

# World Happiness Report

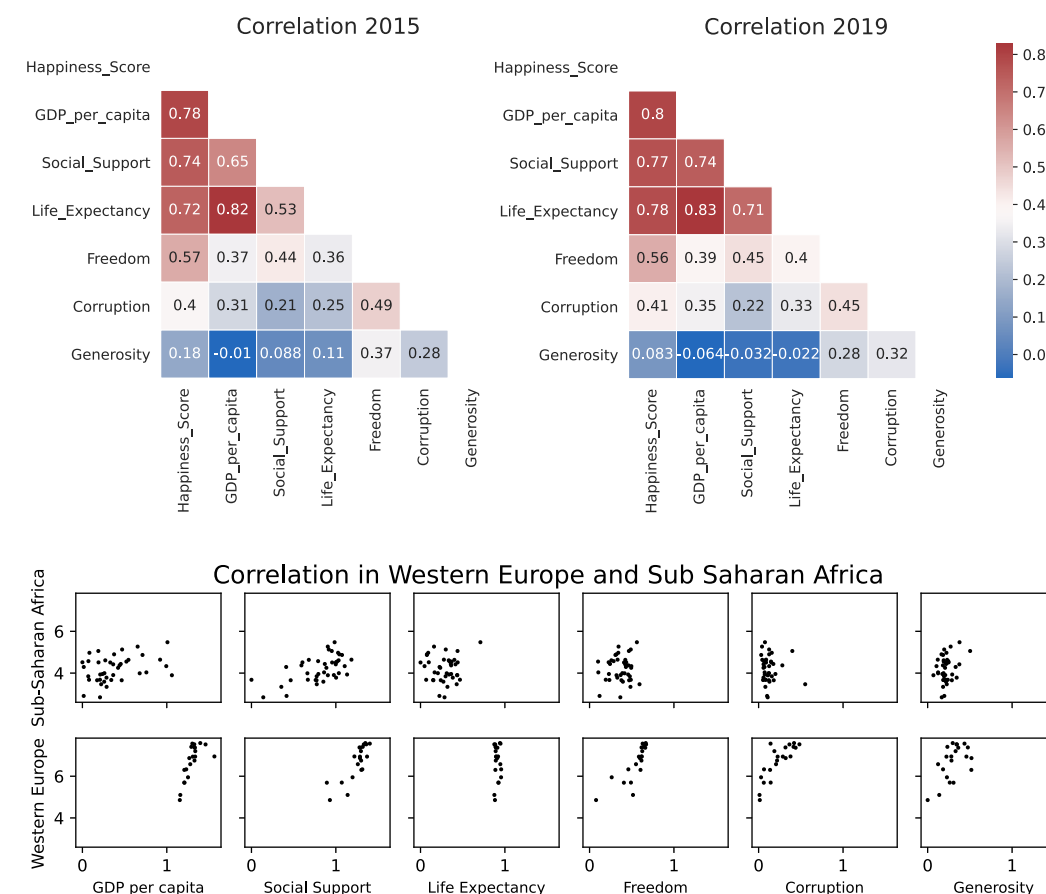
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## Factor Analysis

### different factors have different influence

The hypothesis of money being the most important factor is to be either confirmed or denied based on this survey. Let's see how important different factors are to determine the happiness. As you can see in the correlation graphs, GDP per capita is the most important factor, followed by Social Support and Life Expectancy. These three main factors can predict your happiness with the best accuracy and should all be looked at. Money most certainly makes the world go round, but without a stable social structure around a person and a future that has many happy years to come, it won't make the people feel as good.

