

Research Article

The First 100 Days: A Review and Analysis of the Evolution of the Covid-19 Pandemic in the West African Economic and Monetary Union (WAEMU)

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Abstract

Objectives: The West African Economic and Monetary Union (WAEMU) zone recorded its first case of confirmed acute respiratory disease due to coronavirus on March 2, 2020. Since then, countries throughout the zone have adopted stringent actions to protect the populations from the infection proliferation. This study presents the current state of the coronavirus disease (COVID-19) in the Union, with a focus on the first confirmed case, death and recovered history, sub-regional safeguards, preparedness among national governments, and socio-economic impacts.

Methods: We conducted a review and analysis of the current literature. Additionally, Ordinary Least Squares regressions and ratio analysis were used for data treatment, and the forecast of coronavirus confirmed cases of infection, deaths, and recovery based on 110 days' historical data.

Results: The findings revealed that most of the first confirmed cases were imported, and the first death cases are mostly aged people with antecedent health issues. According to forecasts, Benin, Togo, and Burkina Faso will record less confirmed cases of COVID-19 over time. Meanwhile, Benin, Togo, and Guinea Bissau will register the less number of deaths and recovered.

Conclusion: Though great efforts were made to prevent the disease spread, more efforts are required on the curative point of view.

Keywords: COVID-19 (coronavirus), pandemic, west african economic and monetary union (WAEMU)

Cite This Article: Bouraima MB, Zonon BIP, Qiu Y. The First 100 Days: A Review and Analysis of the Evolution of the Covid-19 Pandemic in the West African Economic and Monetary Union (WAEMU). EJMI 2020;4(4):405–413.

The respiratory virus coronavirus disease 2019 (COVID-19) that appeared in the city of Wuhan, China, in December 2019 has so far exhibited its capacity to produce severe outbreaks in restricted settings and traverse borders succeeding human movement patterns. The Severe Acute Respiratory Syndrome coronavirus 2 (SARS-CoV-2) was proclaimed on January 30, 2020, by the World Health Organization (WHO) as a Public Health Emergency of universal apprehension.^[1] Due to a considerable rapid-

ity in cases in the United States, the WHO declared that the country could shortly become the epicenter of the coronavirus pandemic on March 26, 2020.^[2] In Africa, the first case was detected in Egypt from a non-national on February 15, 2020.^[3] Much hypothesis has been made on whether the COVID-19 virus is less transmitted at a warmer temperature. This speculation results in the production by some European countries of policies believing in diminution transmission frequencies during the summer

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Submitted Date: June 13, 2020 **Accepted Date:** July 27, 2020 **Available Online Date:** August 14, 2020

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period,^[4] and the confidence that little epidemics will occur in African countries in comparison to their European counterparts. However, based on Nkengasong,^[5] Africa is at high risk for the introduction and proliferation of the virus due to trade and huge travel volume between Africa and other parts of the globe. According to Nkengasong and Mankoula,^[6] the repercussion might be catastrophic in Africa, where most countries have inadequate health-care systems, without antecedent immunity, and with neither vaccines nor treatment.

As a consequence, various actions have earlier been carried out to intercept and supervise feasible cases imported from foreign countries.^[7] Literature available so far, reveals that efforts have been made on the research of the coronavirus disease issues in Africa.^[8–10] Nevertheless, no study is available that describes the COVID-19 pandemic in the West African Economic and Monetary Union (WAEMU). Therefore, herein, we study the evolution of the coronavirus disease in WAEMU countries, the sub-regional security safeguards, preparedness among national governments, and socio-economic impact. We complete the study with a forecast, based on 110 days' historical data, of COVID-19 confirmed cases of infection, related deaths, and recovery in the WAEMU countries.

Methods

Study Area

The WAEMU is an organization of eight francophone West African states within the Economic Community of West African States (ECOWAS). It was established on January 10, 1994, to promote economic integration between the countries that have the CFA (Communauté Financière Africaine) franc as ordinary currency and share a customs union.

