



KNOWLEDGE PLATFORM ON INCLUSIVE DEVELOPMENT POLICIES

The COVID-19 pandemic and inequality

*Are Benin's mitigation actions and strategies
inclusive?*



By **African School of Economics**

Published April 2021

INCLUDE

Authors

Leonard Wantchekon (ASE and Princeton University)
Leonie Koumassa (ASE)
Thierry Ogoutchoro (ASE)
Yannick N’Gongang (ASE)

Support

INCLUDE Secretariat

Executive summary

This paper reports on a study evaluating the differential impacts of the coronavirus pandemic in Benin and assessing the measures and policies implemented by the Beninese government to fight against COVID-19. The study seeks to analyse how the different policies responded to differently affected socioeconomic groups, sectors, and regions within Benin societies. We used ordinal logistic regression to measure the effects of COVID-19 on different socioeconomic groups; in particular, how COVID-19 has affected income, activity levels, and employment.

The study also focused on control and mitigation measures introduced by the Beninese government and its technical and financial partners. Among other things, the study made it possible to list some accompanying policies as a priority set out by these socioeconomic groups to mitigate the harmful effects of COVID-19. The study covered four departments (administrative divisions) and targeted 1200 individuals and 327 enterprises.

Key findings

- There was no specific plan implemented by the government for diverse socioeconomic groups separately. Instead, there were interventions from international partners and social promotion centres towards some particularly vulnerable groups.
- Few people benefitted from the mitigation actions promoted by the government. The way the mitigation action for households (removal of electricity and water bills) was implemented did not receive the population's support.
- People with pre-existing medical conditions were not explicitly protected. In most cases, people who died from coronavirus already had the highest risk.
- The pandemic impacted everyone, but very few received the subsidies. Subsidy registration protocols were not accessible or not clear to most of the population, including artisans, transporters and restaurateurs.

Table of contents

Executive summary	3
Table of contents.....	4
Introduction.....	5
Country profile	6
Structure of the economy and economic growth of Benin	6
Population and human development	8
COVID-19 in Benin.....	8
Methodology.....	10
Sample size and sampling strategies for individuals.....	10
Sample size and sampling strategies for formal and informal enterprises.....	11
Limitations	11
Findings.....	12
Population knowledge about and perceptions of COVID-19.....	12
Perceptions of risk of exposure by socioeconomic groups	13
Impacts of COVID-19 on various groups, sectors, and regions in Benin.....	14
Impact of COVID-19 on access to essential services	14
Impacts of COVID-19 on employment by socioeconomic group	17
Impact of COVID-19 on income by socioeconomic group.....	22
Control measures implemented by the government and its partners	24
Mitigation measures	25
Impact of mitigation and control measures on revenues.....	36
Impact of COVID-19 on citizenship and governance	37
Best practices for COVID-19 management in Benin	38
Conclusion.....	39
References	40
Useful links.....	41
Annexes	42

Introduction

The COVID-19 pandemic has caused a substantial negative shock to global demands. Coronavirus-related death predictions for Africa are around 3.3 million (UNECA, 2020) and it has been predicted that the annual growth in Africa would decline from 2.4% in 2019 to between -2.1% and -5.1% in 2020 (World Bank, 2020).

In Benin, following confirmation of the first case on March 16, 2020, the government and its partners set a plan to fight the spread of coronavirus. A national intervention plan of US\$320,338,983 was prepared, and it focused on improving health infrastructure and equipment, communication, provision of health care, and capacity building of health professionals, journalists, and community members (Unicef Benin, 2020). This plan also included proposing mitigation strategies¹ to limit the effects of the pandemic on the socioeconomic activities of populations based on three points: financial support for businesses (US\$108,900,344), financial support for artisans and small traders (US\$8,556,701), and electricity and water bill subsidies for all citizens (US\$9,896,907).

The Beninese population is unequally organized in terms of income, business, and access to information, basic needs and health care. This study seeks to analyse how different socioeconomic groups, by occupation, are each affected by the pandemic and how various mitigation measures targeted these multiple groups differently.

¹ Ministries council meeting report, 11 June 2020

Country profile

Structure of the economy and economic growth of Benin

Benin's economic growth has remained robust (estimated at 6.7% for 2019) over the past two decades (World Bank, 2020); this is partly due to an increase in public investments that rose from 21% of GDP in 2016 to 29.6% in 2019. On the supply side, this growth is attributable to the performance of the agricultural sector, with cotton in the lead (its production rose from 269,222 tons in 2016 to 726,831 in 2019), the vitality of the building and public works sector, the revival of agro-industry activities, and the dynamism of the port of Cotonou. Inflation has remained low, at an estimated rate of -0.1% in 2019, below the West African Economic and Monetary Union (WAEMU) limit of 3%. The CFA franc, pegged to the euro, was appreciated against the dollar over 2017–2019 (AFDB, 2020).

Benin's economy is dominated by the tertiary sector, driven by the dynamism of trade with Nigeria, which represented on average about 48.9% of the nominal GDP over the period 2013–2019. The tertiary sector includes the banking sector, transport and telecommunications, public administration, and other business services. The share of the primary sector, composed mainly of cotton, cashew, and pineapple cultivation, represented on average about 26.9% over the period 2013–2018, while that of the secondary sector, composed mainly of energy and construction, represented 15.9% during the same period. Taxes and duties net of subsidies made up the rest, with an average share of around 8.2% of nominal GDP over the same period (INSAE, 2020).

Table 1 below shows the distribution of nominal GDP by sector of activity in 2019.

Table 1. Distribution of nominal GDP by sector of activity

	Primary	Secondary	Tertiary	Taxes and duties net of subsidies	GDP
GDP growth (%)	5.2	13.6	5.2	10.1	6.9
Weight in GDP (%)	26.9	16.3	48.0	8.8	100.0
Contribution to GDP growth (%)	1.5	2.0	2.5	0.9	6.9

Source: INSAE (2020)

Table 2 below shows the distribution of nominal GDP between the different sectors of the economy from 2013 to 2019, expressed in billions of CFA and the components of the nominal GDP of Benin in terms of expenditure between 2013 and 2019.

Table 2. Distribution of nominal GDP among different sectors of the economy (2013–2019)

	2013	2014	2015	2016	2017	2018	2019
Primary sector	1562.7	1680.4	1776.9	1944.2	2101.2	2223.3	2266.2
Agriculture	1247.4	1317.5	1347.7	1486.8	1648.8	1743.5	1761.6

Breeding, hunting	156.8	188.1	243.7	263.4	263.5	280.6	304.1
Fishing, forestry, and logging	158.5	174.8	185.6	194	188.8	199.1	200.6
Secondary sector	1066.1	1076.5	1103.2	1100	1114.2	1159.9	1375.5
Extractive activities	13.2	24.8	26.1	26.6	28.3	30.5	34.4
Agrifoods industries	463.8	466.7	434.9	443.2	462.9	469.9	531.5
Other manufacturing industries	211.4	214.5	240.8	252.5	246.6	256	300.4
Electricity, gas, and water	71.5	80.2	89.4	53.3	55.5	55.8	60.6
Construction	306.1	290.1	312	324.4	321	347.7	448.6
Tertiary sector	3055.5	3248.7	3315.3	3376.7	3569.7	3865.9	4049.7
Trade	856.3	877.9	867.8	926.9	970.2	1030.6	1035.3
Restaurants and hotels	220.4	240.5	238.8	207.2	216.9	224.1	251.8
Transports	519.3	543	580	629.7	659.1	706.9	795
Post and telecommunications	192.9	201.7	134.2	129.7	135.1	143.1	153.2
Banks and financial organizations	72.6	122.3	106.3	120.1	117.6	121.3	132.5
Public administration and social security	382.5	400	461.1	426.6	461.1	577	511.8
Education	287.6	301.4	334.2	291.1	317.2	331.2	367.4
Health and social work	50.1	60.1	75.3	64.6	70.2	73.2	82.7
Other services	473.7	501.8	517.7	580.8	622.3	658.7	720.2
Total added values	5684.2	6005.6	6195.4	6420.9	6785.1	7249.2	7691.5
Taxes and duties net of Subsidies	498.3	553.7	537.4	584.3	590.2	672.8	740.8
GDP	6182.6	6559.3	6732.8	7005.2	7375.3	7922	8432.2

Source: INSAE (2020)

The budget deficit, financed by loans and grants, narrowed to 2.5% of GDP in 2019. The current account deficit (which improved thanks to cotton) is mainly financed by official loans (33%), private loans (27%), and foreign direct investments (19%) (AFDB, 2020).

