Part of agriculture in Morocco's GDP.

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Abstract

Morocco is a country where agriculture is an important sector that employs a lot of people and forms a significant part of the Moroccan GDP. However this sector depends constantly on weather conditions. Therefore I will in follow the next steps in order to deal with this subject.

First we will try to see the evolution of gdp per capita by year in Morocco.

Second we will look for the part of agriculture in the gdp.

And third we will see the weather change in morocco especially rainning.

The three parts will give us an idea about the moroccan policy and answer to some questions like?

Is the moroccan gdp depends constantly of the agriculture sector?

Does climate change pose a danger to the moroccan economy?

What are the policies adopted by morocco to cope with this danger?

Motivation

The goal of this study is to see if the moroccan Gdp depends constantly of agriculture and try to understand why the part of agriculture in moroccan gdp has increased or decreased by studying climate change

Dataset(s)

1-World development indicators: https://www.kaggle.com/worldbank/world-development-indicators

2-Average Rainfull for Morocco from 1901 to 2015: http://sdwebx.worldbank.org/climateportal/index.cfm?page=country_historical_climate&ThisCCode=MAR#

Data Preparation and Cleaning

I just did data cleaning as presented in the course like dropping columns, and null values.
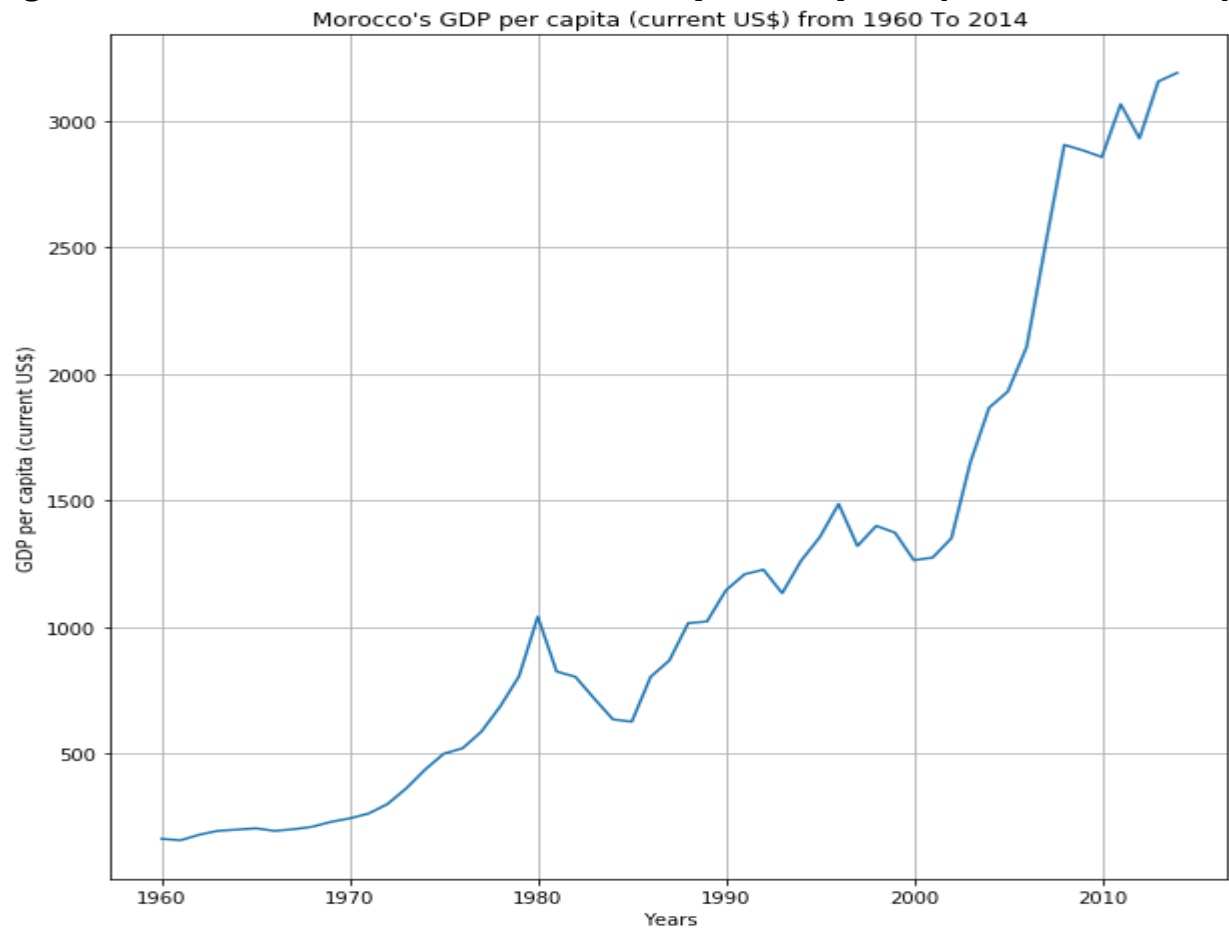
Research Question(s)

Is the moroccan gdp depends constantly of the agriculture sector?