Data Collection Sources

The data on the daily confirmed cases and related reported deaths and recovery from the eight WAEMU countries were obtained from the Worldometer database (<https://www.worldometers.info>) and the COVID-19 dashboard of the Center for Systems Science and Engineering of John Hopkins University over a period from March 2, 2020, to June 20, 2020. The data were reviewed with data from the Ministry of Health website for the corresponding countries for conformity.

Statistical Analysis

Summary statistics were used to present the data, and ordinary least square regressions were performed for forecasting purposes. P-values <0.05 were considered statistically significant. The statistical analysis was conducted using Stata/SE 15.1

Evolution of Coronavirus (COVID-19) in WAEMU Zone

Synopsis of the First Confirmed COVID-19 Case

Over 120 million people live in the eight countries of the WAEMU. The first confirmed COVID-19 case in the sub-region happened in Senegal on March 2, 2020, just two months after the first emergence of pneumonia of mysterious sources in the city of Wuhan, China. Table 1 presents details of the disease appearance in the zone.

COVID-19 and Sub-Regional Security Safeguards

WAEMU sub-region, which was untouched until late February, is increasingly threatened by the spread of the pandemic. Thus, following the Memorandum No. 057 of March 11, 2020, from the President of the WAEMU Commission, necessary information about the mode of disease transmission and the clinical signs are brought to the attention of all and the individual precautionary measures to be taken both to preserve individuals and to protect those around them are provided. Hand washing is the forefront of protection upon the coronavirus. Governments authorities and the WAEMU commission encouraged other global security precautions. Among others: regularly washing hands with soap and water, wrapping mouth and nose when sneezing and coughing, avoiding people who are sick, social out space approach, and abstaining from contact with mouth, nose, and eyes with unwashed hands. Attempts are in place by some countries to show adequate masks use and hand washing methods. For instance, at the University of Abomey-Calavi in Benin, students have designed an automatic hand-washing device that works with solar energy.^[11] With the rapid increase of confirmed cases, social distancing is decisive for reducing the further proliferation of the disease.^[20] Nevertheless, the subsistence of a vast population has been disturbed by social distancing, which shows premises of an awful financial shock. In Benin, social distancing measures have been implemented by the government through the closure of schools.^[21] In Burkina Faso's side, the ban on large gatherings was applied by the national government.^[22]

In Mali, the social distancing measures have been proved by the Islamic High Council to be incompatible with the rules of collective prayer; thus, as many anticipated, "the distance of one meter will not be respected in mosques, especially during this Ramadan period".^[23] That prediction was later proven correct. The total number of COVID-19 confirmed cases in Mali spiked from around 300 to nearly 1000 between the beginning and the end of the Ramadan. Although social distancing remains a big challenge for the WAEMU countries, studies have shown it to have a considerable effect in reducing COVID-19 cases in countries like China, the USA, and South Korea.^[24,25]

Table 1. First confirmed COVID-19 confirmed cases and deaths in the WAEMU

Countries	First COVID-19 confirmed case		First death case
	Date	Patient	Date
Benin	March 16, 2020	A 49-year-old male of Burkinabe nationality who returned to Benin on March 12. ^[12]	April 6, 2020 March 17, 2020
Burkina Faso	March 9, 2020	A couple who returned from France. ^[13]	April 26, 2020
Guinea Bissau	March 25, 2020	A Congolese U.N employee and an Indian citizen. ^[14]	
Ivory Coast	March 11, 2020	A 45-year old Ivorian man who had recently been to Italy. ^[15]	March 29, 2020
Mali	March 25, 2020	A 49-year-old woman and a 62-year-old man who had recently been to France. ^[16]	March 31, 2020
Niger	March 19, 2020	A 36-year-old Nigerien man who had recently been to Togo, Ghana, Ivory Coast, and Burkina Faso. ^[17]	March 24, 2020
Senegal	March 2, 2020	A 54-year-old French national who flew back to Dakar on February 26. ^[18]	March 31, 2020
Togo	March 6, 2020	A 42-year-old Togolese who traveled between Turkey, France, Germany, and Benin before returning to Togo. ^[19]	March 27, 2020

