

# World Happiness Data Analysis

Group 4

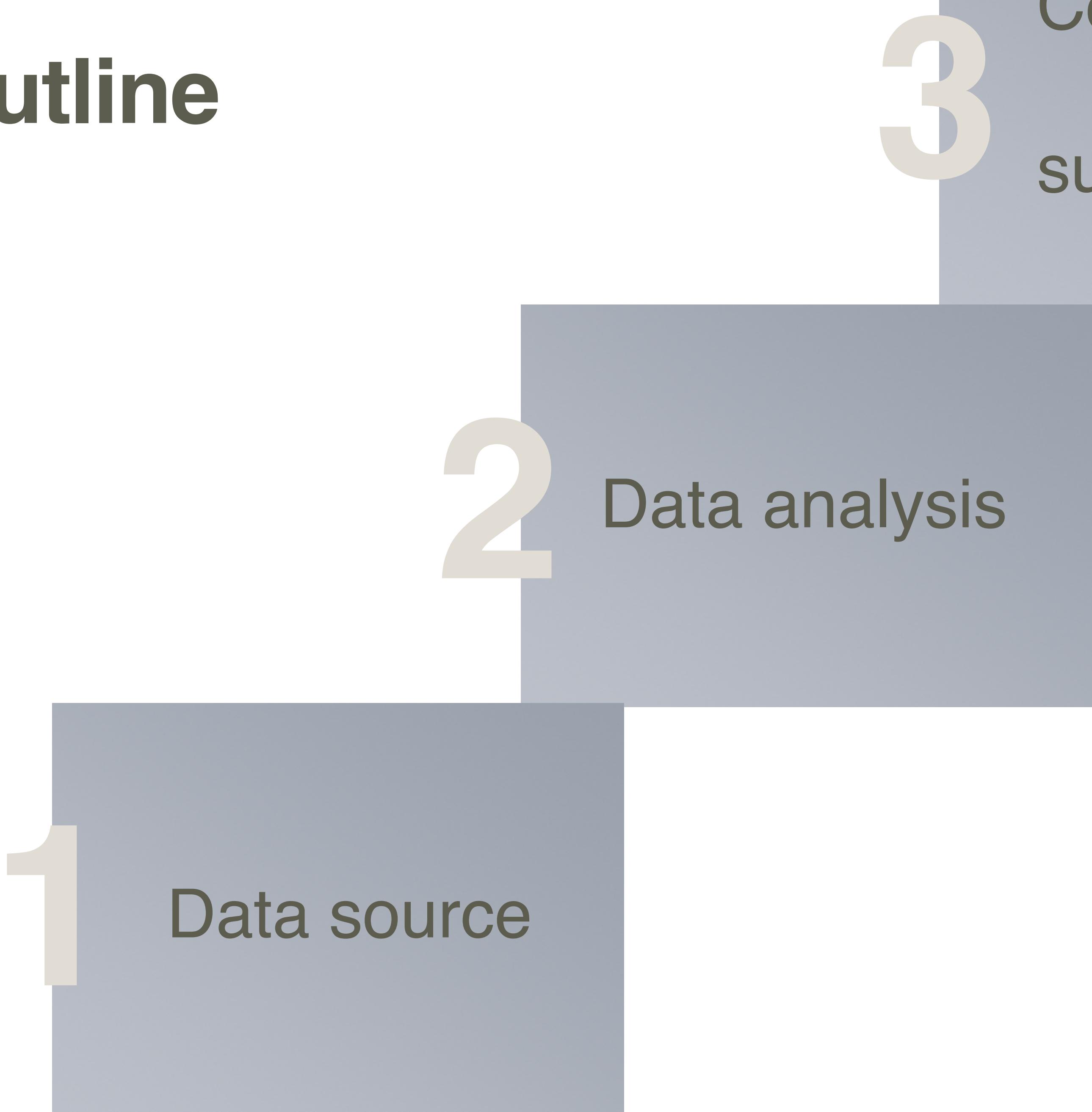
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Yichen Li

