

# How does the suicide rate change with the wealth of country?

Group B | Data Science Programmierpraktikum



# Hypothesis



- Suicide is a leading cause of death worldwide
- Risk Factors Identification
- Mental Health Awareness
- Impact on Society

**Source:** Economic Times, "In China, wealth does not mean happiness as suicides and unnatural deaths among the rich are on the rise"

# Hypothesis



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higher GDP  
↓  
higher suicide rate

# Suicide Rates Overview 1985 to 2016



**WORLD BANK  
GROUP**

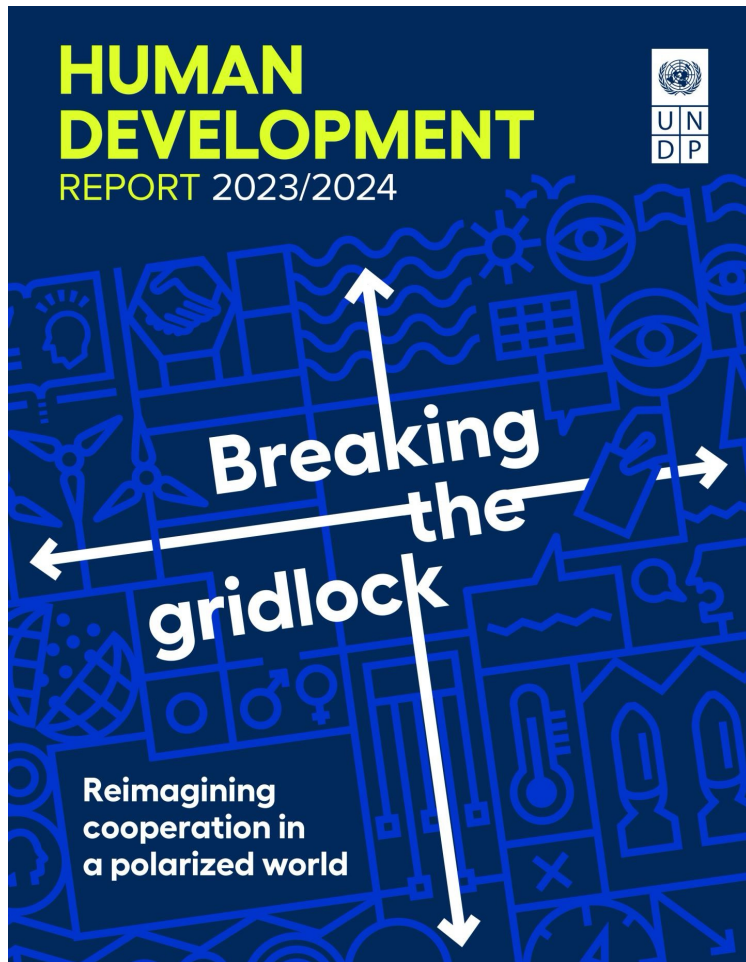


**World Health  
Organization**



- From: United Nations Development Program (UNDP), the World Bank, and the World Health Organization (WHO)
- Removed entries with less than 20 years represented in the data

# Human Development World Index



- This Dataset is created from Human Development Report
- The dataset includes global, regional, and country-level data on key dimensions of human development, along with various composite indices such as HDI, MPI, IHDI, GII, GDI, PHDI, and GSNI.
- Our analysis will specifically focus on the Human Development Index (HDI).