Does climate change pose a danger to the moroccan economy?

Methods

What methods did you use to analyze the data and why are they appropriate? Be sure to adequately, but briefly, describe your methods.

Findings: **Section1: Morocco's GDP per capita (current US$)**

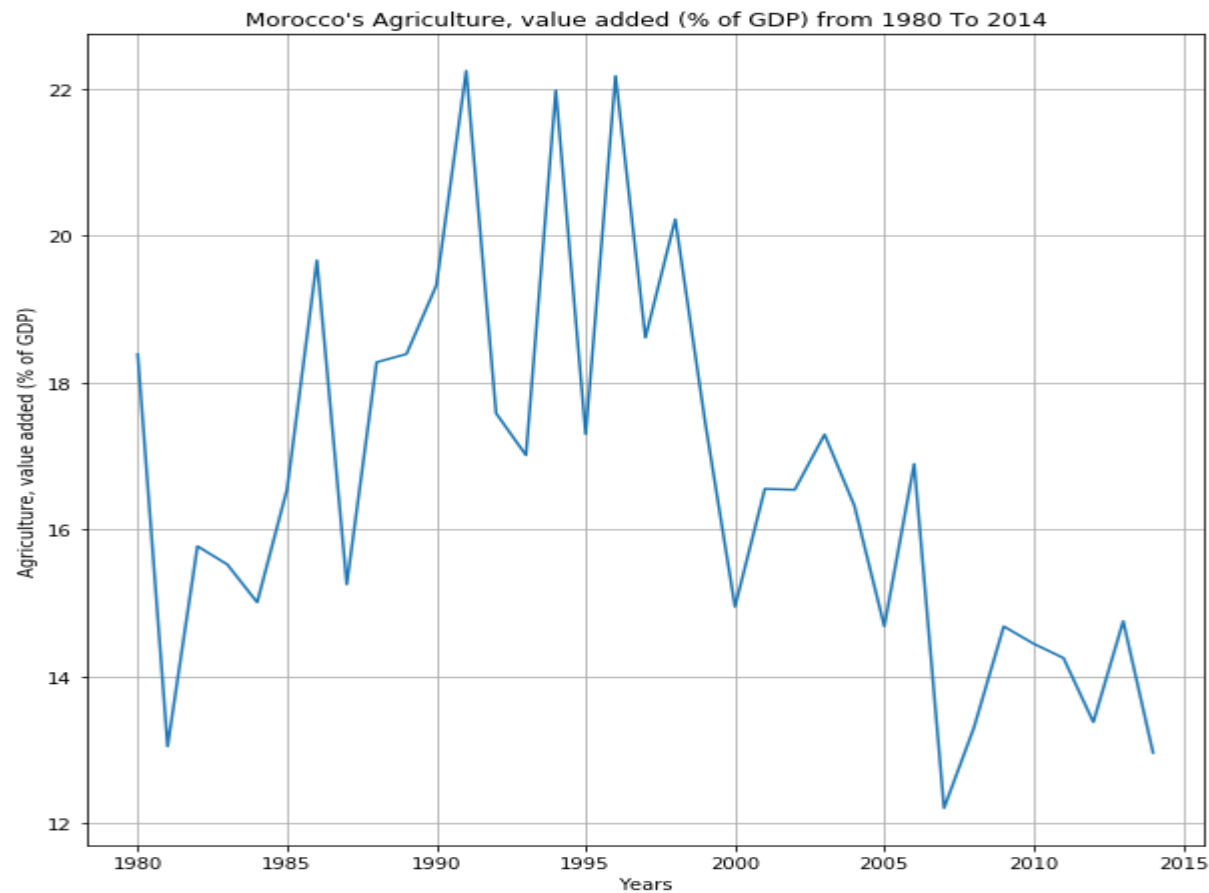Morocco's GDP per capita (current US$) from 1960 To 2014

Findings: **Section1: Morocco's GDP per capita (current US$)**

In the previous graph we can note that moroccan gdp per capita has increased especially from 2000. But we wonder if the agriculture had an impact in this growth. That is why we will visulize in the second section the part of agriculture in GDP

Findings: **Section1: Morocco's GDP per capita (current US$)**

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Findings: **Section 2: Morocco's Agriculture, value added (% of GDP)**