Foreign exchange reserves fell to US\$20.93 million in 2018 (or 0.07 months of import). Public debt was estimated at 54% of the GDP in 2019. In March 2019, the country issued a Eurobond of €500 million (5.2% of GDP), but the risk of debt distress is considered moderate. Benin is rated B+ by the Standard & Poor's Agency (AFDB, 2020). However, high levels of poverty (40% of the population) and inequality reflect the non-inclusive nature of growth (AFDB, 2020).

Population and human development

According to the 2013 *Recensement Général de la Population et de l'Habitat* (RGPH-4) carried out by the National Institute of Statistics (INSAE), Benin's population was 10,008,749 in 2013, with 51.2% women and 48.8% men (INSAE, 2015). In July 2020, the population was estimated at 12,864,634 (IndexMundi, 2020). Benin has a very young population; almost 65% of the population is under 25 and 42% is 14 or under. In 2020, the population under 25 was estimated to be 8,480,808 people (IndexMundi, 2020).

According to the May 2018 edition of the CIA World Factbook, more than half of the population lives in rural areas (55.2%). The two largest cities, Cotonou and Abomey-Calavi, had approximately 757,000 inhabitants and 682,000 inhabitants, respectively, in 2015.

The country is home to about fifty ethnic groups. According to the 2013 RGPH-4 (INSAE), the most important ethnic groups in Benin are Fon and related (38.4%), Adja and related (15.1%), Yoruba and related (12%), and Bariba and related (9.6%). The RGPH-4 shows various religions practiced in Benin, including Christianity (48.5%), Islam (27.7%), and voodoo (11.6%) (INSAE, 2015).

Benin, taking advantage of its political stability, has continuously recorded an increase in its human development index (HDI) over the past thirty years, which rose from 0.348 in 1990 to 0.531 in 2019, an increase of 0.182 points. This increase is the result of the progress made by the country in three areas (health, education, and living standards) by which the index is measured. Indeed, between 1990 and 2019, Benin experienced successive gains in life expectancy at birth of its citizens means an average of 0.3 years per year, with a period of stagnation between 1996 and 2000. The country also generally recorded an improvement in its gross national income per capita over the period, which rose from US\$1431 in 1990 to US\$2217.57 purchasing power parity (PPP) in 2019.

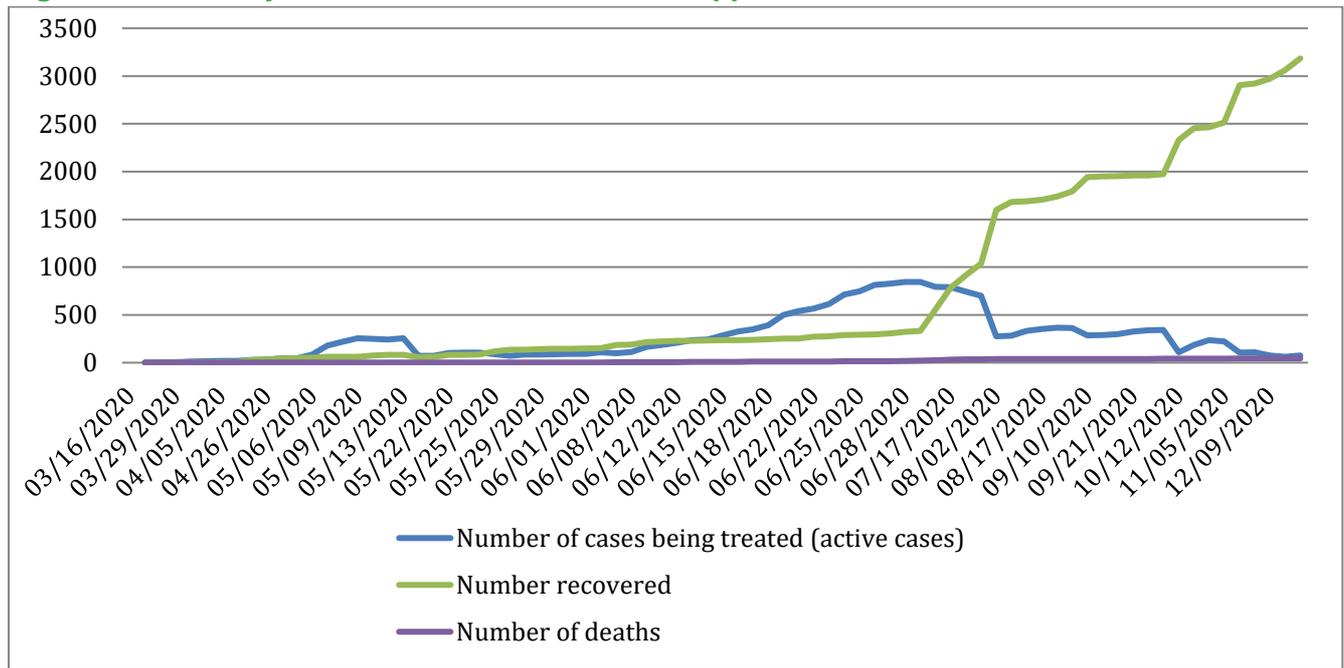
COVID-19 in Benin

Following the appearance of the first case of COVID-19 in Benin on 16 March 2020, the number of contaminations evolved and on 18 June of that year, Benin recorded 53 new cases, the highest number yet, bringing the number of cases of contamination to 650. By 24 June, the number of cases passed 1,000 infected people. The first death linked to the virus was recorded on 6 April 2020. More recently, on 4 January 2021, Benin had 75 active cases and 3,304 confirmed cases, including 3,185 cured and 44 deaths.

At the start of the pandemic, the spread of COVID-19 was accelerated by cultural beliefs and the trivialization of the disease among the general public. Our data collection showed that these beliefs included thinking: the pandemic is a divine punishment in response to the injustices, atrocities, and wicked acts committed by people on earth; the crisis is "God's will" and nothing can be done about it; the pandemic is linked to fate, believing that those who die from it can do nothing to prevent it; and, the virus is no different from the ordinary flu and can be treated with usual herbal remedies.

The following figure shows the evolution of the number of COVID-19 cases in Benin.

Figure 1. Variability of COVID-19 cases since the appearance of the first case



Source: ASE-2021 based on national statistics

Methodology

Data collection included key informant interviews and phone surveys with two main categories of actors: individuals and companies. Of these categories, actors included state and non-state actors who intervened in the management of the COVID-19 pandemic, leaders of various workers' organizations and socioeconomic group leaders. We aim to have a global view of the manifestation of the pandemic at these levels and examine the implications of decisions on the most affected sectors and actors.

In the context of the pandemic, our primary concern was not to reach all actors but to investigate those who are most impacted by the pandemic. Thus, teachers, students, restauranters, transporters, agricultural producers, merchants, artists and marginalized people in social advancement centres (*centres de promotion social*, CPSs) are involved. Representatives of the lead organizations gave us access to the lists and contacts of these actors.

The study also included formal and informal enterprises. Formal companies were sampled from a list of formal enterprises (INSAE, 2017) and include businesses in accommodation and food services, arts and crafts services, recreational facilities, wholesale and retail businesses, pharmaceutical services, etc. Regarding informal enterprises, this group comprises only the artisans; the lists and contacts were obtained from the craftsmen's association of each commune. Data were mainly collected using the phone survey method.

The study covers four territorial departments in Benin: Atlantic, Littoral, Borgou, and Atacora. The study systematically considers the Atlantic and Littoral departments the epicentres of COVID-19 in Benin; most cross-border transactions happen in these two southern departments. To see the different effects of the pandemic on the various regions, two departments in the north (Borgou and Atacora) were also taken into account. In each of these departments, one rural and one urban commune were selected to account for differences in living environment. Overall, seven communes were chosen for the study: Cotonou, Abomey-Calavi, Toffo, Parakou, Kalalé, Natitingou, and Coby.

Sample size and sampling strategies for individuals

The targets of this study include nine categories of individuals: transporters (motorbike taxis, city cabs, minibuses), agricultural producers, marginalized people in CPSs (social advancement centres), merchants, students, secondary school teachers, pharmacists, artists, and restauranters. A sampling database was not at our disposal; instead, we had previously collected lists from the lead organizations to which these individuals belong. For people with disabilities, older people, poor people and orphans, these lists were provided exclusively by CPSs in each of the municipalities covered by the study. All these lists helped us define a database with different essential characteristics of these targets and has been used as a sampling base. Once the sampling frame was available, we adopted a strategy to determine the total sample size and distribute it among the different communes. The sample size calculation was performed using the formulas below.

$$n_1 = \left(z^2 \frac{P(1 - P)}{e^2} \right)$$

With "z" the confidence level of the estimates, "P" the proportion of individuals who have undergone, in one way or another, directly or indirectly, the influence of the *cordon sanitaire* (meaning "sanitary cordon" in English, this refers to an area cordoned off for lockdown or quarantine purposes) on their

activities, " e " the marginal error term and " n_1 " the initial sample size. For the calculation of the initial size of the sample, we chose a confidence level of 95%, with a margin error of 3% and the proportion $p = 0.5$.

