International Journal of Science and Innovative Research-Novus Volume: 02, Issue: 04, 2021 http://ijesir.org/april-2/ Registration Code: 02599290224

ISSN: 2724-3338

IJESIR PUBLISHERS
International Journal of Science and Innovative Research
Novus
Trentino, Italy

Volume: 02, Issue: 04, 2021

Evolution of the COVID-19 Pandemic and Evaluation of Government Measures on the Reproduction Rate in Chad as June 30, 2020

Paper id: 0100040IJESIR

Abstract: The objective of this study was to take stock of the evolution of the COVID-19 pandemic in the world, model its evolution and assess the impacts of government measures on its instantaneous reproduction rate in Chad on the date of June 30, 2020. The exploratory analysis revealed that the evolution of this global health crisis has remained exponential and variable by country and by subcontinent with an average growth in infection cases of 7.0% per day. In addition, exposure to the COVID-19 risk which implicitly reflects the level of development of the countries is not correlated with the results achieved in the management of the pandemic. The countries exposed to the COVID-19 risk, mainly in sub-Saharan Africa, are able to contain, with a few exceptions, the evolution of cases of infections and deaths, for having put in place government measures following the recommendations of the WHO or for epidemiological factors. However, a few countries end up with a high proportion of active cases. Countries believed to have low exposure to COVID-19, mainly in the Western block, have recorded contrasting developments in the pandemic. Modeling the evolution of the pandemic in Chad has revealed that an average of 12 infected people per day escape the surveillance and control of the pandemic. In addition, the evaluation of government measures showed that the sanitary measures lowered the reproduction rate (R_t) by 28.5% and a 1% increase in the rate followed causes it to decrease by about 25.4%. On the other hand, ad-hoc border opening measures aimed at passenger arrivals led to an increase in the R_t of 20.6%. It is also observed that the measures to reduce displacements and / or containment only act on the R_t with a delay of 4 to 5 days, with the start of a significant decrease of 29.6 % of reproduction rate.

Keywords: Covid-19, infection, instantaneous reproduction rate

Authors: Gouh Pinabey Nathaniel*, Abdou Abdallah