

We Predict



We are a **consultancy firm** specializing on Business Intelligence and Economical Forecasting.

The **World Economic Forum** asked us to conduct a study of **inflation** in order to identify **trends** or cycles and possibly the **factors** that would lead to high inflation.

Project

Overview

Which topic did you choose and why?

We have chosen to study the inflation rate and its effects. This is a current concern that has a huge impact on our lives.

Briefly describe the original dataset and the hypothesis you formulated.

This dataset provides a comprehensive historical record of inflation rates worldwide, covering over 200 countries and the period from 1960 to the present. We have 2 hypotheses which are :

1. Regional and Sub-Regional Inflation Patterns
2. Relationship Between Inflation and Time Periods

Data Wrangling and Cleaning

- Here the significant data cleaning challenges we encountered
 - missing data
 - non-useful columns
 - Spanish language
- How we resolved these challenges
 - replacing missing data
 - checking unique values of columns
 - checking data types
 - combining values to ease encoding on categorical data

03

Exploratory Data Analysis

- We used the following exploratory data analysis methods :
 - checking head, shape and info
 - plotting all columns
 - checking for outliers
 - checking distributions of numerical columns

04

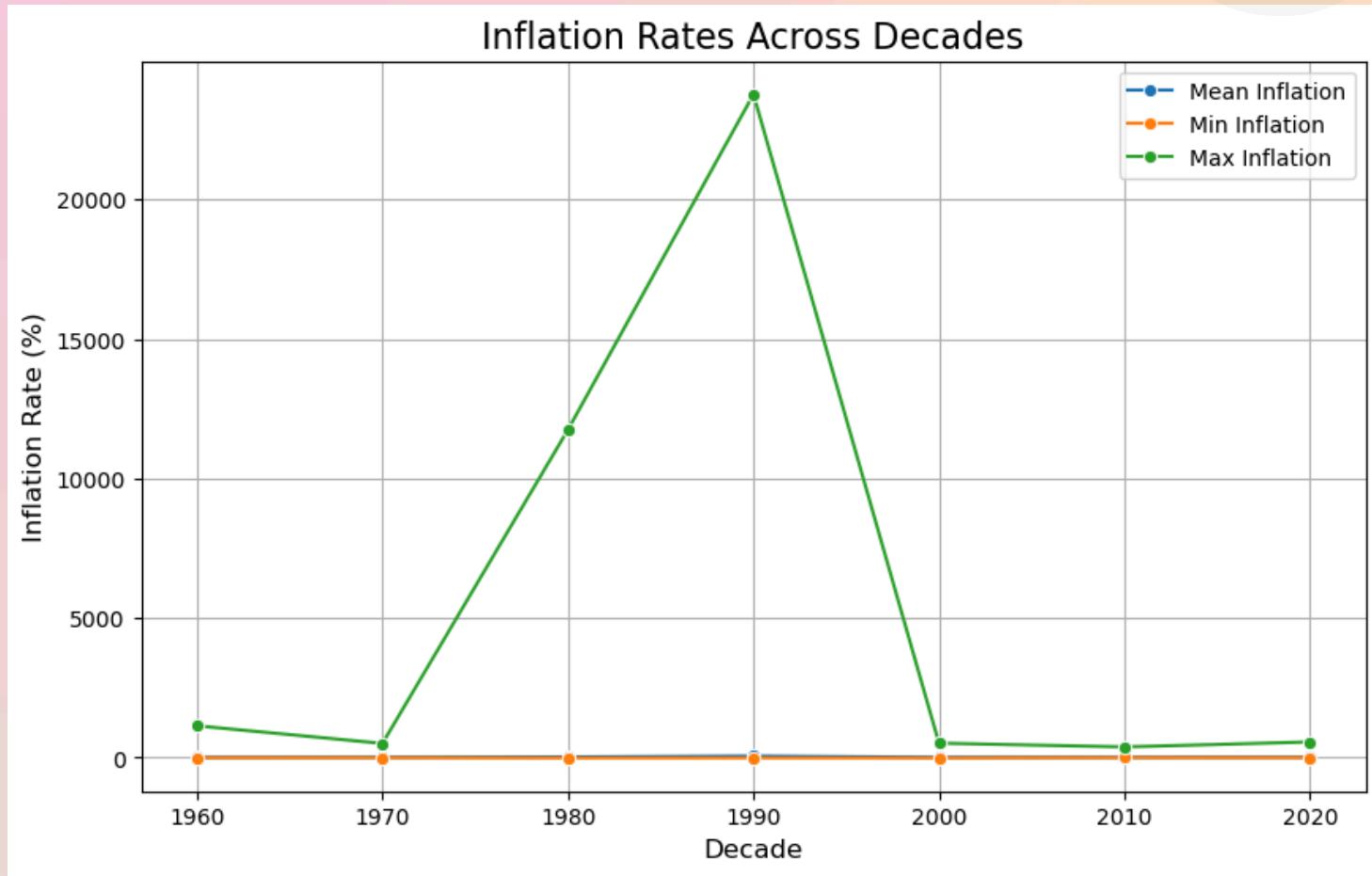
Teamwork & Project Management

- The **teamwork** went very naturally.
- We succeeded to split the work and achieve our duties in time, with regular updates. We shared our progress and also our propositions and questions.