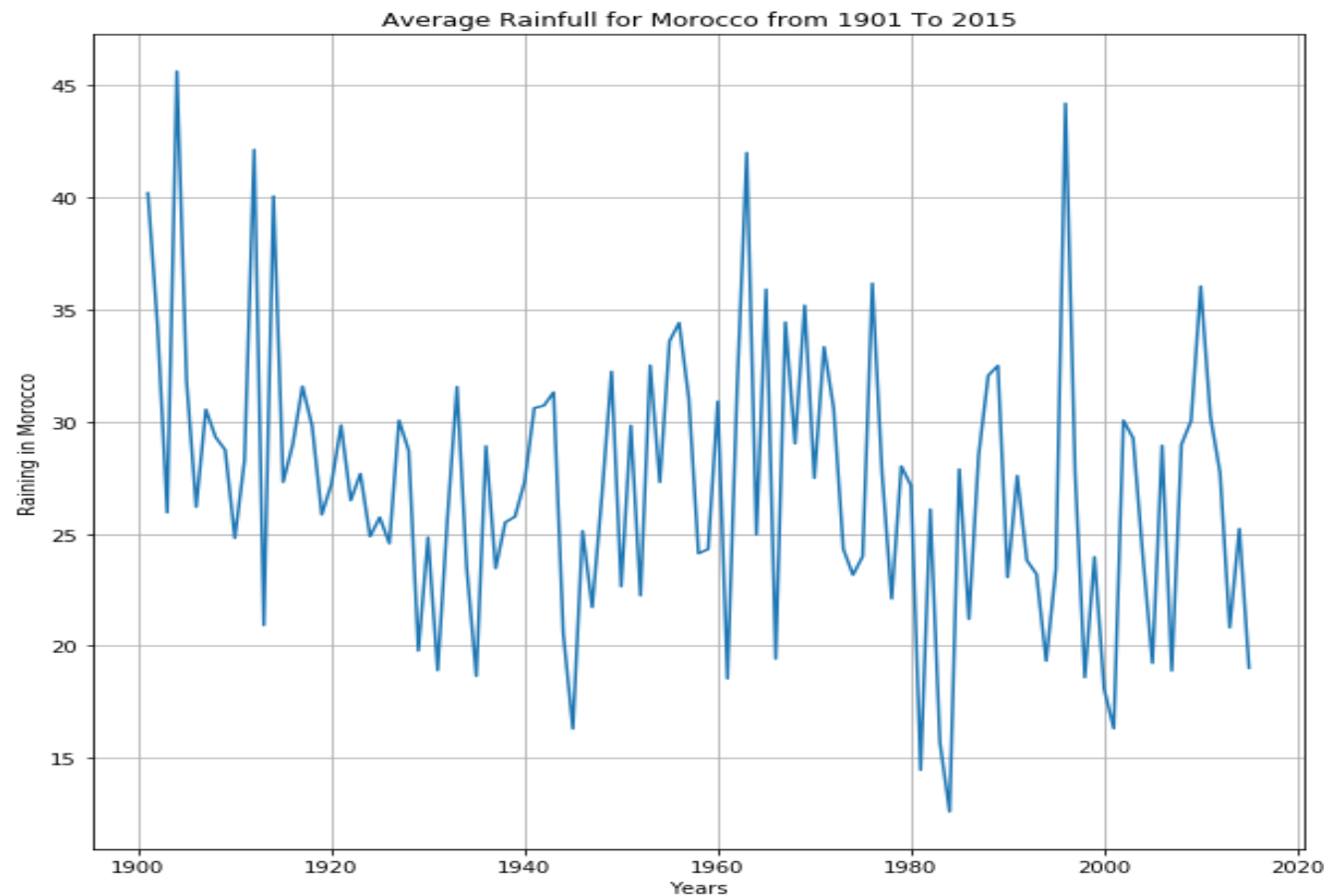Morocco's Agriculture, value added (% of GDP) from 1980 To 2014

Findings: **Section 2: Morocco's Agriculture, value added (% of GDP)**

As we can see in the second graph. The percentage of Agriculture in GDP has decreased since 2000.That doesn't mean that Morocco produce less in agriculture. But it indicates that there are other sectors that contributes in GDP such as: Industry and services. Consequently we wonder why Morocco tends to integrate other sectors for the constitution of GDP. One of the aspects that can help to understand this is the sudy of climate change in Morocco and its impact on the agriculture. For this purpose we tried to use data from the Climate change knowledge portale in the link: http://sdwebx.worldbank.org/climateportal/index.cfm?page=country_historical_climate&ThisCCode=MAR

Findings: **Section 3: Average Rainfull for Morocco from 1901 to 2015**

Average Rainfull for Morocco from 1901 To 2015

Findings

- From the graph it's clear that the average rainfall in Morocco has decreased. But this doesn't mean that there aren't years where the rainfull is high. Consequently Morocco has decreased the part of agriculture in GDP by looking for new opportunities like services.

Limitations

As a limitation for this project I've found the average of rainfall per month so I took the average by year. The limitation is that we are studying the impact of rainfall in the agriculture. However the avergge of rainfall could be good in the year but low in the months that are more benificial for the agriculture.

Conclusions

Data science can help in the developement of countries. Indeed we've noticed that exploring data from different sources (gdp growth,part of agriculture in gdp and rainfall) and vizualizing the results give you a clear idea about the state of your country. Using those insights we can perform several actions to improve.

References

Edx sandiego mooc: Python for Data science