

Evolutional and Developmental Changes on International Trade of Electronics from China to Ghana Arising from Covid 19

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Abstract: Following the introduction of COVID-19 and the subsequent declaration of a global pandemic by the World Health Organization (WHO), it has had a significant impact on various countries' quality of life and other essential aspects of daily living. This viewpoint attempts to provide information and an update on COVID-19 in Ghana and China. The world economy has relied heavily on global trade, which affects almost every nation. There is no distinction between Ghana and nations that significantly rely on international trade. Nearly all countries had to close their borders as a result of the COVID-19 pandemic, which also forced an end to international trade. This research intends for the purpose of assessing the effect of the pandemic on foreign trading partnerships and the industrial prosperity between China and Ghana. China is one of Ghana's top trading partners. China became very strict on restrictions and policies since the advent of the pandemic which caused a lot of risks factors especially on its international trade with other countries. Covid-19 has presented Ghana with its fair share of problems as a global pandemic. Although some positive steps have been taken, the pandemic's impacts will take time to reverse. This situation, on the other hand, has not only hampered economic development and jeopardized health-care services and/or facilities, but it has also provided Ghana with some promising and innovative solutions to its problems, hence analyzed.

Keywords: Mobile phone import and export; Electronics, Global Trade, Economic policy; COVID 19.

I. INTRODUCTION

Over time, there have been major evolutions in the electronics trade between China and Ghana. As a result of these modifications, trade volume has expanded, product diversity has occurred, the trade balance has changed, investment has increased, and technology has advanced. The pandemic disrupted the global supply chain of electronics, affecting the production and delivery of electronics from China to Ghana. After the 2019 coronavirus illness (COVID-19) spread globally, more than 1 million people died as a result of the pandemic, and it is anticipated that the global economy will contract by an astounding 4.3%. the COVID-19 pandemic has however resulted in both evolutionary and developmental changes in the international trade of electronics between China and Ghana. While the pandemic has caused disruptions in the supply chain and changes in consumer behaviour, it has also led to the localization of production and increased trade between the two countries. Although the epidemic and its accompanying socio-economic impacts have affected almost every aspect of life, this study's main focus is on the pandemic's enormous implications for trade and growth. 2019 saw an actual 7.1 percent growth in Ghana's Gross Domestic Product due to the country's expanding economy. Since 2017, Ghana's economy has maintained a solid growth momentum, consistently ranking in the top 10 fastest growing in Africa. Because of rising private consumption, macroeconomic growth has been matched by rises in domestic demand. The manufacturing sector, which saw an average annual gain of more than 10% in the three years leading up to 2019, appears to have been the catalyst for growth in the three years before to 2019, which was a big driver of growth, according to the African

Development Bank 2019 saw an actual 7.1 percent growth in Ghana's Gross Domestic Product due to the country's expanding economy. Since 2017, Ghana's economy has maintained a solid growth momentum, consistently ranking in the top 10 fastest growing in Africa. Because of rising private spending, development has been accompanied by an increase in domestic demand in the macroeconomic environment. The manufacturing sector, which saw an average annual gain of more than 10% in the three years leading up to 2019, appears to have emerged as the primary driver of growth in those three years, according to the African Development Bank. Ghana's economy is going to suffer, according to finance minister Ken Ofori Attah, as the country's budget deficit is expected to more than quadruple and growth has been slowed to just 0.9%. The Ghanaian Finance Minister addressed Parliament on March 30, 2020, with a presentation titled "The Economic Impact of the COVID 19 outbreak all over the country" The respected law enforcement in charge were notified by the sub minority leaders about information concerning the projected impact COVID-19 will have on the national economy as well as the numerous measures taken by the administration to lessen such consequences. This analysis's goal is to predict how the COVID-19 pandemic may affect Ghana's economy from the standpoint of earlier research.

This review examines existing literature from others to evaluate trends that explain Ghana's prior pattern of international trade. The review outlined how the pandemic has halted international trade progress. Trade restrictions implemented and how they affected the nation as a whole and the people whose entire livelihoods depended on these imported commodities. Additionally, examination of whether Covid 19 presented a positive or negative impact to the trade of electronics in Ghana was addressed. Finally, analysis and recommendations were made on the general assessment on what could be done differently to sustain or improve better trade in the area of electronics, in the event of such a situation like Covid 19.

