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# Poverty Stricken Countries

August 2020

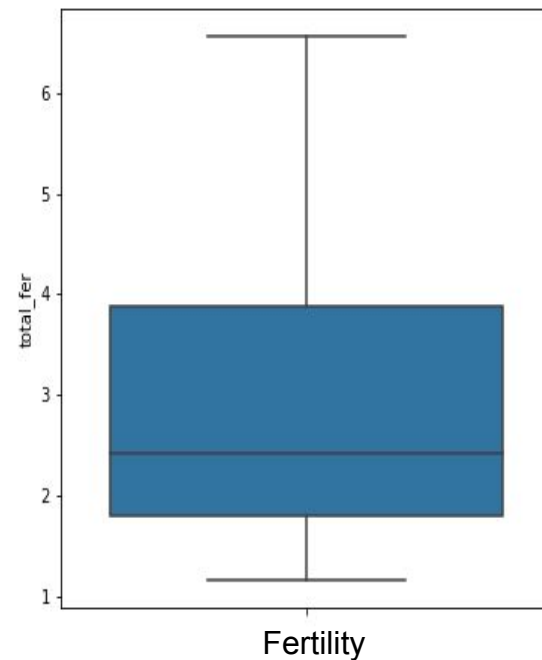
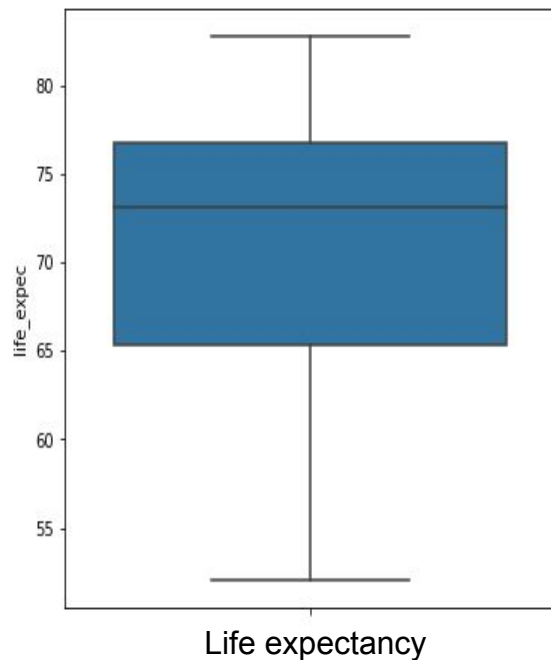
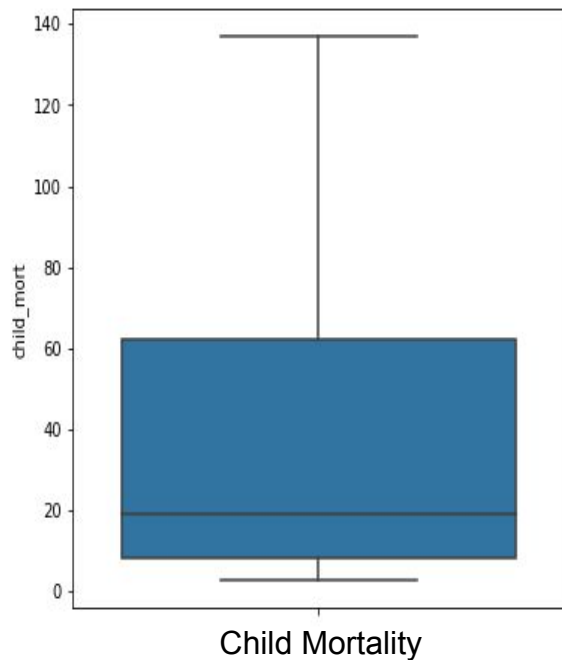
