

# Mental Health Acquisition

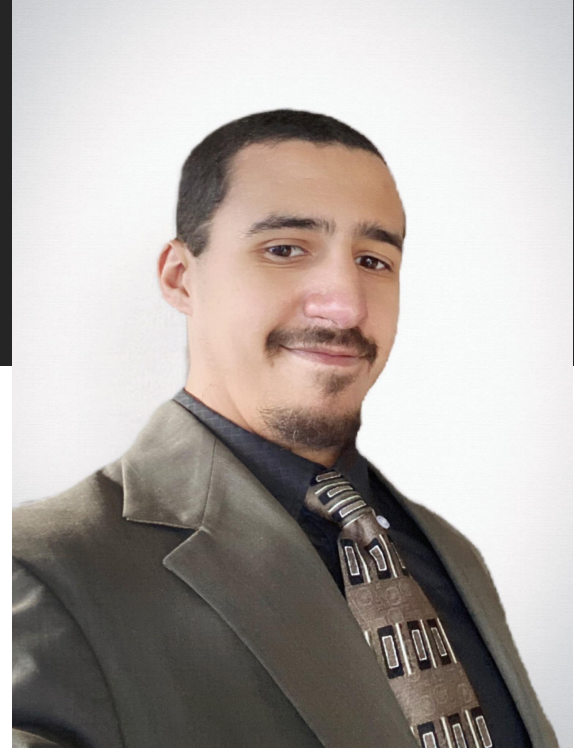
Development Indicators by Country



# Introduction

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# Agenda

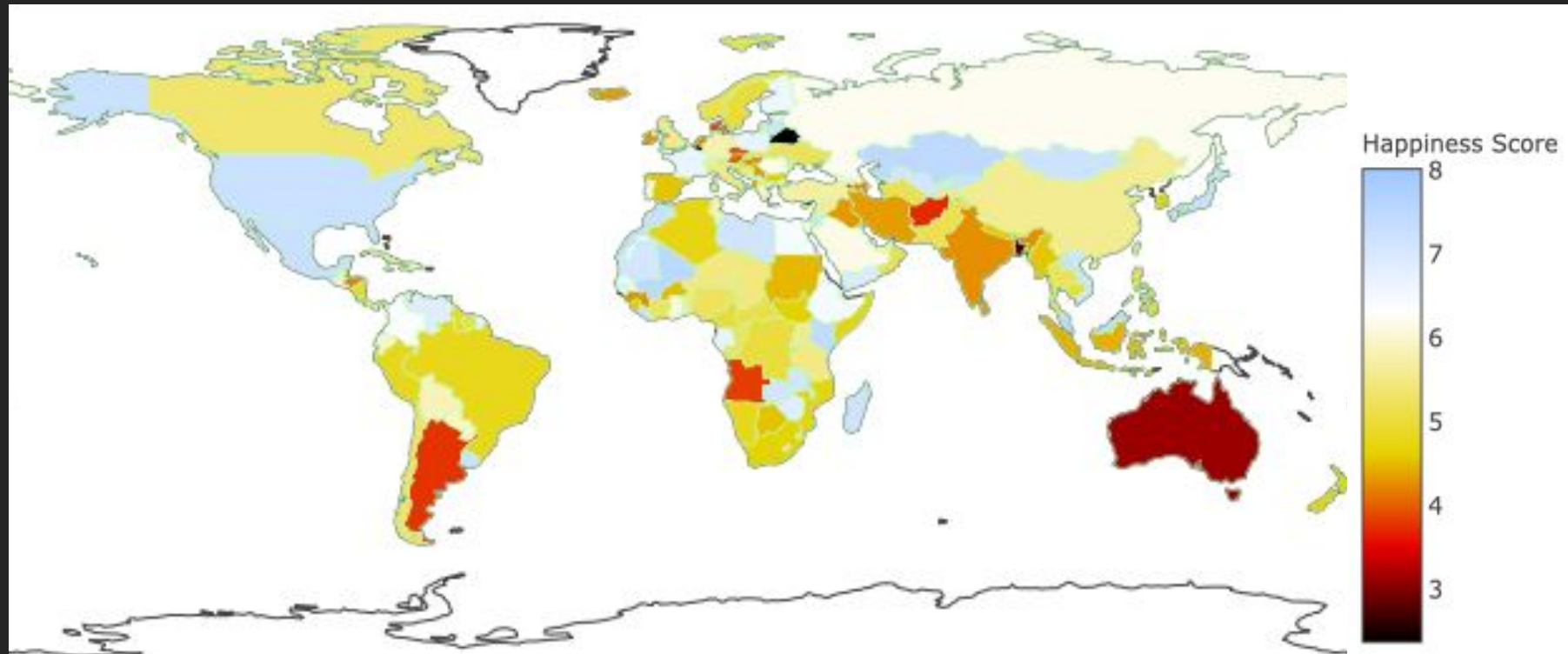


- 01 Business Understanding
- 02 Data & Methods Overview
- 03 Analysis
- 04 Future Research