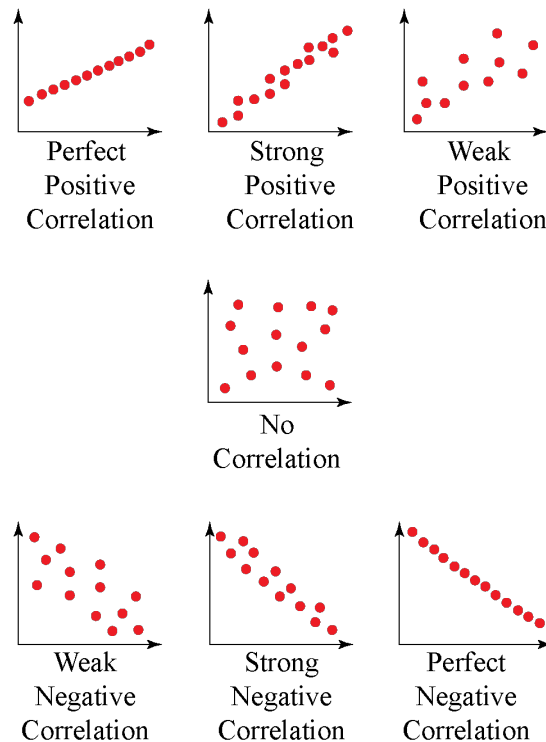
# Variables

These variables provide a broad perspective on the relationship between economic wealth and suicide rates by considering various aspects of a country's social and economic conditions.

- Gross Domestic Product (GDP)
- Gini Coefficient
- Human Development Index (HDI)

# What is Correlation?

Correlation measures the strength and direction of a relationship between two variables.

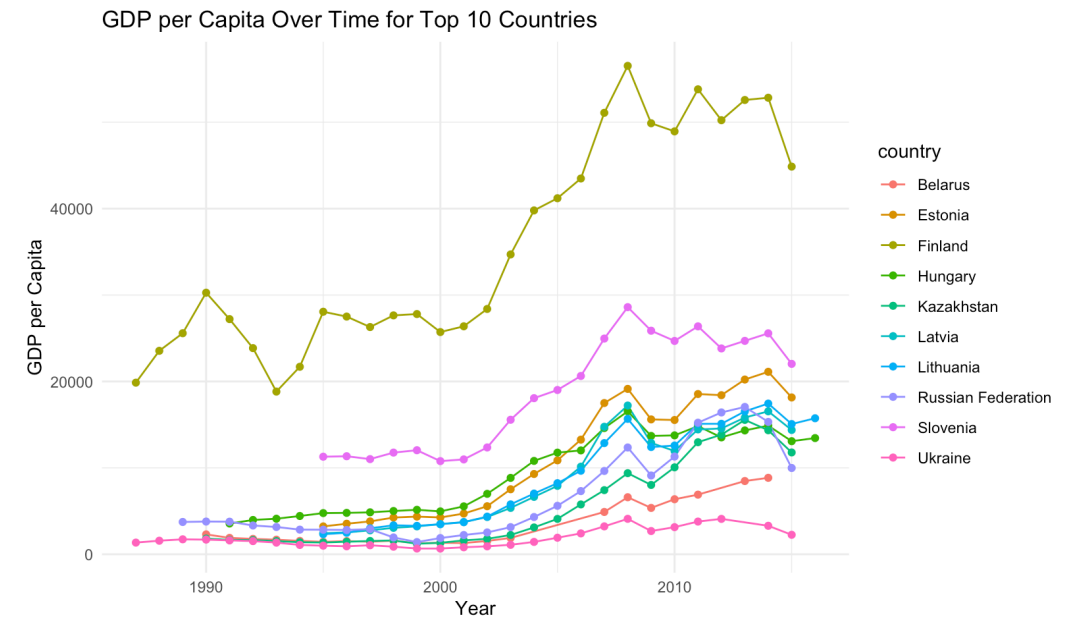
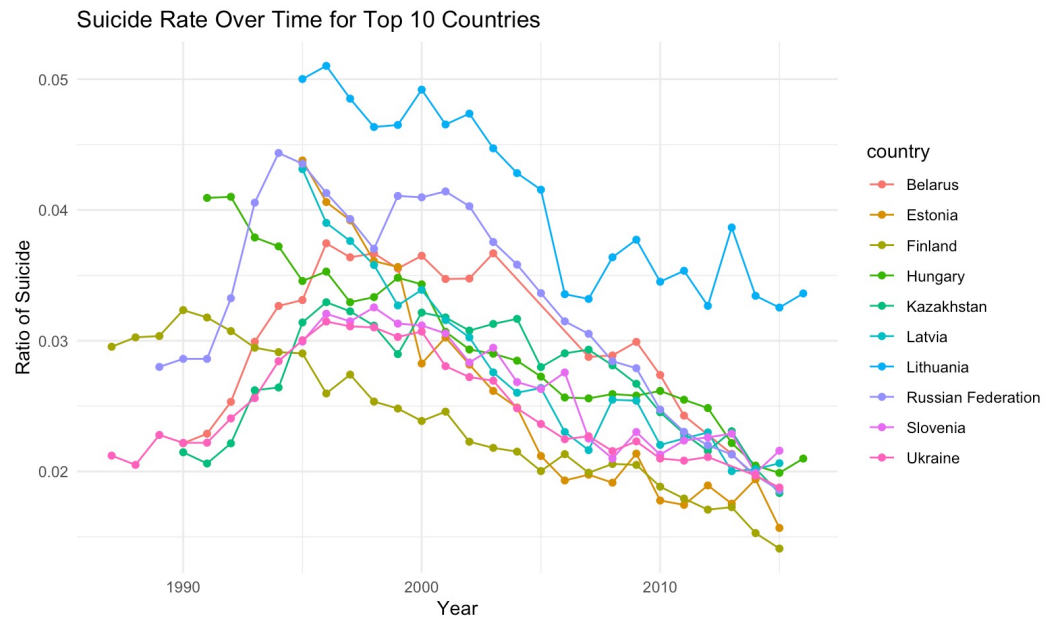


