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# Nigeria

## Impacts of COVID-19 on Production, Poverty & Food Systems

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**Updated: May 19, 2020**

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- **Lockdown scenario updated since 6<sup>th</sup> May release**
  - Easing of lockdowns in Lagos, FCT & Ogun (starting 4<sup>th</sup> May)
  - Federal lockdown extended in Kano & Taraba (until early-June)
    - Result: Slightly larger economic costs relative to earlier estimates
- **New information on foreign remittance inflows**
  - World Bank estimates 23% decline in remittances to Africa (not 30%)
    - Result: Minor effect relative to size of other impact channels
- **New scenario with more gradual easing & slower recovery**
  - IMF now suggests global economy may not recover until late-2021
    - Previous Nigeria GDP forecast: 2.2% (2019), -3.4% growth (2020), +2.4% (2021)
    - Result: Larger losses during 2020 for this more pessimistic scenario

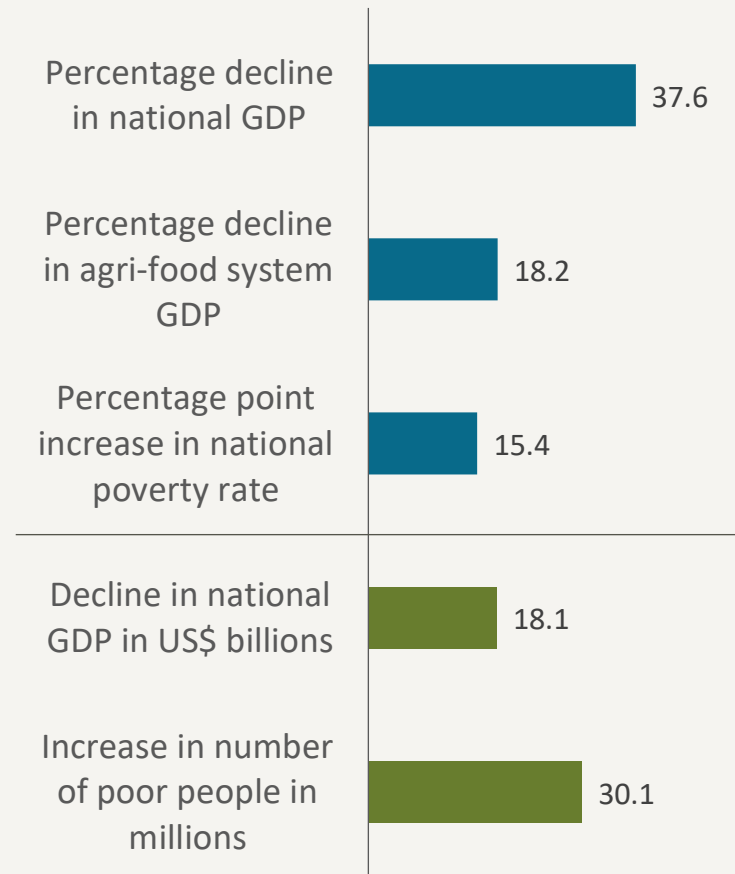
# Lockdown Imposes Heavy Economic Costs



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- **National GDP is estimated to fall by 38% during the 5-week lockdown**  
(US\$18 bil. in lost GDP)
- **Food system is adversely affected by falling consumer & export demand**  
(18% agri-food GDP decline, despite exemptions)
- **National poverty rate increases by 15%-points during the lockdown**  
(30 million more people temporarily living below the US\$1.90-a-day poverty line)

## Economic impacts during 5-week lockdown period



# Costs Likely to Persist Throughout 2020



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- **Economy is reopening & some restrictions are eased**

- **But economic losses remain, even with a fast recovery**

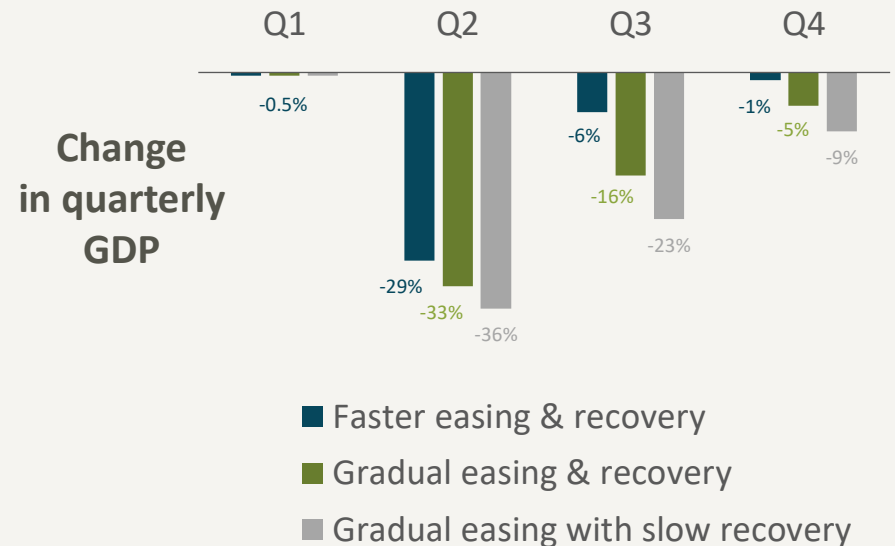
(GDP may be 9-17% lower in 2020 compared to a no-COVID scenario)

- **Average GDP & poverty rates for 2020 hide sharp mid-year deteriorations**

(many businesses & people will require government support to cope & recover)

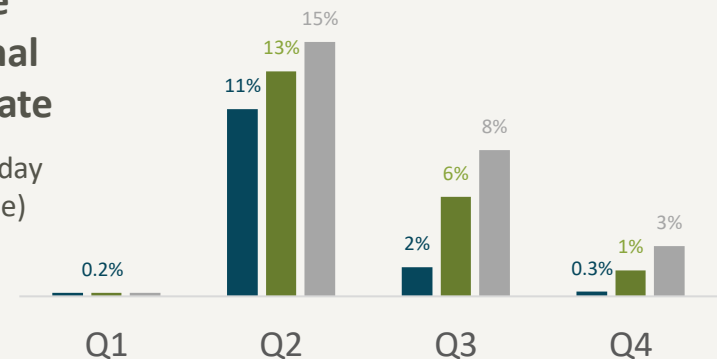
## Quarterly national impacts under faster or slower easing of lockdowns/recovery

(changes are relative to a no-COVID scenario)



## Change in national poverty rate

(US\$1.90-a-day poverty line)