# Business Understanding

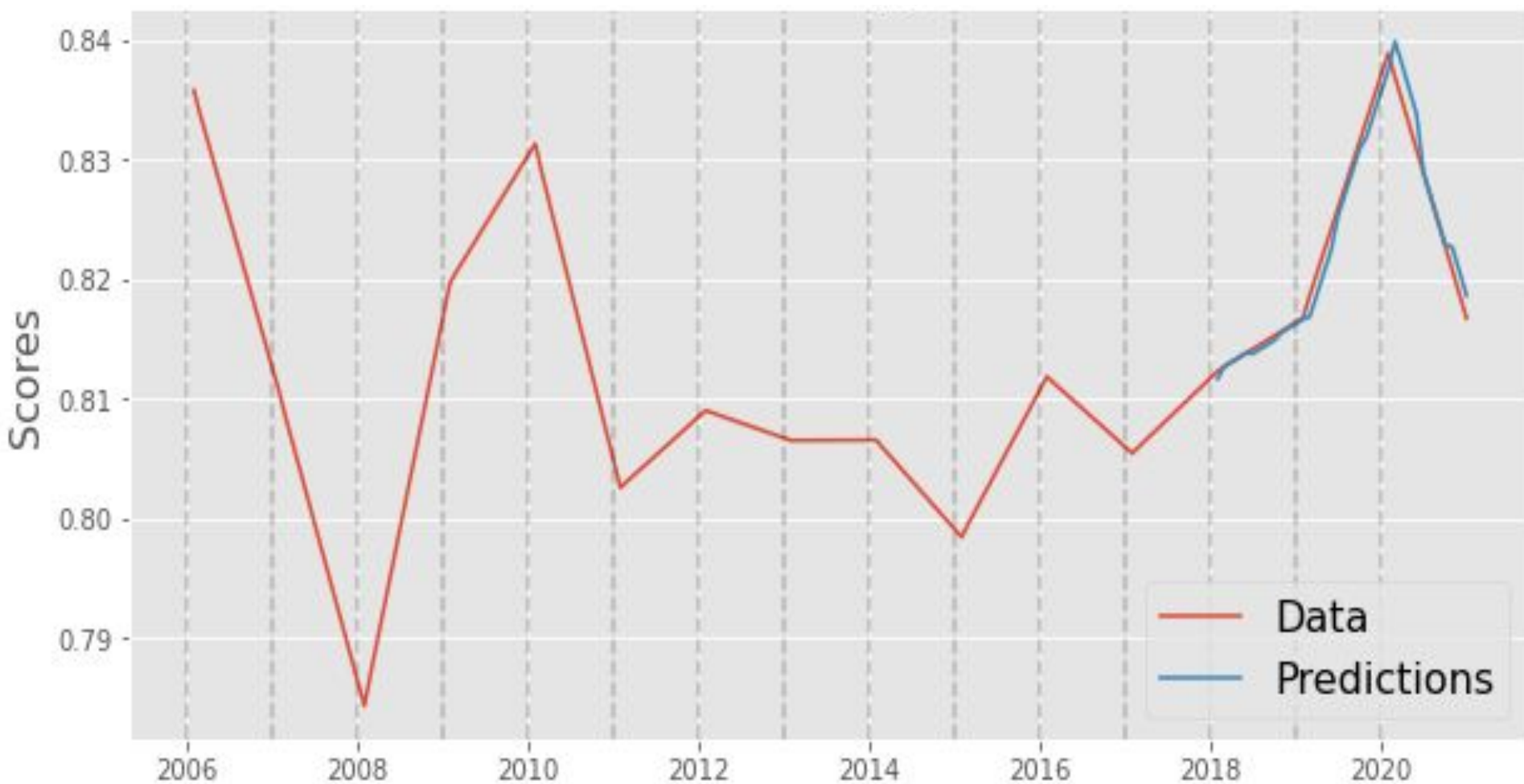
# Worldwide Happiness Scores



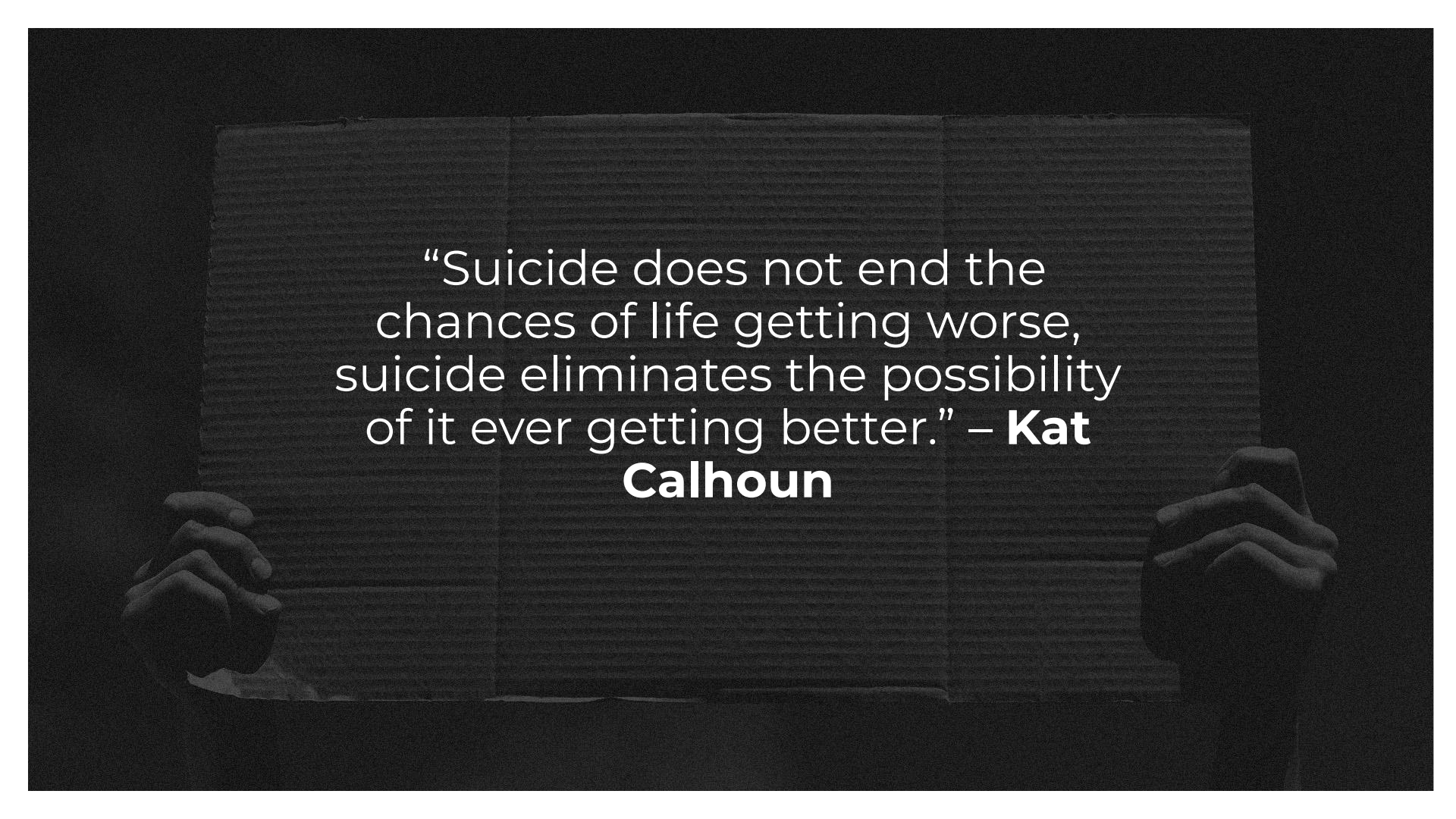
# *Happiness Scores Worldwide*



## *Social Support*





A black and white photograph of a person's hands holding a rectangular piece of corrugated cardboard against a dark background. The cardboard has a quote printed on it in white text. The person's hands are visible at the bottom corners of the cardboard, gripping it. The lighting is dramatic, highlighting the texture of the cardboard and the person's hands.