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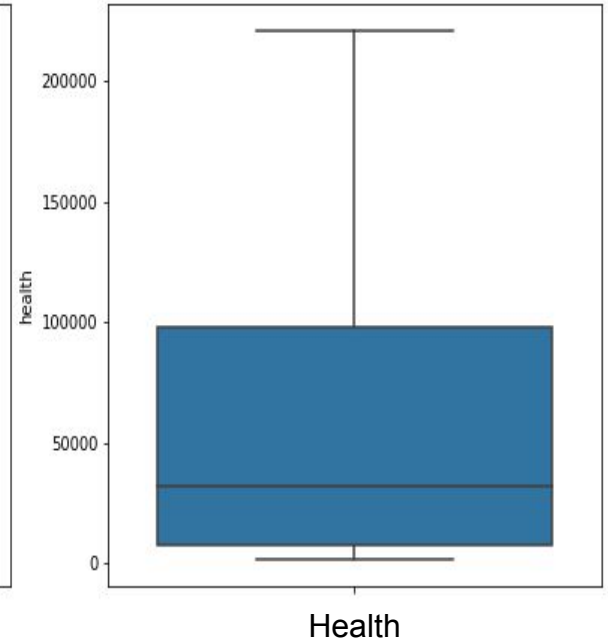
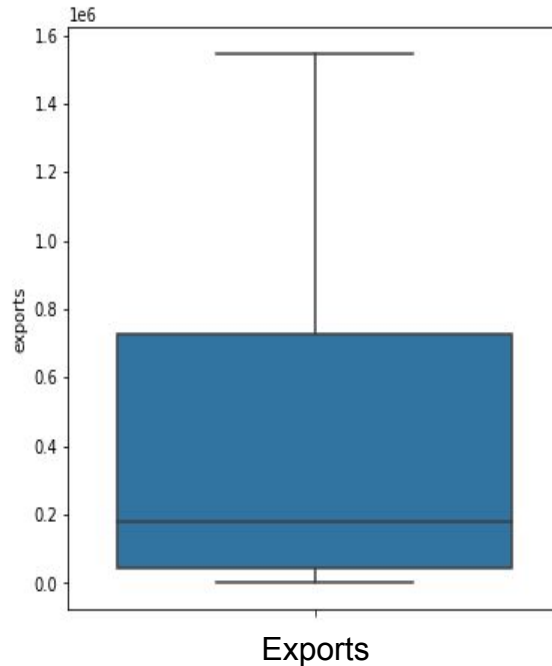
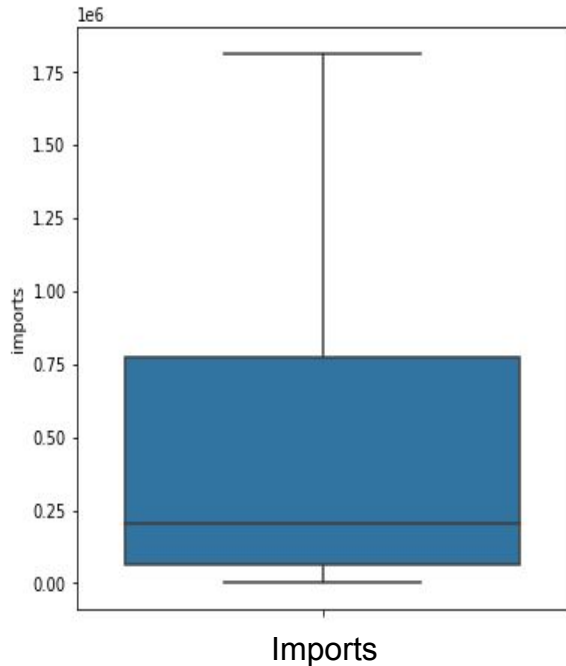
# Introduction