Preparedness Among National Governments

Nearly every single country attempts to keep the disease away to abstain from reproducing the afflictions of Middle East Respiratory Syndrome (MERS) and SARS.^[20,26] For instance, Benin established a health barrier around ten municipalities most exposed to the pandemic starting Monday, March 30, 2020,^[27] at midnight. Burkina Faso announced the development of a response plan budgeted of over 9 billion covering several aspects of the fight against COVID-19, including rapid response, epidemiological surveillance, diagnostics, and communication. The Government of Ivory Coast and the World Bank signed a \$ 35 million credit consensus from the International Development Association (IDA) to bring up efforts to fight the coronavirus at the national level.^[28] In Mali, a \$ 25.8 million International Development Association (IDA) 50 % credit and 50% grant has been approved by the World Bank to help the country's response to COVID-19.^[29] Other countries such as Senegal, Niger, and Togo have obtained the approval of the World Bank to have a \$ 20 million, \$ 13.95 million, and \$ 8.1 million credit respectively from the International Development Association to fight coronavirus (COVID-19) and better respond to the crisis.^[30–32]

The Economic Impact of COVID-19

Unless the region imperatively gets more help, the disease will continue to cut a mortal and pitiless path across it, with ever terrifying health and various implications and impacts

on the WAEMU zone. The pandemic which affects all continents will have a direct effect on the economies of the WAEMU zone through international trade, migrant remittance flows, national economic activity, and public finances. The countries of the Union mainly export raw materials and import what they consume. In 2017, the five (5) main export products of the Union were gold, cocoa, petroleum, cashew nuts, and cotton. They represent 64.72% of the total exports of goods. Gold, despite its asset quality during a crisis, experienced very high price volatility in the first quarter due to the many uncertainties raised by COVID-19. Although cocoa prices were up in the first two months of 2020, lower demand due to the spread of COVID-19 contributed to lower prices in March. This situation could persist and have an impact on exports from Ivory Coast, the world's leading cocoa producer, whose cocoa products represent 38.6% of its total goods exports in 2018. Oil prices are falling quite sharply, with more than 60% lost in their value in the first quarter of 2020. This fall is the result of an imbalance in the market between abundant supply and falling global demand. Ivory Coast, Niger, and Senegal are the central countries in the zone whose exports are exposed. International cotton prices are strongly impacted by the sharp drop in demand caused by the closure of clothing and textile stores, as well as industries involved in this sector. Benin is the most exposed country in the area, with cotton products representing 56.9% of its total goods exports in 2018. Many other examples can be cited regard-

ing the negative impact of the pandemic on the WAEMU economy as a whole and its countries specifically.

Social Impact of COVID-19

The Africa continent, in general, of which the WAEMU zone has also been hit by the COVID-19 and is expected to face the first recession in the region in 25 years with a disturbance to many families.^[33] In an area, where approximately 8 out of 10 people take part in low wage informal employment and often just making ends meet, the subsistence, well-being, and incomes of many families and their human resources are exposed. While the disease will dispossess individuals of earnings and resulting in not having money to pay for treatments, the consequence is already felt more extensively across the population. Social distancing actions reduce economic activity, disturbances of the supply chain influence remittances, and prices from abroad dry up. Initially, self-employed and informal sector employees in metropolises, like market merchants, are walloped. The urban poor already faced grumblings of dissatisfaction at the supplementary hardship because of lockdown inflicted by the government in some WAEMU's megacities. Additionally, as noticed by Mme Vera Songwe, Executive Secretary of the Economic Commission for Africa, the Africa continent of which WAEMU zone is vulnerable as more than 50% of its urban population is concentrated in slums or informal settlements, and only 34% of Africa families have access to necessary facilities for washing hands. Thus, the preventive measures may not be effective in every area, and may also increase hardship and hinder access to basic needs by part of the population.

Results

As shown in Figures 1-3 below, the maximum number of confirmed cases is in Ivory Coast, followed by Senegal and Mali. Togo has recorded the least amount of confirmed cases over the period. Considering the number of death cases over the period, Mali recorded more deaths, followed by Senegal, Niger, Burkina Faso, Ivory Coast, Guinea Bissau, Togo and Benin. The number of people who recovered from the COVID-19 in the West African Economic and Monetary Union (WAEMU) did not follow the same trend per country, just as has been observed for the number of confirmed cases and the number of deaths. The most significant number of recovery was recorded for Senegal, followed by Ivory Coast and Mali.