- Positive correlation: both variables increase together
- Negative correlation: one variable increases while the other decreases.



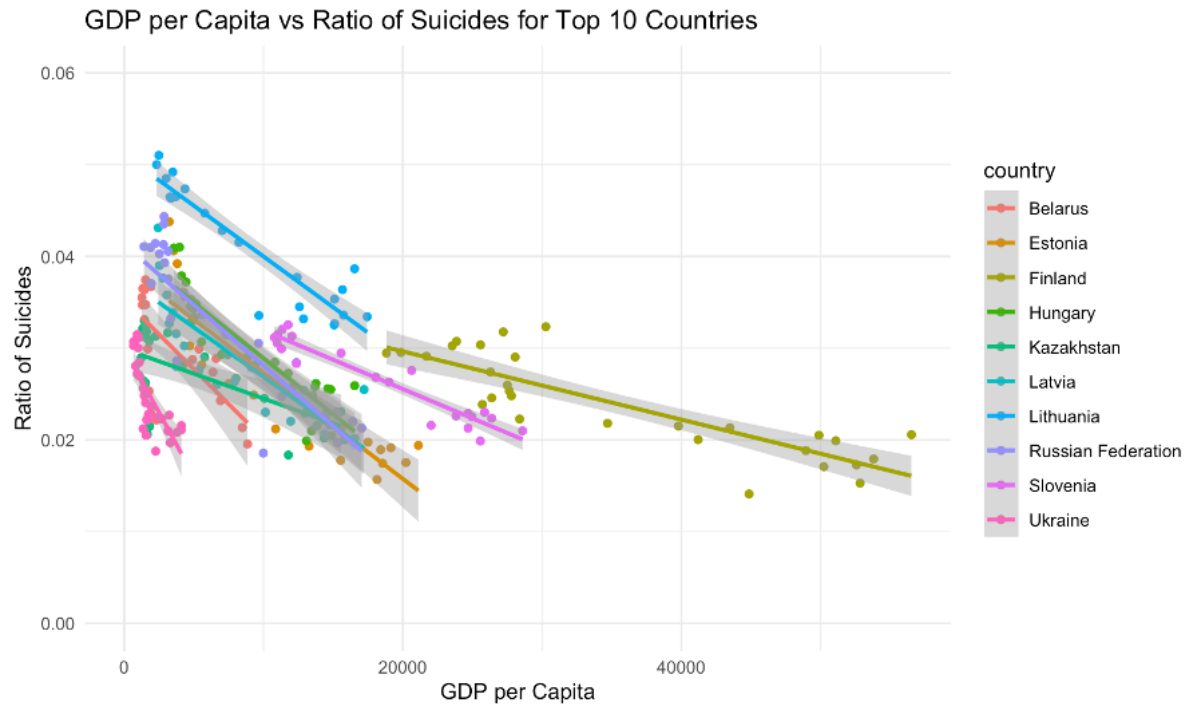
# Change over the years

The suicide rate in the ten countries with the