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# Outline



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# 1 Data source

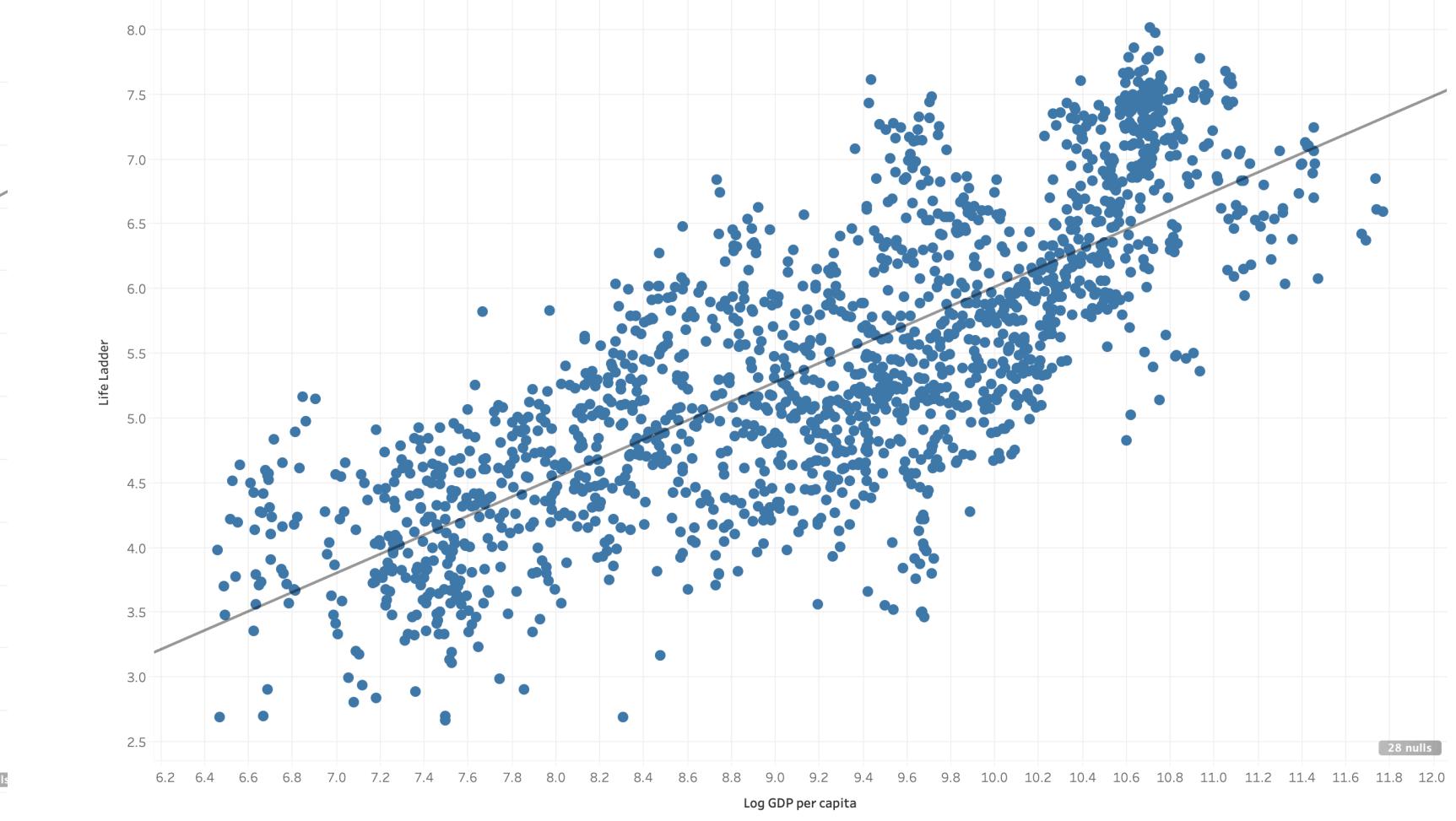
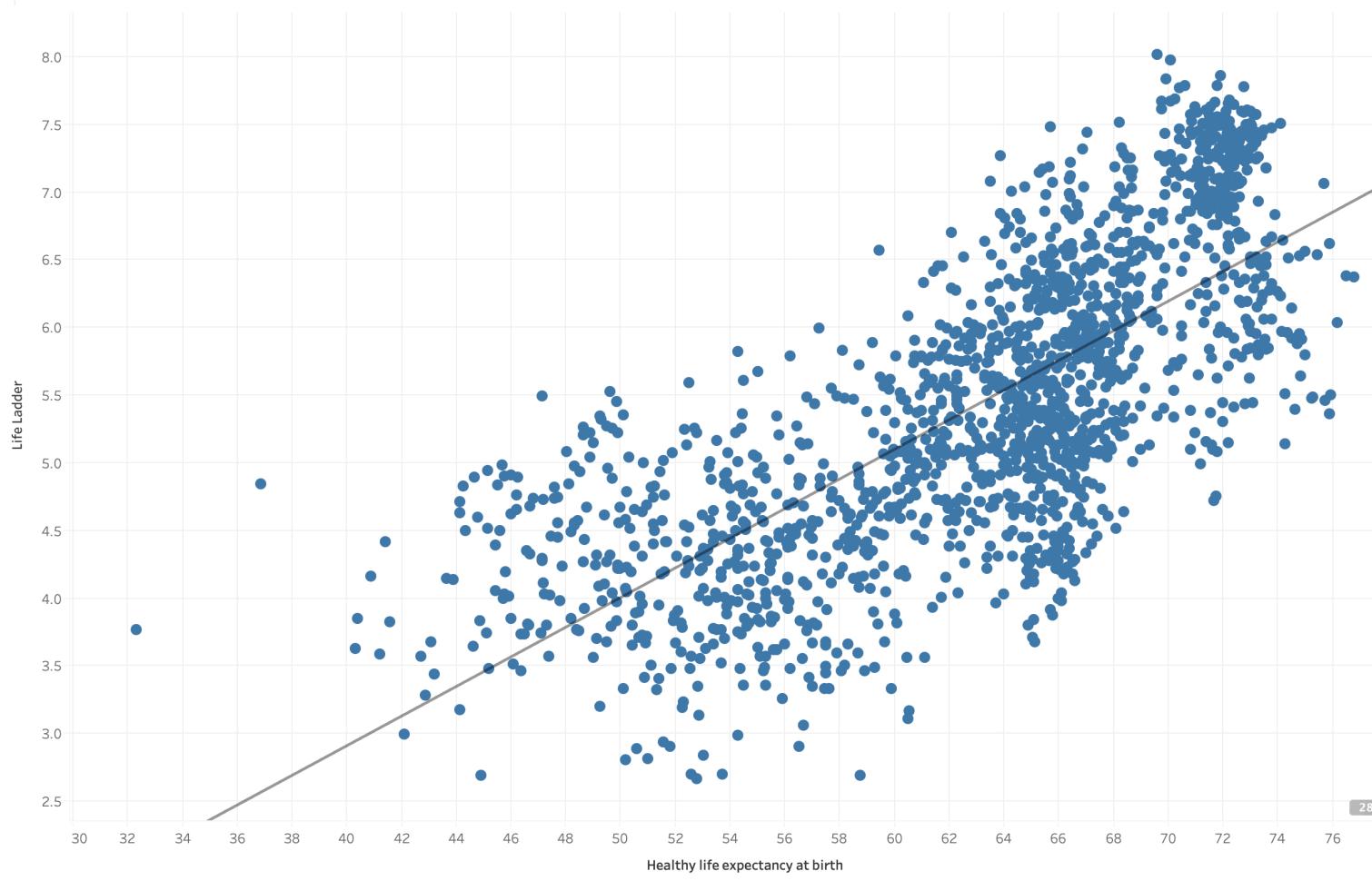
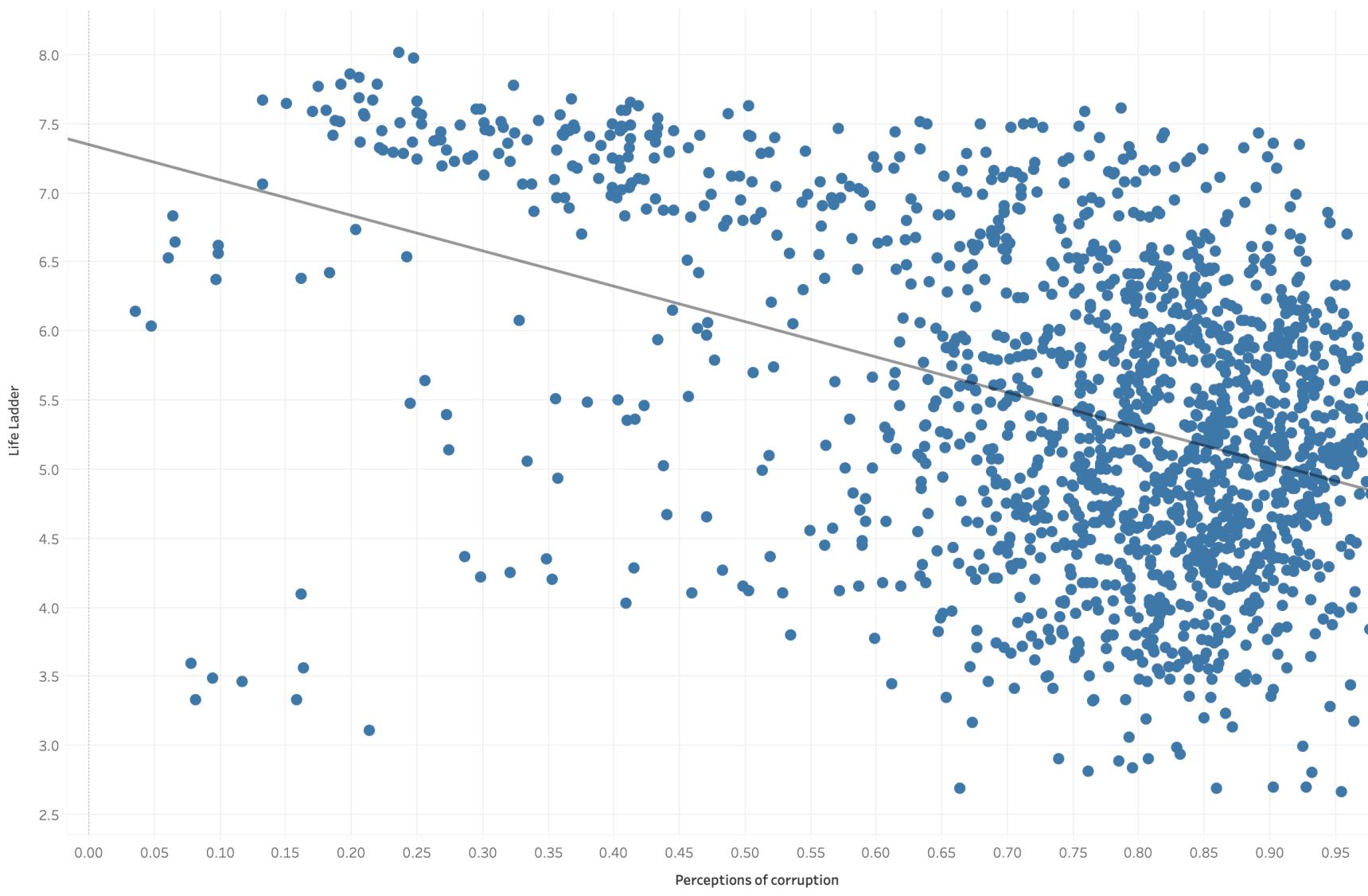


# Our Dataset

- Data collected from the surveys, which asked thousands of people across the globe to place themselves on a ladder with steps numbered from zero to 10—a method known as the Cantril Scale
- The report evaluates six variables: GDP (or gross domestic product) per capita, social support, healthy life expectancy, freedom to make life choices, freedom from corruption and generosity.
- Statistical analysis can reveal which factors are associated with national happiness levels.