- “HELP International” is an international humanitarian NGO that is committed to fighting poverty and providing the people of undeveloped countries with basic amenities and relief during the time of disaster and natural calamity
- It runs a lot of operational projects from time to time along with advocacy drives to raise awareness as well as for funding purposes
- After the recent funding programmes, they have been able to raise around \$10 million
- This analysis will help in deciding how to use this money strategically and effectively such that the countries that are in the direst need of aid could benefit the most

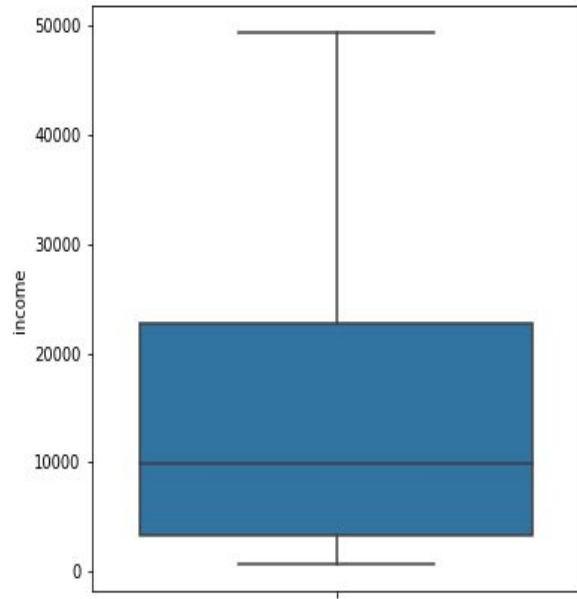
# Distributions of the Input Variables - Social



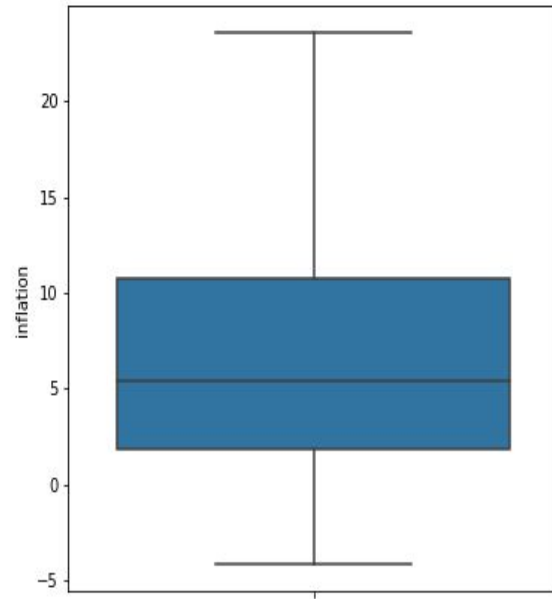
# Distributions of the Input Variables - Economic



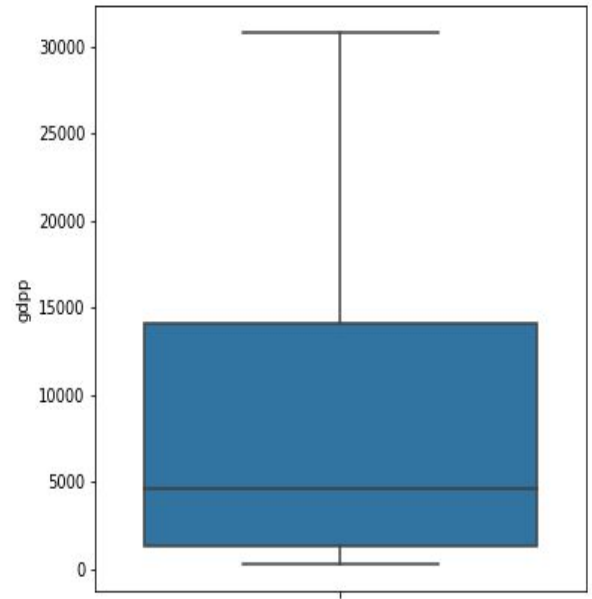
# Distributions of the Input Variables - Economic