Prior to the Covid-19 epidemic, Ghana's economic prognosis

Amano et al.,¹ stated that as of 2019, the Ghanaian economy has continued to grow steadily. The first quarter's GDP was predicted to be 6.7%, up from the first quarter of 2018's GDP of 5.4. Also mentioned was a 6.0% gain that wasn't related to oil. The swift reversal in the service sector, which climbed 7.2% compared to 1.2% in 2018², was the primary driver of the growth that appeared to be occurring quickly on a quarterly basis. Despite challenges in meeting the planned sales, the country's administration continued to consolidate its fiscal activities in 2019. A net budget deficit of 3.3 percent of GDP was found in the first quarter of 2019, which was 2.9 percent greater than anticipated as a result of fiscal actions. Instead of a 1 percent decline in expenditure, this may be caused by a 1.6% drop in GDP from sales. Ghana was predicted to have a surplus of 0.1% of GDP in its current account in the first quarter of 2019. The gross BOP surplus rises to about 1.9 percent of GDP when the surplus paid for in the current account is added to the significant capital and financial account inflows. Ghana's foreign reserves (GIR), which at the end of June 2019 covered 4.3 months of imports, increased significantly in March 2019 as a result of the issuance of a USD 3 billion Eurobond, reaching USD 8.6 billion. The Ghana cedi, the country's currency, had considerable pressure in the first half of the year as a result of rising demand as importers looked to top off their inventories, but in the second half of the year, the domestic currency market experienced its most tranquil period of the year³.

Current status of Ghana's Economy

The epidemic affected the manufacture and delivery of electronics from China to Ghana, disrupting the electronics industry's global supply chain. As a result of national lockdowns, the movement of raw materials and completed items was slowed or even temporarily stopped, hampering manufacturing. Ghana is one of the nations that has seen an increase in the importation of Chinese electronics items as a result of China's recent rise to prominence in the global electronics trade. In recent years, there have been substantial developments in the development of the electronics trade between China and Ghana. The demand for electronic goods in Ghana has dramatically expanded, and Chinese producers have seized the opportunity to manufacture, supply and meet that demand. Chinese Custom's statistics show that between 2015 and 2020, China exported \$729.05 million worth of electronics to Ghana, up from \$424.88 million in 2015⁴.

An increase in online sales was observed as a result of the adoption of lockdowns and other restrictions on physical establishments, which resulted in a shift in consumer preference for online electronic sales. Ecommerce platforms and electronic payments increased as a result of this. People began to adapt to the use of more electronic devices, due to conditions such as the "work-from-home" or "online way of learning and education", this situation made more individuals crave the use of some certain types of technological gadgets such as laptops, phones and phone accessories like Bluetooth devices and earphones. Aside the need arising from work or education related issues, the usual or mere staying at home

from the lockdowns, resulting in people relying on online services and internet platforms such as social media for connecting with family and friends and also for acquiring information for daily living. Social media platforms like TikTok and Instagram became the very means of entertainment for the normal person, in the “free” time. As it is known that access to such platforms requires an internet and an electronic device, resulted in the high demand for gadgets such as phones, laptops, iPad, and its likes. Even though there are no more lockdowns and many people have the liberty to move around and travel or meet physically, either to work, in school or even with family friends, it doesn't seem to have affected the demand and use of electronics, in any massive way. Many more people still rely on the internet for certain means such as entertainment, and some cases, online purchases (buying and selling). People adapted the comfort that comes with online activities like receiving bought items from an online marketer, in their homes, instead of having to go all the way to the market to purchase such items ⁵.

II. LITERATURE REVIEW

A. *Evolutionary and significant Changes in the trade of Electronics*

According to a thorough investigation conducted by the ministry of health and released on June 4 of 2020, the coronavirus pandemic is also having a negative impact on trade and values (both domestically and globally). They reported that they are also seeing a decline in trade volumes and values with many nations, with China leading the pack (China accounts for the majority of Ghana's imports and ranks second for exports). They added that they are seeing a third less containers arriving at the ports, which is also having an impact on the number of imports (duties) that are being paid. These data however serve to elaborate and add value to my work by supporting my thesis that a drop in imported commodities will automatically delay manufacturing activity in Ghana. When imports of goods and services are reduced, demand is expected to fall ⁶.