Furthermore, since the population size was not infinite, an adjustment was made to account for this size using the formula:

$$n_2 = \frac{n_1 N}{N + n_1}$$

With " N " the size of the population of actors identified based on the exploratory phases and " n_2 " the modified sample size.

Finally, an adjustment was made for the expected response rate through the equation $n = \frac{n_2}{r}$, where r is the expected response rate; this provided the final sample size n for the study. As a result of these various calculation procedures, the sample size selected for the study is 1200. After collecting the data, we got a sample size of 1067 individuals corresponding to a non-response rate of 11.1%.

Sample size and sampling strategies for formal and informal enterprises

At the enterprise level, the sampling base was the list of formal enterprises (INSAE, 2017). The enterprises used for the sampling were those operating in sectors likely most affected by COVID-19: accommodation and food services, arts and recreation services, wholesale and retail trade, pharmaceutical services, beverage manufacturing, food manufacturing, real estate, office services, human health, social action and specialized scientific and technical support activities. In total, there were 1624 formal enterprises working in these sectors in the seven communes covered by the study. The same sampling method was used to determine the size of 101 enterprises surveyed.

The sampling of informal enterprises followed the same process described for individual actors. Applying the same methodology, we obtained a sample size of 200 artisans distributed among the different communes. After the phone data collection, 113 and 217 enterprises were surveyed in the formal and informal sectors, respectively.

Limitations

The study has three main data limitations.

- The sampling was not representative at the national level, only of the departments and communes targeted by the study; thus, findings cannot be generalized nationally. Instead, conclusions derived from the survey are limited to regions and communes.
- COVID-19 restrictive measures limited the team of researchers and made some aspects of the research impossible to implement. For instance, there was a section planned on the involvement of non-state actors in COVID-19 management. The team was unable to reach those actors due to the restrictions, so instead the team relied on information found on the net.
- It was challenging to handle some data (information on people with disabilities, for instance) where the lead institutions determined it to be strictly anonymous and could not be shared.

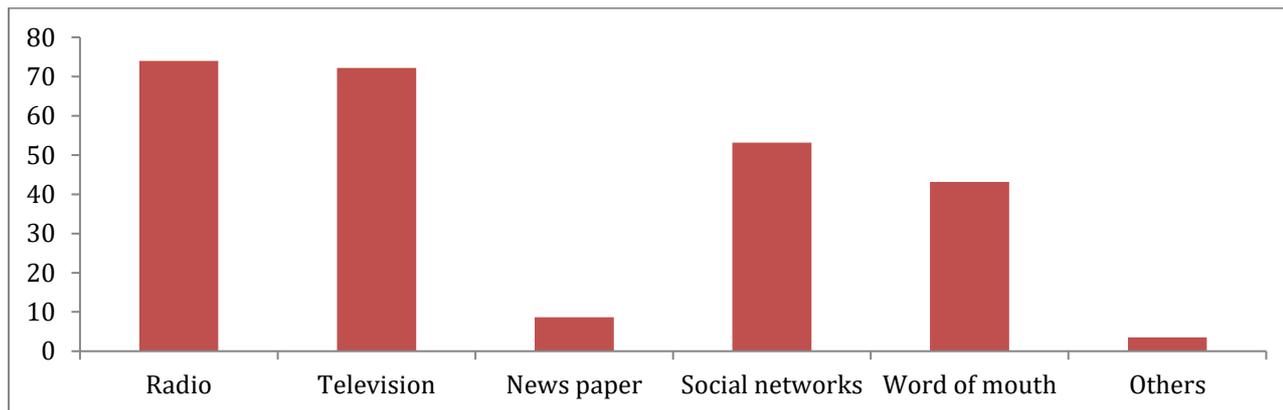
Findings

Population knowledge about and perceptions of COVID-19

✓ Information channels

Among Beninese who use channels for information about COVID-19, more than 74% use radio, followed by 72% who use television and 53% who use social networks. The following figure shows different information channels used by the population to stay informed about the pandemic.

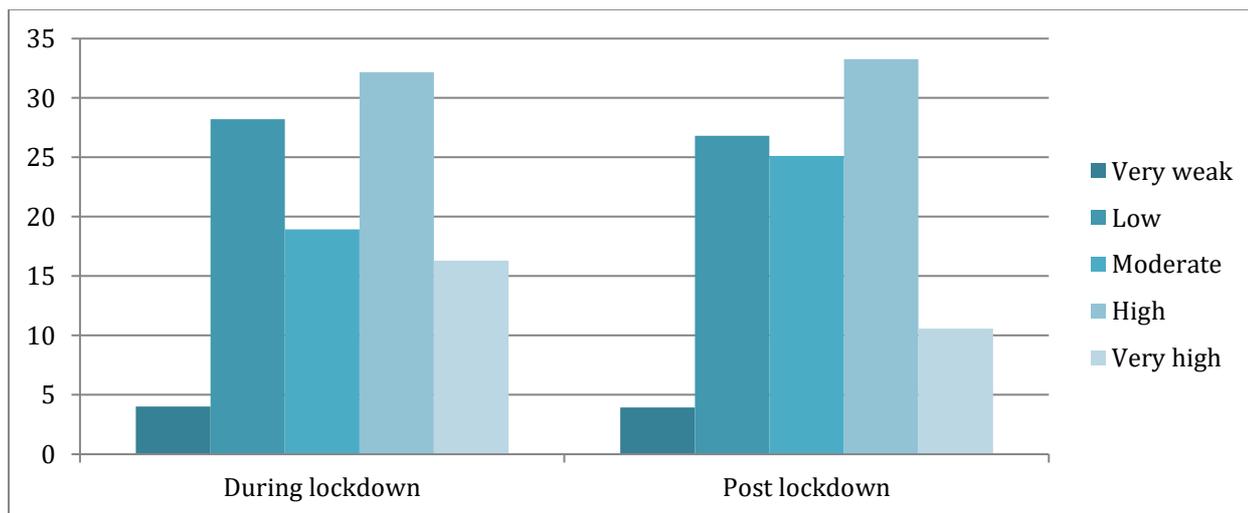
Figure 2. Information channels used by the surveyed population



✓ Perceptions of risk of contamination

Since the arrival of COVID-19, the perception of surveyed Beninese on the risk of contamination was about the same during lockdown (or time of *cordon sanitaire*) and post lockdown. To be more specific, about 32% of people said that the risk of contamination is "high" during the lockdown compared to 33% of respondents during the post lockdown.

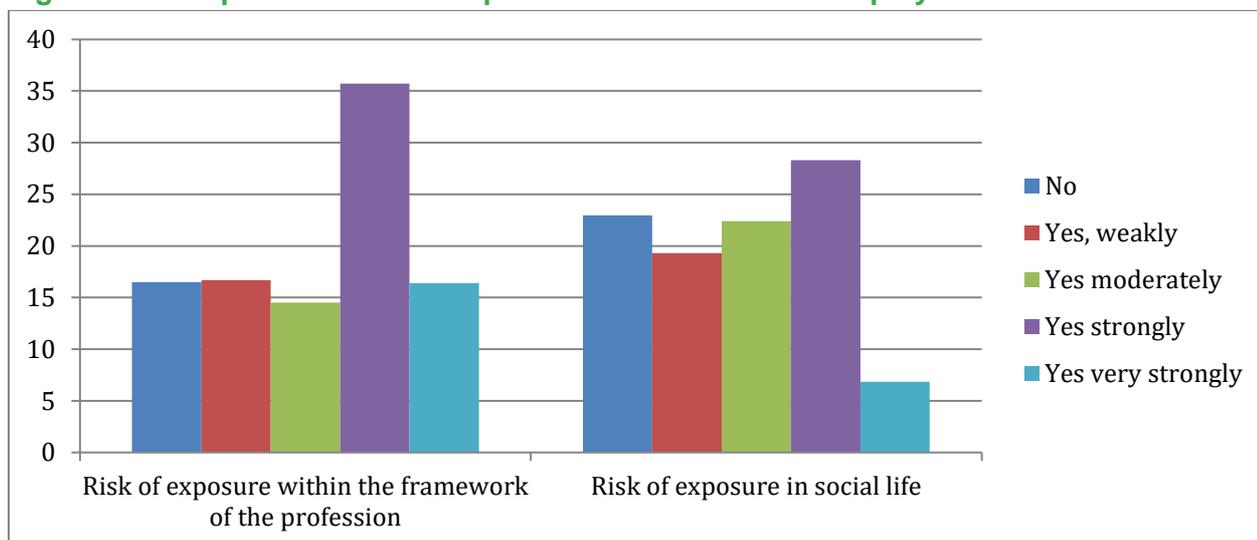
Figure 3. Perceptions of contamination risk



✓ Perception of risk of exposure

The research team assessed perceptions of risk of exposure in normal social life and during working periods. Among Beninese who are working, more than 36% felt that they are at risk of exposure to COVID-19. In comparison, only 28% of individuals felt they were at risk of exposure in their social life.

