

Exploratory Data Analysis for Covid-19 in Nigeria.

Executive Summary

Purpose

The purpose of this report is to intimate the general public and health stakeholders on the extent and impact of the ongoing Covid-19 outbreak so as to influence practical steps and strategic approach towards disease prevention and optimum budget allocation.

Problem Statement

Due to the novelty of the current disease outbreak, little is known of the rate of spread, incubation period, vulnerability and other indices.

Likewise, in order to debunk the myths and misconceptions surrounding the disease outbreak, by the public, it is very pertinent that adequate data is provided as evidence to measure the extent of spread, impact as well as factors influencing spread.

Summary

From the data gathered, we have been able to observe the states and regions affected the most and possible indicators responsible, for both infections and death, such as age, population, vulnerability index etc. We were also able to measure the economic impact of the outbreak on the GDP of the country due to shifts in budgetary allocation.

Data Overview/Methods

We were able to gather passive data from reports generated across the globe and within Nigeria i.e. Through Web scraping from Nigerian Centre for Disease Control, World Health Organization and other data of Nigeria's GDP.

The data gathered featured all states within the country and their corresponding information. These data was cleaned and manipulated to extract the specific information needed for the analysis.

Analysis

We analyzed the data to observe the top 10 states affected by the virus and their progression, which would aid in emergency and effective budgetary allocation in such states.

We also observed the daily rate of infection across the country, as well as the maximum number of new cases to check the trend of disease progression and the interacting factors.

We also observed the vulnerability index, Population density, Age and Region to further understand how these factors have been responsible, individually and collectively, in the spread of the disease.

We then compared the GDP across the different quarters of the year 2020 to observe the impact of the disease on the country's economy.

Results/Recommendations

From our analysis, we observed that Age and Population have been highly implicated as a risk factor in the infection and spread of the disease.

Furthermore, the South Western region seems to be affected the most which in part could be due to its population while the Northern parts appear to have less cases in comparison, perhaps due to under-reporting or insufficient awareness.

We therefore recommend that more work is done in disease reporting, awareness and social mobilization while more strategic approaches are taken to curtail the disease.