Income

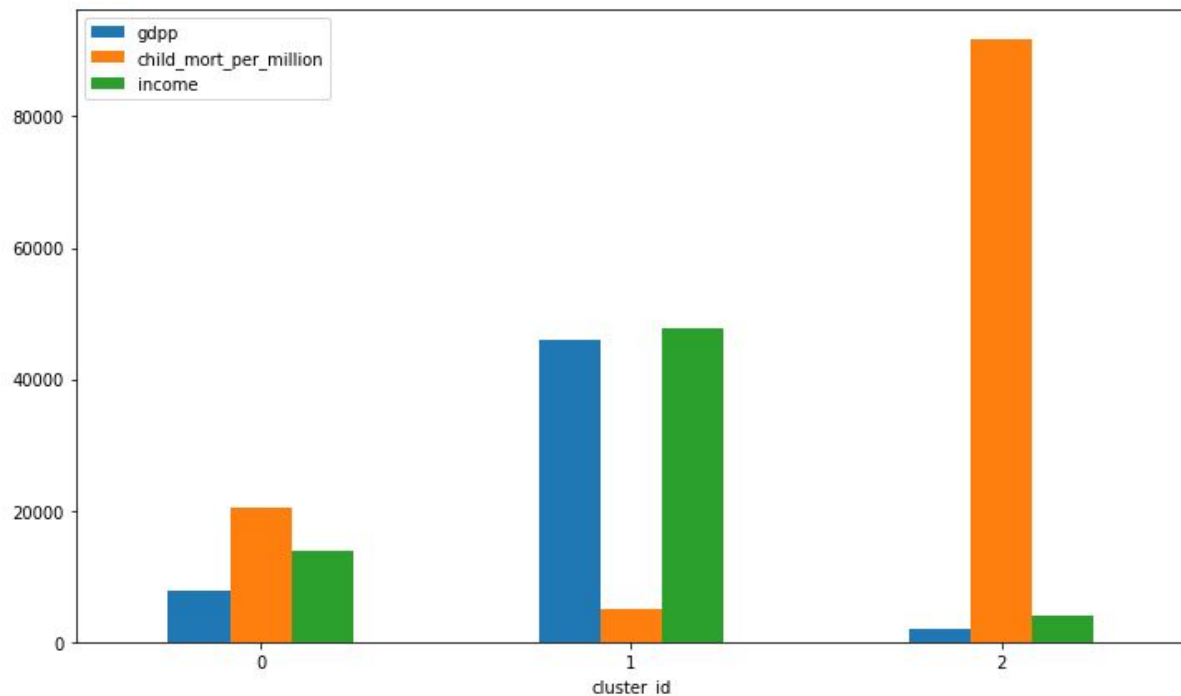


Inflation



GDPP

# Cluster formation using K-means

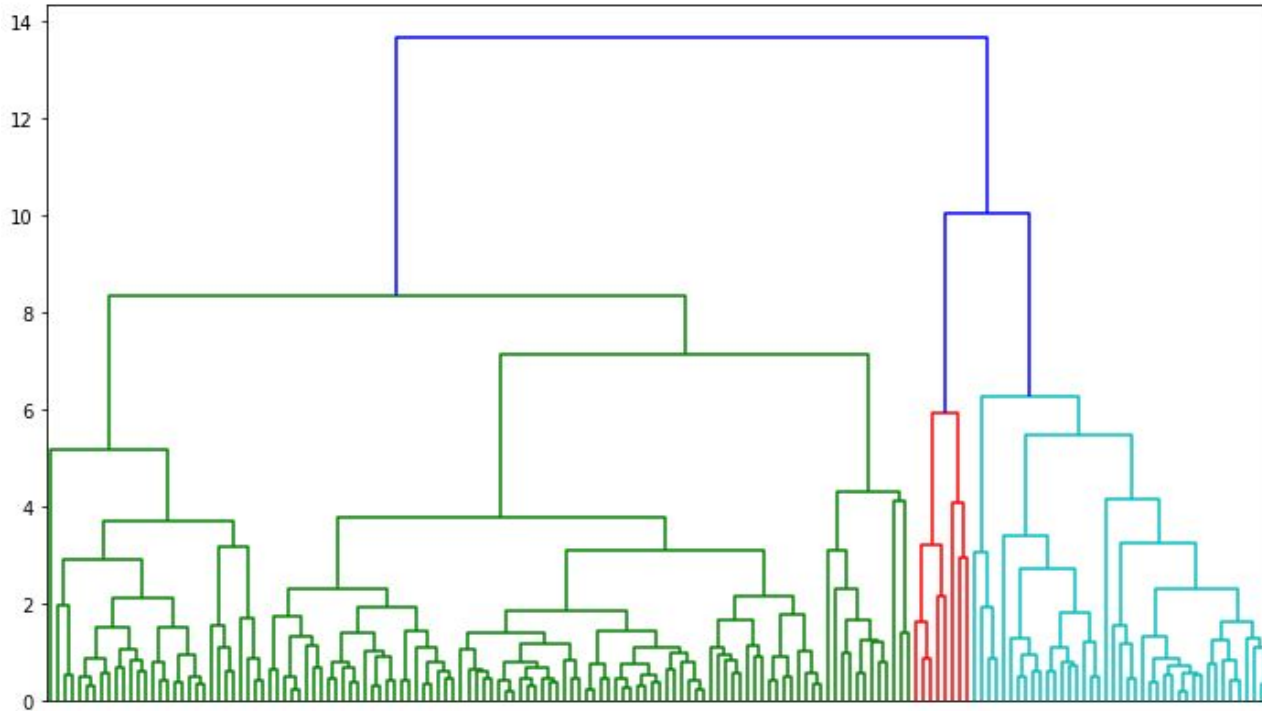


From the bar plot on the left we can see that:

- **Cluster-0** has low average gdpp, low average child mortality and low average income
- **Cluster-1** has intermediate average gdpp, low average child mortality and intermediate average income
- **Cluster-2** has low average gdpp, high average child mortality and low average income

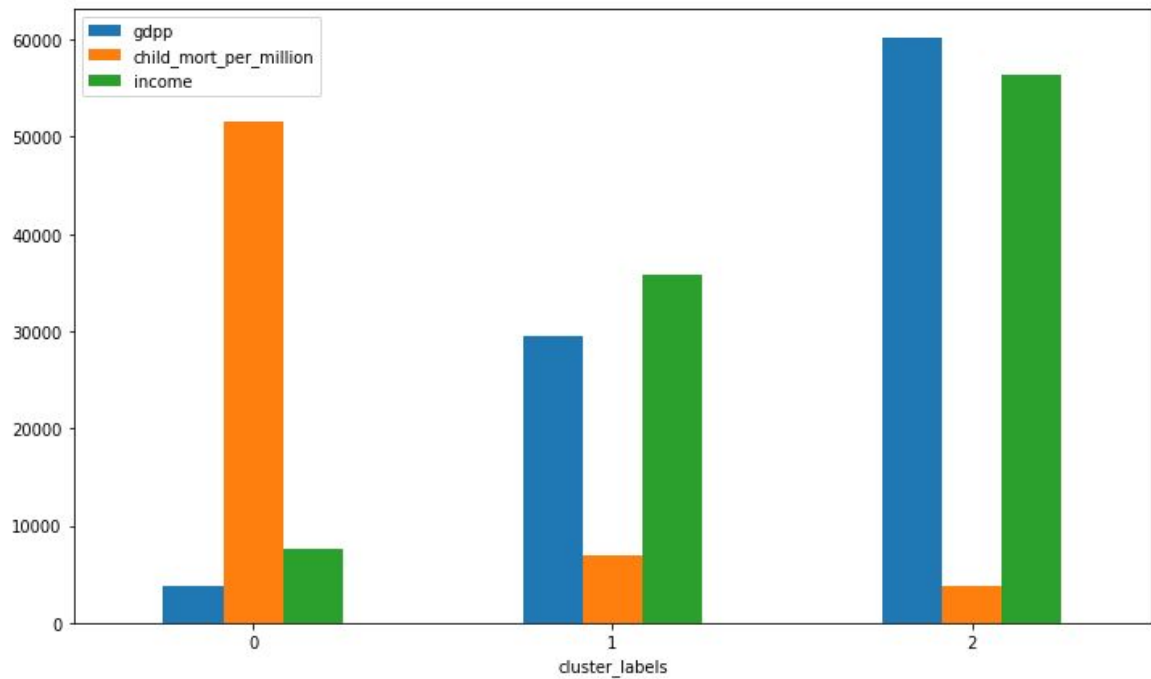
Hence, we can say that the countries in **Cluster-2** are in most dire need of aid.

# Hierarchical Clustering



Formation of clusters using "complete linkage"

# Cluster formation using Hierarchical Clustering



From the bar plot on the left we can see that:

- **Cluster-0** has low average gdp, high average child mortality and low average income
- **Cluster-1** has intermediate average gdp, low average child mortality and intermediate average income
- **Cluster-2** has high average gdp, low average child mortality and high average income

Hence, we can say that the countries in **Cluster-0** are in most dire need of aid.



# Poverty-stricken Countries

According to the K-means clustering and Hierarchical clustering following are the 5 countries (all African) that are in the direst need of aid:

1. Burundi
2. Liberia
3. Democratic Republic of the Congo
4. Niger
5. Sierra Leone