highest suicide numbers decreases as their GDP increases.



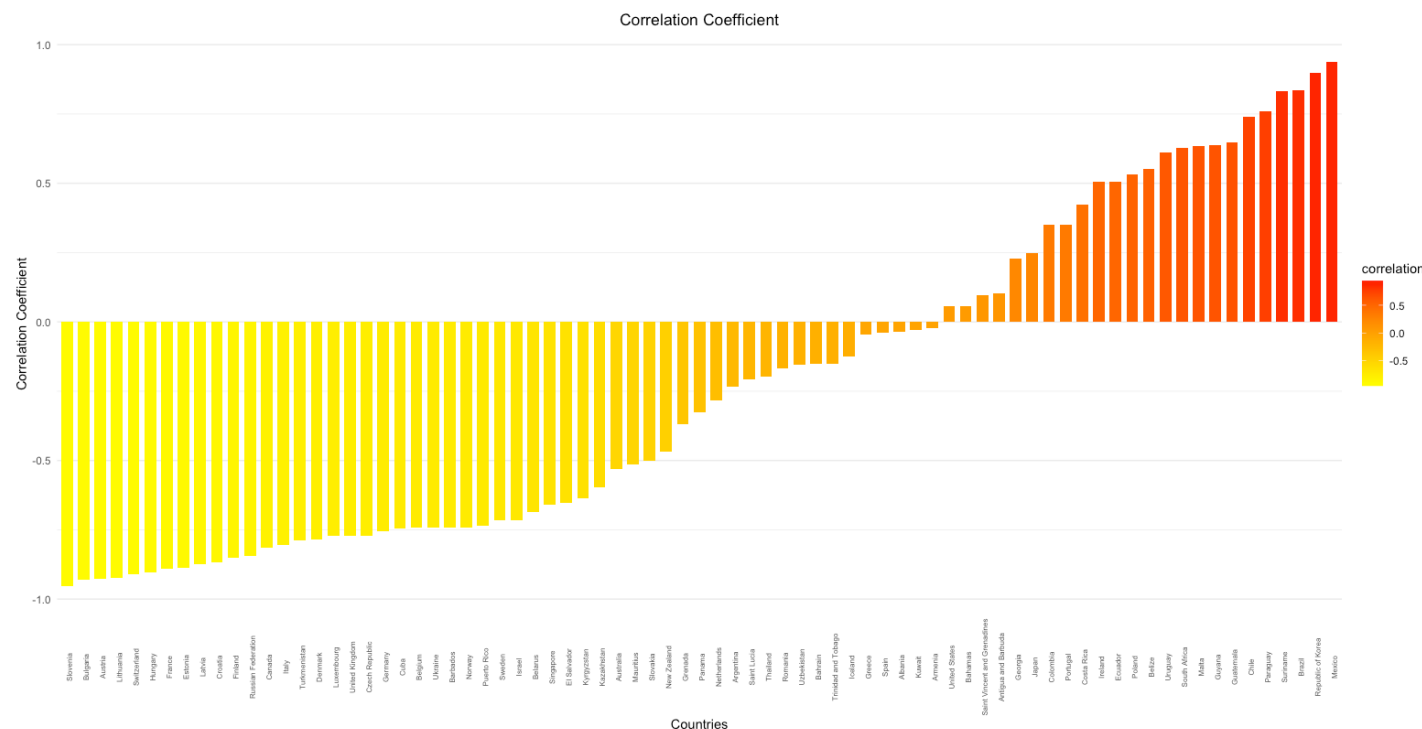


# Correlation coefficient



- Most trend lines show a downward slope, indicating that as GDP increases, the suicide rate tends to decrease