Figure 4. Perceptions of risk of exposure in social life and employment



Perceptions of risk of exposure by socioeconomic groups

Among socioeconomic groups surveyed, the highest percentage who think they are exposed to COVID-19 in their professional life are teachers (91%) and traders (89%). However, the highest percentage who think they are exposed to the virus in their social lives are traders (84%) and taxis (83% of motorbike taxis and 80% of intercity taxis).

Table 3. Perceptions of risk of exposure by socioeconomic groups

Category	Exposure to risk in professional life (%)	Exposure to risk in social life (%)
Motorbike taxis	85.6	83.3
City taxi/minibus	80	72
Intercity taxis	85.7	80.4
Artists	86.1	73.6
Teachers	91.4	79.2
Traders	89	84
Bartender/ restaurateurs	83.8	73.7
Students	75.9	74.5
Agricultural producers	76.2	73.6
Overall	83.5	77.1

Impacts of COVID-19 on various groups, sectors, and regions in Benin

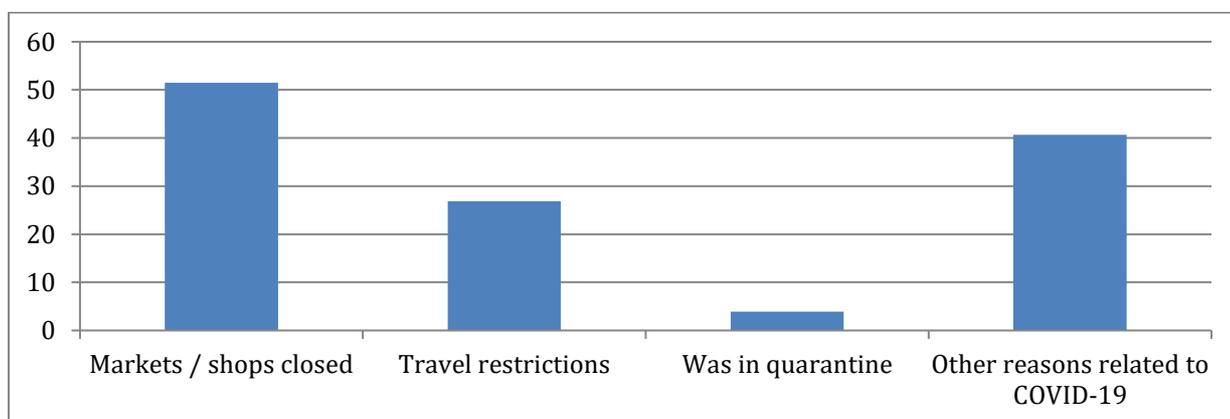
Impact of COVID-19 on access to essential services

✓ Difficulties in accessing markets in the context of COVID-19

Although the government in Benin did not explicitly prohibit access to markets as a measure to fight COVID-19, data shows that some people still had difficulties accessing markets. For example, 21.6% of those surveyed believed that they did not have access to some local markets (in the same municipality); 4.7% could not access the stores; 2.2% could not access supermarkets, and only 1.3% believed they could not access international markets.

According to the data, the leading cause of inaccessibility to markets for goods and services was shop closure. Other reasons for non-accessibility, mentioned by 41% of interviewees, were mainly related to implementing safety measures against COVID-19. All reasons are shown in the chart below.

Figure 5. Causes of inaccessibility to markets of goods and services



✓ Perceptions of food prices in the context of COVID-19

The majority of individuals surveyed believe that there was a price increase of certain goods compared to pre-COVID-19 prices. More than 95% of respondents recorded an increase in the prices of maize, sorghum or millet, rice, *gari* (local food made of ground cassava, dried and roasted), beans, pepper, peanut oil, and palm oil during the lockdown. In the post-confinement period, an average of 85% of interviewees believe that the price of these products has increased compared to the period before COVID-19.

Table 4. Perceptions of food price changes during COVID-19 context

Food	During lockdown (%)		Post lockdown (%)	
	Price increased	Price dropped	Price increased	Price dropped
Maize	96.1	3.9	83.9	16.1
Sorghum / millet	97.4	2.6	82.5	17.5
Rice	98.4	1.6	83.3	16.7
Gari	97.4	2.6	90	10
Bean	98.1	1.9	87.1	12.9
Pepper	93	7	80.2	19.8
Peanut oil	99.3	0.7	86.1	13.9
Palm oil	95.9	4	89.8	10.2

✓ **Perceptions of hygiene product prices in the context of COVID-19**

According to the respondents, the COVID-19 pandemic positively impacted the purchase price of some sanitary products, including soap, bleach, ointment, detergent, and hydroalcoholic gel. 96% of the people surveyed during the lockdown and 76% post lockdown confirmed this information.

Table 5. Perception of hygiene product price changes during COVID-19 context

Hygienic products	During lockdown (%)		Post lockdown (%)	
	Price increase	Price drop	Price increase	Price drop
Soap	92.2	7.8	72.0	28
Bleach	94.9	5.1	77.1	23
Ointment	99.1	0.9	75.7	24.3
Detergent	95.8	4.2	81.7	18.3
Hydroalcoholic gel	97.7	2.3	75	25

✓ **Perceptions of essential pharmaceutical product prices in the context of COVID-19**

More than 93% of respondents affirmed that there was an increase in the purchase prices of some basic pharmaceutical products like paracetamol, amoxicillin, and chloroquine during the lockdown. This same proportion is about 75% during the post-lockdown period.

Table 6. Pharmaceutical product price changes during the COVID-19 context

Some basic pharmaceuticals	During lockdown (%)		Post lockdown (%)	
	Price increase	Price drop	Price increase	Price drop
Paracetamol	86.9	13.8	70.7	29.3
Amoxicillin	95.9	4.1	78.4	21.6
Chloroquine	96.5	43.5	71	29
Other pharmaceutical products	95.8	4.2	82.5	17.5

✓ **Changes in transportation costs in the context of COVID-19**

More than 95% of those surveyed saw an increase in transport costs during lockdown compared to 77.5% during the post lockdown period.

Table 7. Transportation costs during the COVID-19 context

	Transportation costs		
	Stable price (%)	Price increase (%)	Price drop (%)
During lockdown	2.3	95.7	0.7
Post lockdown	10.3	77.5	11

Impacts of COVID-19 on employment by socioeconomic group

In this section, ordinal logistic regression shows the effect of lockdown on the activity levels of some socioeconomic groups.

Table 8 reveals the impact of the lockdown on levels of activity. Data reveals that, on all other things being equal basis, almost all socioeconomic groups except agricultural producers completely stopped activity during the lockdown.

Table 8. Activity level of various socioeconomic groups

Activity level	
Motorbike taxis	-
City taxi/minibus	-1.123**
Intercity taxis	-1.067***
Artists	-1.352***
Teachers	-2.054***
Traders	-0.742**
Bartender/restauranteurs	-1.369***
Students	-1.560***
Agricultural producers	0.577*
Unemployed, retired	-0.103
Constant 1	-1.681***
Constant 2	0.166
Constant 3	0.966***
Constant 4	3.410***
Number of observations	956
* p<0.05, ** p<0.01, *** p<0.001	

Table 9 expands on the results of Table 8 and presents average adjusted predictions (AAP) for diverse activity groups. Looking at the results of this table, teachers are most likely to have completely stopped occupational activity during lockdown. Students, bartenders/restauranteurs and artists follow, with, respectively, 47%, 42.3%, and 41.9% probability of altogether ceasing their activity during the lockdown.

Table 9. Average adjusted predictions for activity levels of socioeconomic groups

Main activity	Complete cessation	Significant drop	Moderate drop	Activity unchanged	Increase of activities
Motorbike taxis	0.157	0.384	0.183	0.244	0.032
City taxi/minibus	0.364	0.420	0.106	0.099	0.011
Intercity taxis	0.351	0.423	0.110	0.105	0.011
Artists	0.419	0.402	0.090	0.081	0.008
Teachers	0.592	0.310	0.051	0.042	0.004
Traders	0.281	0.431	0.134	0.138	0.015
Bartender/ restauranteurs	0.423	0.400	0.089	0.080	0.008
Students	0.470	0.379	0.077	0.067	0.007
Agricultural producers	0.095	0.304	0.197	0.348	0.056

The results of Table 9 also reveal the probability that some socioeconomic groups had activities increase during the lockdown. We can observe that there is a higher probability (5.6%) that agricultural producers increased activity during the lockdown, while in contrast, a lower chance (0.4%) is observed for teachers.