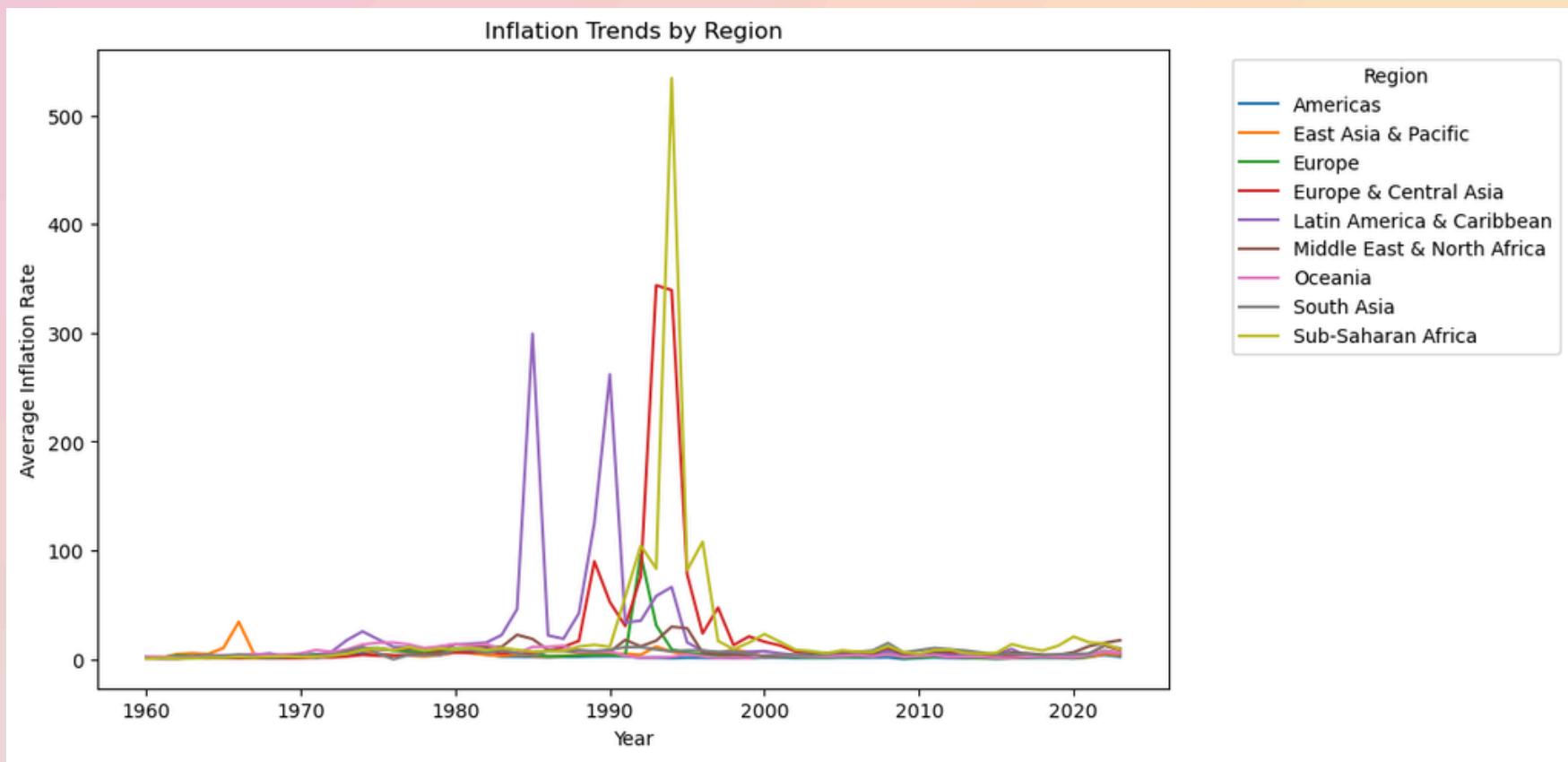
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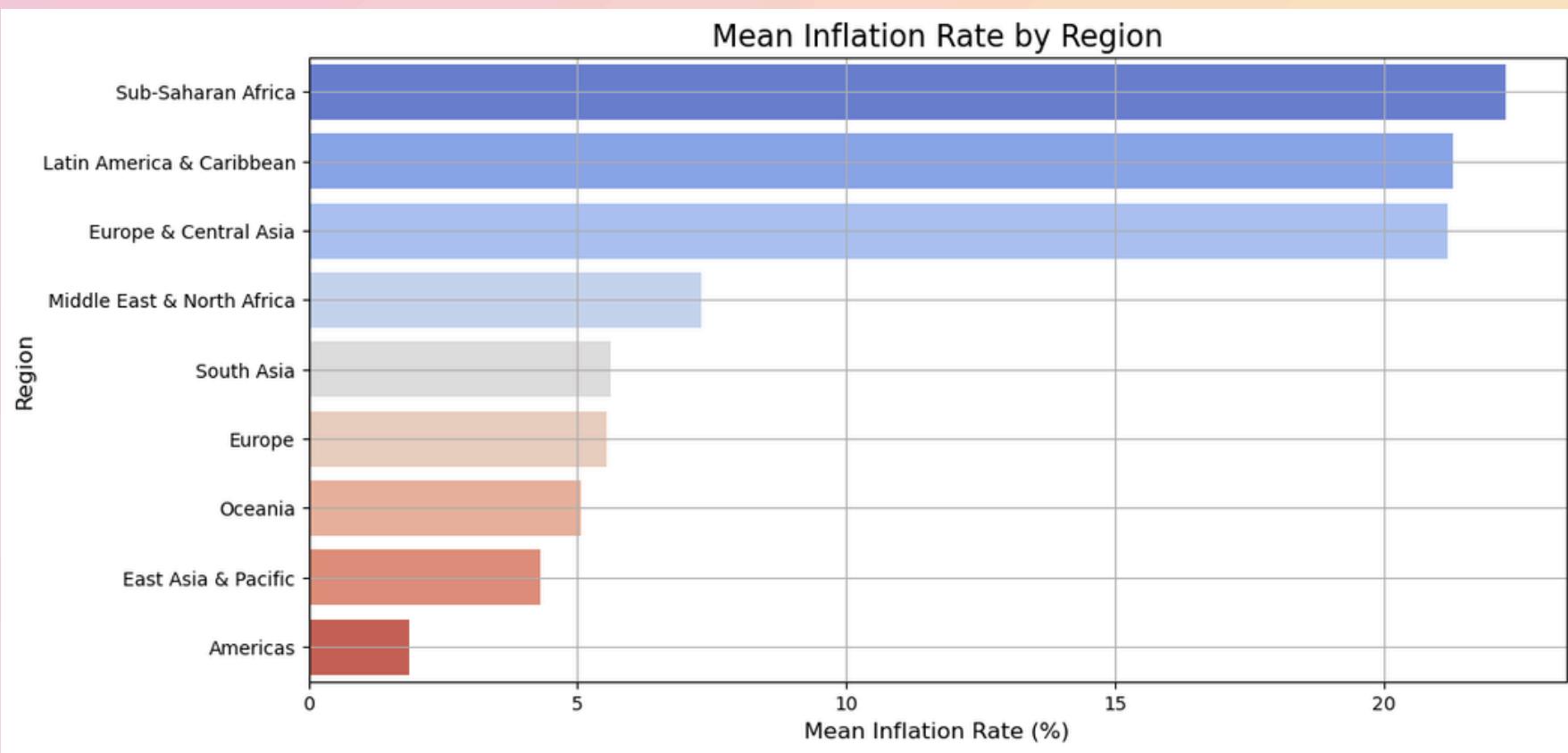
Main Obstacle & Challenges

- The **main challenge** we went through is our first commit. We each made changes on our own, on different files, and when it came to merging, it was complicated. We lost a lot of time, but we also learnt a lot from this mistake.
- Also, we weren't able to web scraping to enrich our data. Finding good dataset was very time-consuming and we couldn't afford to keep on searching.