“Suicide does not end the  
chances of life getting worse,  
suicide eliminates the possibility  
of it ever getting better.” – **Kat  
Calhoun**



# Data & Methods Overview



# The Data



World  
Development

World Bank

1965-2017



Happiness

Gallup World Poll

2006-2021

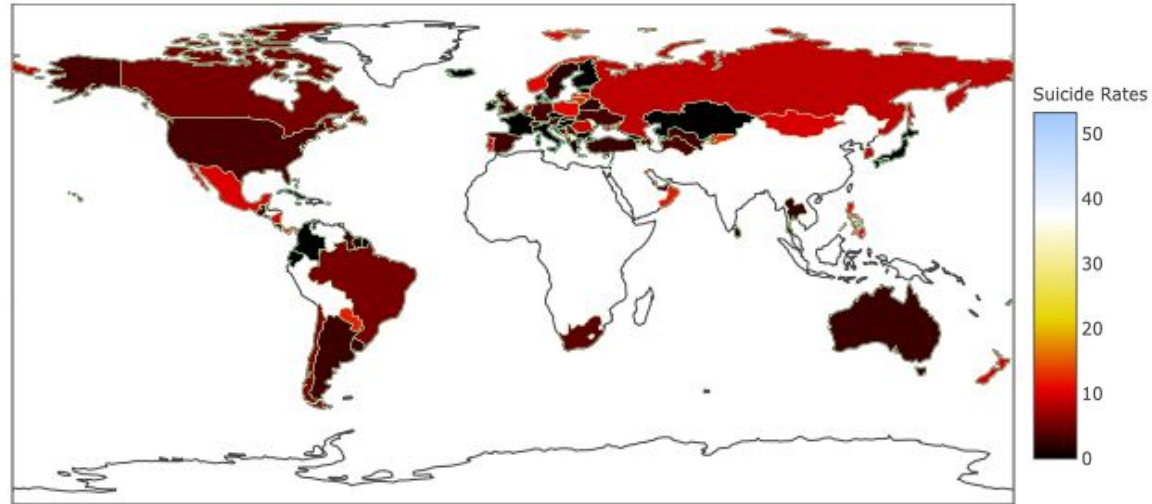


Suicide

United Nations Development  
Program, World Health  
Organization, and the World  
Bank  
1985-2017

# Area of Study

Suicide Rates by Country



## The Data

- Complex Subject
- Missing Data
- Targeted Analysis

## South America

- Suriname
- Paraguay
- Dominica

# South America



## Suriname

Highest Rate in  
South America



## Guyana

Second Highest



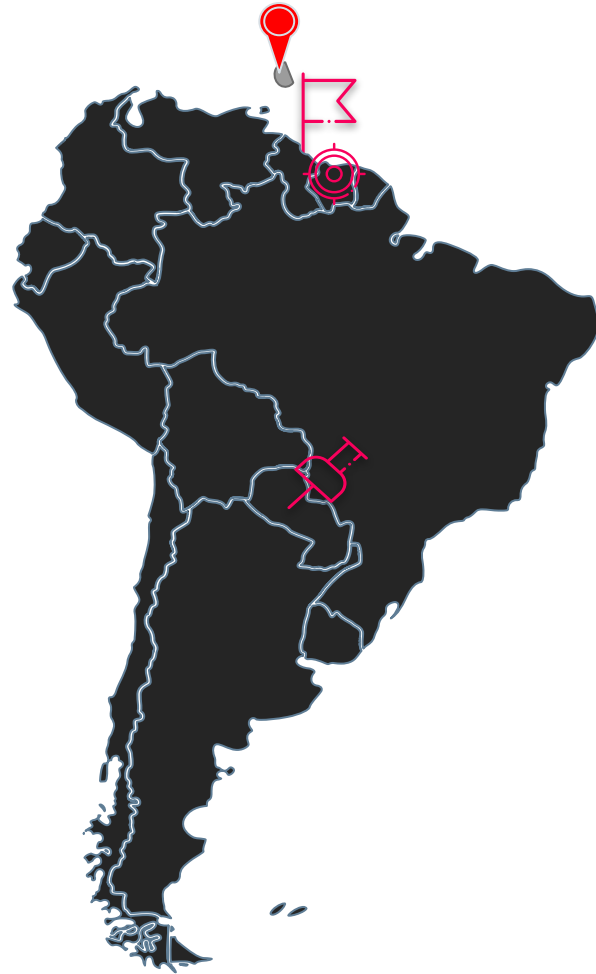
## Paraguay

Lowest Rates Inland



## Dominica

No Suicides Reported



# Methods

## Test Features

Random Forest Regression,  
Gradient Boost, & Ordinary Least  
Squares

## Time Series

Predicting trends of significant  
features that impact mental  
health.