✓ Changes in activity levels by socioeconomic group

Overall, groups reported that occupational activity levels dropped an average of 36.7% during the lockdown and 19% during the post-lockdown period. City taxi drivers reported the highest level of decreased activity, at 60%. Analysis of Table 10 further reveals that in general, 35.8% of respondents completely ceased activity during the lockdown and 30.7% after lockdown. High school teachers were more affected among the latter, at a proportion of 63.6%.

Table 10. Levels of activity by socioeconomic groups

	During the lockdown (%)			Post-lockdown (%)		
	Complete cessation of activity	A significant drop in activity level	A moderate drop in activity level	Complete cessation of activity	A substantial drop in activity level	A moderate drop in activity level
Motorbike taxis	8.9	52.2	12.2	1.1	15.6	43.3
City taxi/minibus	28	60	8	4	32	44
Intercity taxis	35.7	42.9	7.1	43.6	37.5	41.1
Artists	38.9	47.2	6.9	5.6	31.9	44.4
Teachers	63.6	17.2	8.1	1	8.6	16.2
Traders	22	54	14	5	28	46
Bartender/restauranters	37.4	51.5	7.1	4	35.3	41.4
Students	51.8	25.3	11.1	19.7	10.5	21.6
Agricultural producers	4.2	34.7	25	1.4	12.5	24.3
Overall	35.8	36.7	11.8	6	19	30.7

✓ Repercussions of changes in activity levels on employment conditions

Changes in activity levels during or after lockdown had essential consequences on worker employment. Indeed, 33.5% of respondents temporarily stopped their activities and 6.1% were placed on technical unemployment. Of those who kept their employment, many experienced reductions in working hours or wages received, including 29% during lockdown and 24.9% post lockdown. The following tables 11, 12, 13 and 14 exhibit the impacts on employment due to changes in conditions.

Table 11. Consequences of activity level changes during the lockdown period

	During lockdown					
	Permanent loss of job (%)	Pause of job/technical leave (%)	Moderate reduction in working hours and/or	Continue(d) to work normally (%)	Increase in working hours/overtime	Increase in salary / income (%)

			wages (%)		(%)	
Motorbike taxis	5.6	12.2	35.6	27.8	10	1.1
City taxi/minibus	4	48	32	12	0	0
Intercity taxis	8.9	33.9	39.3	10.7	3.6	1.8
Artists	9.7	44.4	33.3	5.6	2.8	0
Teachers	3.54	60.6	13.6	15.1	0.5	0.5
Traders	7	27	31	20	2	1
Bartender/ restauranteurs	8.1	35.3	37.4	9.1	0	2
Students	2.5	31.5	26.5	11.1	0	0.6
Agricultural producers	2.1	8.3	37.5	41.7	2.8	0
Overall	5	33.5	29.1	18.4	2.1	0.7

Table 12. Consequences of activity level changes during the post-lockdown period

	Post-lockdown					
	Permanen t loss of job (%)	Pause of job/ technical leave (%)	Moderate reduction in working hours and/or wages (%)	Continue(d) to work normally (%)	Increase in working hours/ overtime (%)	Increase in salary / income (%)
Motorbike taxis	4.4	5.6	30	51.1	3.3	0
City taxi/minibus	4.	16	40	24	16	0
Intercity taxis	1.8	8.9	50	26.8	7.1	3.6
Artists	2.8	16.7	48.6	30.6	0	0
Teachers	0.5	2	10.6	60.6	18.7	0.5
Traders	9	5	27	44	5	0
Bartender/ restauranteurs	3	5	40.4	40.4	2	2
Students	2.5	7.4	16.7	44.4	6.1	0.6
Agricultural producers	2.8	4.1	16	64.6	6.2	0.7
Overall	3.2	6.1	24.9	48	7.7	0.7

According to our research, the COVID-19 pandemic negatively impacted employment conditions for many socioeconomic groups. About 43% of interviewees saw their wages reduced. Of the few categories of workers who continued to receive their regular wages without reduction, nearly 5% maintained that their salaries came late.

Some respondents noted that fear among potential clients added to reduced activity levels. Among the motorbike taxi drivers surveyed, for example, some said they had not experienced problems conducting their activity, while others noted a lack of customers as people were afraid to go out. This fear also caused a considerable decrease in the number of passengers among city taxi drivers. Intercity taxi drivers also experienced difficulties in finding customers.

In addition, some artists interviewed mentioned other difficulties related to the pandemic. For example, most of them said they were no longer able to meet their basic needs. Compliance with restrictive measures related to COVID-19 does not allow them to carry out their activity. This prevents them from honouring their social contributions as members of an association.

As for teachers, even though most respondents claimed that they did not have as much financial difficulty, they experienced psychosocial difficulties at work derived from the fear of being contaminated with COVID-19 from the school environment.

Table 13. Employment-related difficulties encountered in the COVID-19 context

	Decrease in salary (%)	The total cessation of salary (%)	Late wages (%)	Other difficulties (%)
Motorbike taxis	68.4	3.5	0	33.3
City taxi/minibus	72.7	0	0	36.4
Intercity taxis	57.1	0	7.1	35.7
Artists	46.4	3.6	3.6	50
Teachers	19.3	1.7	17.5	66.7
Traders	47.1	2	0	58.8
Bartender/ restauranteurs	60.9	0	13	39.1
Students	18	0	3.3	82
Agricultural producers	36.8	0.9	0.9	65.8
Overall	42.3	1.3	4.8	57

✓ COVID-19 and dismissal of employees

The COVID-19 health crisis negatively impacted employment for many, including 11.4% of respondents who reported being dismissed due to COVID-19. There is a particularly high rate (32.3%) of layoffs among those working in bars and restaurants.

Table 14. Percentage of dismissal by category

	No	Yes
Motorbike taxis	92.2	6.7
City taxi/minibus	76	24
Intercity taxi	91.1	8.9
Artists	87.5	8.3
Teachers	92.4	6.6
Traders	86	13
Bartender/restauranteurs	67.7	32.3
Agricultural producer	82.6	16
Overall	86.9	11.4

According to the individuals surveyed, the communes that experienced lockdowns, like Cotonou and Abomey-Calavi, also experienced more layoffs. More than half of the individuals surveyed who declared having seen the companies in which they work carry out redundancies were found in the municipalities of Abomey-Calavi (28.7%) and Cotonou (22.9%).

Job dismissal was also more frequent during the *cordon sanitaire* period in the commune of Natitingou, which was not part of the *cordon sanitaire* area but was strongly affected by the effects of this measure. This could be explained by the tourist status of the city. Since travel was (almost) prohibited, especially for people coming from outside the country, tourist activities—on which some economic actors depend—also ceased, leading to staff reductions.

Table 15. Proportion of dismissal by municipality

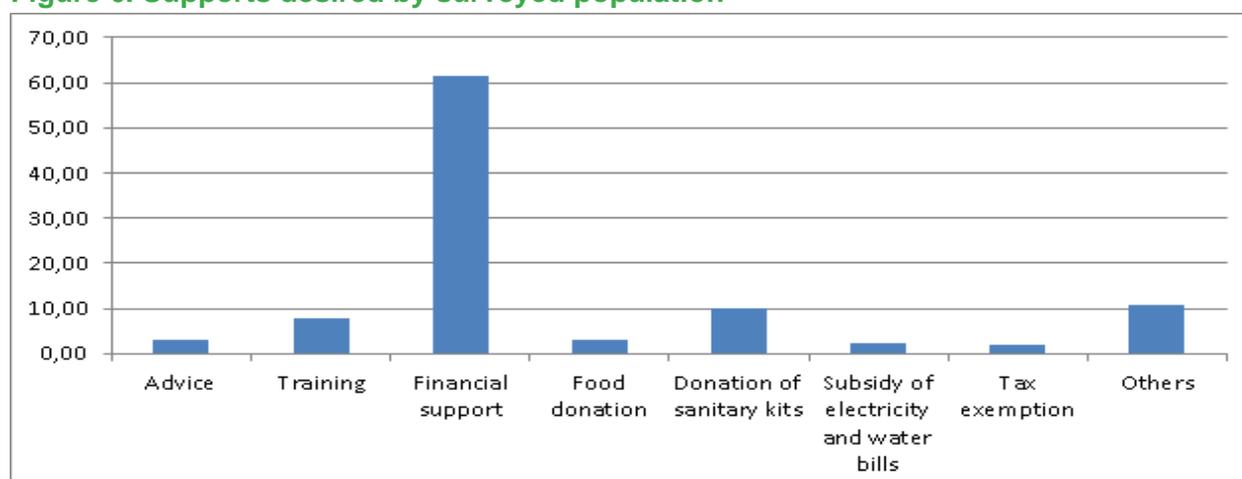
	No (%)	Yes (%)
Abomey-Calavi	29.9	28.7
Cobly	1.9	2.5
Cotonou	17.8	22.9
Kalale	11.2	6.6
Natitingou	11.5	20.5
Parakou	18.8	7.4
Toffo	8.9	11.5
Total	100	100

✓ Desired COVID-19 mitigation supports

Following measures to fight the spread of COVID-19, several acts to mitigate the negative effects of the pandemic were initiated and implemented by the government. These include, among others, subsidies to water and electricity bills (intended for the entire population), financial assistance (provided to specific individuals belonging to certain socioeconomic groups including artisans and transporters, etc.), and tax exemptions for formal businesses. Did these various mitigation measures meet the wishes of some socioeconomic groups included in this study? That is the question the research team tried to answer. Results are shown in Figure 6.