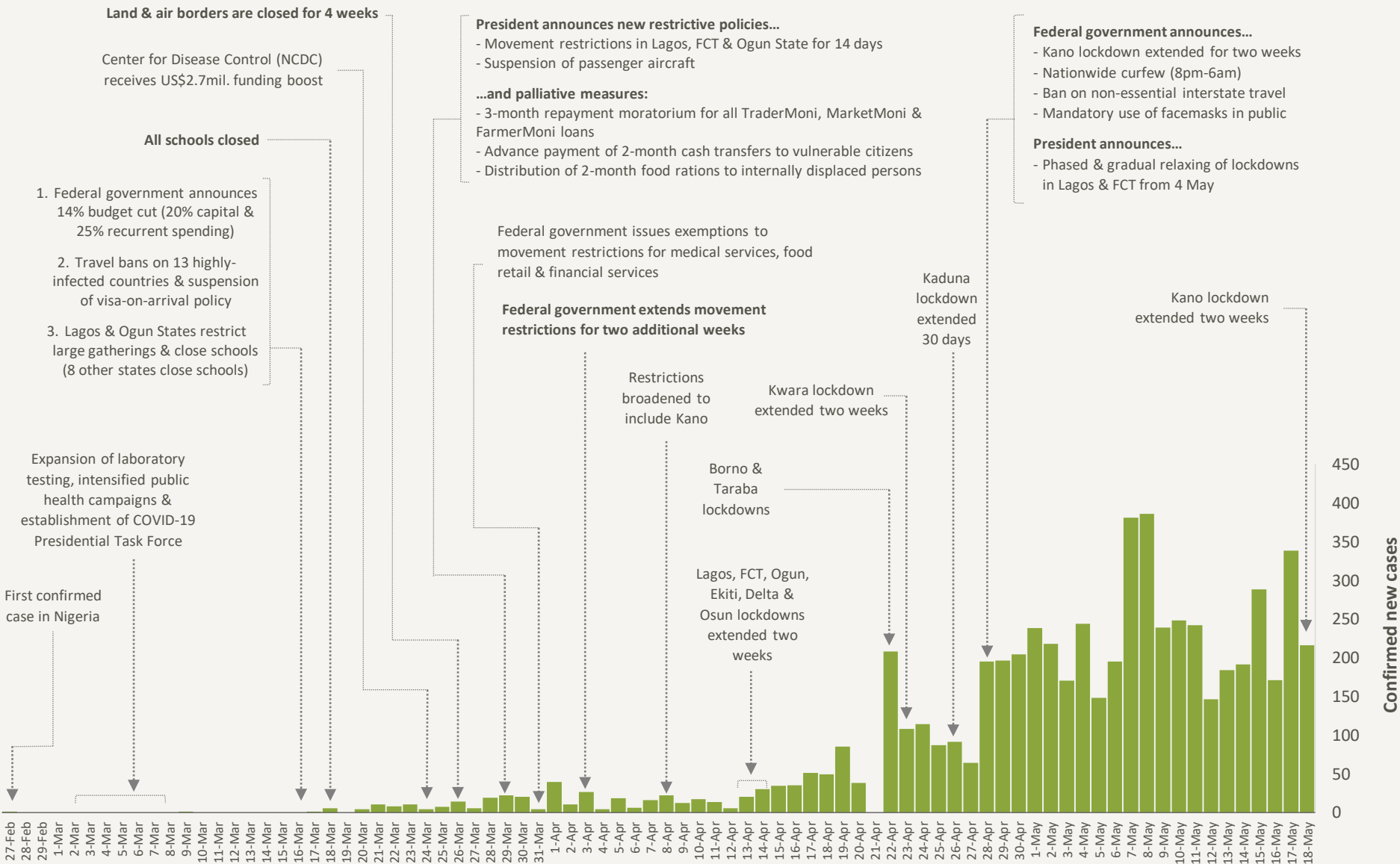


# COVID-19 Outbreak & Lockdown Policies in Nigeria

# COVID-19 Cases & Policy Timeline



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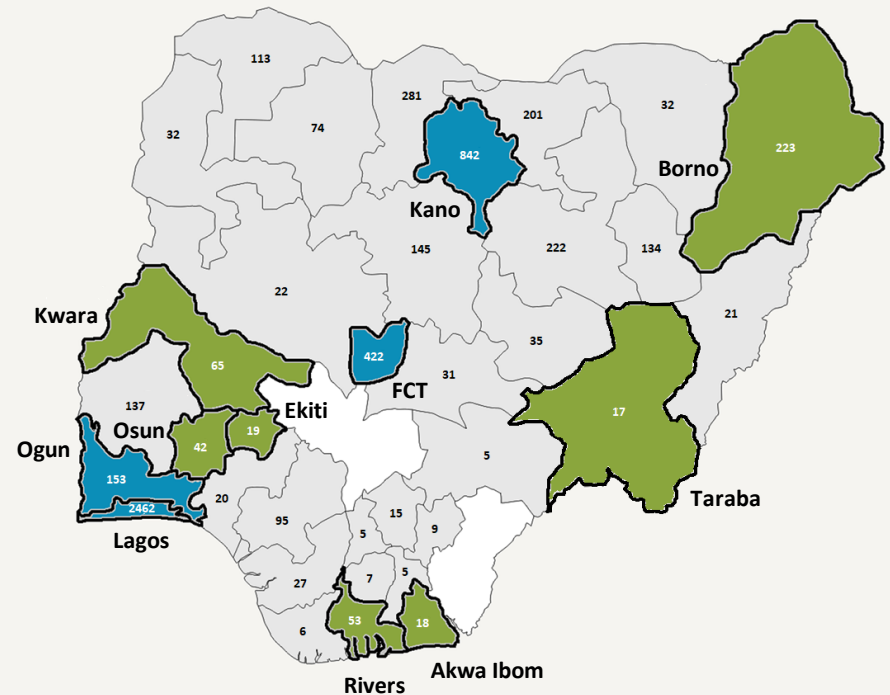
# States Under Lockdown (28 Apr 2020)



Updated: May 19, 2020

- **Only part of the economy is under lockdown restrictions**
  - But nationwide school closures, limits on size of gatherings & ban on interstate passenger travel
- **Federal government lockdowns**
  - Lagos, FCT-Abuja, Ogun, Kano
  - $\approx$  40% of national GDP
- **State government lockdowns**
  - Akwa Ibom, Borno, Ekiti, Kwara, Osun, Rivers, Taraba
  - $\approx$  25% of national GDP

Number of confirmed cases by state & states under partial or full lockdowns



# Sectors Affected by Lockdown Policies (1)



Updated: May 19, 2020

Sector	Lockdown restrictions or exemptions in targeted regions	Directly Affected?
<b>Agriculture</b>	<ul style="list-style-type: none"> <li>• Movement restrictions occurring at start of planting season</li> <li>• Suspended development projects</li> <li>• Ban on interstate passenger travel (labor &amp; trade implications)</li> </ul>	<b>Minimal</b>
<b>Mining &amp; crude oil</b>	<ul style="list-style-type: none"> <li>• Continuing to operate (essential sector)</li> <li>• Lower oil prices &amp; export demand (small supply effects to date)</li> </ul>	<b>Minimal</b>
<b>Manufacturing</b>	<ul style="list-style-type: none"> <li>• Food processing &amp; medicines exempted (essential sector)</li> <li>• Nonfood producing companies closed</li> <li>• Port congestion constraining access to inputs</li> </ul>	<b>High</b>
<b>Utilities</b>	<ul style="list-style-type: none"> <li>• Electricity &amp; water distribution exempted (essential sector)</li> </ul>	<b>Minimal</b>
<b>Construction</b>	<p><b>Nationwide</b></p> <ul style="list-style-type: none"> <li>• Many public works programs reduced in affected areas</li> <li>• Local curfews &amp; border closures reducing activity elsewhere</li> </ul>	<b>Some</b>
<b>Wholesale &amp; retail trade services</b>	<ul style="list-style-type: none"> <li>• Retailers of essential goods exempted (but 10am-2pm trading times)</li> <li>• Wholesale not exempted</li> </ul>	<b>Some</b>
<b>Transportation, storage &amp; cargo</b>	<p><b>Nationwide</b></p> <ul style="list-style-type: none"> <li>• Rail &amp; air travel closed; freight transport partly restricted</li> <li>• Demand for urban passenger transit reduced</li> <li>• Port cargo handling &amp; storage exempted</li> <li>• Ban on interstate passenger travel</li> </ul>	<b>High</b>
<b>Hotels &amp; food services</b>	<p><b>Nationwide</b></p> <ul style="list-style-type: none"> <li>• Restaurant dining banned or severely limited</li> <li>• Limited delivery options for food or other products</li> </ul>	<b>High</b>



# Sectors Affected by Lockdown Policies (2)



Updated: May 19, 2020

Sector	Lockdown restrictions or exemptions in targeted regions	Directly Affected?
<b>Banking, finance &amp; insurance</b>	<ul style="list-style-type: none"> <li>• Money transfer services exempted (essential)</li> <li>• Banks operating with essential staff only</li> <li>• Other financial institutions closed or teleworking (e.g., insurance)</li> </ul>	<b>Some</b>
<b>Professional &amp; business services</b>	<ul style="list-style-type: none"> <li>• Almost all closed or teleworking (e.g., legal, accounting services)</li> <li>• Activities involving in-person field visits affected (e.g., engineers)</li> </ul>	<b>Some</b>
<b>Public admin &amp; law enforcement</b>	<ul style="list-style-type: none"> <li>• Public services &amp; agencies remain open, but most staff teleworking</li> <li>• Public &amp; private security services exempted (essential)</li> </ul>	<b>Some</b>
<b>Education services</b>	<ul style="list-style-type: none"> <li>• <b>Nationwide</b></li> <li>• All public schools closed without much scope for online delivery</li> <li>• Private schools closed with some online materials</li> </ul>	<b>High</b>
<b>Health services</b>	<ul style="list-style-type: none"> <li>• Health services exempted (essential)</li> <li>• Elective operations reduced but rising number of COVID patients</li> </ul>	<b>Minimal</b>
<b>Sports &amp; entertainment</b>	<ul style="list-style-type: none"> <li>• <b>Nationwide</b></li> <li>• Most sports &amp; outdoor entertainment banned</li> <li>• Some activities operating (e.g., newspapers, radio &amp; TV)</li> </ul>	<b>High</b>
<b>Other services</b>	<ul style="list-style-type: none"> <li>• Domestic workers cannot commute, but live-in workers less affected</li> <li>• In-person religious gatherings banned</li> <li>• Major disruptions to informal repair firms due to market closures</li> </ul>	<b>Some</b>

