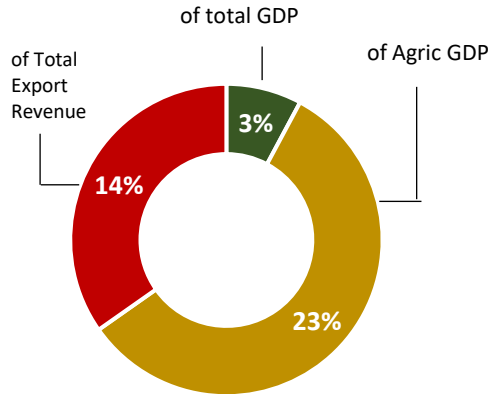


IMPACT OF COVID 19 PANDEMIC ON GHANA'S COCOA EXPORT REVENUES

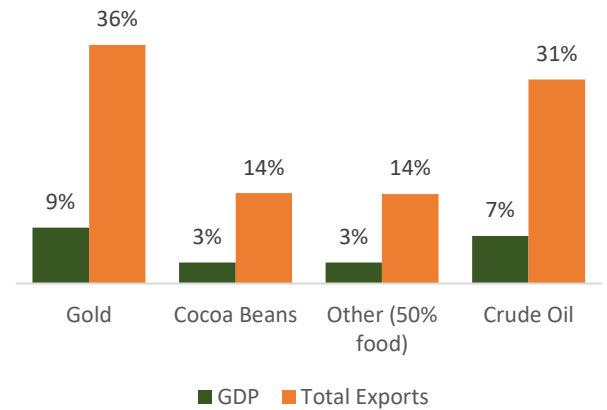
80%

of Ghana's cocoa bean export revenues are from countries listed amongst the top 10 most affected in terms of active COVID-19 cases

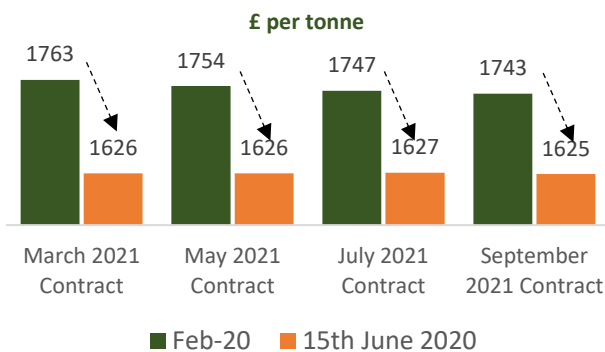
Cocoa Export Revenues contribute significantly to Ghana's Economy



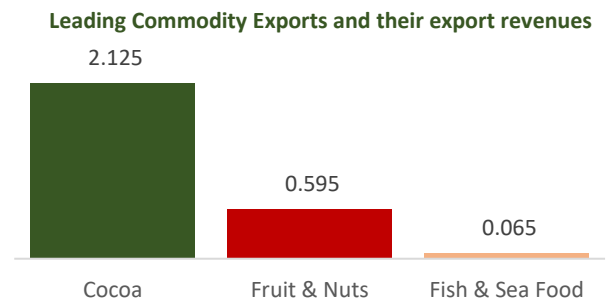
Cocoa is the only agricultural commodity with the highest contribution to Ghana's total exports revenues



Closure of some chocolate factories in Europe is impacting on International Cocoa prices



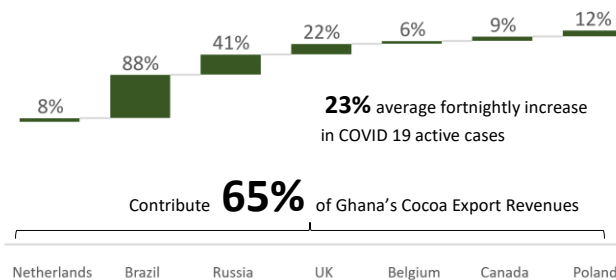
Cocoa export revenues contribute over 75% of Ghana's food export revenues



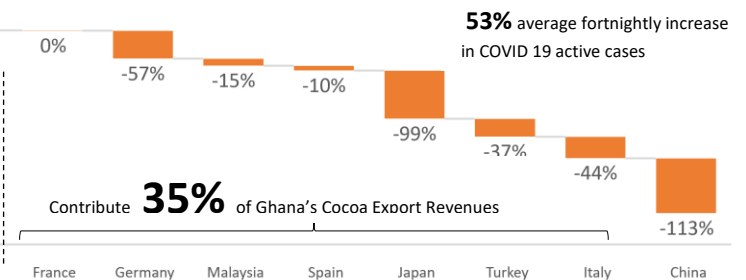
65%

of Ghana's Cocoa Export Revenues are from countries witnessing an increasing number of cases daily as of May 2020

INCREASE IN COVID CASES



DECREASE IN COVID CASES



Source: Ghana Budget Statement 2019/2020 || <https://www.theice.com/products/37089076/London-Cocoa-Futures/data?marketId=5810528> || www.worldometers.info/coronavirus || <https://comtrade.un.org/data> || <https://www.bloomberg.com/news/articles/2020-06-08/coronavirus-may-cost-africa-4-8-billion-in-agriculture-exports> || IESO Analysis