# Regression model

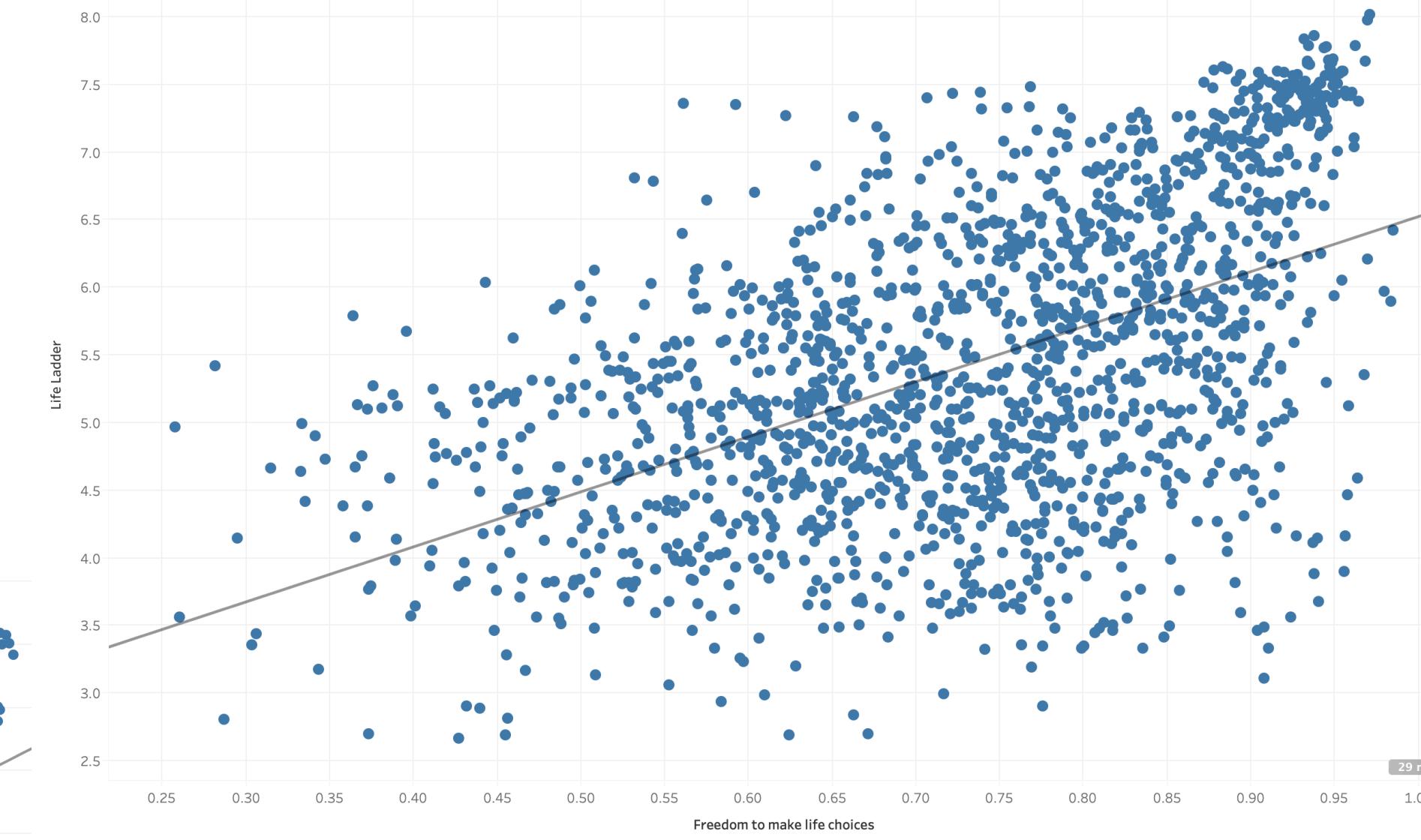
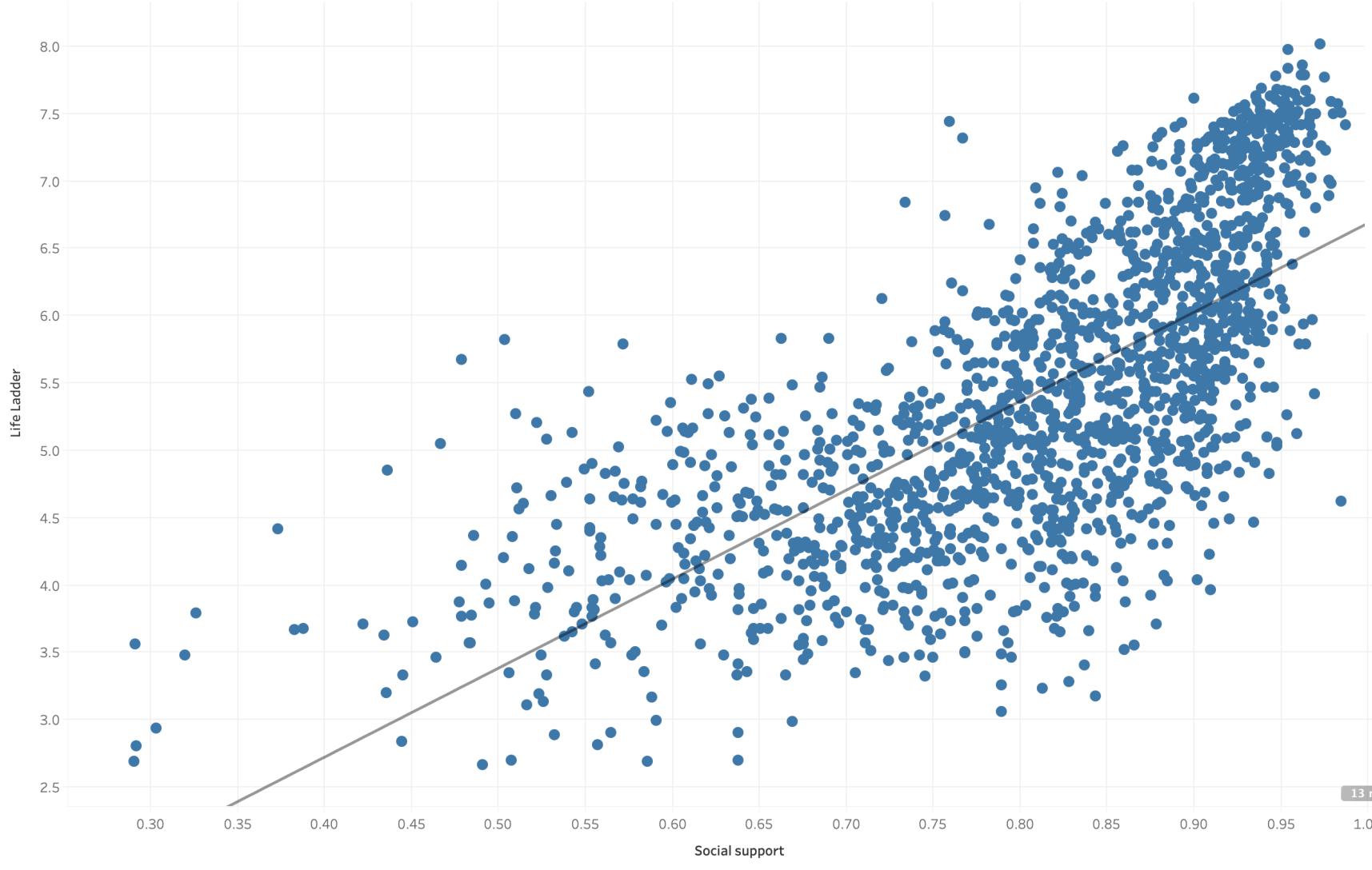
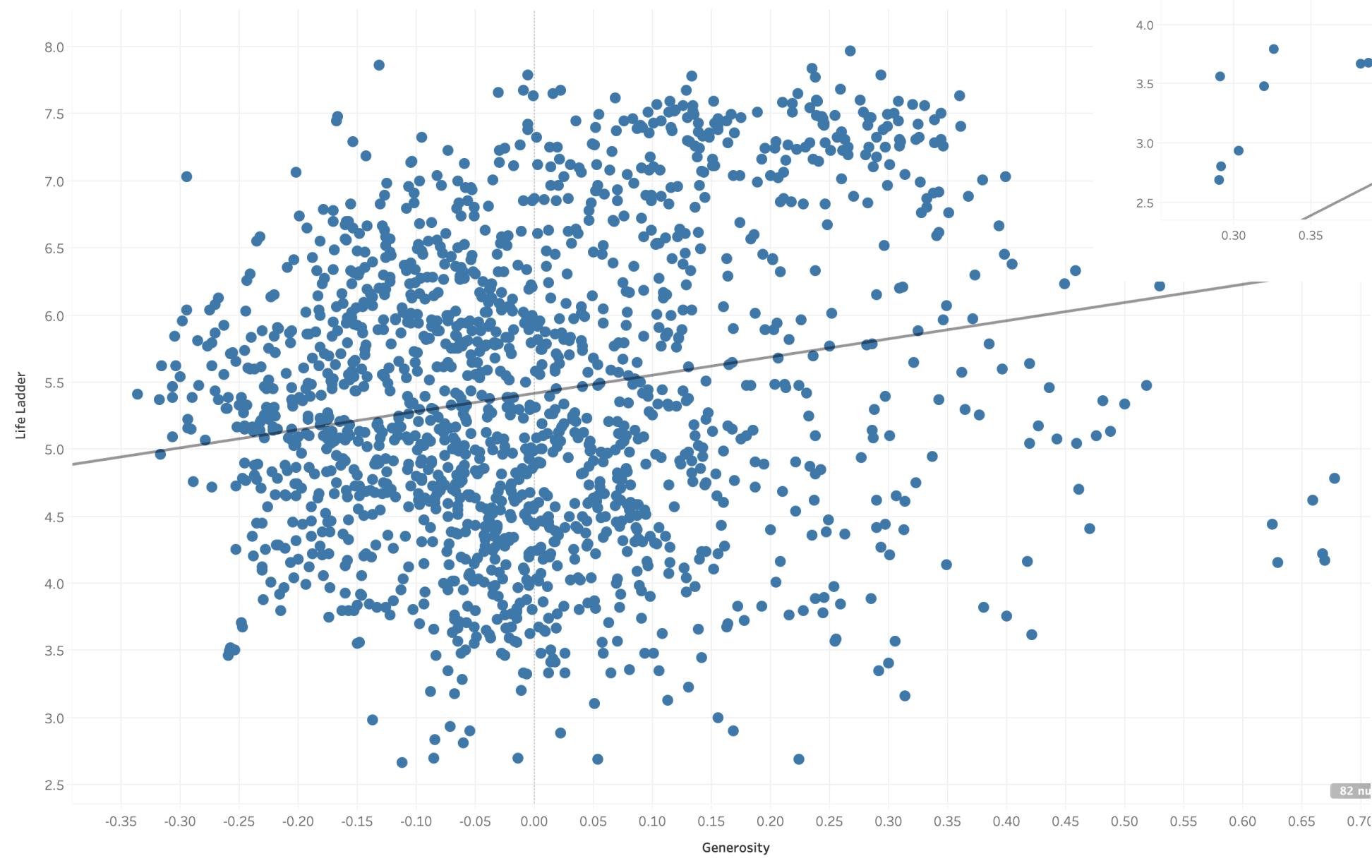