# Global & Other Nationwide Shocks



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Sector	Lockdown restrictions or exemptions in targeted regions	Directly Affected?
<b>Export demand</b>	<b>Nationwide</b> <ul style="list-style-type: none"><li>• Sizable decline in demand for oil, but production continues</li><li>• Reduced international tourism &amp; business travel to Nigeria</li></ul>	<b>High</b>
<b>Remittances</b>	<b>Nationwide</b> <ul style="list-style-type: none"><li>• Declines in the value of remittances sent by national working abroad</li></ul>	<b>Some</b>
<b>Government revenues</b>	<b>Nationwide</b> <ul style="list-style-type: none"><li>• Fall in tax revenues due to decline in economic activity</li><li>• Lower trade tax collections due to reduced import demand</li></ul>	<b>Some</b>

**See detailed sector-level assumptions about production & demand shocks in Annex at the end of slide deck**



## **2** Measuring Economic Impacts

# Economywide Multiplier Analysis



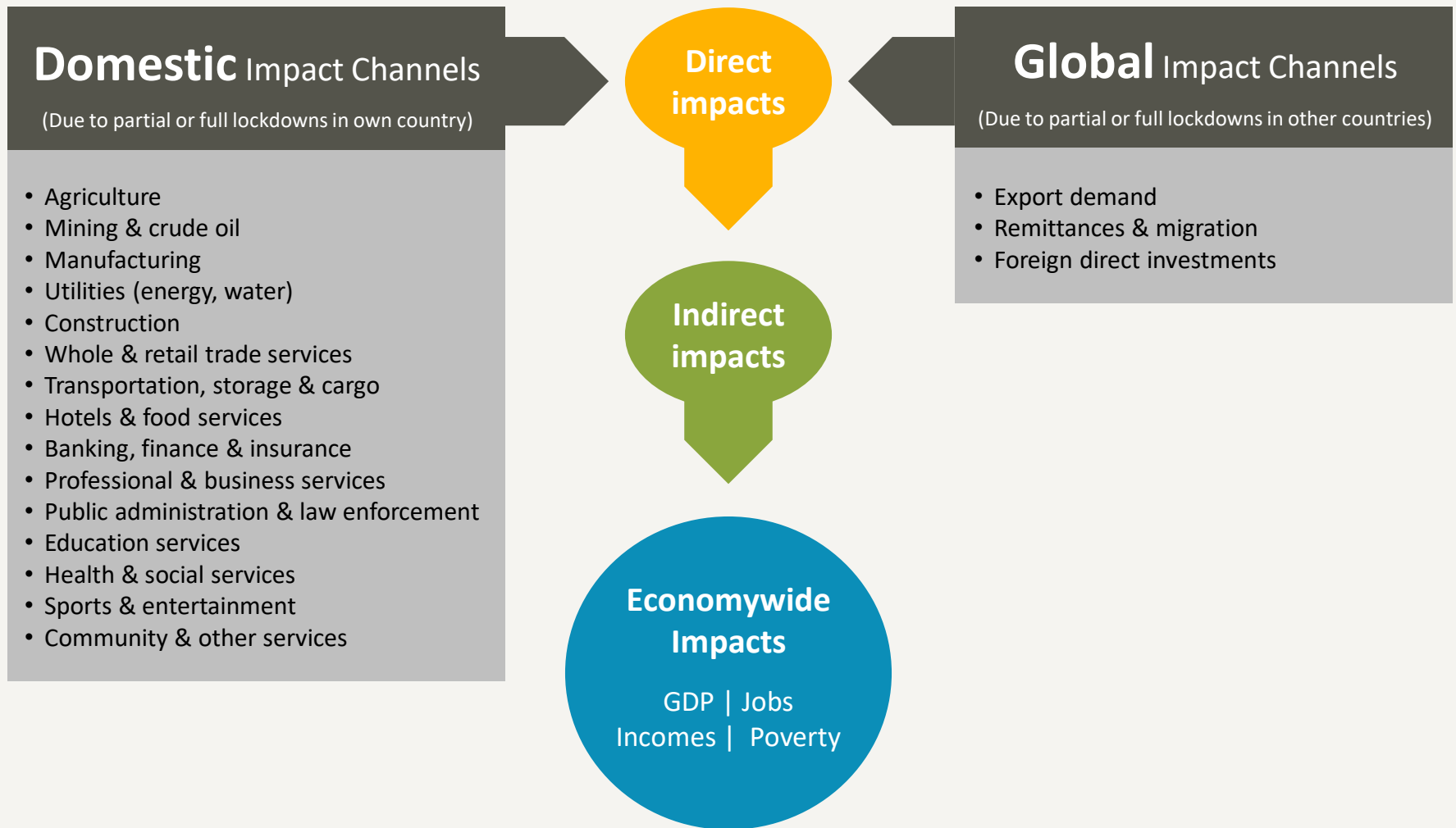
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- **Lockdown policies & shocks have direct impacts on the operation of certain sectors**  
(e.g., closing businesses, restricting travel, etc.)
- **But it also generates indirect impacts on other sectors involved in supply chains**  
(i.e., input suppliers & downstream users)
- **Multiplier analysis uses sector input-output data to measure direct & indirect impacts throughout & across supply chains**  
(incl. impacts on GDP, jobs & household incomes)
- **Nigeria model based on 2018 SAM & 2011 household survey data**  
(results scaled to 2019 GDP & employment levels)

# Framework for Analyzing COVID-19



Updated: May 19, 2020



# Impact Channels & Shocks



Updated: May 19, 2020

- **Lockdowns are simulated using a range of impact channels**
  - Shocks to each channel are imposed on the model & impacts are simultaneously traced across all supply chains
- **Multiplier model separates entire Nigerian economy into 86 sectors**  
(shocks are calculated bottom-up using supply-use data for 284 goods & services)
- **Size of shocks is estimated by IFPRI's in-country staff & collaborators**  
(see Annex)

Impact channels used to replicate lockdowns	
1	✗ Restrictions on farming
2	✗ Closing mining operations
3	Closing non-essential manufacturing operations
4	✗ Restrictions on energy and water supply
5	Restrictions on construction activities
6	Closing non-essential wholesale/retail trade
7	Transport/travel restrictions
8	Closing hotels, bars and restaurants
9	Closing non-essential business services
10	✗ Government work-from-home orders
11	Closing all schools in the country
12	✗ Restrictions on hospitals and clinics
13	Banning sports & other entertainment
14	Domestic workers & other services
15	Reduced export demand
16	Falling foreign remittances
17	Falling government revenues

✗ No direct losses via these channels in Nigeria (e.g., exempted or no information)

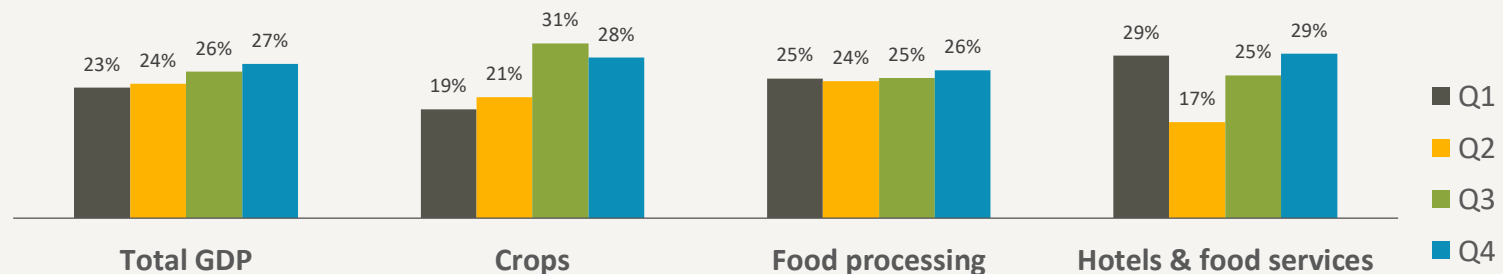
# Adjusting for Geography & Seasonality



Updated: May 19, 2020

- **Shocks are weighted to reflect the geographic targeting of lockdowns policies** (using official data on sectoral GDP by state)
- **Shocks also weighted by importance of Q2-2020 for sectoral GDP**
  - Second half of year is more important for crop GDP
  - Q2 is “low season” for tourism (mainly hotels & food services sector)
  - Food processing GDP is evenly distributed across year