Table 2 confirms the graphical observations and gives further details. The mean values reveal that the rate of infection per country has not been the same as the maximum number of infections. There has been a higher rate of infection in Senegal, followed by Ivory Coast and Mali. The slowest rate of infection over the period was recorded in Benin. For the deaths cases, there has been a faster rate of

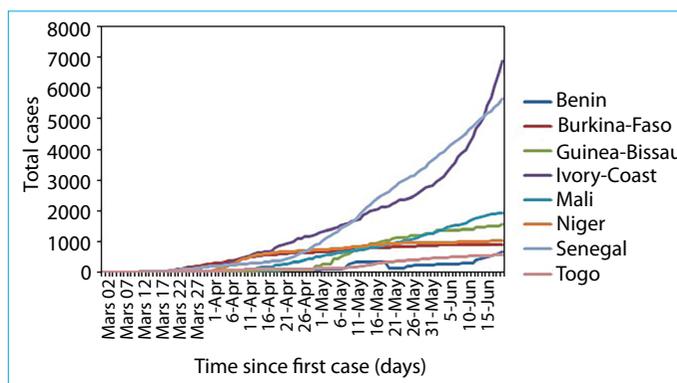


Figure 1. Evolution of the number of COVID-19 confirmed cases over the study period.

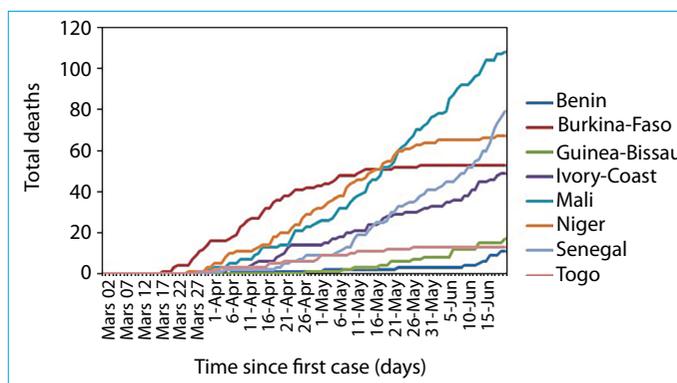


Figure 2. Evolution of the number of COVID-19 deaths cases over the study period.

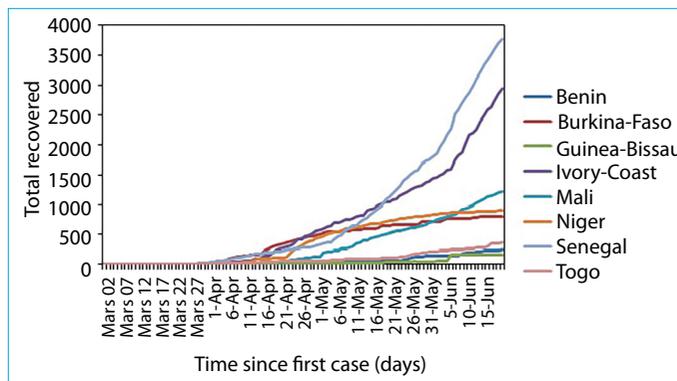


Figure 3. Evolution of the number of COVID-19 recovered cases over the study period.

death in Mali, followed by Burkina Faso and Niger, with the lowest rate observed in Benin. The highest recovery rate is in Senegal, with Ivory Coast, Niger, Burkina Faso, Mali, Togo, Benin, and Guinea Bissau coming next.