From an analysis of Figure 6, it emerges that in terms of mitigation measures, individuals from various socioeconomic groups involved in this assessment first want financial support (62%) from the government. In addition, others would have liked support measures such as the donation of health kits (9.9%) or adaptive training (7.9%). These individuals are less interested in support measures such as advice, food donations, subsidies to electricity and water bills, and exemption from taxes or levies.

Figure 6. Supports desired by surveyed population



Impact of COVID-19 on income by socioeconomic group

In this section, an ordinal logistic regression has been run to provide how COVID-19 has impacted diverse socioeconomic groups regarding their income. Table 16 shows that only bartenders and artists saw their revenue significantly decreased during the lockdown.

The results of Table 16 show that, on an all-other thing being equal basis, bartender/restauranteurs and artists tend to have a higher proportion of income decreasing in the cordon sanitaire time.

Table 16. Effects of COVID-19 on the income of the socioeconomic groups

The proportion of income decreasing	
Motorbike taxis	-
City taxi/minibus	0.677
Intercity taxis	0.592
Artists	1.234***
Teachers	-0.887**
Traders	0.252
Bartender/ restauranteurs	1.251***
Students	-0.154
Agricultural producers	0.266
Constant1	-1.958***
Constant2	0.015
Constant3	1.656***
R-squared	
N	779

* p<0.05, ** p<0.01, *** p<0.001

To get a tangible feel for how large and important these differences are, we compute the AAP for these categories of activity groups. Looking at the results, and on all-others things equal basis, among the bartenders/restauranteurs and artists, more than three quarters (37% versus 38.7%) are likely to have their income decreased with a proportion of more than 75%.

Table 17. Average adjusted predictions (AAP) on income reductions

Main activity	Average adjusted predictions (AAP)			
	Less than 25%	From 25 to 50%	From 50 and 75%	From 75 and 100%
Artists	0.044	0.207	0.379	0.370
Bartenders/restauranteurs	0.041	0.197	0.375	0.387

This leads to the conclusion that, according to the model, restaurateurs and artists have a higher probability (76.2% versus 74.9%) of having their income decreased with the proportion decreasing more than 50%.

Consistent with the earlier results, the marginal effects (Table 18) show that, on average, bartenders/restaurateurs are 24.4 percentage points more likely than motorbike taxi drivers to say their income decreases in proportion more than 75%, and about 20.2 percentage points less likely to say their income decreases in a proportion from 25% to 50%.

Table 18. Marginal effects of income reduction by socioeconomic group

Marginal effects of income decrease				
	Less than 25%	From 25 to 50%	From 50 to 75%	From 75 to 100%
City taxi / minibus driver	-0.060	-0.091	0.058	0.093
Intercity taxi	-0.059	-0.090	0.058	0.092
Artist	-0.097	-0.192	0.062	0.228
Teacher	0.056	0.040	-0.054	-0.042
Trader	-0.041	-0.056	0.042	0.055
Bartender/restaurateur	-0.100	-0.202	0.058	0.244
Student	-0.015	-0.017	0.015	0.016
Agricultural producer	-0.031	-0.039	0.032	0.039
Unemployed, retired	-0.037	-0.048	0.038	0.047

Artists are 22.8 percentage points more likely than motorbike taxi drivers to say their income decreases in proportion more than 75%, and about 19.2 percentage points less likely to say their income decreases in a proportion from 25% to 50%.

✓ Income level changes by socioeconomic group in the COVID-19 context

Table 19 below shows the income level variation in the context of the pandemic among the surveyed population.

Table 19. Income level variation in the COVID-19 context

	Proportion of income decrease by occupation			
	Less than 25%	Between 25 and 50%	Between 50 and 75%	More than 75%
Motorbike taxis driver	13.4	44.8	38.8	3
City taxi/minibus driver	15.8	31.6	36.8	15.8
Intercity taxi driver	12.8	40.4	25.5	21.3
Artist	8.5	22	49.1	20.3
Teacher	35.1	40.5	23	1.3
Trader	15.1	40.7	34.9	9.3
Bartender/restaurateur	7.7	38.5	35.9	18
Student	20.9	45.6	27.2	7
Agricultural producer	21.3	41.7	27.8	9.3
Overall	17.4	39.9	32.1	10.5

COVID-19 management strategies implemented by the Government of Benin and its partners

Control measures implemented by the government and its partners

Many decisions were made to control the spread of the disease, most of which were related to forbidding people from gathering and moving to areas where the risk of contamination is high. Table 20 below shows some measures implemented by the Beninese government to fight the pandemic.

Table 20. Containment measures implemented

COVID-19 containment measure	Target area or group	Description
Installation of <i>cordon sanitaire</i>	Entire population in Cotonou, Abomey-Calavi, Allada, Ouidah, Tori, Zè, Sèmè-Podji, Porto-Novo, Akpro-Missérété, Adjarra, etc.	Starting from 14 April, no freedom of movement around the 15 cities most infected by COVID-19
Meetings/group of more than 50 people is forbidden	Everyone	In effect since early April
Funeral, parties, and concerts are forbidden	Everyone	In effect since April 4
Mass celebrations banned from March 31 to June 5, 2020	Everyone	In effect since March 31
Worker attendance must be on a rotational basis in workplaces	Workers	Workplaces must arrange for employees to work remotely and come to the office on a rotational basis

✓ Practicing control measures at the individual level

The government set up many controlling measures, while the media also promoted ways to control the spread of the disease individually. The table below shows that most of the population surveyed practices measures to fight against the disease.

Table 21. Percentage of people who practice individual control measures

COVID-19 control measure	People that apply (%)
Using hand sanitizer	80
Wearing a facial mask	99
Wearing gloves	26
Limiting number of people in workplaces	51
Relocation of facilities	56
Cleaning and sanitizing of facilities	76
Social distancing	89
Reducing participation in public events	92
Limiting trips outside the home	90
Washing hands	98

✓ Control measures specific to vulnerable groups

Apart from actions taken by the Benin government, partners worked to set up specific measures for specific groups, as listed in the table below. Among others, they targeted pregnant women, people with HIV, older people, and rural populations. In addition, social promotion centres, which typically help people in need, increased their contribution to vulnerable groups with support from partners. Vulnerable groups typically depend on other people for support, and as livelihood activities ceased, more pressure was put on these dependent groups and their caregivers. Social promotion centres then switched their intervention plans and devoted more financial resources to their target groups (orphans, people with disabilities, older people, and poor households).

Table 22. Specific measures for vulnerable groups

Actor	Nature of intervention	Target group
UNFPA	Designed a therapeutic scheme for pregnant women	Pregnant women with COVID-19
UNDP	Donating sanitizer and handwashing equipment	People with disabilities
ONUSIDA	Communication toward people with HIV, giving treatment to prevent HIV positive people from contracting COVID-19	HIV positive persons
USAID, WFO	Sensitizations to fight against COVID-19	Rural populations
Jama'atn Islamique Ahmadiyya	Food distribution	Elderly people
European Union	COVID-19 sensitization and prevention equipment	Women in markets
IPSA NGO, IYF	Informing, sensitizing, and educating	Youth Beninese
German Embassy	Capacity building	Health care workers
CARITAS Benin	Support to vulnerable groups through donations of sanitary kits and basic needs, sensitization of the population	Vulnerable people

Mitigation measures

✓ Government mitigation measures implemented

State actors offered three main types of mitigation actions: financial support for businesses; financial support for artisans and small traders; and electricity and water bill subsidies for households. A period of registration was launched for the businesses to register and get access to the subsidy. This was from a platform created by the government and also via physical registration in the socio promotion centers. Unfortunately, all the businessmen were not able to register on time, the process was complicated and everyone was not as formalized and have the necessary papers to be submitted. In consequence, the mitigation measure only reached a few proportions of the target group made of stylists, restauranters, hairdressers, carriers and most of artisan. Aside from measures implemented by the central government, other specific mitigation actions have been undertaken by social promotion centres and by reorganizing public service delivery. Table 23 below summarizes those actions.