Share of annual GDP produced each quarter

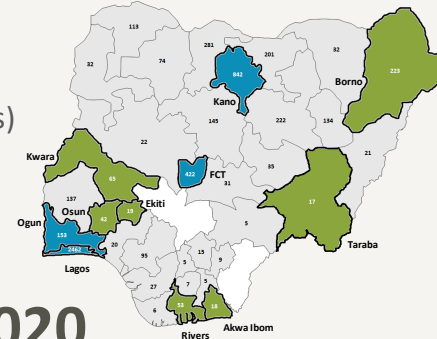


# Scenarios

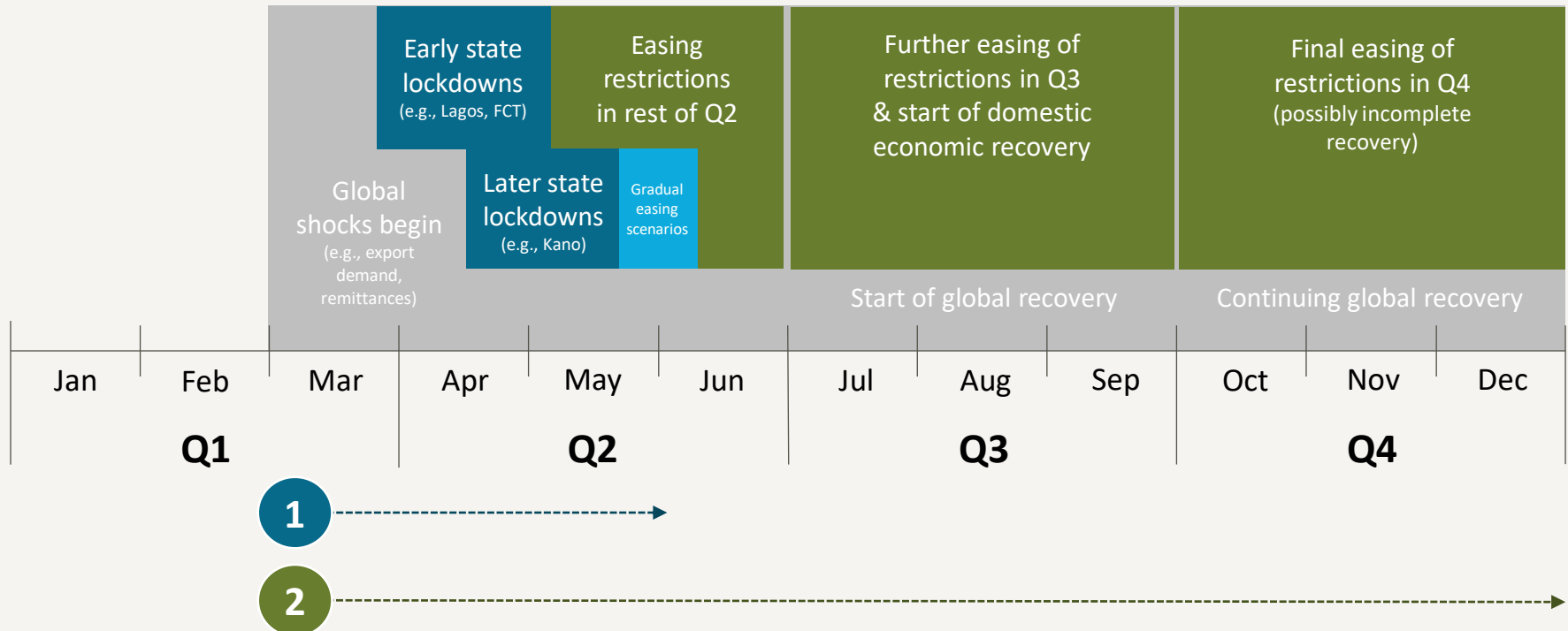
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## 1. Impacts during the **lockdown** period

- 5 weeks for early states (≈30 Mar - 4 May for Lagos, FCT, Ogun, Ekiti, Kwara, Rivers)
- 5-8 weeks for later states (≈14 Apr - 9 Jun for Kano, Akwa Ibom, Borno, Taraba)



## 2. Plus impacts from **easing/recovery** during rest of 2020







**3**

## **Economic Impacts During the Ongoing Lockdown Period**

# GDP Losses During Lockdown



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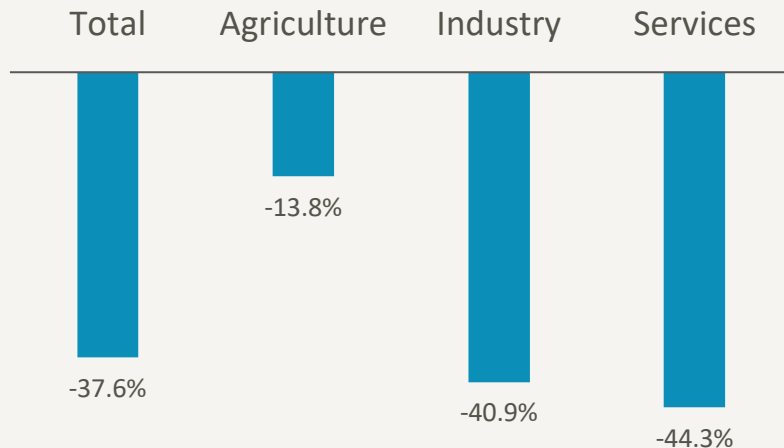
## National GDP drops 38% during 5-weeks of state lockdowns

(most losses occur in the services sectors, but industry is also badly affected)

## Assumes lockdowns are not expanded or reintroduced

(e.g., lockdowns in Kano or other states might last 8 weeks – see gradual easing scenarios)

Change in total GDP during lockdown period (%)



Change in total GDP during lockdown period (US\$ bil.)



# Sources of GDP Losses

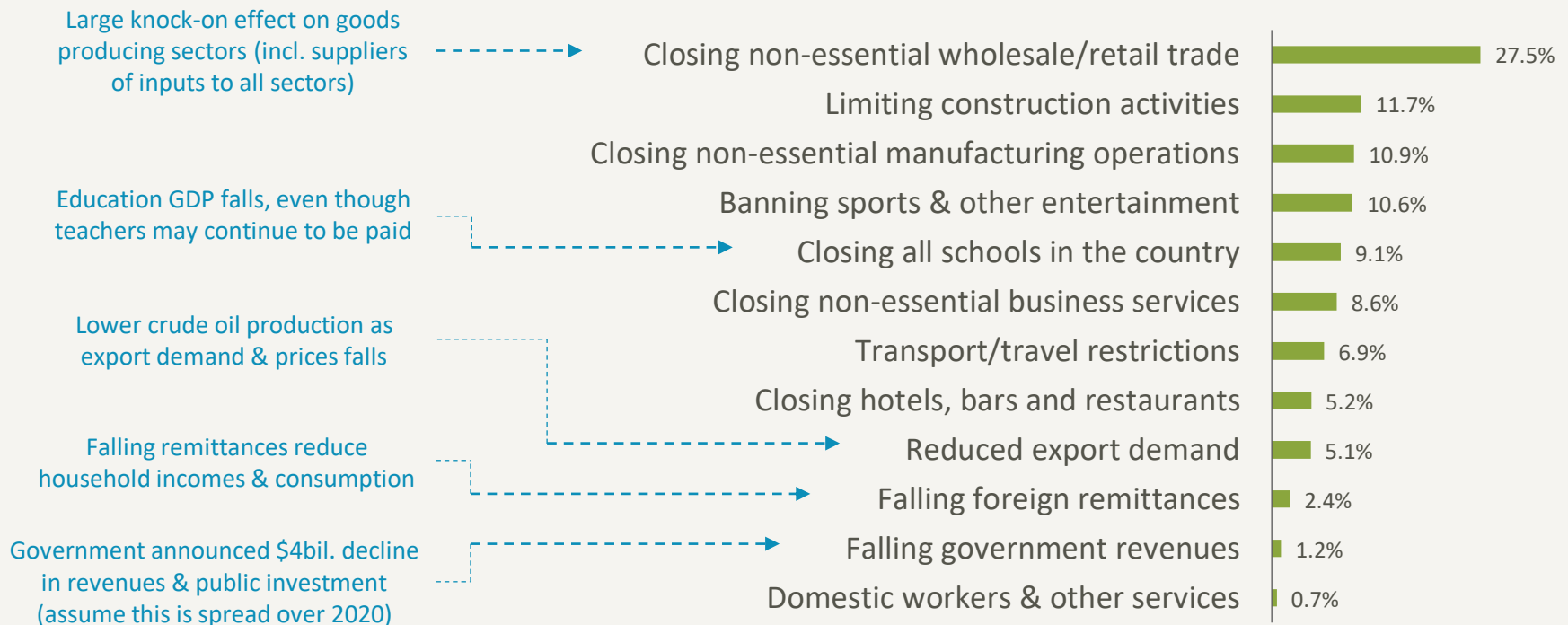


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## Restricting non-essential trade accounts for a quarter of GDP losses