The ratios presented in Table 3 give us to what extent the countries have been affected in terms of lives lost during the period of study. Unlike the information such as maximum, minimum, average, rate, etc. obtained from the descriptive statistics Tables, the ratios inform us of the actual

Table 2. Summary statistics of confirmed cases, number of deaths, and number of recovered

Countries	n	Mean	SD	Min	P25	P75	Max	Med
Confirmed cases								
Benin	110	132.154	155.799	0	6	244	597	59
Burkina Faso	110	527.836	326.010	0	222	814	899	631
Guinea Bissau	110	503.554	582.750	0	2	1114	1492	53
Ivory Coast	110	1543.600	1642.273	0	165	2366	6444	1114
Mali	110	580.609	616.072	0	18	1015	1906	380
Niger	110	553.181	397.583	0	18	943	1020	690
Senegal	110	1583.891	1755.730	2	142	2976	5475	643
Togo	110	187.645	189.326	0	25	373	547	97
Deaths								
Benin	110	1.827	2.237	0	0	3	11	1
Burkina Faso	110	32.509	20.859	0	12	52	53	42
Guinea Bissau	110	3.418	4.879	0	0	6	15	1
Ivory Coast	110	16.154	15.483	0	1	30	49	14
Mali	110	33.881	35.398	0	1	63	107	22
Niger	110	30.572	26.199	0	1	61	67	28
Senegal	110	17.736	21.553	0	0	34	76	8
Togo	110	6.645	5.213	0	1	12	13	6
Recovered								
Benin	110	60.481	72.364	0	0	83	238	30
Burkina Faso	110	381.881	306.749	0	23	672	810	448
Guinea Bissau	110	32.818	50.783	0	0	42	153	4
Ivory Coast	110	705.136	804.822	0	4	1188	2863	444
Mali	110	308.354	373.223	0	0	574	1192	102
Niger	110	382.672	363.848	0	0	775	901	338
Senegal	110	833.309	1077.573	0	27	1416	3716	280
Togo	110	91.845	100.935	0	1	133	353	62

n: Number.

Table 3. Ratios of the number of deaths over confirmed cases and the number of recovered over confirmed cases

	Benin	Burkina Faso	Guinea Bissau	Ivory Coast	Mali	Niger	Senegal	Togo
Mean deaths/confirmed cases ratio	0.012	0.049	0.002	0.008	0.048	0.041	0.007	0.037
Mean recovered/ confirmed cases ratio	0.285	0.480	0.029	0.268	0.262	0.374	0.350	0.347

situation based on confirmed cases. The ratios are to be interpreted in the opposite direction to each other, i.e., the lower the death to confirmed cases ratio, the better, and the higher the recovered to confirmed cases ratio, the better. As such, per confirmed cases, Guinea Bissau has been less affected in terms of deaths, followed by Senegal, Ivory Coast, Benin, Togo, Niger, Mali, and Burkina Faso. This suggests that Burkina Faso is the country which has suffered more loss as per confirmed cases. We recall that Burkina Faso was the country in the Union to record the first death

case. Considering the recovery level, Burkina Faso also comes first, followed by Niger, Senegal, Togo, Benin, Ivory Coast, Mali, and Guinea Bissau. This reveals that, in terms of curative measures per confirmed cases, Burkina Faso has performed better than the other countries of the Union, even though it is the third country to record the first recovered case in the Union after Senegal and Togo.

The results presented in Table 4 help us forecast the expected number of new cases, the number of deaths, and the number of recovered to be confirmed per day given the

Table 4. OLS regression of confirmed cases over time, number of deaths over time and numbered of recovered over time

Country	Benin	Burkina Faso	Guinea Bissau	Ivory Coast	Mali	Niger	Senegal	Togo
Confirmed cases								
Coefficient	4.182	9.896	16.782	47.208	18.264	11.905	51.079	5.574
P-value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-96.920	-21.406	-427.865	-1076.461	-433.066	-107.555	-125.019	-121.714
Observations	110	110	110	110	110	110	110	110
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pseudo R-square	0.732	0.938	0.844	0.840	0.894	0.912	0.861	0.882
Adjusted R-square	0.730	0.937	0.842	0.839	0.893	0.911	0.859	0.880
Death								
Coefficient	0.057	0.621	0.130	0.469	1.051	0.801	0.610	0.159
P-value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-1.361	-1.993	-3.831	-9.906	-24.502	-13.894	-16.141	-2.194
Observations	110	110	110	110	110	110	110	110
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pseudo R-square	0.671	0.903	0.729	0.936	0.898	0.952	0.816	0.950
Adjusted R-square	0.667	0.902	0.726	0.935	0.897	0.951	0.814	0.949
Recovered								
Coefficient	2.046	9.394	1.265	23.177	10.673	10.916	29.509	2.900
P-value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-53.111	-139.381	-37.412	-581.219	-283.993	-223.193	-804.471	-69.121
Observations	110	110	110	110	110	110	110	110
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pseudo R-square	0.814	0.954	0.631	0.843	0.832	0.916	0.763	0.840
Adjusted R-square	0.812	0.953	0.628	0.842	0.830	0.915	0.760	0.838