Table 23. Mitigation measures implemented by the government and its partners

Type of measure	Intended beneficiaries	Conditions of access	Excluded categories not likely to benefit
Social protection			
Subsidy for facial masks	General public	None	None
Lockdown	General public	None	Population outside the 15 <i>cordon sanitaire</i> communes
Income support			
Subsidy to artisans and transporters	Artisans and transporters	Fill online and on paper to deposit	Everyone except the artisans and carriers
Tax exemption for enterprises	Businesses	Formal enterprises only; must be registered and request the aid	Informal enterprises
Electricity and water free of charge for households for three months	Households	None	None
Access to services			
Online service for taxes payment	General public	None	None
Online service for judicial record acquisition	General public	None	None
Regulations/ advisories			
Advertising and sensitization campaigns via television, radio, and social media about COVID-19 and ways to fight against the disease	General public	None	None
Business stimulus			
Tax exemption for enterprises	Businesses	Formal enterprises to be registered and request the aid	Informal enterprises

Source: <https://sqq.gouv.bj/cm/2020-06-10/>

✓ Mitigation assistance received by groups

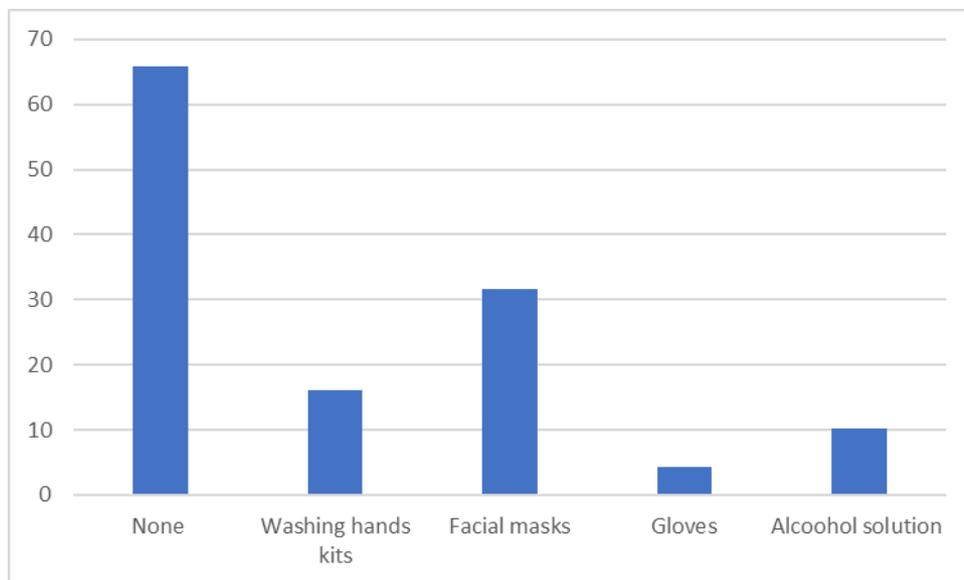
Although mitigation assistance was put in place in terms of financial support, the analysis of the surveyed population shows that only a tiny proportion of that population was reached (Table 24 and Figure 7 below). Except for water and electricity bill subsidies, other mitigation actions (mainly the financial assistance) were not accessible to everyone. In addition, the total amount devoted could not cover the entire target population. This shows that much needs to be done. Decision-makers have proposed a second round of registration to obtain mitigations measures, but this has not yet been implemented.

Table 24. Mitigation actions received by specific socioeconomic groups

Mitigation action received	None	from my employer	From an organization	Yes, from a state institution	from a private institution	from colleagues	From friends and family	Others	Total
Unemployed	93.3	0	6.7	0	0	0	0	0	100
Motorbike taxis drivers	100	0	0	0	0	0	0	0	100
Taxi/minibus drivers	96	0	0	4	0	0	0	0	100
Intercity taxis	87.5	3.6	0	7.1	0	0	0	1.8	100
Artists	98.6	0	0	1.4	0	0	0	0	100
Teachers	80.8	1.5	0.5	14.6	1	0	0	1.5	100
Merchants	98	0	0	1	1	0	0	0	100
Restaurateur	97	0	0	3	0	0	0	0	100
Student	91.4	0.6	0.6	3.7	0.6	0.6	1.8	0.6	100
Agricultural Producer	96.5	0	0.7	0.7	1.4	0	0.7	0	100
Pharmacist	96.7	0	0	0	3.3	0	0	0	100
Retired	100	0	0	0	0	0	0	0	100
Others	83.3	6.1	3	7.6	0	0	0	0	100
Total	92.1	0.9	0.6	4.8	0.7	0.1	0.4	0.5	100

The research shows that 66% of the surveyed population received physical asset donations to mitigate the pandemic (Figure 7 below). Of these, 31% received facial masks, 16% received handwashing kits and 10% received alcohol solutions (sanitizer). The donations came from social promotion centres and some international partners.

Figure 7. Physical assets received by the population



✓ Proposed mitigation actions

Table 25 below shows actions proposed by respondents to mitigate the damage caused by the COVID-19 pandemic.

Table 25. Social measures proposed by population

Social measures proposed by population	Proportion
Delay the deadline of payments	21.3
Make remote administrative procedures	24.1
Give aid to support unemployment	31.5
Programs to revive economic activities	40.6
Others (subsidy, sensitization, food aid)	39.6

Impact of mitigation and control measures on revenues

The table below shows the percentage of surveyed population that experienced an increase, decrease or no change of revenue during the *cordon sanitaire* and mitigation of COVID-19. 81.6% saw their revenue shut down during the main phase of the *cordon sanitaire*. After removing the *cordon sanitaire*, this percentage fell to around 69% and then to 56% after roll-out of the mitigation measures. This shows that the mitigation measures improved the damage caused by the pandemic but didn't bring revenues back to the regular rate.

Table 26. Impact of control and mitigation measures on revenues

	During <i>cordon sanitaire</i>	After <i>cordon sanitaire</i>	Once mitigation actions are applied
Revenue increase	1.4	9.3	6.1
Revenue decrease	81.6	68.9	56.2
Stable revenue	17	21.8	37.7
Total	100	100	100

Impact of COVID-19 on citizenship and governance

Most Benin citizens were not involved in the decision-making process for COVID-19 management (see the table below). We recorded 19 percent of the surveyed population engaged in taking action for control measures. For others, there is no substantial notice of public action participation.

Table 27. Public participation and governance in the context of the pandemic

Public action participation and governance	Percentage of the survey population
Participation in decision making for COVID-19 management	
Control measures	19.2
Mitigation measure	6.9
<i>Cordon sanitaire</i>	8.1
Participating to protest movement for COVID-19	3.5

Best practices for COVID-19 management in Benin

In light of the study's findings, here are our suggestions for COVID-19 management.

- Increase awareness campaigns on safety measures and the risks of contamination
- Increase efforts to subsidize agricultural producers to offset price inflation of some food products induced by the pandemic
- Strengthen financial aid programs for different socioeconomic groups with a view of relaunching economic/ occupational activities
- Involve most socioeconomic group leaders in the decision-making process for COVID-19 mitigation measures
- Put in place financing strategies to be able to provide concrete assistance to the various layers of the population most affected
- Ensure that all members of target groups (artisans, restaurateurs, drivers, stylists, hairdressers, etc.) have access to the subsidies

Conclusion

Like all countries, Benin was affected by the coronavirus health crisis, which weakened its reformed economy. Benin opted for a *cordon sanitaire* to curb the spread of the pandemic and counter the negative impacts on the economic fabric. This measure seemed to be preferable and, at the same time, the most appropriate to avoid the spread of the virus in the Beninese context. Benin is a small country with an informal economy, and general lockdown would create more than considerable damages at the socioeconomic level.

Benin also took measures to mitigate the economic impacts of the COVID-19 pandemic. However, from our analysis, most socioeconomic actors would primarily prefer financial support from the government in terms of mitigation measures. In addition, others would have liked support measures such as the donation of health kits or adaptive training. These individuals less desired supportive measures such as counselling, the assistance of food, subsidies for electricity and water bills, and exemption from taxes or levies. In light of this, the response put in place by the government by providing financial assistance to certain key socioeconomic actors aligns to meet the most pressing needs of these various actors. The financial assistance measure also targets stakeholders who are most affected by the pandemic in their daily activity (stylists, hairdressers, transporters, restaurateurs, artists, etc.). However, the amount made available to assist the population was not enough to cover most targeted actors (only up to 14% of the targeted populations have received it). Therefore, although most socioeconomic actors desired an accurate mitigation measure, it has also been a potential source of inequality because it does not reach a significant part of the actors most affected by the COVID-19 pandemic.