(limiting construction & manufacturing activities makes up about another quarter)

### Contribution of lockdown restrictions & shocks to loss in total GDP during lockdown (sums to 100%)



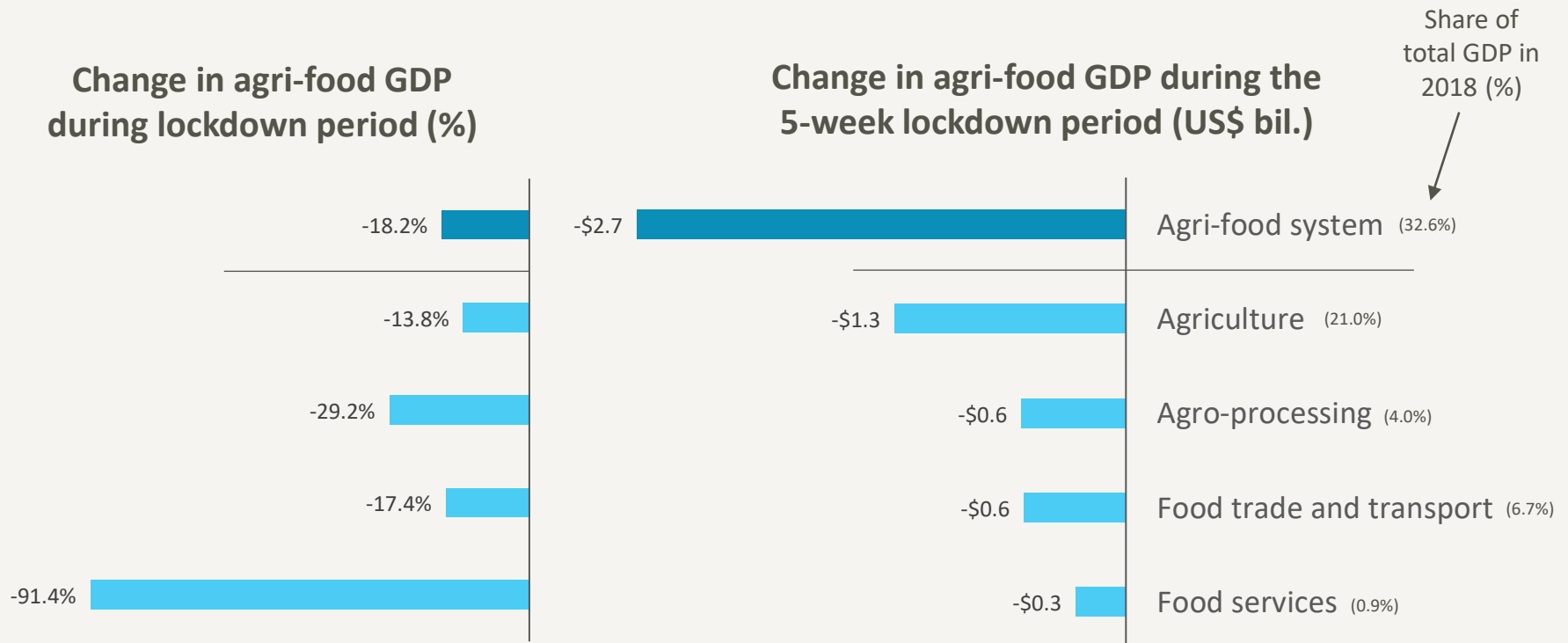
# Impacts on the Agri-Food System



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**Food supply is exempt from most restrictions, but it is still indirectly affected by falling consumer incomes & other shocks**

(food services is directly affected by the closing of hotels, restaurants & bars, but this is a small component of the overall agri-food system)



# Sources of Agri-Food System GDP Losses



Updated: May 19, 2020

## Domestic trade restrictions cause a large share of agri-food GDP losses

(limiting construction & banning entertainment activities makes up another quarter)

### Contribution of lockdown restrictions & shocks to loss in agri-food GDP during lockdown (sums to 100%)

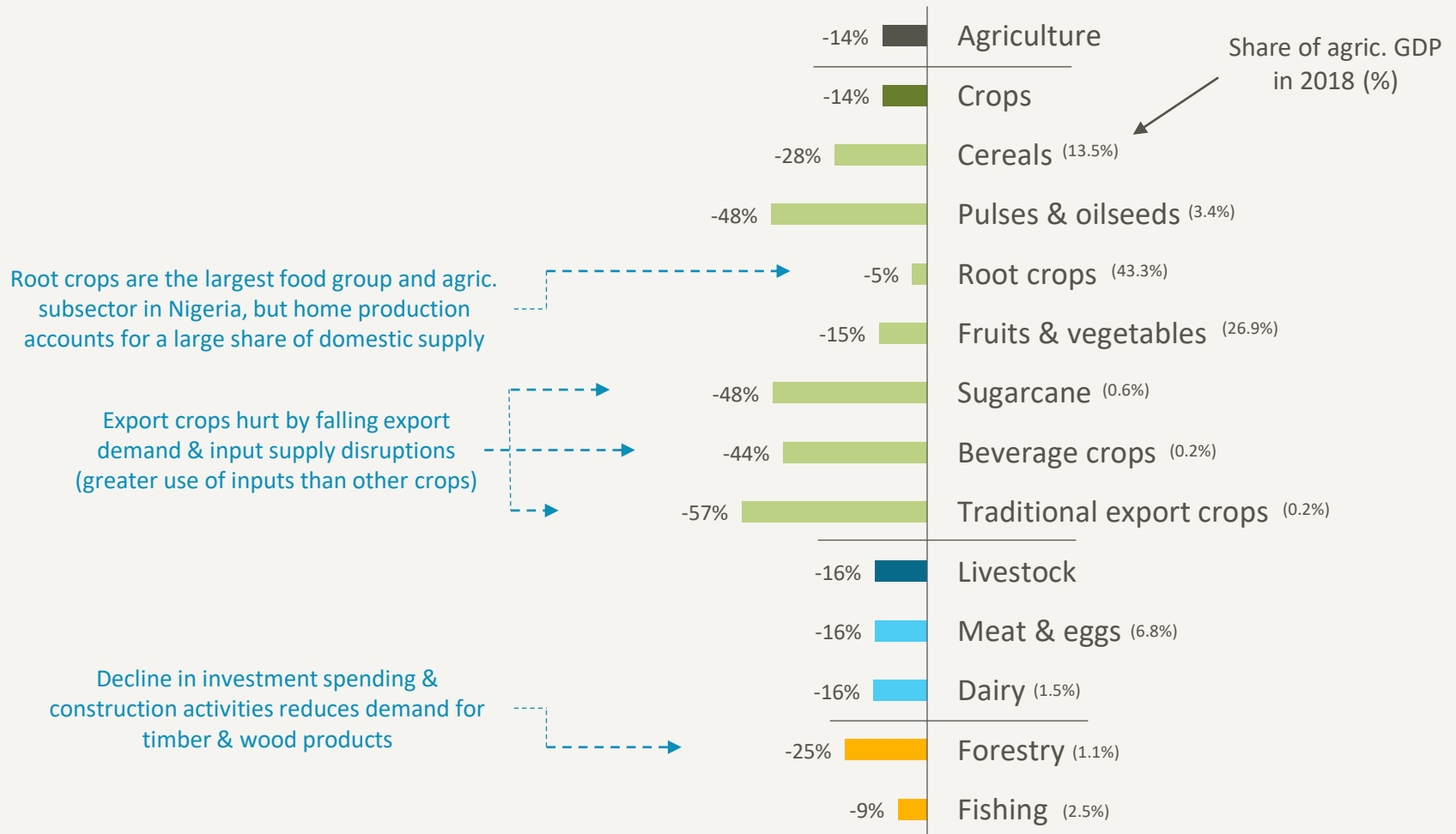


# Unpacking Agricultural GDP Impacts



Updated: May 19, 2020

## Change in GDP during the lockdown (%)



# Unpacking Food Processing GDP Impacts



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**Note:** Agri-food processing is a subsector within manufacturing