# Correlation coefficient



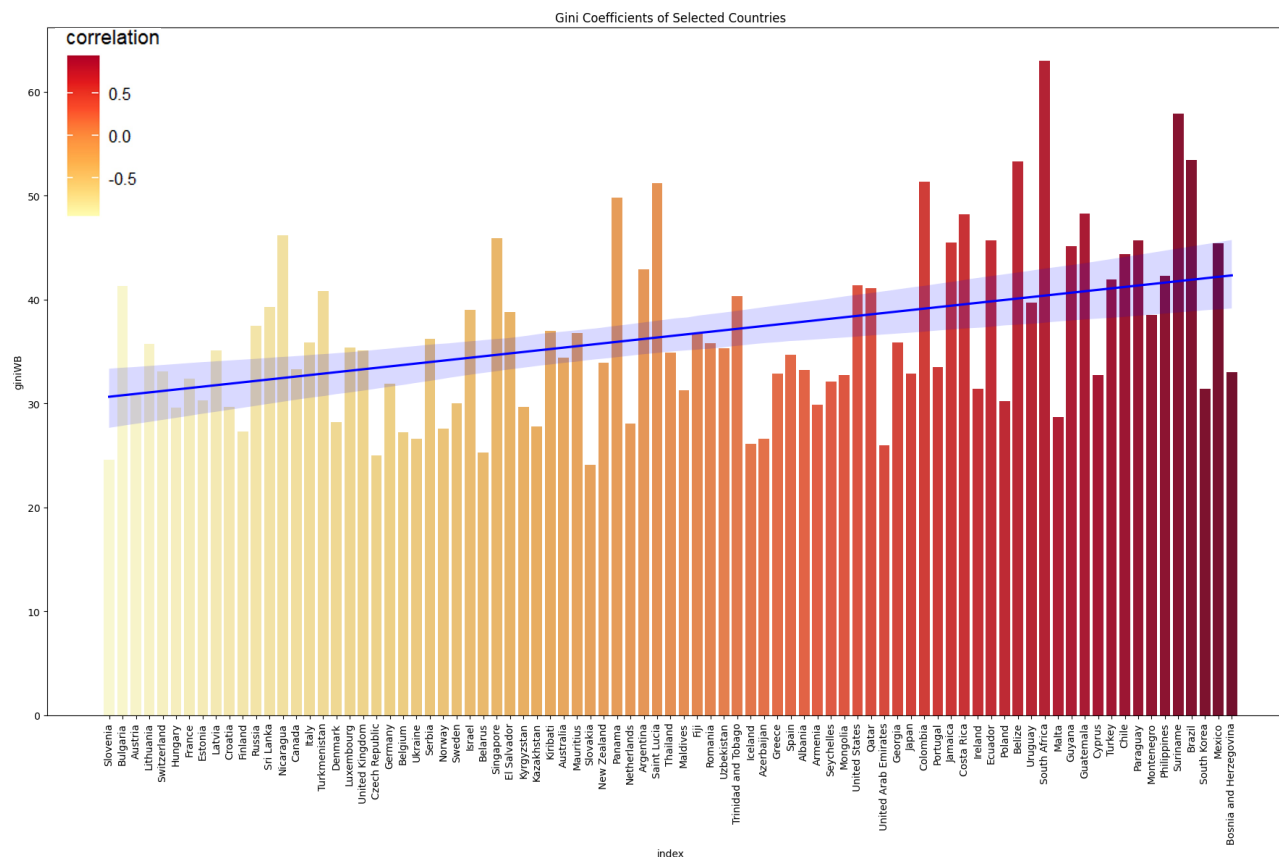
- On the left side, the countries have negative correlation coefficients
- On the right side, the countries have positive correlation coefficients

