

The relation between fertility rate and the gross domestic product per capita (USD) in South America

By Juan Garcia

Dataset

- This project is based on the World Development Indicators Dataset.
 - To download the dataset please refer to:
 - Worldbank API
 - Kaggle (<https://www.kaggle.com/worldbank/world-development-indicators>)

Motivation

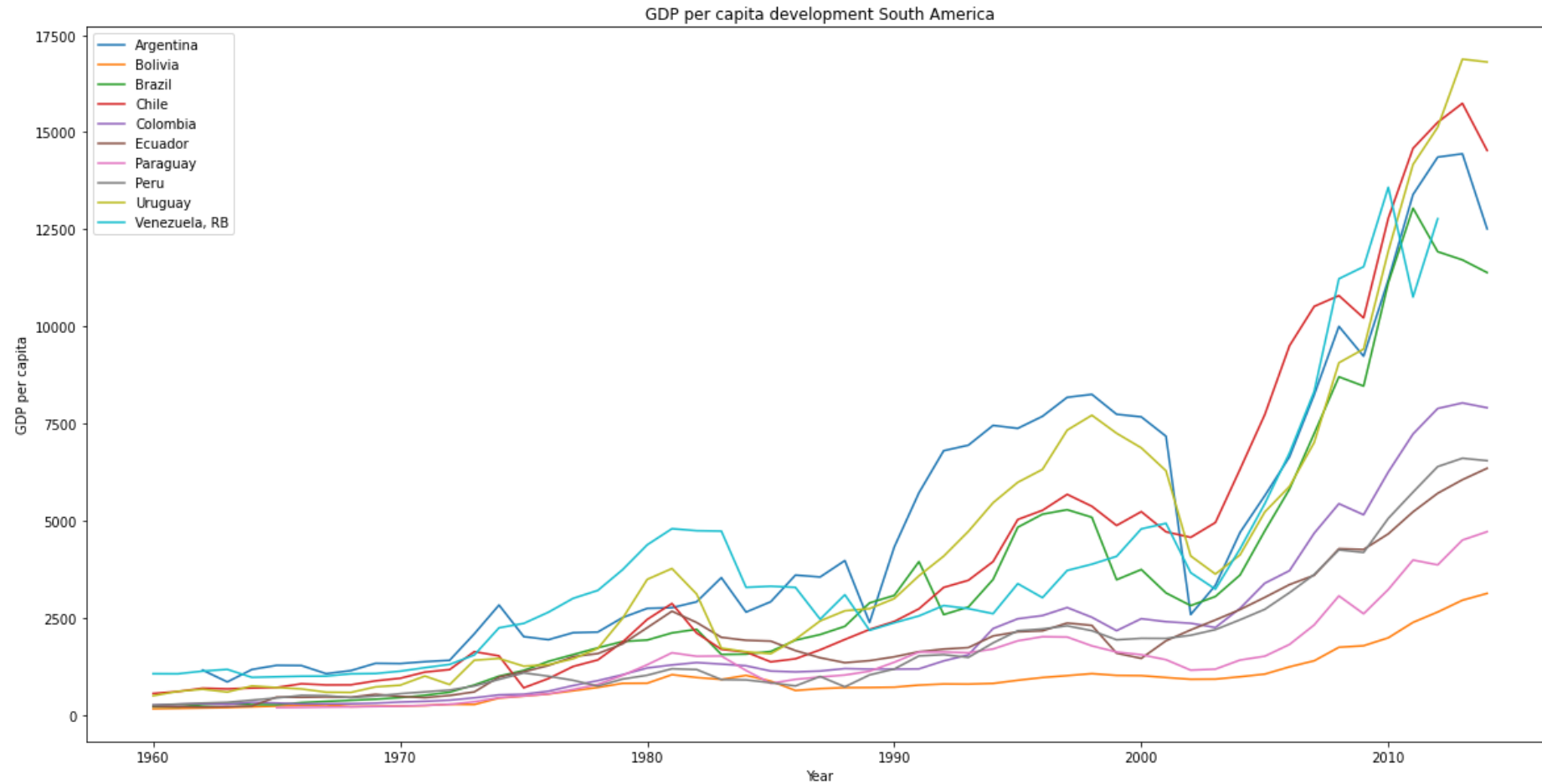
Fertility rate has been a big topic in the industrialized countries in the last decade. **The social insurance systems are based on the idea that society will always grow.** However, there is a clear trend in the developed countries for families to have fewer children. **At the same time we have observed how the GDP per capita has been increasing dramatically over the years.** I am interested in the relation between these two factors for emerging countries. in this case I will be analyzing the Spanish speaking countries in South America: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay and Venezuela.