## Change in GDP during the lockdown (%)

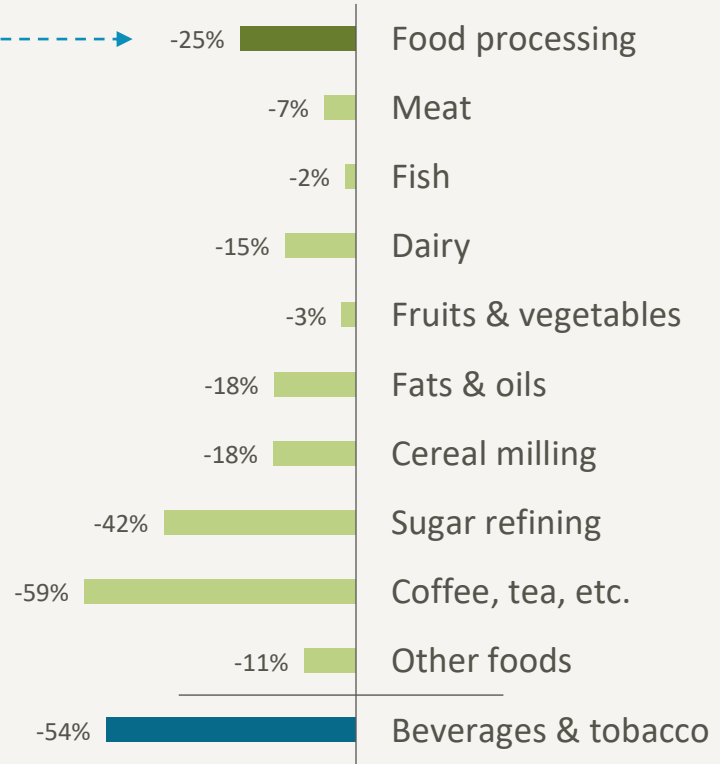
Processed foods are more intensively consumed by urban households, who are affected badly by lockdown (see later slides)



Export-oriented crops are typically processed before being exported



Not entirely exempted by lockdown restrictions



# Impacts on Household Incomes



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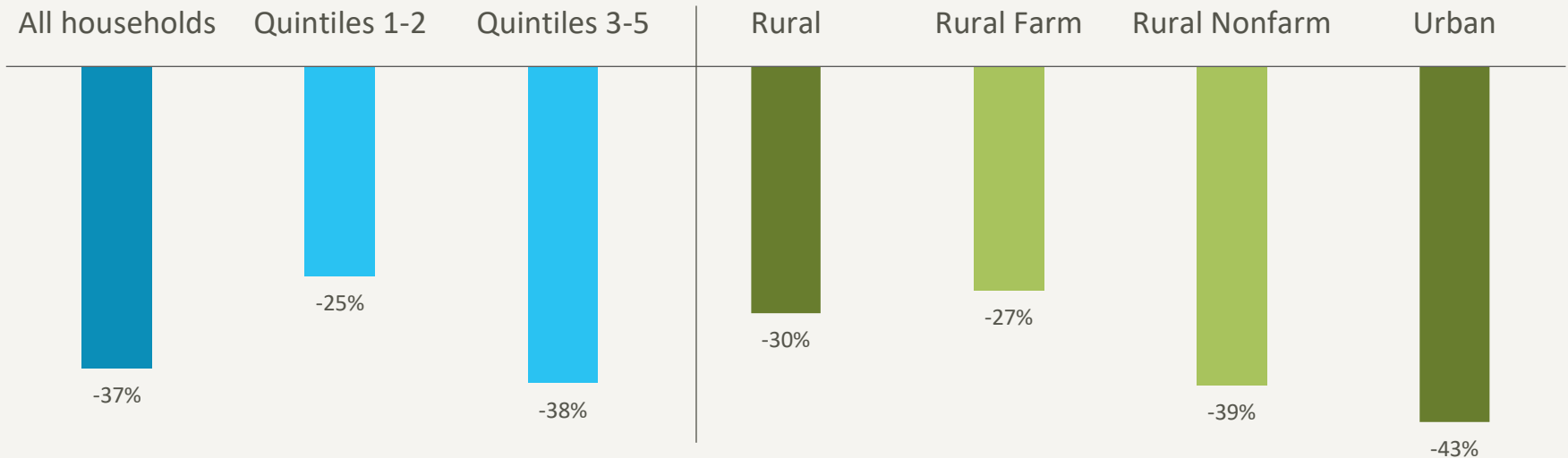
## All households experience large income losses

(smaller losses for rural households because farming/food trade is exempt)

## Larger income losses for higher-income households

(but we do not consider how these households have savings & assets that can help smooth income shocks)

### Change in household incomes during lockdown (%)





# Poverty Impacts During the Lockdown

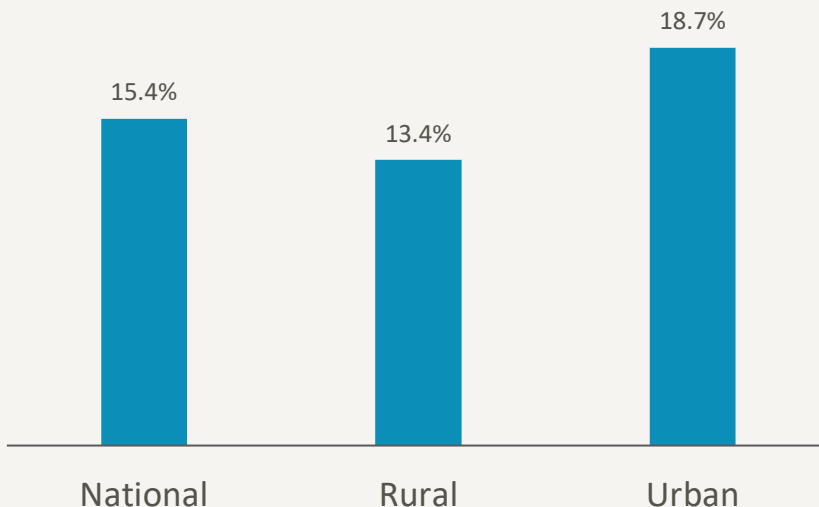


Updated: May 19, 2020

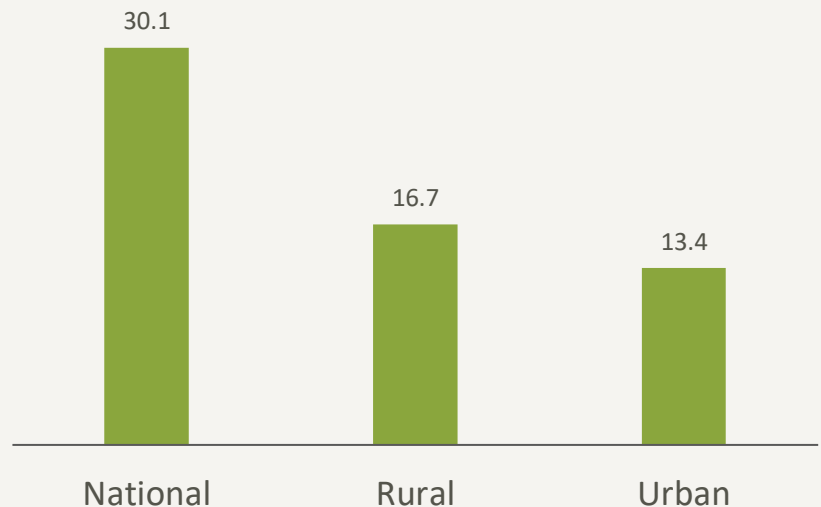
**National poverty rate increases by 15%-points during the lockdown period ( $\approx$  30 mil. more poor Nigerians)**

(poverty rate is the share of the population with consumption spending below the US\$1.90-a-day poverty line)