The COVID-19 epidemic has had a considerable impact on international electronics trade between China and Ghana, resulting in both evolutionary and developmental changes highlighted below:

1. **Production Localization:** The pandemic revealed the risks of relying on a single country for production, prompting a push in Ghana to localize production. This could result in the growth of Ghana's electronics industry and the creation of new job opportunities for most civilians who lose their jobs during the mild epidemic.
2. **Increased Trade between China and Ghana:** Because the epidemic has highlighted the necessity of international cooperation, there may be a rise in trade between China and Ghana in the electronics industry.
3. **Adoption of Digital Technologies:** The pandemic has accelerated the adoption of digital technologies in Ghana, resulting in an increase in the number of people using them.
4. **Shift from Raw Materials to Finished Products:** Previously, Chinese exports to Ghana were mostly raw materials utilized in electronics manufacture. However, in recent years, there has been a shift towards finished products such as mobile phones, televisions, and computers. This transition has been fueled by Ghana's expanding middle class, which has raised demand for high-quality electronics.

Boosted investment: Over the years, Chinese firms have boosted their investment in Ghana's electronics industry. Because of this there now exists various manufacturing factories in Ghana, increasing the country's production of electronics.

Technological advancement: China is well-known for its superior technology, which has had a big impact on China-Ghana electronics commerce. Ghana has benefited from China's advanced technology by importing and employing cutting-edge electrical devices.

E-commerce: With the rise of e-commerce platforms such as Jumia and Zoobashop, Ghanaian customers now have greater access to Chinese gadgets. These platforms give a diverse range of products at reasonable rates and a convenient shopping experience for consumers.

Expanded trade volume: Over the years, the volume of electronic commerce between China and Ghana has expanded dramatically. This might be linked to Ghana's increased demand for electronic devices, which has led in an increase in Chinese imports⁷.

Product diversification: Initially, electronic trade between China and Ghana was restricted to a few products such as mobile phones and televisions. However, the products traded between the two countries have become more diverse. Ghana currently imports a large range of electronics from China, including laptops, desktop computers, printers, and other computer accessories.

B. Evolution of China-Ghana Electronics relations

Many Western political and business leaders are increasingly concerned that China is transforming into an economic giant capable of competing not only in labor intensive industries, but also in high-tech businesses. This worry is fueled by the fact that some Chinese electronics "champions" have successfully penetrated overseas markets and become global competitors in recent years. Haier has risen through the ranks of consumer electronics to become the world's fourth-largest manufacturer of big household appliances. Lenovo built a reputation for itself in the computer business by purchasing IBM's PC unit and becoming the first Chinese corporation to sponsor the Olympic Games. Huawei and ZTE have emerged as credible challengers to global stalwarts such as Cisco and Nortel in the telecommunications equipment business. Other brands such as Oppo, Apple, Samsung and techno are also making headway as they are the most exported electronics out of China to Ghana. Chinese electronics industries rely significantly on technology and complicated components supplied by international firms. According to MIT's Edward Steinfeld, Chinese computer giant Lenovo, for example, does not manufacture all of its complex components: It worked together with Microsoft to create a tablet computer, uses IBM storage technology in its own storage solutions, and more, and also uses IBM voice-recognition software in its pocket computers, and uses Intel Pentium processors. Foreign firms also play an important and expanding role in China's electronics processing trade ¹⁴.

China sent electrical and electronic equipment to Ghana in 2022 for a total value of US\$682.2 million, according to the United Nations database of global trade. The most recent update to the data, historical chart, and statistics on China's exports of electrical and electronic equipment to Ghana was made in May 2023. Telecommunications in Ghana offer a broader range of communications solutions, including broadcasting, cellular communications, information technology, and electronic commerce. However, there is a consistent market supplying consumer electronics such as cellphones, computers, tablets, and smart devices in this sector to achieve the purpose of communication.

Ghana has the greatest mobile user penetration in West Africa, outperforming all regional rivals with a rate of 55% as of December 2019 ⁶. This is higher than the regional average of 44.8%, indicating that the country has a ready market for digital services, a positive sign for economic progress⁸. This is evident in Table 1, Figs. 1-3 where the ownership of smartphones is based on various demography and type basic phones. Usage ranges from personal activities to business.