Table 5. OLS regression of Number of deaths over confirmed cases and Number of recovered over confirmed cases

Country	Benin	Burkina Faso	Guinea Bissau	Ivory Coast	Mali	Niger	Senegal	Togo
Number of deaths/confirmed cases								
Coefficient	0.013	0.063	0.007	0.009	0.057	0.062	0.012	0.025
P-value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	0.072	-1.066	-0.516	2.061	0.612	-3.981	-1.564	1.934
Observations	110	110	110	110	110	110	110	110
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pseudo R-square	0.817	0.988	0.871	0.938	0.994	0.898	0.985	0.830
Adjusted R-square	0.816	0.987	0.870	0.937	0.993	0.897	0.984	0.829
Number of recovered/confirmed cases								
Coefficient	0.426	0.906	0.074	0.487	0.601	0.843	0.602	0.517
P-value	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	2.965	-86.115	-4.398	-47.348	-40.621	-83.925	-119.515	-5.242
Observations	110	110	110	110	110	110	110	110
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pseudo R-square	0.839	0.927	0.719	0.990	0.984	0.850	0.961	0.942

current state of the pandemic. The model is significant for all the countries (Prob>F=0.000), and the coefficients are also all significant (p-values=0.000). As for the explanatory

power of the independent variable regarding the dependent variable, the r-squares suggest a robust explanatory power (>70% for the confirmed cases, >65% for the deaths

and >60% for the recovered). We anticipate a minimum of 4 new confirmed cases per day in Benin, 9 in Burkina Faso, 16 in Guinea Bissau, 47 in Ivory Coast, 18 in Mali, 11 in Niger, 51 in Senegal and 5 in Togo. Therefore, given the current state, Benin and Togo are the countries in the Union that are expected to record fewer new cases in the coming days. Still, Senegal and Ivory Coast are highly exposed.

The expected daily number of death is very low for Benin, Guinea Bissau, and Togo. The highest expectation is for Mali, with one (1) death a day (1.051) followed by Niger, Burkina Faso, and Senegal, with about one (1) death every two days (0.801 per day for Niger, 0.621 per day for Burkina Faso and 0.610 per day for Senegal).

Along with the expected confirmed cases and deaths, a forecast of expected recovery overtime was also made. Senegal leads the way with 29.509 expected to recover every day, followed by 23.177 in Ivory Coast, 10.916 in Niger, 10.673 in Mali, 9.394 in Burkina Faso, 2.900 in Togo, 2.046 in Benin, and 1.265 in Guinea.

So far, observations show that Benin, Guinea Bissau, and Togo are the only three countries that are expected to record fewer deaths from COVID-19 over time. However, they are also the three countries that are expected to register fewer recovered. These suggest that even though the measures they have taken to prevent the COVID-19 spread may be useful, they still need to make more effort on the curative point of view.

The results presented in Table 5 are a forecast of the expected number of deaths per confirmed cases, and the expected number of recovered per confirmed cases for each country of the WAEMU. As can be seen, the models, as well as the coefficients are all significant, and the r-squares are >80% for the number of deaths per confirmed cases and >70% for the number of recovered per confirmed cases.

For each new confirmed case, there is more death expectation in Burkina Faso (0.063), followed by Niger (0.062), Mali (0.057), Togo (0.025), Benin (0.013), Senegal (0.012), Ivory Coast (0.009) and Guinea Bissau (0.007). For the expected number of recovery, Burkina Faso is again ahead with 0.906 recovered for one new confirmed case. Niger follows with 0.843, then Senegal (0.602), Mali (0.601), Togo (0.517), Ivory Coast (0.487), Benin (0.426) and Guinea Bissau (0.074). We see that Burkina Faso is expected to record more deaths and more number of recovered per new confirmed cases, compared to other countries of the Union. For each new confirmed case, Guinea Bissau is expected to record less death, but also less recovery. It is followed by Ivory Coast and Senegal in fewer deaths expectation, and by Benin and Ivory Coast in fewer recovery expectations. Concerning Guinea Bissau, these confirm our findings as per which,

even though the measures some countries have taken to contain the COVID-19 spread may be effective, they still need to make more effort on the curative point of view.