**Increase in share of population living in poverty during 5-weeks of lockdowns (%)**



**Increase in number of poor people in Nigeria during 5-weeks of lockdowns (mil.)**





**4**

**Economic Impacts Under Fast & Slow  
Easing of Restrictions**

# Easing of Restrictions & Speed of Recovery



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## We consider three stylized scenarios:

**Fast recovery:** Economy rebounds strongly in Q3 & largely returns to normal by Dec 2020

**Gradual easing:** Modest rebound in Q3 with productivity in Q4 still below pre-lockdown levels

		<b>Fast Recovery</b> (faster easing & recovery)	<b>Gradual Recovery</b> (gradual easing & recovery)	<b>Slower Recovery</b> (gradual easing, slow recovery)	<b>Global shocks</b>
<b>Q1</b>	Jan	No lockdown restrictions or global shocks in this “pre-COVID-19” period			
	Feb				
	Mar	5-week lockdown for early & late states (from late-March until early-June)	5-week lockdown for early states like Lagos (from late-march) & 8-week lockdown for late states like Kano (until mid-June)		Remittances & export demand decline from 1 <sup>st</sup> March onwards
<b>Q2</b>	Apr				
	May				
	Jun	Losses reduced by 50%	Losses reduced by 25%	Losses reduced by 5%	
<b>Q3</b>	Jul	Losses reduced by 90% (transport & entertainment by 70%)	Losses reduced by 60% (transport & entertainment by 40%)	Losses reduced by 40% (transport & entertainment by 30%)	Global shocks reduced by 50% (by 30% in slower recovery)
	Aug				
	Sep				
<b>Q4</b>	Oct	Losses reduced by 99% (transport by 95%)	Losses reduced by 90% (transport & entertainment by 80%)	Losses reduced by 80% (transport & entertainment by 60%)	Global shocks reduced by 75% (by 65% in slower recovery)
	Nov				
	Dec				

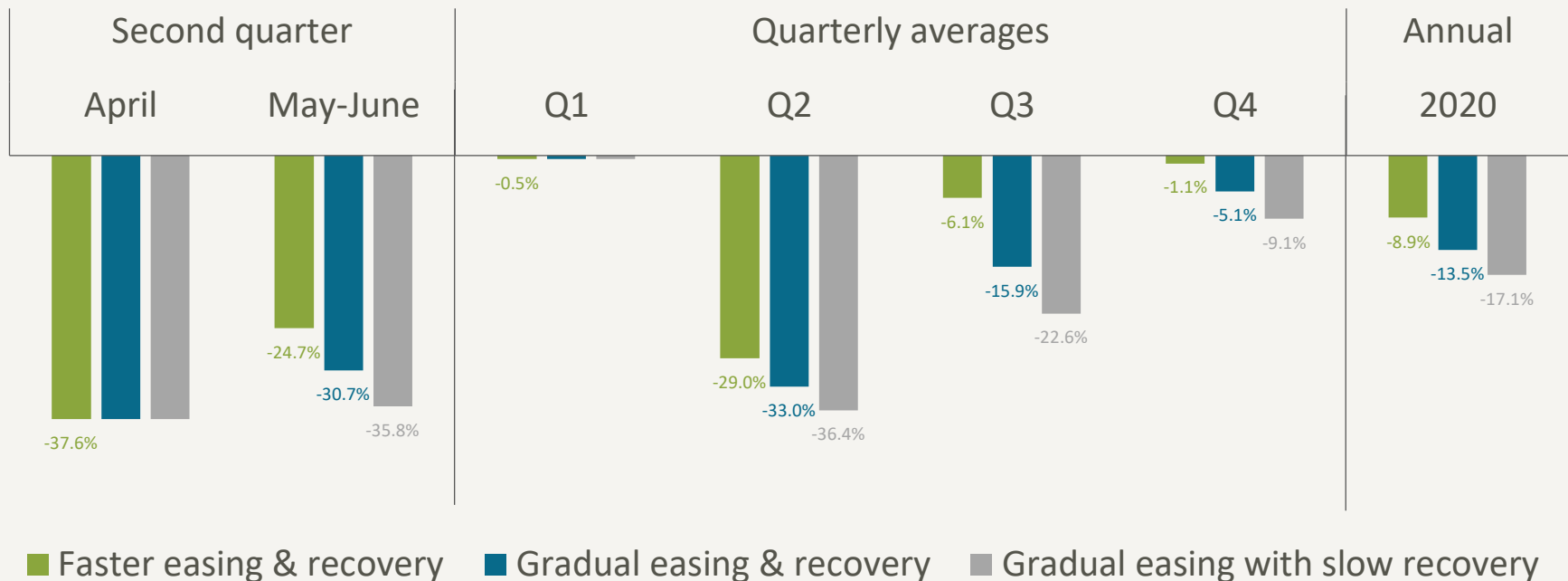
# GDP Impacts with Recovery Scenarios



Updated: May 19, 2020

**National GDP is 9% lower over 2020 as a result of COVID-19, assuming a faster easing of restrictions & faster recovery**

**Change in quarterly & annual national GDP with fast or slow easing of restrictions**  
(changes are relative to a no-COVID growth scenario)



# Cumulative Quarterly GDP Losses



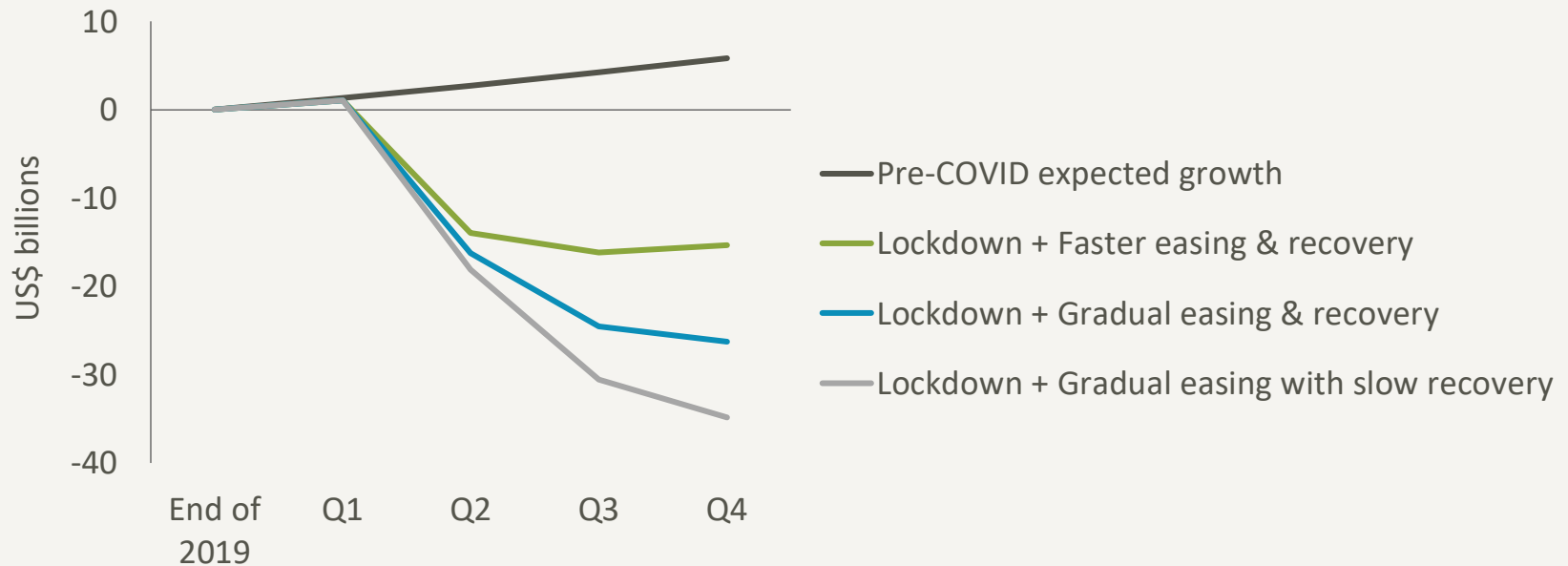
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## Even with faster recovery, Nigeria ends 2020 with lower GDP

(GDP losses accumulate each quarter & will take time to recover to pre-COVID levels)

### Cumulative changes in 2020 GDP from end of 2019

(pre-COVID expected growth rate for 2020 was 2.3% according to IMF's 2019 Economic Outlook)