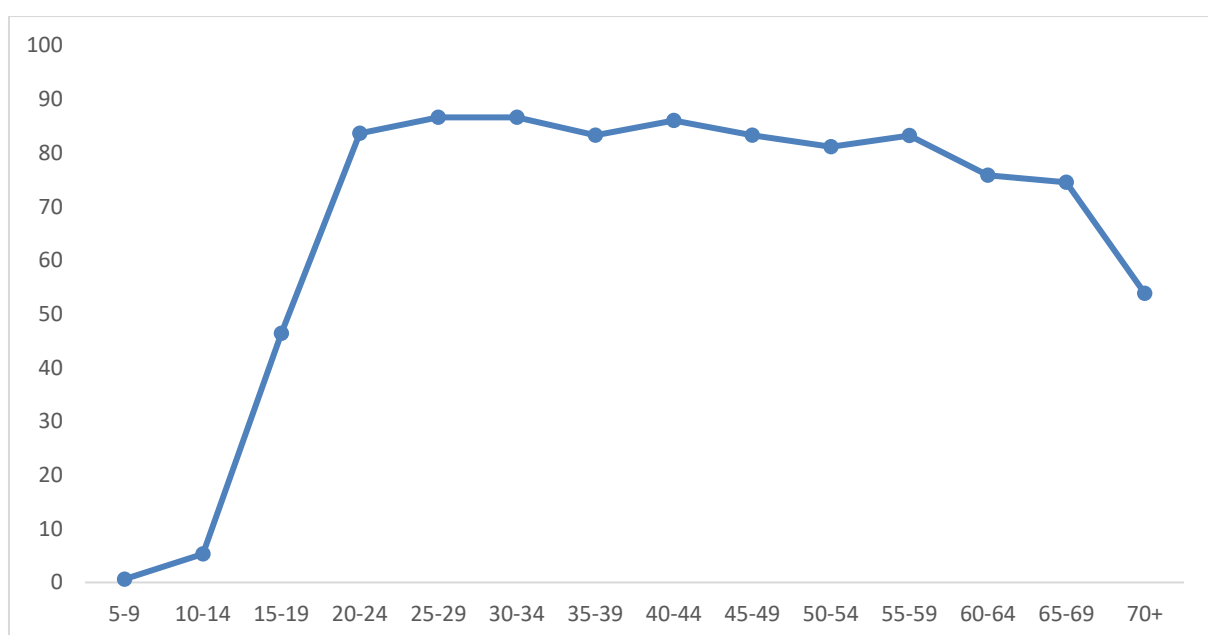


Fig. 1. Electronic devices ownership by age group from 5 years and above. Adapted from ⁹

Table 1. Type of mobile phone owned by locality – individuals five years and up, Adapted from ⁹

Nationwide			Urban			Rural		
Basic phone	smartphone	Feature phone	Basic phone	smartphone	Feature phone	Basic phone	smartphone	Feature phone
47.9	46.1	12.8	38.7	58.4	11.1	61.3	28.1	15.3

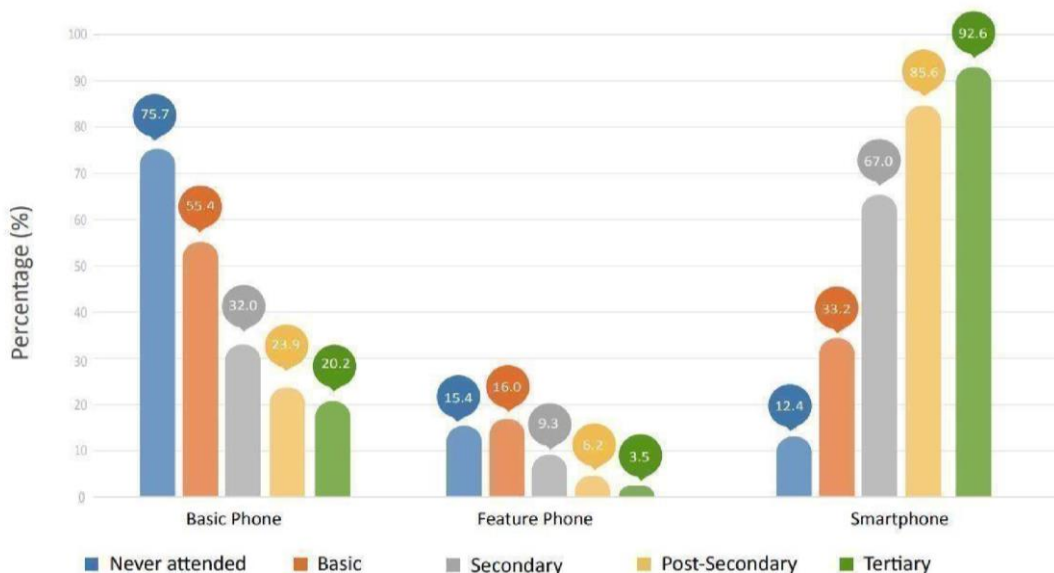


Fig 2. Electronic devices owned by educational attainments⁹.