- Perceptions of corruption has a strong negative correlation with happiness score. As the value of perceptions of corruption increased, the happiness scores will go down.

- There is a positive correlation between life expectancy and happiness, which increases as people's life expectancy increases

- There is also a very strong positive correlation between GDP and happiness. When GDP increases, so does happiness scores.

# Regression model



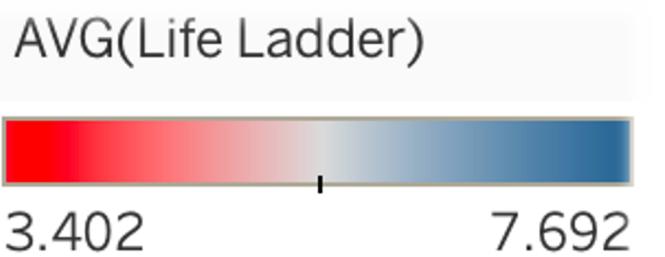
- **Generosity, Social support and freedom all have strong positive correlation with happiness score. All three factors have a positive effect on people's happiness scores.**

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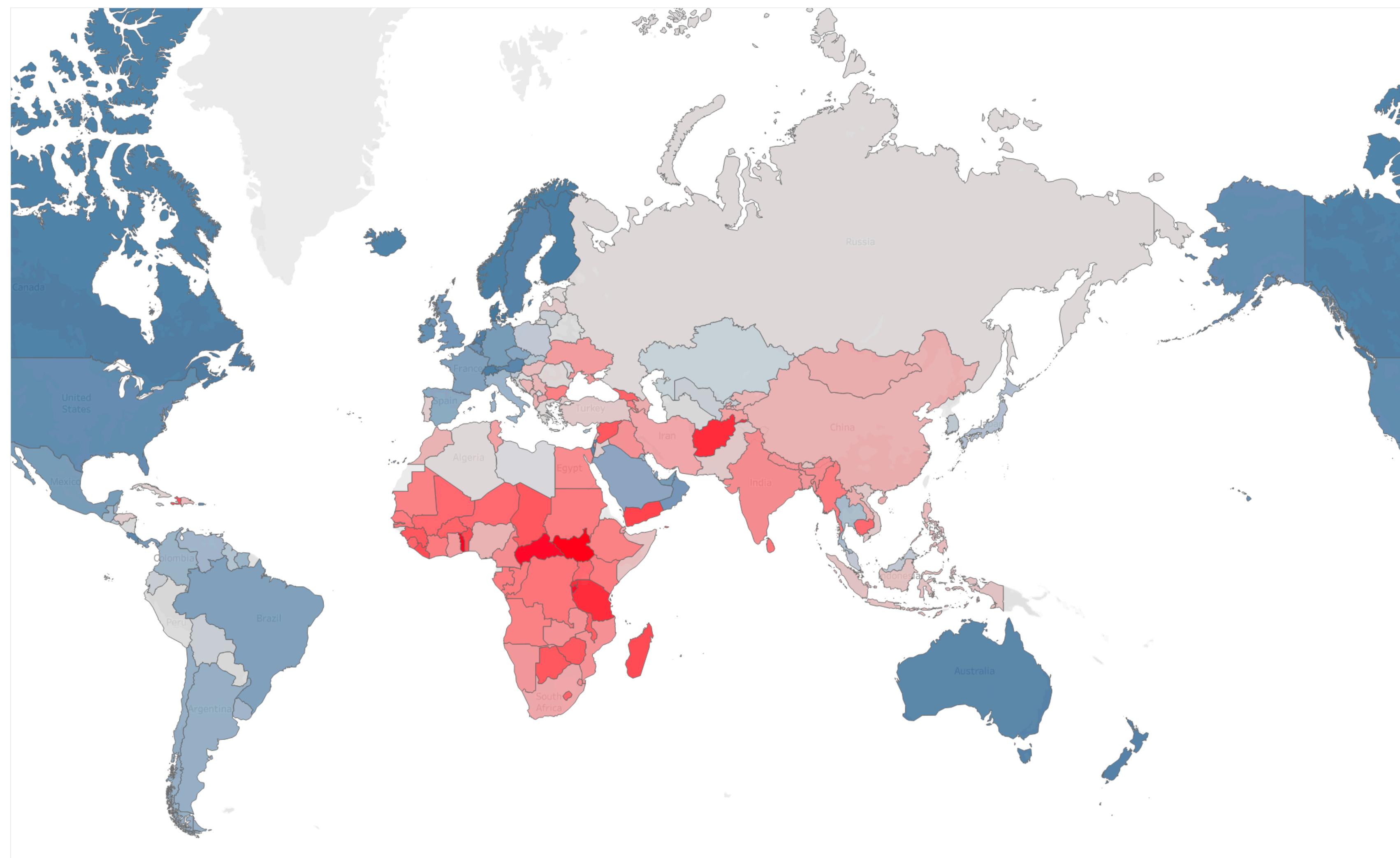
## 2 Data analysis

H A P PY

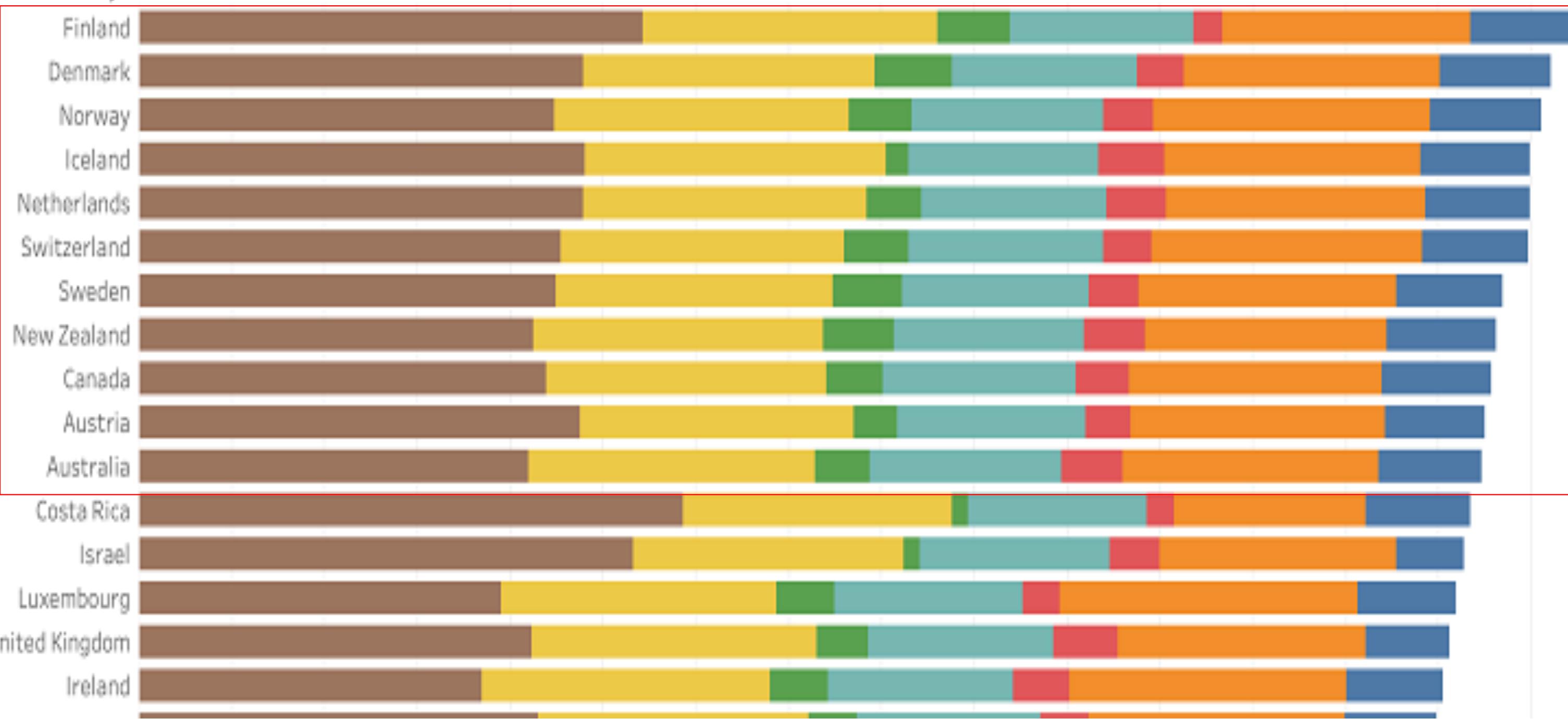
# Average happiness scores by different regions



- Top 3 regions with highest happiness score are: north America, Australia as well as New Zealand, and North Europe
- Top 3 region with lowest happiness scores: Africa, middle and eastern Asia are the worst regions of happiness.