COVID 19 Pandemic **MAY NOT HAVE** an impact on Cocoa Export Revenues for **2019/2020 season**

80% of Cocoa Beans were procured before the outbreak of the pandemic

Supply of cocoa beans **not** affected

October 2019

Harvesting season

September 2019

\$1.3bn syndicated loan deal secured
Cocoa Bean purchases from farmers were secured

December 2019

80% of Cocoa Beans shipped out of the country
80% of Revenue from other Cocoa Products Received

BEFORE THE COVID PANDEMIC

Jan - Mar 2020
March 2020

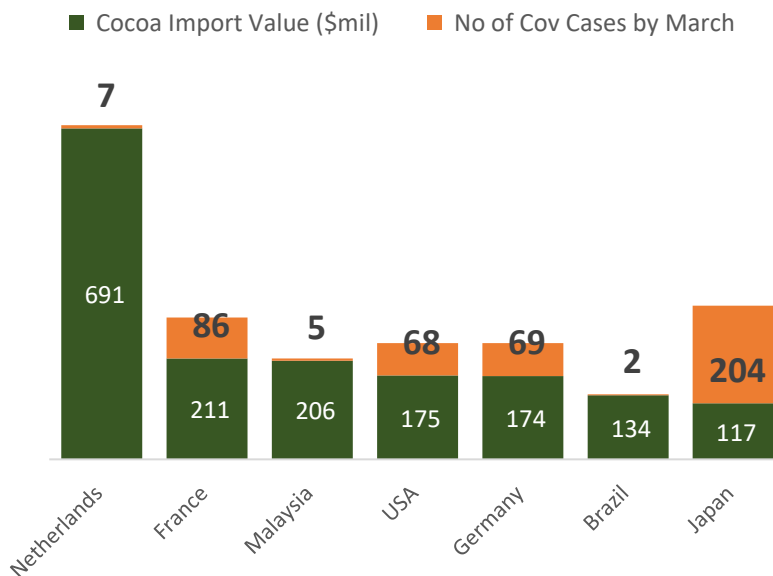
Cocoa Beans already en route to respective destinations
Cocoa Beans Delivered to Trading Partners

DURING THE PANDEMIC

IESO Analysis

Demand for cocoa beans **has not** been affected

TOP 7 COCOA TRADING PARTNERS BY EXPORT VALUE (\$Mil)



- All top 7 trading partners who account for over 70% of Ghana's Cocoa beans imports had not more than 200 COVID cases by end of February
- Shipments was already en-route or already arrived at certain destinations

Source: UN COMTRADE Database || www.worldometers.info/coronavirus || IESO Analysis

COVID 19 Pandemic **MAY HAVE** an impact on Cocoa Export Revenues for **2021/2022** season

Impact of COVID-19 on Cocoa Production & Trade

DRIVERS Daily growth in Total COVID-19 Cases **may not affect** cocoa production and supply due to **LIVING INCOME DIFFERENTIAL**

& Potential Growth in Cases in Cocoa Producing Regions **may affect** labor supply, labor productivity, production, and **RISK APPETITE OF LENDERS TO THE SYNDICATED LOAN**

Supply Producers

\$400 a metric ton premium over futures prices to help increase payments to farmers

\$2,600 minimum price per tonne free-on-board (FOB) that chocolate companies must pay from the 2020/21 season if they want to access their cocoa

70% of a \$2,600 a tonne (FOB) target price dedicated as increased payments to farmers

\$1.3bn syndicated loan secured over the past 3 years, anything less this year could impact over **800k** rural families across Ghana

Ghana has consistently secured \$1.3bn through the cocoa syndicated loan since 2017



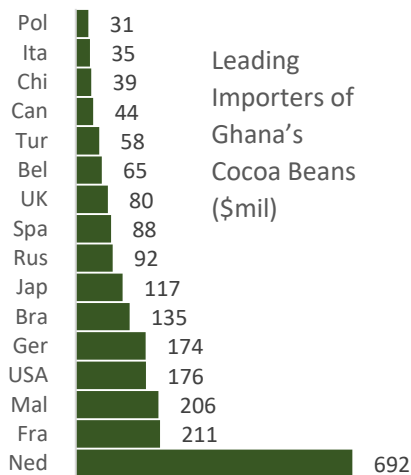
Source: Ghana 2020 Budget Statement | Source: IESO Analysis

Demand Buyers

GH's Cocoa Bean Trading Partners Are leading Chocolate Exporting Countries

10/11 most affected COVID countries in the world are Cocoa Trading Partners with Ghana

80% of Ghana's cocoa bean export revenues are from countries listed amongst the 10 most affected in terms of active COVID-19 cases