Analysis



# Significant Features

Suicides:  
79%

Happiness:  
89%



## Sad Features

Urban Population Growth %, Generosity, Education, Social Support



## Countries of Interest

Inflation, Foreign Investments



## Happy Features

Broadband Connection, Social Support, Freedom to Make Life Choices, Perceptions of Corruption



## Overall

Social Support is key

**[Deploy App](#)**

# Recommendations



## Universal Mental Health Care

- WHO to provide UMHC

## Social Safety Net Programs

- Job security programs
- Healthcare assistance
- Education/Child Care programs

## Provide Basic Necessities

- Access to Electricity
- Water/Sanitation Access

# Future Research

Venezuela

Missing data



Substance Abuse

A important aspect in mental health.



More features, more  
countries

More to explore.

# THANKS

Do you have any questions?

Github: @281clo



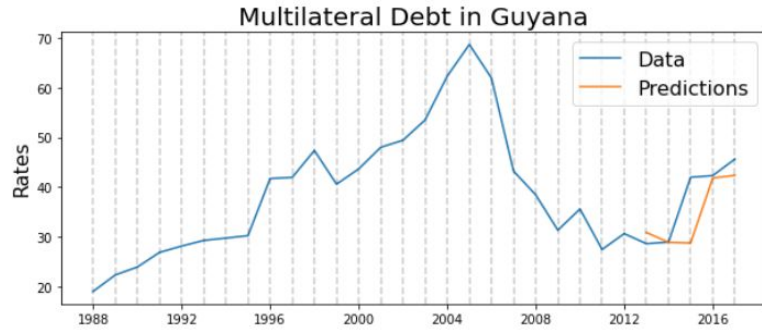
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# Appendix

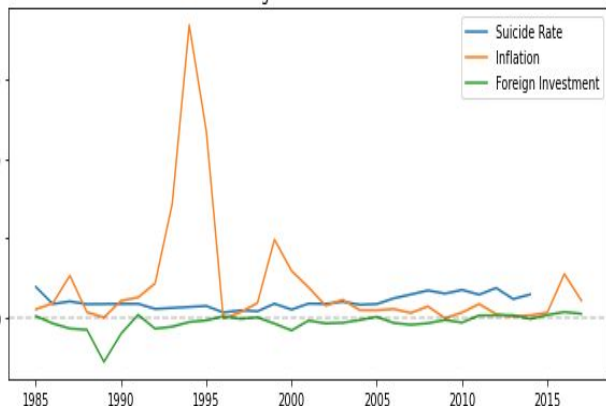


# In Depth

## Suriname

Happiness Score Average: 6.26  
Suicide Rate Average: 21.31  
Inflation Annual % Average: 41.27  
Foreign Investment % of GDP: -5.33

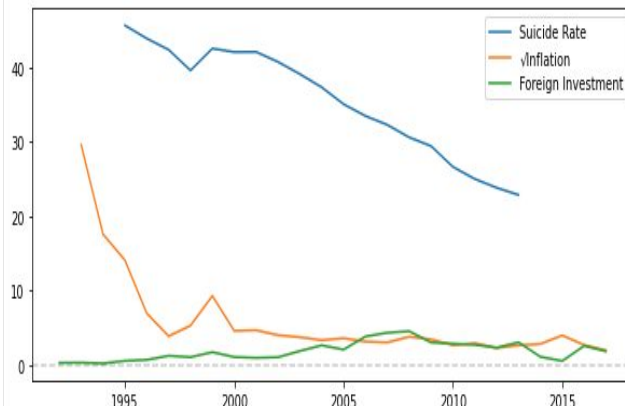
Suriname Foreign Investment & Suicide Rate



## Russia

Happiness Score Average: nan  
Suicide Rate Average: 34.89  
Inflation Annual % Average: 70.25  
Foreign Investment % of GDP: 1.82

Russia & Suicide Rate



## Paraguay

Happiness Score Average: 5.56  
Suicide Rate Average: 4.21  
Inflation Annual % Average: 12.40  
Foreign Investment % of GDP: 1.10

Paraguay Foreign Investment & Suicide Rate