# Top 10 countries with highest happiness scores(2016-2018)



- Finland, which headed the table last year, is the country with highest happiness score (reached about 7.7 points)
- Followed is Denmark, Norway (top in 2017) and Iceland. The Netherlands joined them in top five this year. Switzerland, Sweden, New Zealand, Canada and Austria completed the top 10.

Dystopia (1.88) + residual

Explained by: GDP per capita

Explained by: Social support

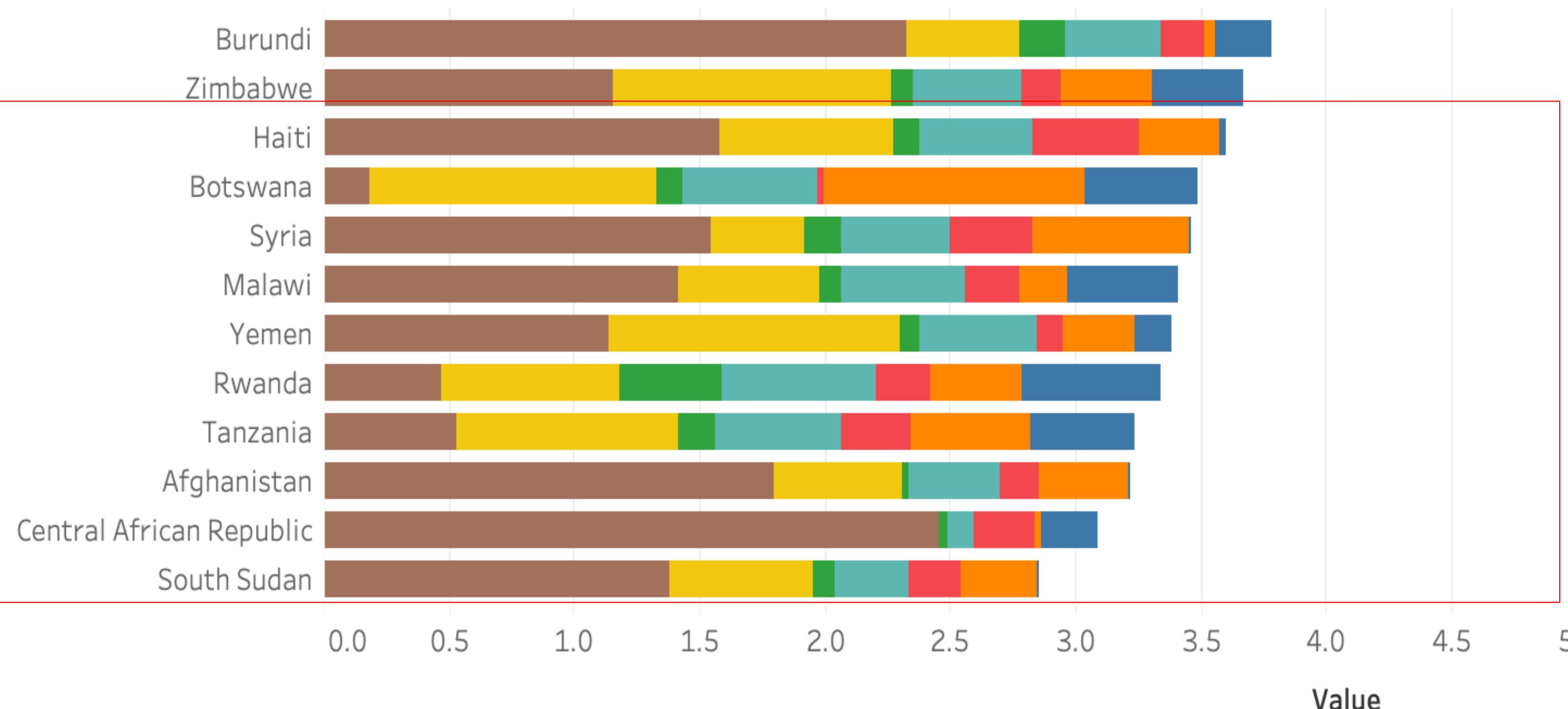
Explained by: Healthy life expectancy

Explained by: Freedom to make life choices

Explained by: Generosity

Explained by: Perceptions of corruption

# Top 10 countries with lowest happiness scores(2016-2018)



Yemen, Afghanistan, always at the bottom of the list.

All top 10 lowest countries are in top 3 .

Dystopia (1.88) + residual

Explained by: GDP per capita

Explained by: Social support

Explained by: Healthy life expectancy

Explained by: Freedom to make life choices

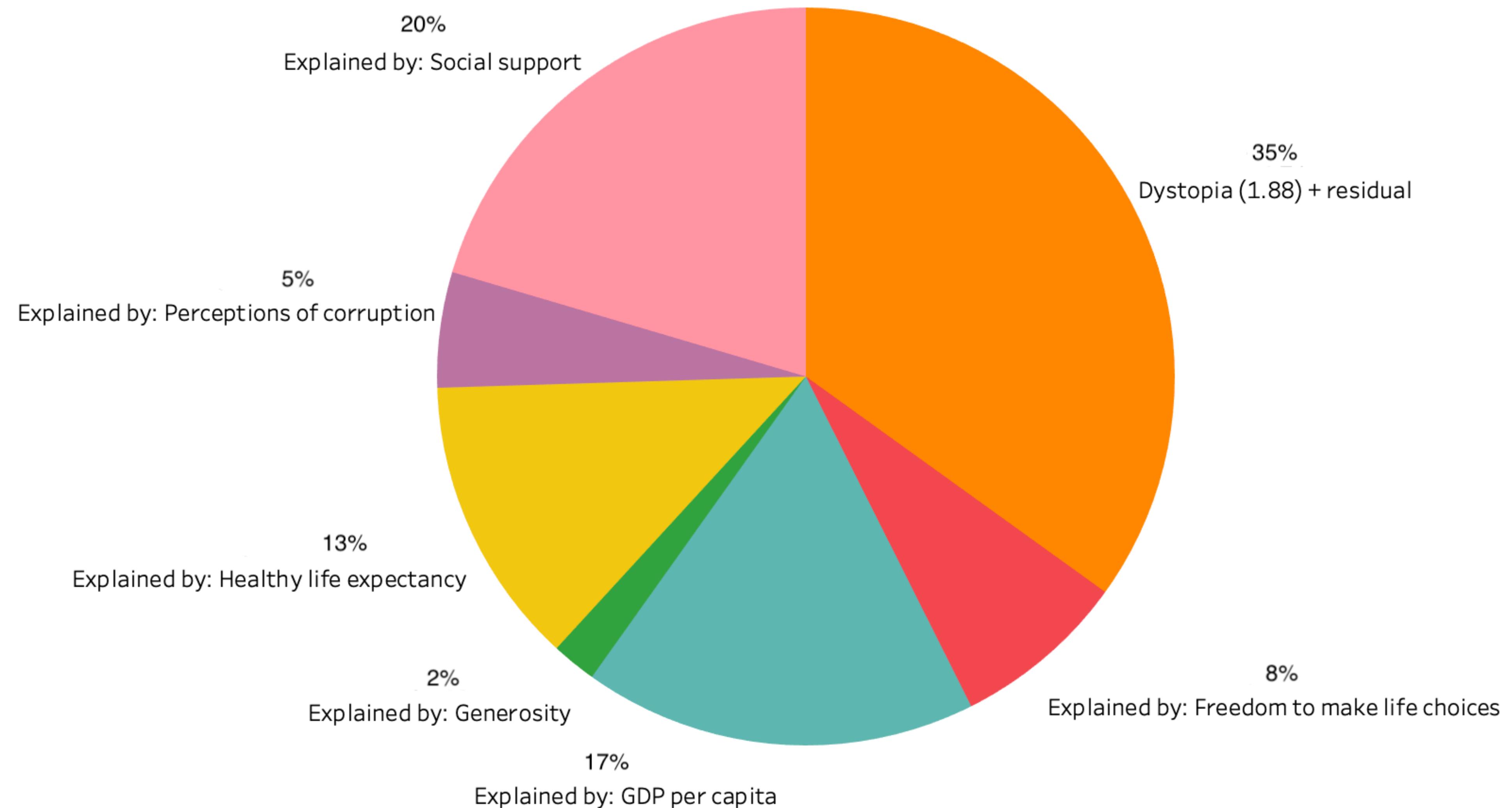
Explained by: Generosity

Explained by: Perceptions of corruption

What factors cause people's  
happiness in the world?