Important note:

Correlation does not imply causation

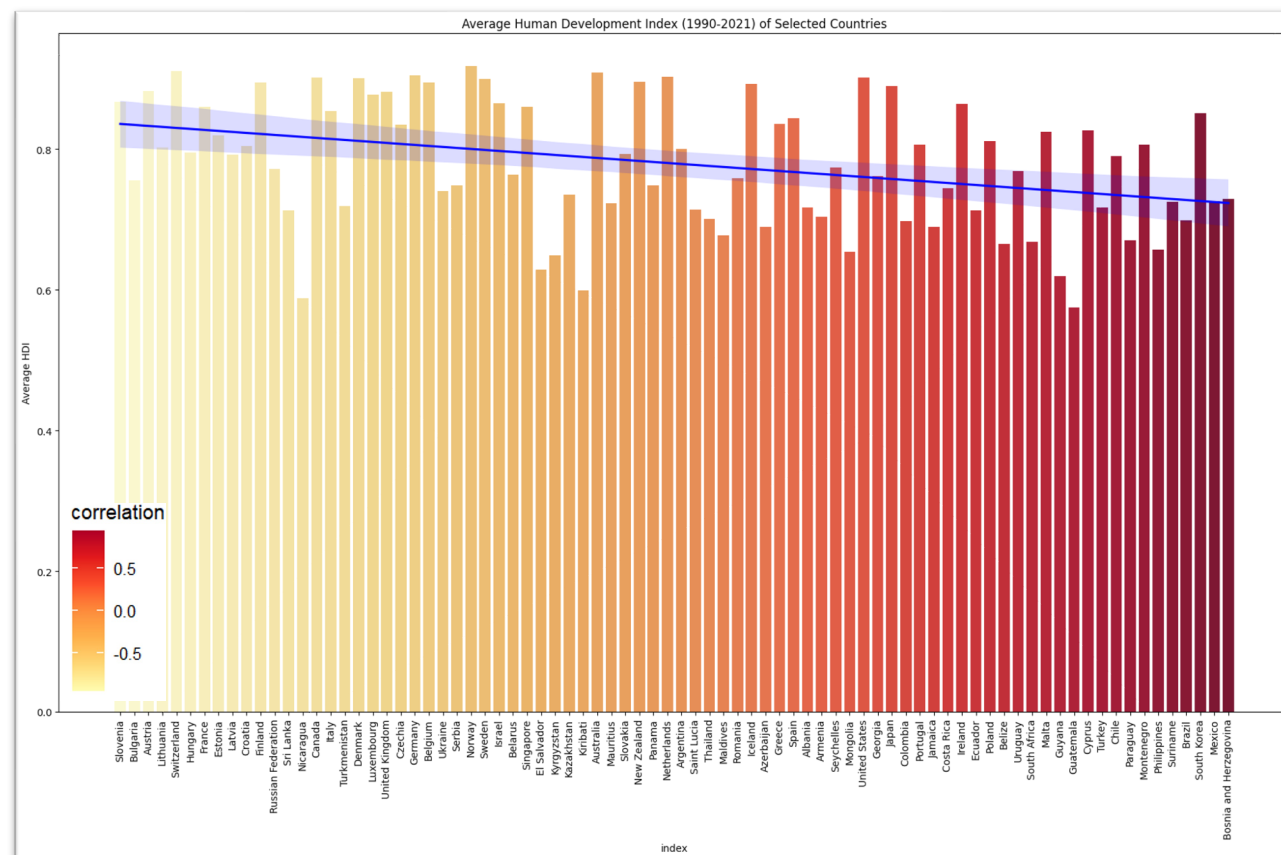
Other factors may influence the relationship