We Predict

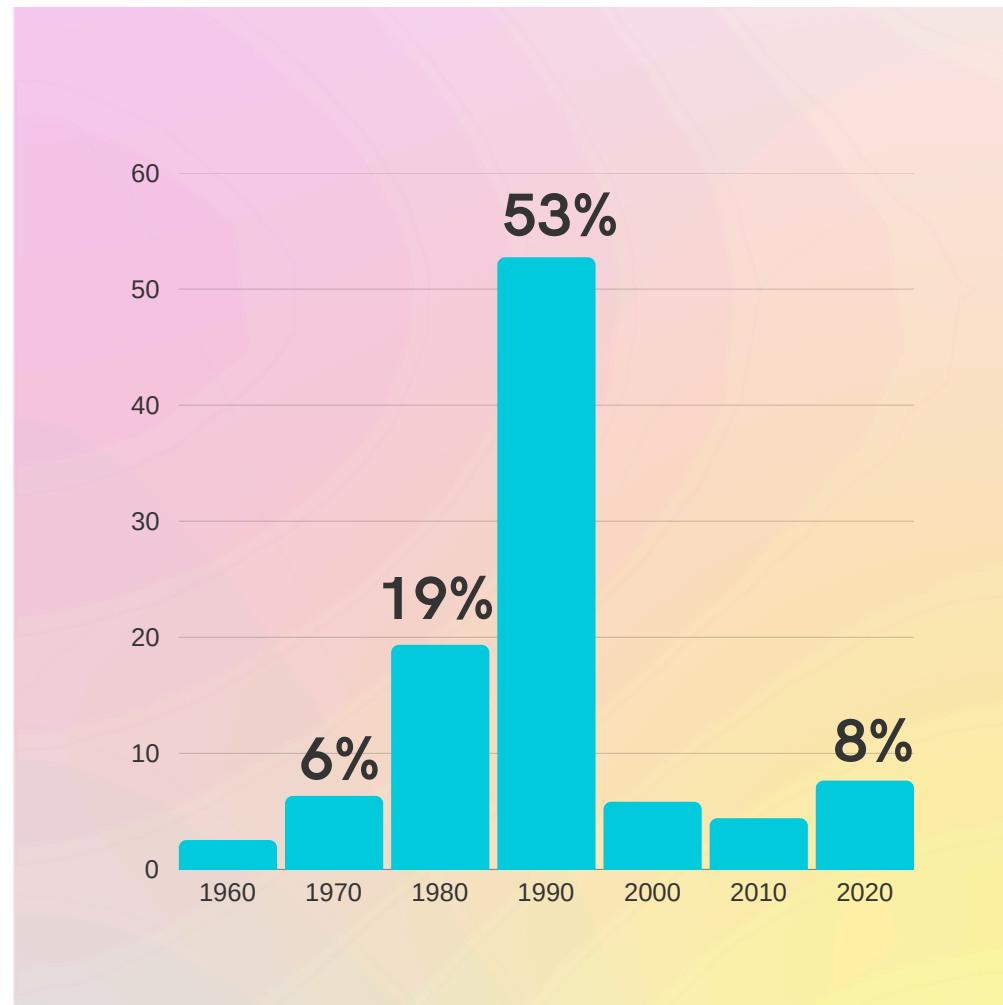




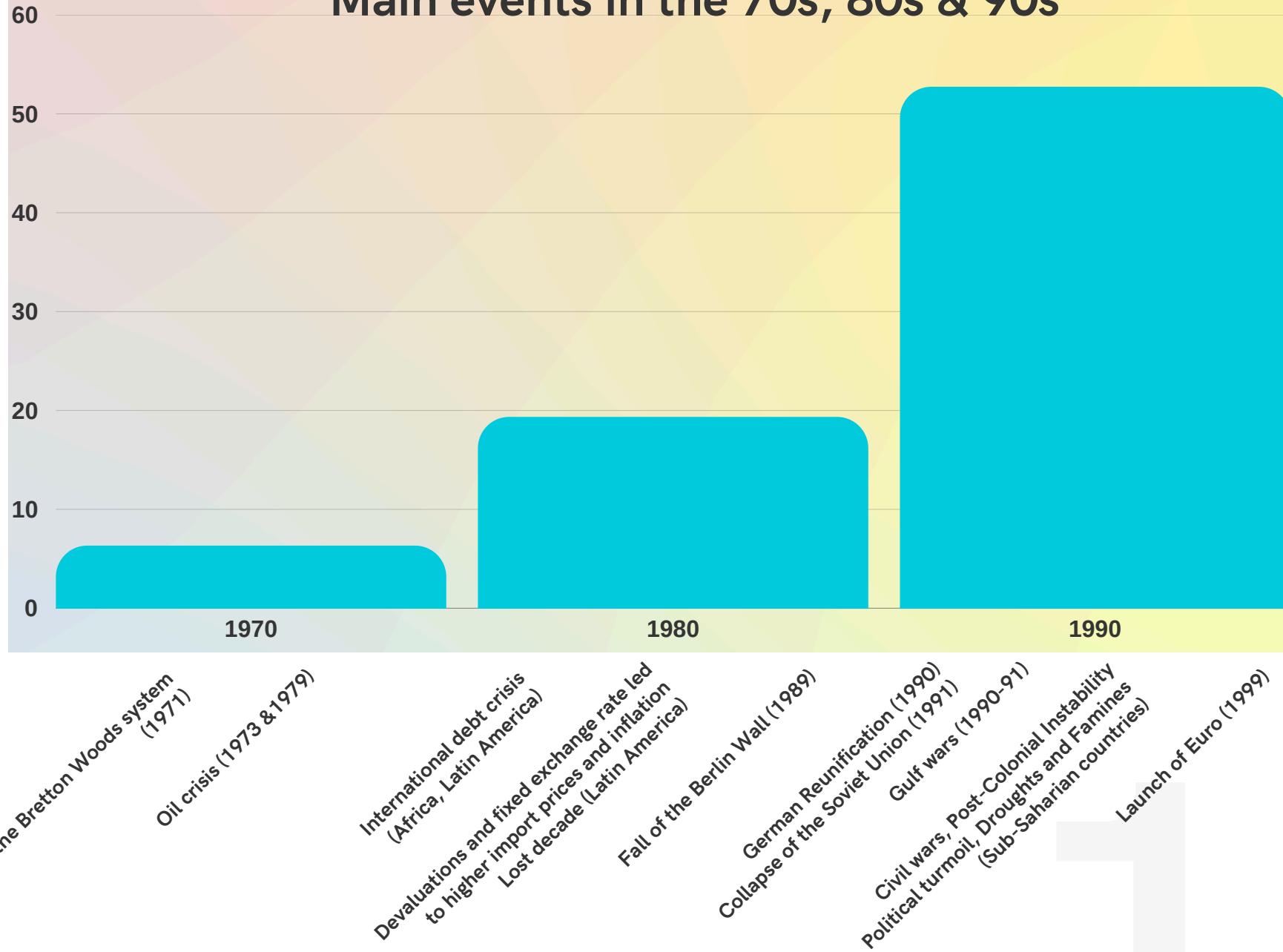
Inflation rate in decades

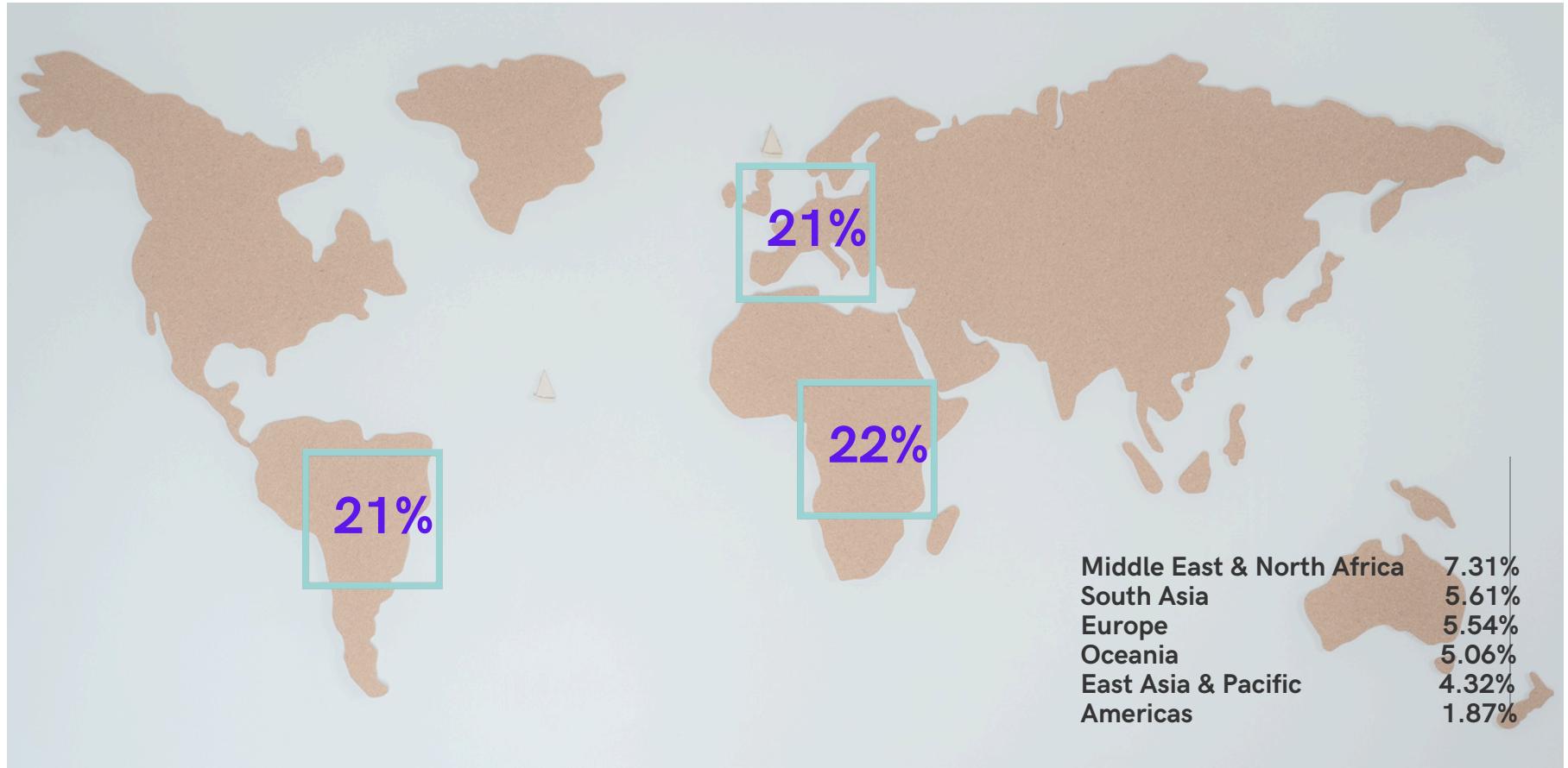
Average world's inflation rate
between 1960 and 2023

Is there a link between inflation rate and time period ? Infation rate was very high during 2 decades (80s-90s).



Main events in the 70s, 80s & 90s





Inflation rate in different regions

Average world's inflation rate between 1960 and 2023

Is there a correlation between inflation rate and the region ?

Conclusion

- Our **initial hypotheses have been confirmed** by the dataset
 - inflation rate was very high during 2 consecutive decades (80s & 90s)
 - two regions were particularly hard hit by inflation: Latin America & Sub-Saharan Africa.
- **Main learnings:** Wars (during the time period studied) do not have the biggest impacts on inflation. In the past, high inflation is due to :
 - Financial & Economical policies
 - Geopolitical events
 - Natural disasters (in Africa that led to food price rising)

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Surprising fundings

North America is not affected by high inflation, despite the colossal US debt and its involvement in numerous geopolitical and trade conflicts.

The same applies to **China**, the 2nd most indebted country in the world.

This 'anomaly' is perhaps caused by the fact that we have not applied a coefficient relating to the economic weight of a region or a country.

Debt alone doesn't cause inflation : Inflation is more about monetary policy, economic growth, and supply-demand imbalances than just having high debt. The U.S. and China managed inflation better than some other countries because they had stronger policy tools, demand for their currencies, and controlled economic structures.

Maybe the inflation itself is not a disease to cure. It's more an indicator to monitor the performance of economical and monetary policies.

Thanks your
attention!