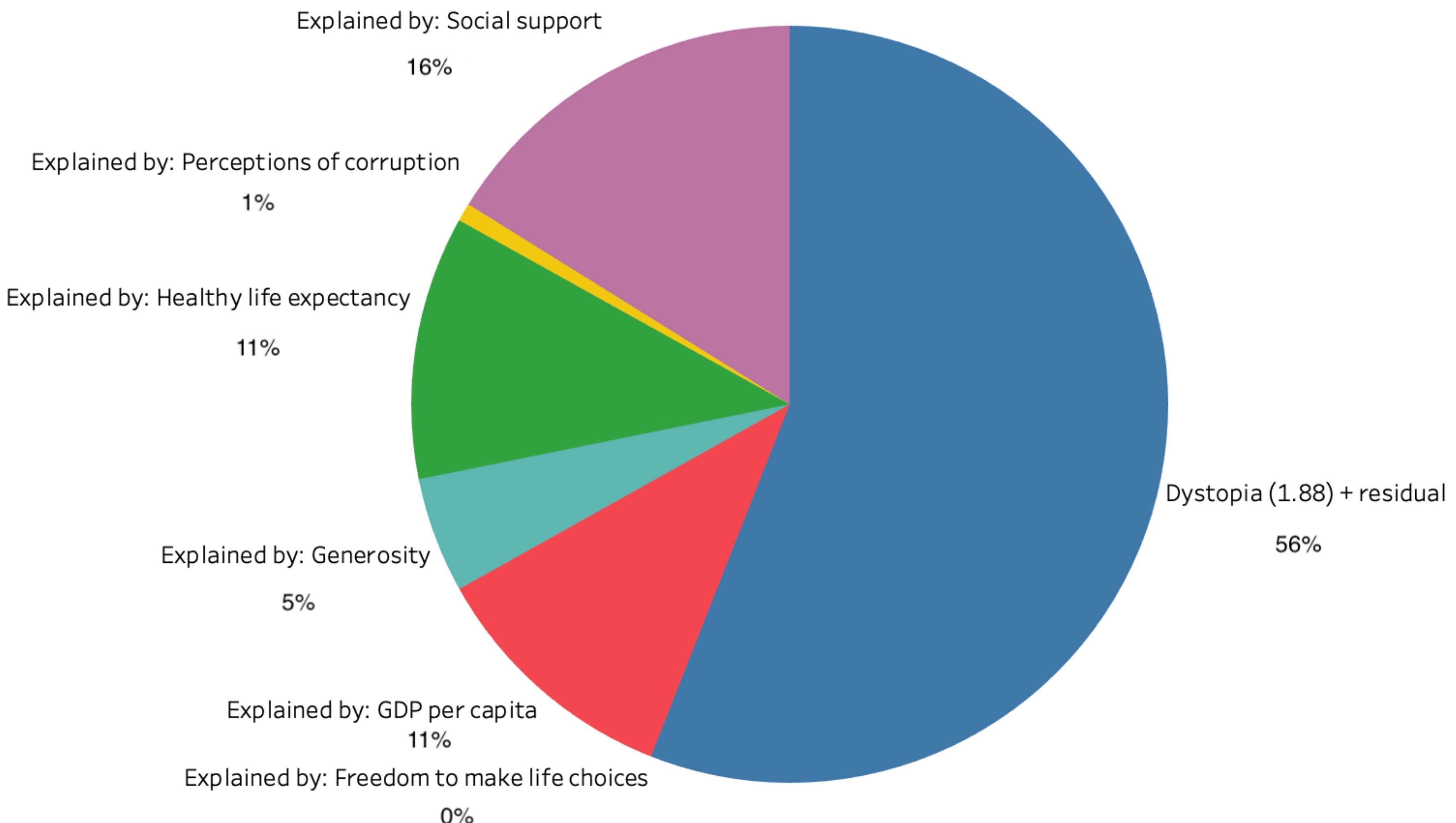
# Pie Chart

## Finland



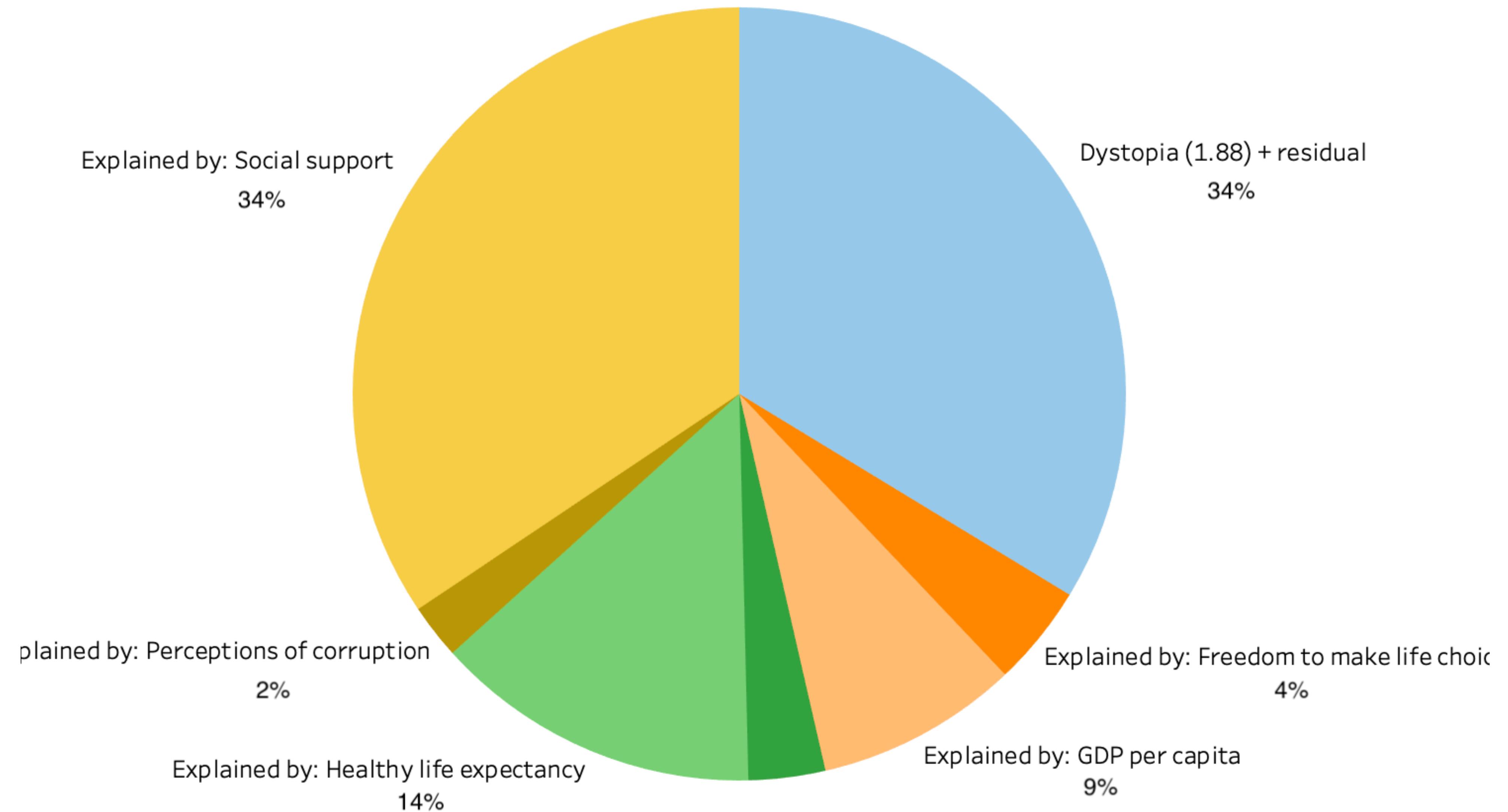
# Denmark

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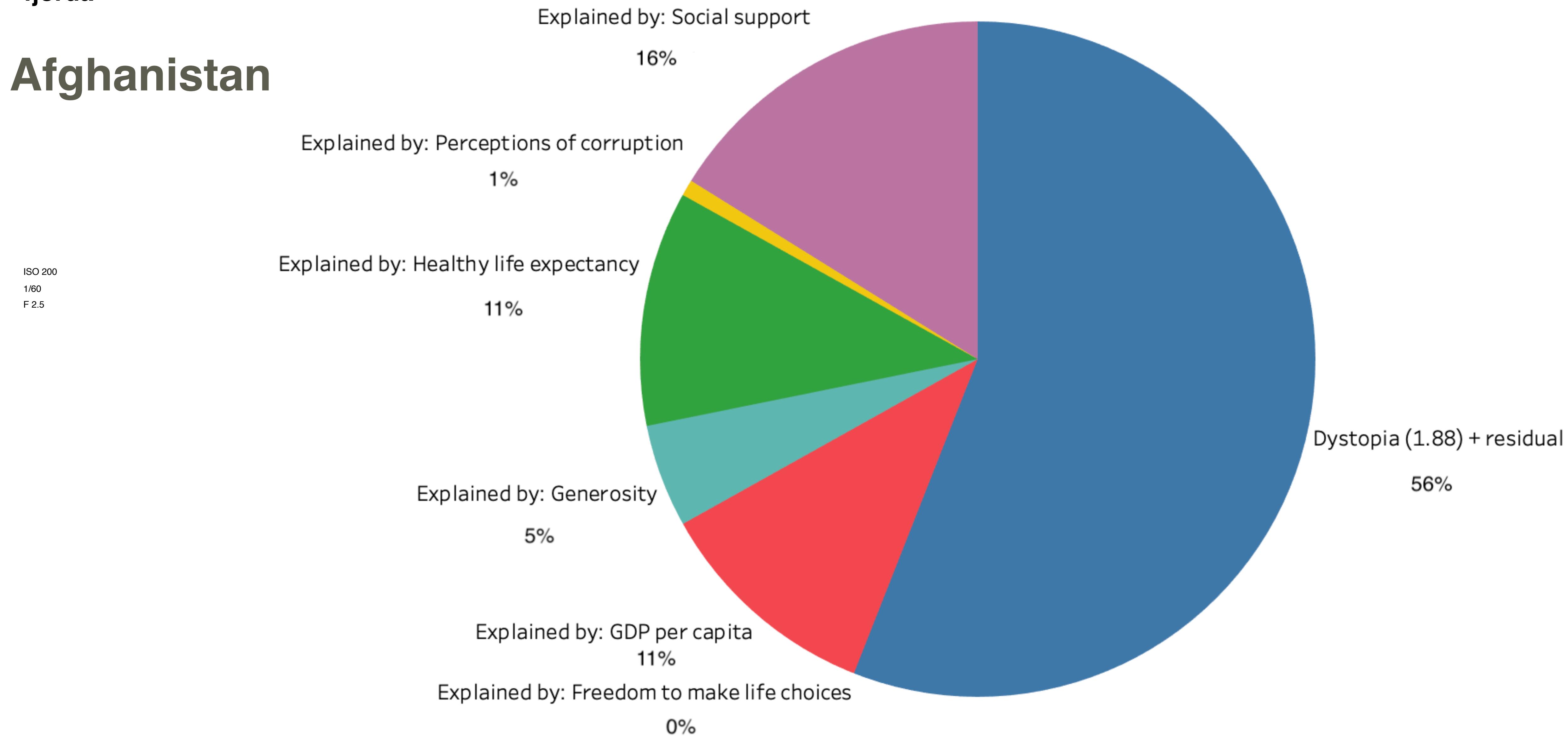
# Yemen

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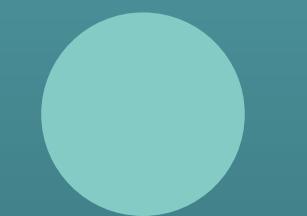


# Afghanistan

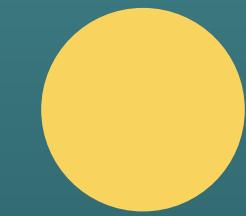
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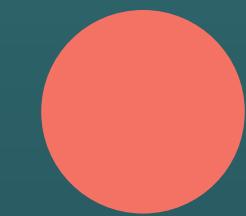
# Findings



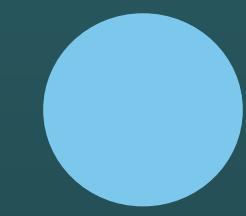
GDP part has a higher proportion in Top rank happiness score country, the percentage is nearly 2 times to the less happiness country



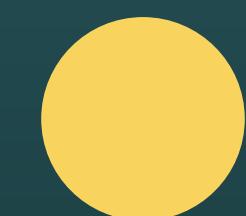