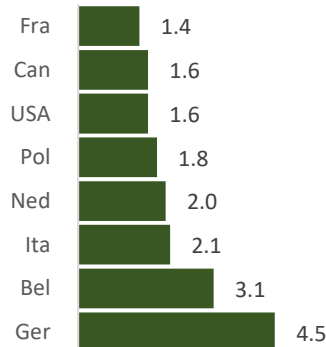
Leading Importers of Ghana's Cocoa Beans (\$mil)

Chocolate Exporting Countries Have also hugely been affected

50% of Ghana's Cocoa Bean Buying Countries are among the **top 8** chocolate producing countries in the world

73% of their chocolate export revenues are derived from their top 10 trading partners or end users

Leading Chocolate Exporting Countries \$bn

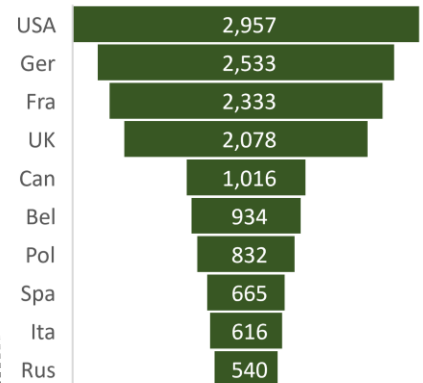


End User Countries Have also hugely been affected

71% of the leading chocolate importing countries are amongst the top 20 most affected countries in terms of reported COVID 19 cases

9/10 leading chocolate importing countries in the world are amongst the top 20 most affected countries in terms of reported COVID 19 cases

Leading Chocolate Importing Countries \$bn



Source: UN COMTRADE Database || www.worldometers.info/coronavirus || <https://asokoinsight.com/content/market-insights/ghana-cocoa-value-chain> || IESO Analysis

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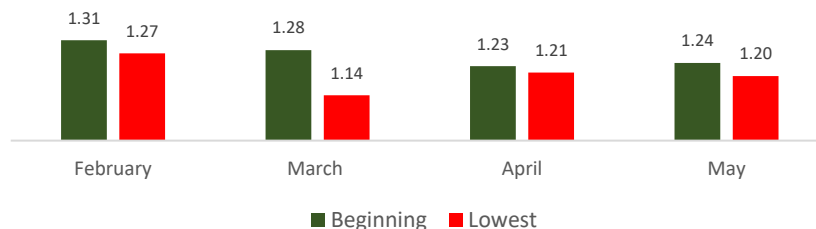
COVID 19 Pandemic **MAY HAVE** an impact on Cocoa Export Revenues for **2021/2022** season

COVID-19 may impact demand for Luxury goods like Chocolate

End User Demand for Chocolate may be affected Due to:	Chocolate Producing Countries reduce demand for Cocoa Beans Due to:	Impact on Ghana
<ol style="list-style-type: none"> 1. UNEMPLOYMENT 2. LOWER INCOMES 3. LOWER PURCHASING POWER 	<ol style="list-style-type: none"> 4. CLOSURE OF SOME CHOCOLATE FACTORIES ACROSS EUROPE 5. LOWER DEMAND FOR CHOCOLATE PRODUCTS FROM END USERS 	<ol style="list-style-type: none"> 6. LOWER COCOA PRICES 7. HIGHER INTEREST RATE ON SYNDICATED LOAN 8. IMPACT COCOA SUPPLY 9. IMPACT COCOA EXPORT REVENUES

INT MARKET PRICES SINCE COVID 19 OUTBREAK

British Pound (£) dropped by 2% between February and May 2020



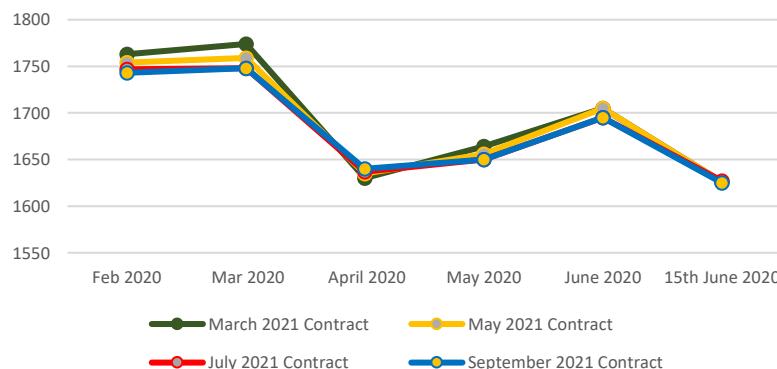
Drop in the pound could spur increased demand for cocoa beans by Euro importers

Increase in the pound could increase cocoa revenues for Ghana

Source: <https://tradingeconomics.com/united-kingdom/currency> || IESO Analysis

Price of Futures Market on the London (ICE Futures Europe) £ per metric tonne

Cocoa Futures Contracts fell by an average **7.2%** across all contract series trading between February 2020 and June 15th, 2020



Cocoa Futures Prices have been falling by an average **1.3%** per month between February 2020 and June 2020

Source: <https://www.theice.com/products/37089076/London-Cocoa-Futures/data?marketId=5810528> || IESO Analysis