# Gini Coefficient



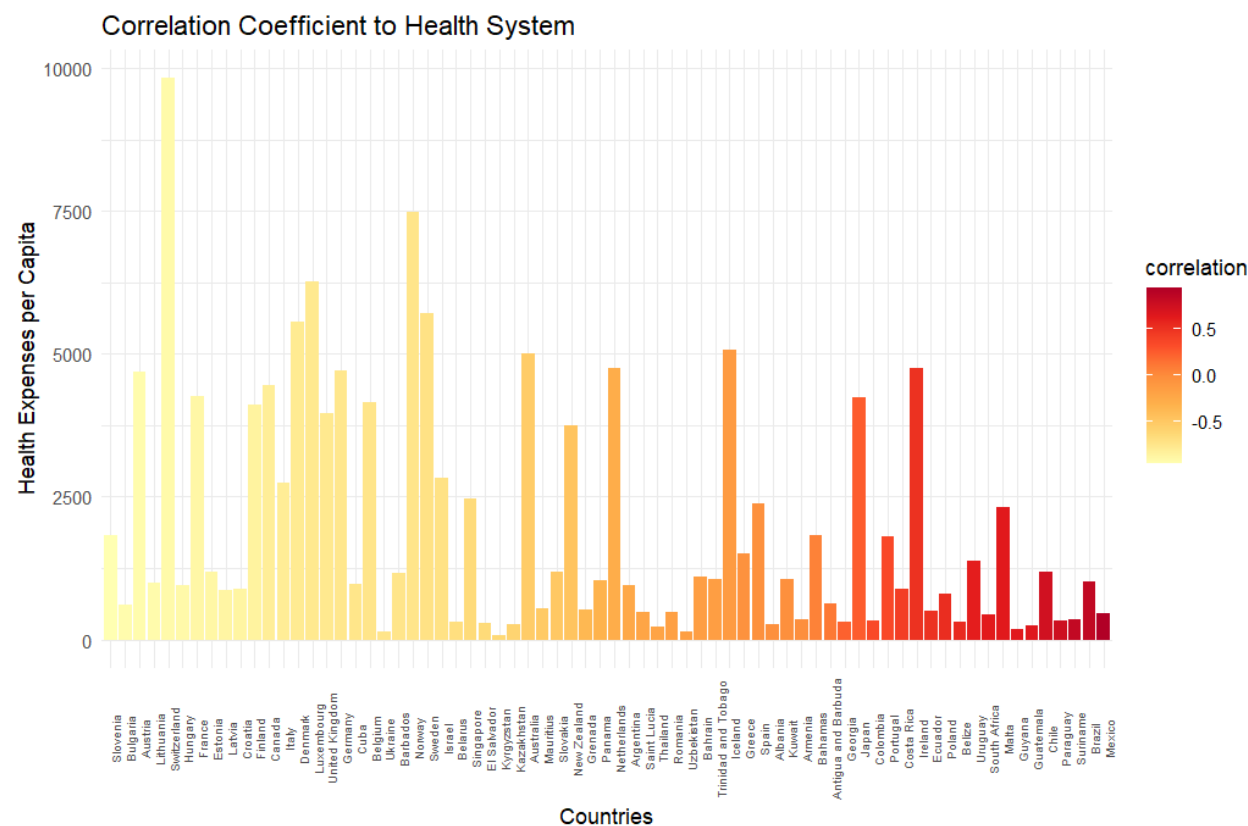
- No correlation found between Gini coefficient and suicide rates.
- Other factors may influence national suicide rates more.

# Human Development Index



- No trend found between Human Development Index and suicide rates.
- Other factors may influence national suicide rates more.

# Health System



- There is no clear visible trend between Suicide Rate and expenses for the Health System

## Variables we've also looked at

- Sunshine Index
- Education
- Latitude

## Conclusion

The correlation between GDP per capita and suicide rates varies significantly across countries, highlighting the complex and multifactorial nature of suicide.







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