Perception of Corruption also has a higher proportion in more happiness country, this might because of their good economy condition which rising more corruption



People in high happiness score country think they have more freedom than that in low country, and people in Afghanistan even think they didn't have freedom



When comes to social support it is clearly that all high scores countries have constant support percentage (around 20%), but in low scores countries, social support varies greatly from country to country. (Low as 14%, high as 35%)



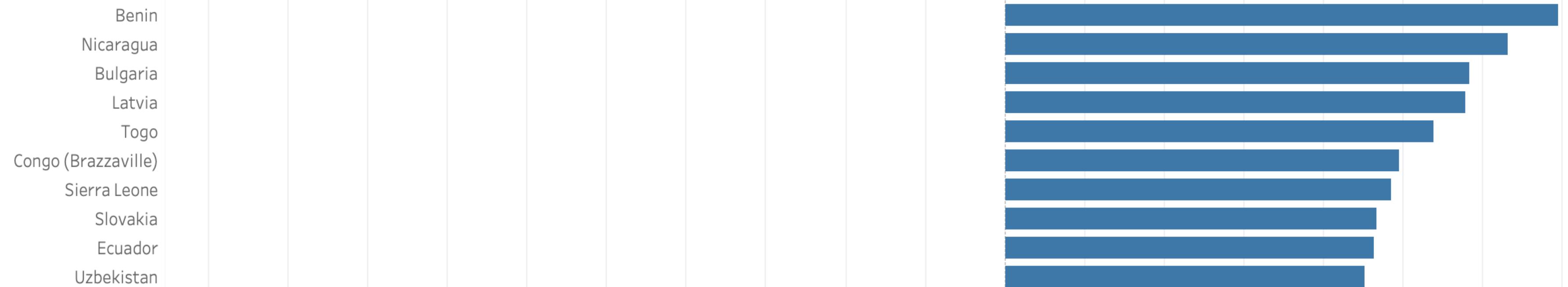
The Healthy Life Expectancy and Generosity proportions in different countries are roughly the constant no matter how much score the country got