Regarding the stakeholder's decision-making implication, only 19% of the actors' lead representatives were informed about the control measures decisions taken for their groups' categories. The proportion of group actors involved in the mitigation measures decisions is even fewer.

The relevance of the measures taken by the government is well-established for companies and socioeconomic groups' actors. However, they do not seem to have experienced in practice the involvement of local authorities in managing this crisis, more particularly that of community relays and actors in traditional medicine. They also observe disparities in the allocation of grants.

In summary, the governments' methods and actions for fighting the COVID-19 crisis agree with the expectations of the populations. However, there are some shortcomings in terms of participation and the distribution of resources.

References

AFDB (2020) *African economic outlook 2020: Developing Africa's workforce for the future*. African Development Bank. <https://www.afdb.org/en/documents/african-economic-outlook-2020>

Afsa, C. (2016) *Le modèle logit: Théorie et application*. Institut national de la statistique et des études économiques (INSEE). <https://www.epsilon.insee.fr/jspui/bitstream/1/41074/1/m1601.pdf>

Alon, T.M., Doepke, M., Olmstead-Rumsey, J. and Tertilt, M. (2020) *The impact of COVID-19 on gender equality*. National Bureau of Economic Research. <https://www.nber.org/papers/w26947>

CIA. (2018) Benin. In *The world factbook*. Central Intelligence Agency. <https://www.cia.gov/the-world-factbook/countries/benin/>

ILO (2020) *Rapid assessment of the impact of COVID-19 on enterprises and workers in the informal economy developing and emerging countries*. International Labour Organization, Geneva. https://labordoc.ilo.org/discovery/fulldisplay/alma995073693402676/41ILO_INST:41ILO_V2

IndexMundi (2020) Benin demographics profile. https://www.indexmundi.com/benin/demographics_profile.html

INSAE (2015) RGPH-4: Que retenir des effectifs de population en 2013? Institut National de la Statistique et de l'Analyse Économique (INSAE).

INSAE-Bénin (2016) *Principaux indicateurs socio-démographiques et économiques au Bénin* (RGPH-4, 2013). Institut National de la Statistique et de l'Analyse Économique (INSAE).

INSAE (2017) Synthèse des analyses sur l'état et la structure de la population. Institut National de la Statistique et de l'Analyse Économique (INSAE).

INSAE (2020) Note sur la pauvreté en 2019. Institut National de la Statistique et de l'Analyse Économique (INSAE). <https://docplayer.fr/191936953-Note-sur-la-pauvrete-en-2019-insae-juillet-2020.html>

Khlat, Myriam (1992) Application des méthodes de l'épidémiologie à l'analyse de la mortalité différentielle: l'exemple des études de migrants. *Population*, 47^e année, Numéro 4, 1992. Pp 933-960.

Ministère de la Santé, Bénin (Février 2020) *Plan de préparation et de réponse à la crise liée à l'infection coronavirus COVID-19 au Bénin*.

Ministère du Plan et du Développement, CI (Mai 2020) *Mesure de l'impact socio-économique du COVID-19 sur les conditions de vie des ménages en Côte-d'Ivoire*. République de Côte-d'Ivoire.

UNECA (2020) United Nations, Economic Commission for Africa (2020-04). *COVID-19 in Africa: Protecting lives and economies*. Addis Ababa. UN - ECA. <https://hdl.handle.net/10855/43756>

UNICEF-BENIN (2020). Benin, COVID-19 Situation Report – #11 [16 May – 22 May 2020]

INCLUDE

UNWTO (2020) *An inclusive response for vulnerable groups*. United Nations World Tourism Organization (UNWTO). <https://www.unwto.org/covid-19-inclusive-response-vulnerable-groups>

Williams R. (2020) *Adjusted predictions & marginal effects for multiple outcome models & commands (including ologit, mlogit, oglm, & gologit2)*. University of Notre Dame. <https://www3.nd.edu/~rwilliam/stats3/Margins05.pdf>

Useful links

Benin responds to COVID-19: “Cordon Sanitaire” without generalized containment or lockdown? <https://www.gouv.bj/actualites/categorie/coronavirus--covid-19>

Gouvernement de la République du Bénin COVID-19 web page: <https://www.gouv.bj/actualites/categorie/coronavirus%2D%2Dcovid-19/>

The World Bank in Benin: <https://www.worldbank.org/en/country/benin/overview>

Benin socio-demographics: <https://fr.countryeconomy.com/demographie/structure-population/benin>

Benin demographics profile: https://www.indexmundi.com/benin/demographics_profile.html

Annexes

Notes

- a. The data request is based on the need for a comparative pre-corona context analysis and the three core objectives of the project, namely the influence of COVID-19 policies and measures on:
 - Work and income
 - Access to basic services, notably education
 - Political empowerment

- b. Depending on the availability of data, we are interested in disaggregation by the following major axes of inequality that INCLUDE is particularly interested in (gender, rural/urban, expenditure quintiles (esp. the 20% poorest), age (youth and elderly), disability (where available) and regional inequalities- where relevant).

A: Tables which provide context for country comparisons

Table 1. Selected Country Indicators

Indicator	Value	Year
1. Country Status a) Least Developed Country (LDC) b) Low Income Country (LIC) c) Low Middle Income Country (LMIC) d) Middle Income (MC)	Low income	2020 https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-group
2. GDP	34.39 USD Billion in 2019	2019
3. Sectoral composition of GDP in percentage a) Agriculture b) Manufacturing c) Services NB. Informal sector Formal sector Self-employed	21.92 27.07 43.32	2019 https://www.statista.com/statistics/447716/uganda-gdp-distribution-across-economic-sectors/

4. Sectoral composition of employment in percentage a) Agriculture b) Manufacturing c) Services	41.2 16.4 42.4	
5. Income Poverty levels National Poverty headcount disaggregated by a) Region b) Rural and urban	87.8 21.4	
6. Gini index a) Income disparities in percentage	42.8	2016 World bank
7. Food security: Under five malnutrition	Stunting; 28.9%	https://globalnutritionreport.org/resources/nutrition-profiles/africa/eastern-
8. Violence against women	30%	UDHS
9. Attitude to violence against women		
10. Adult literacy rates (male vs female)	67 female 81male	2018 UDHS
11. Doctor-patient ratio	1 to 23700	2019 Health Sector Performance Report 2018/19
12. Nurse -patient ratio	1 to 2967	2019 Health Sector Performance Report 2018/19

Table 3. Employment structure: Currently Employed Population 15 years (%)

Indicators	Total	Women	Men	Rural	Urban	Disability	Age (till age	Age (60 and above)	Expenditure quintile	Total
Type of work										
Wage employment- Public sector	842,900									
Wage employment- Private sector	192,000									
Self-employed with employees a) Non- agricultural b) Agricultural										
Self-employed without employees a) Non- agricultural b) Agricultural	45 68									
Contributing family worker a) Non- Agricultural b) Agricultural	35.03 14.25	47.18	29.97							
Casual worker										
Unpaid apprentice										
Domestic worker										
Labour force participation, 15 years and older (%)	74.006	77.37	72.51	73.2	69.4					
Vulnerable employment, 15 years and above (%)	51.3	68	39							
Time spent on unpaid domestic work, 10 years and older in minutes		99	38							
Other										
Total										

Table 5. Access to Health Care Services

Indicator	Total (% of population)	Sex		Location		Age (till age 35)	Age (60 and above)	Expenditure Quintile (poorest 20 percent)	Disability
		Female	Male	Rural	Urban				
Access to health facility									
Registered with Health Insurance	20%	34.4		27.9	53.2			13.6	

Socio-Economic-Impact-COVID-19-Uganda-Brief-1-UNDP-Uganda-April-2020%20(2).pdf

Table 7. Proportion of Individuals aged 12years and older who own, or use computers by region, locality, sex, and age group, disability, and expenditure quintile

Indicators	Total(%)	Female	Male	Urban	Rural	Age (till 35 years)	Age (60 years and above)	Disability (where available)	Expenditure Quintile (poorest 20%)
Own Laptop (Working)	9.5								
Own Desktop/laptop									
Working desktop									
Own Tablet									
Own any one of the devices									
Used a computer									
ICT skills (basic knowledge)									
Mobile phone ownership and use	68.2								
TV ownership	47.8								
Radio ownership	79.1								
Electricity connectivity	28.6			59.1	18.1				

2016/17 UNHS