

COVID-19 in Nigeria: Rural-urban Socio-economic Implications

This project is part of a Capstone Project conducted to fulfil the requirements for completing the Coursera-IBM Data Science Professional Certificate Program.

The COVID-19 pandemic has had varying impacts on countries, and on regions within each Country. Nigeria is no exception. The pandemic - infections, testing, deaths - has exposed some of the pre-existing disparities in both social and economic factors, some of which have accentuated the differences in the severity of the impact from region to region. While some governments are aware of some of these disparities and their effects on the severity of the pandemic, many governments are met with the current challenge of dealing with response to the virus in real-time, with little effort or resources to spare for a more wholistic view of the challenge for a more coordinated response.

A better understanding of this wholistic view vis-a-vis socio-economic indicators, will help the Nigerian government better prepare for whatever future pandemics or epidemics may occur.

Population density, access to healthcare facilities, and the economic wherewithal to successfully ride out such a disruptive event as the pandemic, are some of the factors that will be explored in this project. Data will be accessed from the Nigeria Bureau of Statistics.

The data will comprise:

- a. Population Density in Nigeria by States
- b. Consumer Price Index by States
- c. Unemployment Data by States
- d. COVID-19 latest Data by States
- e. Access to Healthcare facility Indices by States

Foursquare location data will be utilized to assess availability of healthcare services in specific cities and neighborhoods. This information will be used, together with the population data, to determine number of Medical facilities per 100,000 people as an index for access to healthcare. The result will be compared against published data on access to healthcare facility indices by States. While the comparison is not expected to show much similarity, owing to the different methodology used and the inherent cons with each, both data sets can throw more light on the issue of access to healthcare. Moreover, the Foursquare location data should show the level of information that is available to the population as the world moves more into the digital space for seeking information.

The information from Foursquare will be juxtaposed with the COVID-19 data as well as other socio-economic datasets to assess areas hardest hit by the pandemic and should show some of the factors behind the seeming disparity in pandemic severity.

Ultimately, the government of Nigeria, both at the National and State level, should find this assessment useful for planning and implementation, and for better preparedness for future public health crises that may occur.