2016-2018

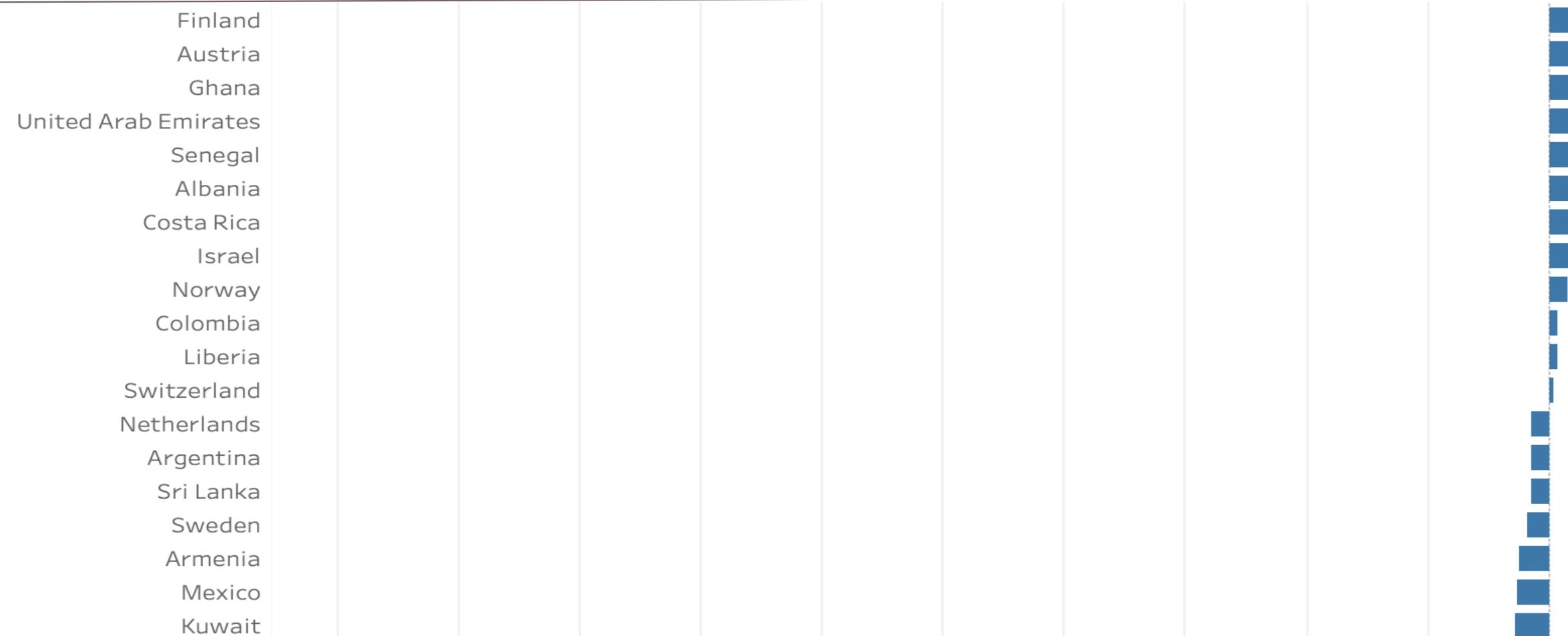
## Changes in Happiness Score

second issue

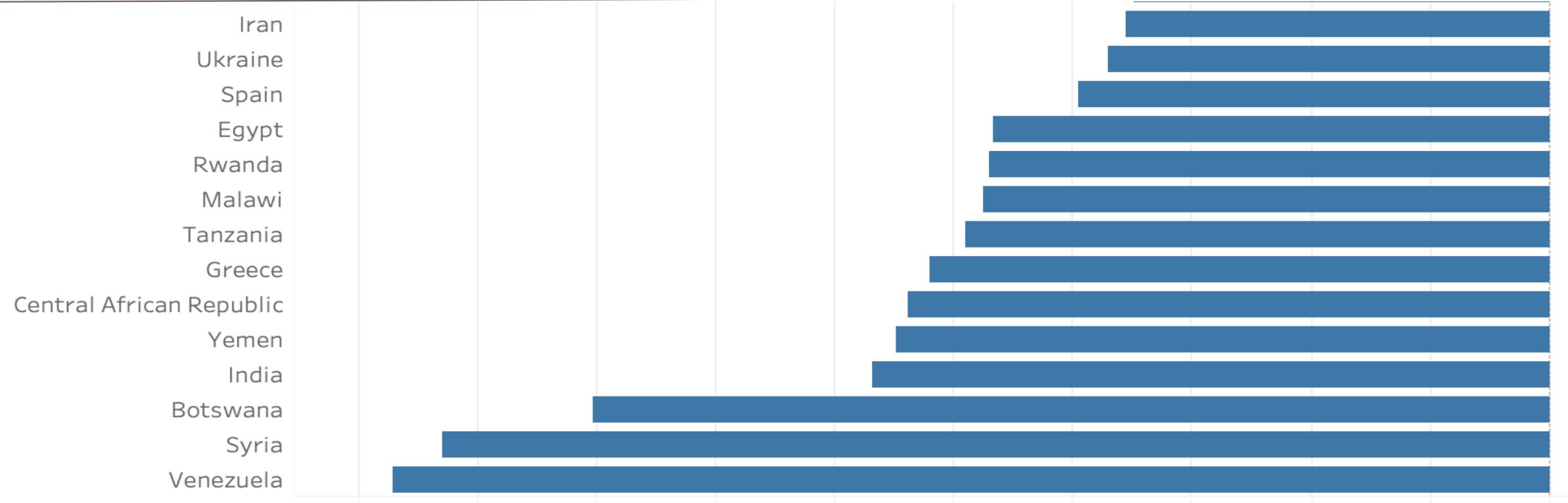
Country1



Positive changes:  
Berlin, Nicaragua, Bulgaria



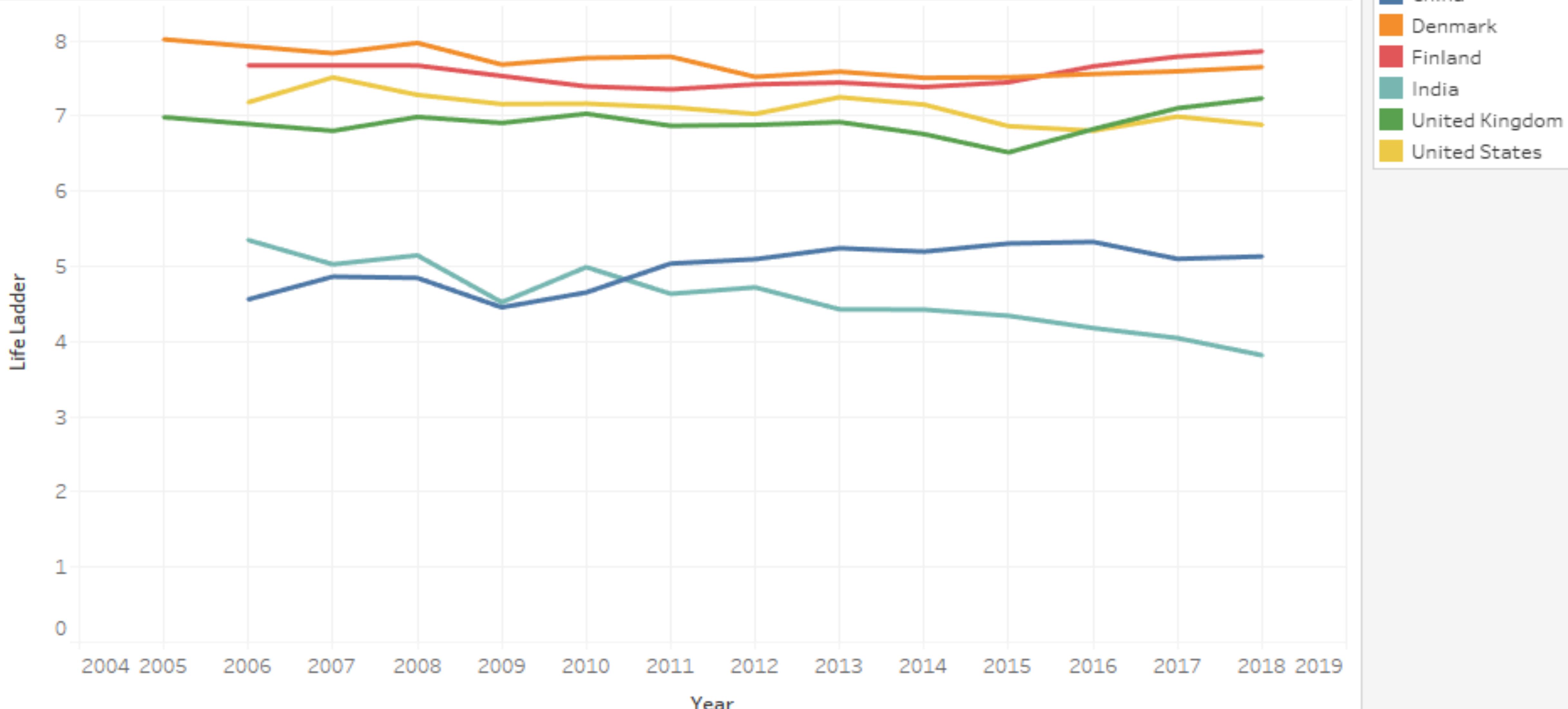
Small changes:  
Switzerland, Norway,  
Netherlands



Negative changes:  
Venezuela, Syria,  
Botswana

# Typical country

Certain countries' happiness tendency



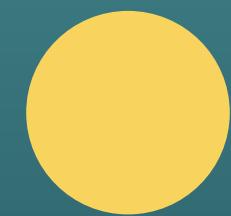
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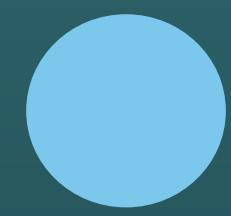
## Conclusion & suggestion



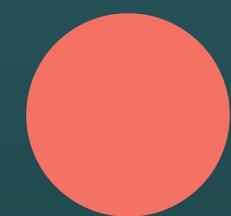
# Conclusion & Suggestions



**Recap:** the government can give people more freedom, improve health care system and economy



**Strengthen:** comprehensive dataset provide us a lot of detailed information to explain complex issues, and show us the change in the long term



**Shortcoming:** we didn't obtain the value of multiple regression analysis to see if there's a model that can explain the happiness score effectively

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*Thank you*

Q&A

H A P Y