Research Question: Is there any relation between the fertility rate and GDP per capita?

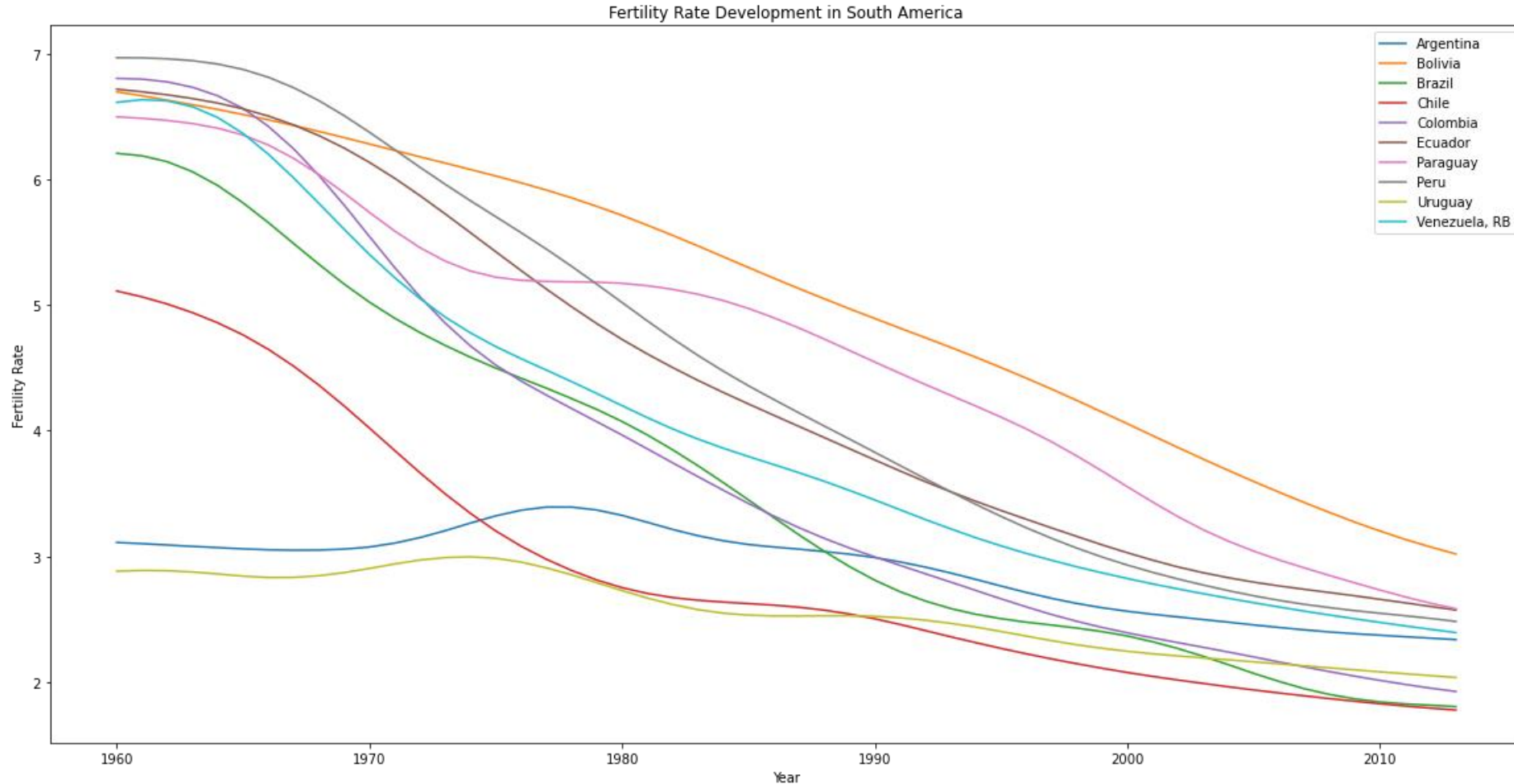
Hypothesis:

An increasing wealth (measured as GDP per capita) is related to lower fertility rates in south American countries.

