**Research question:**

***Is there a correlation between the unemployment rate of East-Africa and the number of pirate attacks in nearby waters from 2015-2020?***

Thesis Statement:

This study will explore the correlation between unemployment rates in East African countries and the number of maritime piracy attacks in nearby waters between 2015 and 2020. A comparison of the data might begin to reveal the relationship between unemployment and the resurgence of piracy as a means of survival. The findings are meant to demonstrate how economic instability and limited employment opportunities fuel piracy, highlighting the critical role of socio-economic conditions in maritime security dynamics in East Africa.

We have investigated our dataset. In our dataset, we found that they examined the unemployment rate per country. This can be very interesting and relevant to study in relation to the occurrence of pirate attacks. This can tell us something about why pirate attacks can occur and if so, how we can lower the attack rate.

Research shows that unemployment can lead to higher criminality rates. This can have several reasons. Individuals may face financial hardships, leading them to commit crimes. Unemployment can also exacerbate social inequalities with criminal behavior as a result. Reduced opportunities or psychological factors can also push people. Towards illegal activities (Jawadi et al., 2021).

This is also confirmed in the work of Mora et al,. in this article, it was found that a 1% increase in the unemployment corresponds to a 0.92% increase in the crime index (Mora et al., 2014).

Research into the correlation between unemployment and the number of pirate attacks is currently relevant because unemployment is rising in East Africa, particularly in countries like Kenya. It is also expected that the unemployment rate will continue to rise if no effective measures are taken to address the underlying causes. The expectation is that the number of unemployed will increase by approximately 1 million per year (Mathenge, 2021).

Given this expected increase, it is important to investigate whether unemployment has a causal relationship with pirate attacks, so that the rise in the number of pirate attacks can be taken into account and a way can be found to mitigate this problem.

## 3. **Dataset problematization**

The data set is very large and contains pirate attacks from all over the world. It will take some time to figure out how to preprocess the data so only statistics remain for East Africa. Furthermore data is missing specifically about attacks, so either the vessel status is NA or the attack type was NA. For our research question specifically we do have the information of

unemployment however there's a lot of entries with NA. Additionally if we want to check the rate of unemployment we'd have to calculate it ourselves since the data set only provides the amount of unemployed people instead of the percentage of population therefore it might be hard to track the unemployment throughout the years we have in mind. With that in mind the dataset is extensive and very informative, it holds much information in general and keeps track of many cases throughout the years and with its extensivity we can find and prove the correlation easier or find that the correlation is tied rather with something else than unemployment.

4. **Process, modeling, and expanding the data based on the RQ:**

To process, model, and expand the data for the research question, we will first pre-process the datasets by addressing missing values, ensuring consistent date formats, and matching country codes to properly align the unemployment data with the pirate attack data. This step is crucial to ensure that the data is organized, and comparable. Following pre-processing, we will structure the datasets by merging the unemployment rates and pirate attacks on a yearly basis, specifically focusing on East African countries from 2015 to 2020.

After organizing the data, we will compute key statistics for both variables, such as the average unemployment rate and the total number of pirate attacks each year. This will allow us to summarize the data in a meaningful way. Using various visualization tools like scatter plots and time-series graphs, we will visually explore trends and potential relationships between unemployment rates and piracy incidents over time.

To deepen the analysis, we may integrate other relevant variables such as GDP, political instability, or additional datasets. These factors could provide valuable context and help us explore whether other elements might also influence piracy rates. Lastly, we will assess the data for any potential underlying relationships or contributing factors that might explain both the rise in unemployment and pirate attacks.

## ***Bibliography:***


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