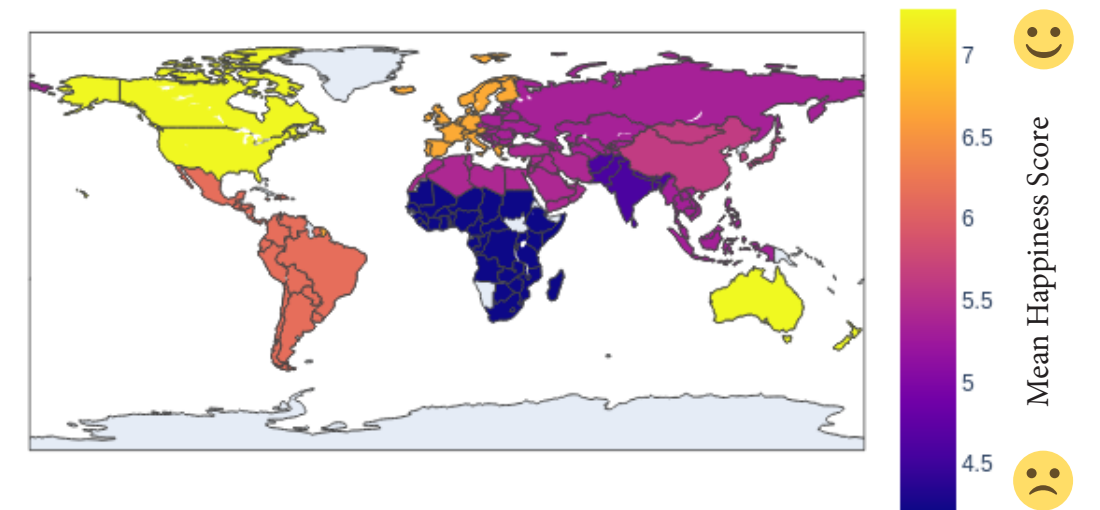
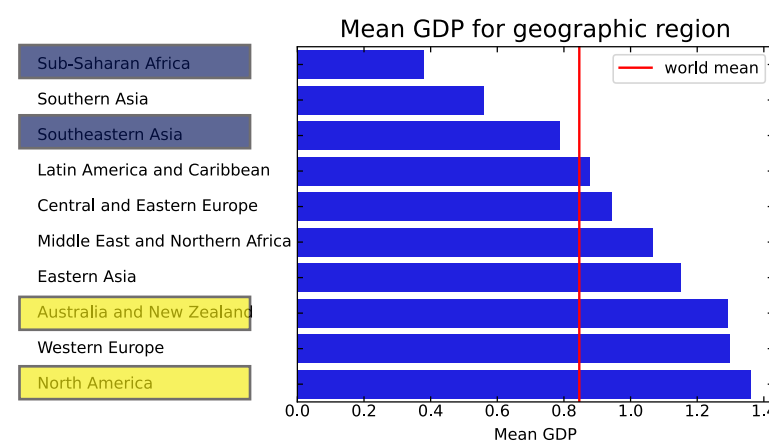


Another way to see the influence of factors like money (GDP per capita) or corruption are scatter plots. As it is visible in these graphs, the main three factors (GDP, Social Support and Life Expectancy) influence happiness the most, while Freedom, Corruption and Generosity are almost randomly structured. The graphs show each contributing factor related to happiness, while size of each dot represents GDP and colour the geographic region. Happiness clearly is dependent on money, social support and life expectancy, but they are almost equally important.

# Money makes the world go round, but does it really?

Analyzing the data published by the United Nations makes us believe that this statement is true. It is no easy task to measure happiness as it is very subjective. Ultimately our goal in life and every humans desire is to live a happy and fulfilled life. But when do people feel the happiest? Is it really just money?

## Worldwide Happiness, are we all equal?



The previous analysis is made on a worldwide scale, but how is happiness spread throughout the world? If we take some regional averages and compare them, the result is as shown in the world map. The message is clear: Happiness is strongly dependent on the region where you are living. Countries like Australia, Western Europe and North America are a lot happier on average than countries in Africa. This also aligns with the hypothesis where money makes the world go round. As we can see Sub-Saharan African GDP per capita is well below the mean GDP per capita worldwide. In general developing countries have a smaller GDP in comparison to first world countries.

## Reflection on project development

Our learning experience was, that there are endless possibilities to visualize a specific data-set. In the beginning we cleaned the available data-set to be able to create some explorations. We had certain questions in our mind from selecting this topic and data-set. During the process and exploratory phase, we realized how important it is to know the message you want to transmit and show the audience. With that in our mind we decided on the specific techniques as well as which data to select. Technology-wise we are quite happy with our decision to try out python based tools, specifically Pandas, Matplotlib, Seaborn and Plotly Express for the map visualization. There is good documentation available to present the data in the way we wanted. The used tools were also useful to integrate the learned principles from the lecture into this module task in a practical manner. We enjoyed the learning process during the work on this module task and were able to learn a lot about visualizing data in a productive way.

## Like to know more?

If you'd like to discuss our findings or have any further questions please reach out to us.

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Jupyter Notebook of the results:  
[https://github.com/RomanSutter/TSM\\_InfVis](https://github.com/RomanSutter/TSM_InfVis)

## References

- [1] UN: World Happiness Report. 2015-2019 <https://www.kaggle.com/unsdsn/world-happiness>
- [2] OECD: OECD better life index <http://www.oecdbetterlifeindex.org/>
- [3] Seaborn Doc <https://seaborn.pydata.org/>
- [4] Matplotlib Doc <https://matplotlib.org>