The GDP per capita in South American Countries have been slowly increasing over the years



At the same time the fertility rate has been declining over the years

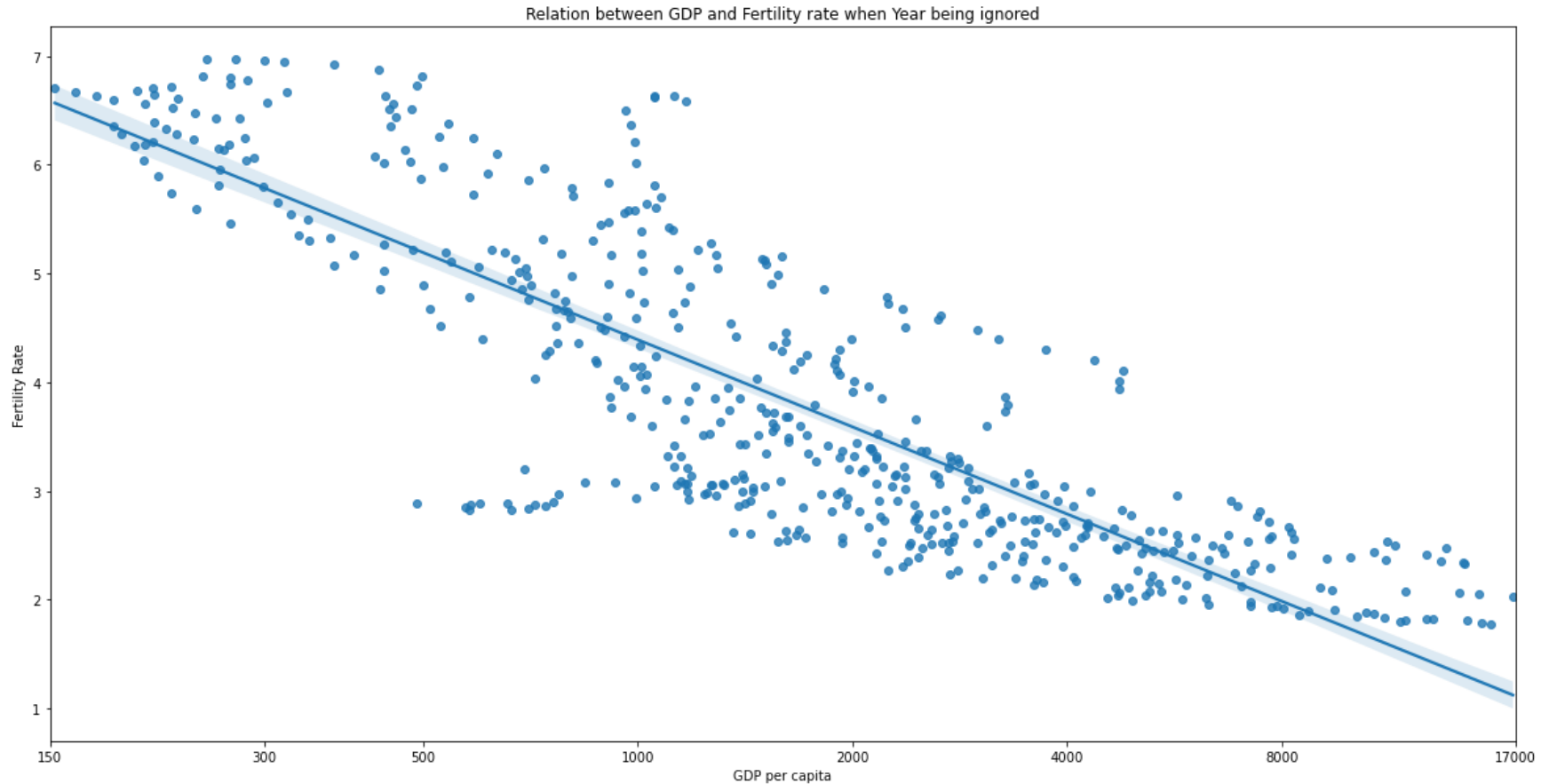


The GDP and the Fertility rate are indeed negatively correlated for South American Countries. However, it is not a linear relation



This graphic treats all years equally and not sequentially. In other words the „time“ dimension has been held constant. More interestingly is the non-linear relation between the variables

A step further: If we wished to set a prediction model, we could use logarithmic transformation to get a linear relation between the variables



Acknowledgements

Thanks to edx and the university of California San Diego for this wonderful course

Thanks to kaggle for hosting a clean dataset almost ready for analysis

Thanks to **you** for taking the time and reviewing my work

References

Please visit my GitHub for the full Jupiter Notebook:

<https://github.com/JuanGarcia10/fertility-rate-GDP-South-America.git>

There are no further references

Thank you!