# Poverty Impacts with Recovery Scenarios

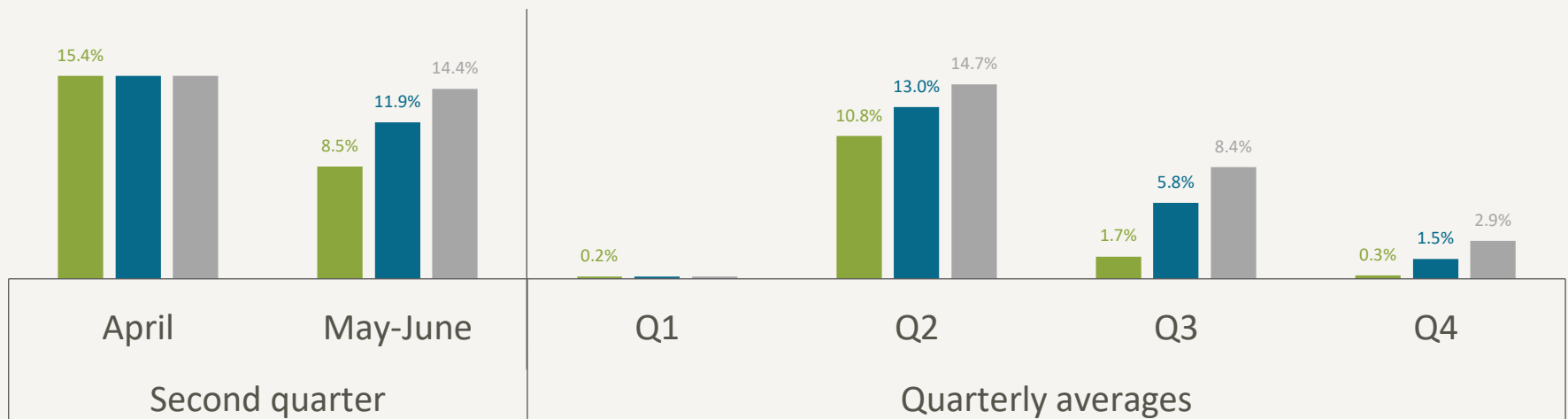


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**Poverty should stabilize by end-2020 as people return to work, incomes recover & consumer demand resumes**

(This hides sharp spike in mid-year poverty, when many households living close to the poverty line may require government or other support to cope)

**Change in national poverty rate with fast or slow easing of restrictions**  
(changes are relative to a no-COVID growth scenario)



■ Faster easing & recovery   ■ Gradual easing & recovery   ■ Gradual easing with slow recovery



# Detailed Assumptions About Production & Demand Shocks

# Channels, Shocks & Affected Sectors (1)



Updated: May 19, 2020

Type of restriction or global shock	Major sectors affected <sup>2</sup>	Geography affected	Size of shock	Detailed subsectors affected by shock <sup>2</sup>
<b>Direct restrictions on farming</b>	Agriculture (A)		0%	Crop/animal production, hunting, related service activities (D01); forestry, logging (D02); fishing, aquaculture (D03)
<b>Limiting mining operations</b>	Mining, quarrying (B)		0%	Coal, lignite (D5); crude petroleum, natural gas (D06); metal ores (D07); quarrying (D08); mining support service activities (D09)
<b>Closing non-essential manufacturing operations</b>	Manufacturing (C)		0%	Food products (D10); coke, refined petroleum (D19); pharmaceuticals, medicinal chemicals (D21); electromedical equipment (G266)
		Only selected cities & states <sup>1</sup>	-100%	Beverages, tobacco (D11-12); textiles, clothing, leather (D13-15); wood, paper, printing (D16-18); chemicals, rubber, plastics (D20-21); non-metallic minerals (D23); metals (D24-25); equipment, machinery (D26-28 excl. G266); vehicles, transport equipment (D29-30); furniture (D31), other manufactures (D33)
<b>Disruptions to energy and water supply</b>	Electricity, gas (D); water supply (E)		0%	Electricity, gas, steam supply (D35); water collection, treatment, supply (D36); sewerage, waste collection/remediation (D37-39)
<b>Limiting construction activities</b>	Construction (F)	National	-30%	Construction of buildings (D41); civil engineering (D42); specialized construction activities (D43)
<b>Closing non-essential trading activities</b>	Wholesale/retail trade (G)		0%	Agricultural raw materials, live animals (G462); agricultural machinery, equipment, supplies (C4653); food, beverages, tobacco, incl. stalls & markets (G463 G471-472 C4781); construction materials, hardware, plumbing, heating equipment (C4663); automotive fuels (G473)
		Only selected cities & states <sup>1</sup>	-65%	Motor vehicle trade/repair (D45); wholesale trade (D46 excl. G462-463 C4653 C4663); retail trade (D47 excl. G471-472 G47 C4781)
<b>Transport/travel restrictions</b>	Transportation, storage (H)		0%	Postal/courier activities (D53); transport via pipeline (G493)
		National	-25%	Sea/coastal/inland water transport (C5011-5012 C5022); transport support (G522)
		National	-50%	Freight rail/road/air transport (C4912 C4923 G512); warehousing/storage (G521)
		National	-75%	Urban/suburban passenger/other land transport (C4911 C4921-4922)
		National	-100%	Passenger air transport (G511)
<b>Government work-from-home orders</b>	Public administration, defense (O)		0%	Public administration, defense, compulsory social security (D84)
<b>Closing hotels, bars and restaurants</b>	Accommodation, food services (I)	Only selected cities & states <sup>1</sup>	-100%	Accommodation (D55); food/beverage service activities (D56)



# Channels, Shocks & Affected Sectors (2)



Updated: May 19, 2020

Type of restriction or global shock	Major sectors affected <sup>2</sup>	Geography affected	Size of shock	Detailed subsectors affected by shock <sup>2</sup>
<b>Closing non-essential business services</b>	Information, communication (J); finance, insurance (K); real estate (L); professional/scientific/technical activities (M); administrative/support services (N)	Only selected cities & states <sup>1</sup>	0%	Publishing activities (D58); programming/broadcasting activities (D60); telecommunications (D61); computer programming/consultancy activities (D62); information service activities (D63); financial services, insurance, pension funding, auxiliary services (D64-66); real estate activities (D68); security and investigation activities (D80)
		Only selected cities & states <sup>1</sup>	-10%	Accounting, bookkeeping, auditing, tax consultancy (G692); head offices, management consultancy (D70); scientific research/development (D72); advertising, market research (D73); other professional/scientific/technical activities (D74);
		Only selected cities & states <sup>1</sup>	-50%	Legal activities (G692); architectural/engineering activities (D71); veterinary activities (D75)
		Only selected cities & states <sup>1</sup>	-100%	Motion picture/video/television program production, etc. (D59); renting/leasing activities (D77); employment activities (D78); travel agencies, tour operators (D79); building services, landscape activities (D81); office administrative, office support, other business support activities (D82)
<b>Closing schools</b>	Education (P)	National	-100%	Pre-primary and primary education (G851)
		National	-80%	Secondary education (G852); Other education (G854)
		National	-60%	Higher education (G853); Educational support activities (G855)
<b>Disruptions to hospitals and clinics</b>	Human health, social work (Q)		0%	Human health activities (D86); residential care activities (D87); social work activities without accommodation (D88)
<b>Banning sports &amp; other entertainment</b>	Arts, recreation, entertainment (R)	National	-100%	Creative/arts/entertainment activities (D90); libraries, archives, museums, other cultural activities (D91); gambling, betting activities (D92); sports, amusement/recreation activities (D93)
<b>Domestic workers &amp; other services</b>	Other service activities (S); households as employers (T); extraterritorial organizations (U)	Only selected cities & states <sup>1</sup>	0%	Extraterritorial organizations/bodies (D99)
		Only selected cities & states <sup>1</sup>	-10%	Membership organizations (D94)
		Only selected cities & states <sup>1</sup>	-50%	Other personal services (D96); domestic workers/personnel (D97); Other production activities of private households for own use (D98)
		Only selected cities & states <sup>1</sup>	-100%	Repairing computers & personal/household goods (D95)

**Note:** (1) Selected cities and states include FCT Abuja, Kano, Lagos and Ogun regions; (2) numbers in parentheses are International Standard Industrial Classification (ISIC Revision 4) codes (by major section with detailed subsectors, D is division, G is group and C is class).