Suddenly appearing and given a harsh blow to the world economy, the COVID-19 pandemic has surprised every country and brought changes everywhere it stricken. Spreading all over the world every day, the pandemic reached Africa and gave rise to the same turmoil. The WAEMU countries also experienced, and are still experiencing, changes in their economies and social structures. As the focus is put on the pandemic, governments are working actively along with citizens to stop or at least reduce the spread of the disease. Most of the preventive measures implemented aim at reducing the spread, and given their nature, they slow down the economy and impose social restrictions that are seen by many by separating humankind, and by others by uniting families. Nonetheless, the continuous implementation of these measures will, in the long run, have more devastating than positive impacts.

Besides, another fight is to limit the death rate and increase the recovery rate. Even though many efforts are being made by African countries to find a cure, no treatment or vaccine has been officially recognized so far by the World Health Organization (WHO). As such, there is uncertainty about how long the WAEMU countries will remain under the pressure of the pandemic.

The countries which are currently less affected in terms of confirmed cases and deaths should try to keep the pace and bend the curve lower if possible. As for the countries of the Union having the most considerable confirmed cases and deaths forecast, they should regard it as an awareness to help them review and strengthen their policies and strategies to tackle the pandemic.

The number of new confirmed cases and death numbers is increasing, and the forecasts let envision more soon. The present forecast may experience changes given that the WAEMU countries come up with more effective measures, and if the populations make more efforts in respecting the already existing preventive directions. The WAEMU economies may also be kept stable and slowly restart if, the governments can unite and cooperate with more control at the borders and new safety policies regarding transport.

From the social point of view, it is time for the WAEMU governments to provide rural areas with more logistic and economic supports, as well as more information about the pandemic through sensitization. In the countries of the Union, as the largest part of the population in rural areas is usually uneducated, they may be a threat to themselves. As such, educating and sensitizing them, together with extra support to meet their basic needs, are the most effective

way of having them effectively implement the protective measures against the disease.

Conclusion

In this study, we present an overview of the COVID-19 pandemic in the countries of the West African and Economic Union (WAEMU). From the very first case recorded in the region through the period of study, the main measures taken by the governments to face and tackle the pandemic has been highlighted along with the economic and social impact, as well as the future perspectives. It appears that most of the first confirmed cases are imported. Also, the early deaths confirmed cases are from aged people who usually have health antecedents. According to the forecast, more cases are expected in the coming days, which may impose new restrictions or the continuation of the current preventive measures, which will have, in the short and long term, a severe negative impact on individuals and businesses, and the countries' economic resources in general. Forecasts suggest that Benin, Togo, and Burkina Faso are the first three countries that are expected to record less confirmed cases of COVID-19 over time. Benin, Guinea Bissau, and Togo are the ones expected to register the less number of deaths and recovered. These suggest that even though the measures they have taken to prevent the COVID-19 spread may be useful, these countries still need to make more effort on the curative point of view. On a confirmed cases basis, quite a similar conclusion can be drawn. For each new confirmed case, Guinea Bissau is expected to record less death, but also less recovery. The previsions put Burkina Faso and Niger as the two countries which will record more death per confirmed cases.

Disclosures

Peer-review: Externally peer-reviewed.

Conflict of Interest: The authors have no conflicts of interest to disclose.

Authorship Contributions: Concept – M. B.; Design – M. B., B. I. P. Z.; Supervision – Y. Q.; Materials – M. B.; Data collection &/or processing – M. B., B. I. P. Z.; Analysis and/or interpretation – M. B., B. I. P. Z.; Literature search – M. B.; Writing – M. B., B. I. P. Z.; Critical review – Y. Q.

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