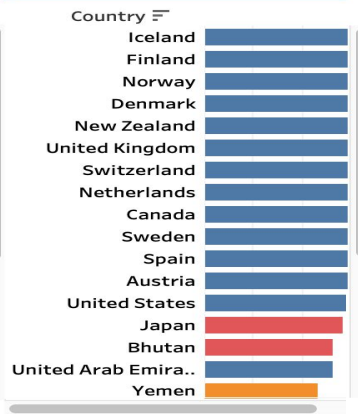
Regional Happiness



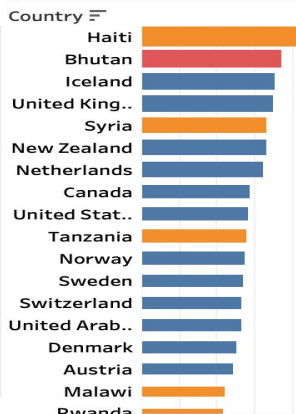
GDP



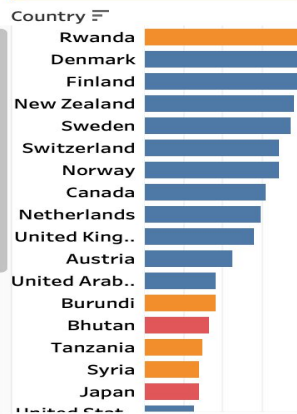
Family Support



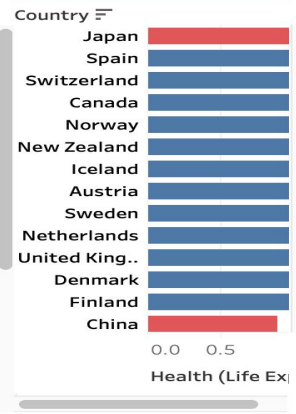
Generosity



Govt. Trust



Life Expectancy



Insights

- North America, Australia & NZ , Western Europe are most happy
- Sub-saharan and Southern Asia are least happy
- Richer countries tend to be happier but not necessarily the most generous
 - Haiti , Bhutan , Syria , Tanzania were more generous than their rich counterparts
- Happier countries tend to have measure high on family support, trust in the government, life expectancy
 - Japan is a rich country with long life expectancy but scores medium in terms of happiness
 - Rwanda is a poor country but measures high on Government Trust
- Happiness has been on the rise over the last 5 years
- 2020 ?

Thank You