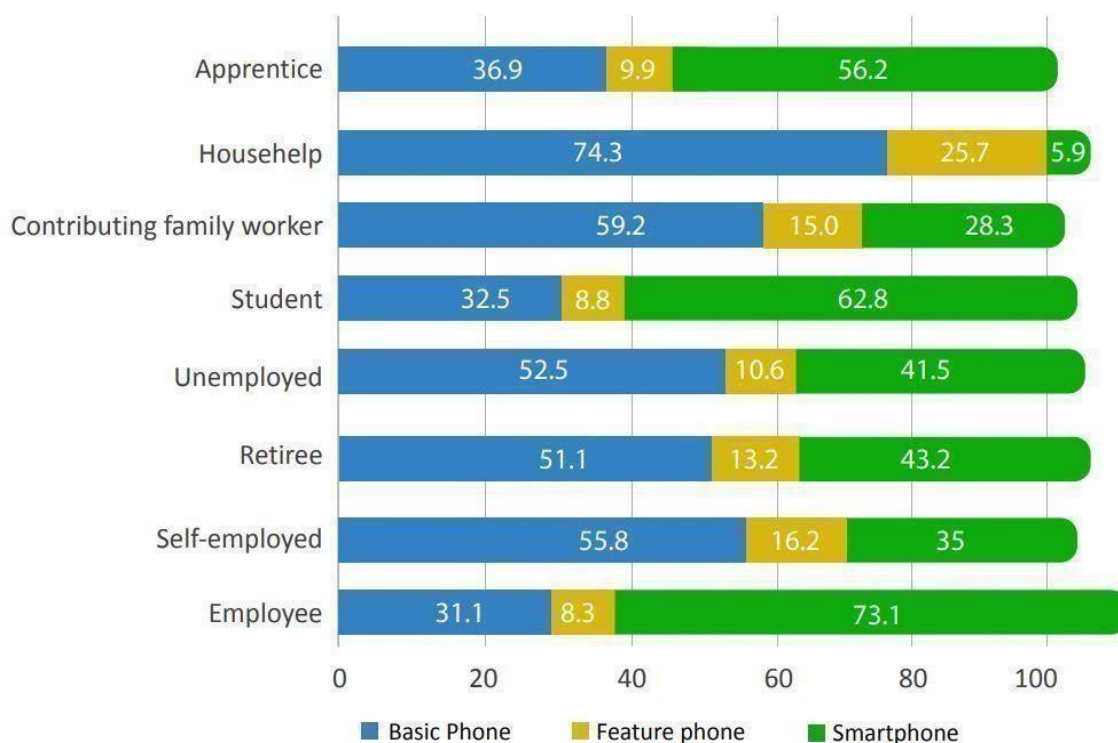


Fig. 3. Electronics devices owned by employment status⁹.

C. Economic implications

The spread of the Coronavirus pandemic has been a critical interruption to overall monetary action. Monetary development in sub-Saharan Africa will diminish from 2.4 percent in 2019 to - 2.1 to - 5.1 percent in 2020, the main withdrawal in the district in 25 years, as per ongoing World Bank estimates. Given that unrefined petroleum trades have made a significant commitment to Ghana's monetary improvement over the previous decade, representing around 20% of absolute fare income in 2018, the nation's economy could be particularly influenced by the decrease in product costs. Cocoa, Ghana's other significant fare product, has likewise seen its costs falling. Then again, as Africa's top gold maker, Ghana's economy may profit by rising gold costs, which have ascended to their most significant levels since 2013 in the previous few months. At last, the impacts will likewise rely upon how India, China, the USA, the nation's top exchange accomplices and unfamiliar direct speculation providers climate the emergency. Workplace closures and travel bans will affect the national economy above the decline in oil prices and external demand. In this light, under the scenario of a partial lockout of the economy, Ghana's finance minister changed the country's economic growth outlook for 2020 downwards, from an original estimate of 6.8 to 1.5 percent, which will be the country's lowest growth rate in 37 years. In general, government mobility limits and the social distancing steps introduced indicate a slowdown in production alongside the complete cessation of such operations. These decreases working hours and labor wages and contributes to a decline in overall demand for goods and services. Subsequently, the Coronavirus pandemic presents significant dangers, not exclusively to the government assistance of people, yet additionally to their financial prosperity. The unfavorable outcomes would adversely affect effectively weak networks. Low-pay workers are vigorously influenced, particularly casual specialists, who get by consistently and have practically no admittance to medical services or social security nets. Companies in the informal economy are like any other company. With COVID19 putting travel and consumer demand to a halt, industries in the informal sector, such as drinking and chop shops, independent retail outlets, hairdressers, and taxi drivers, owing to the pandemic, will see a decline in consumers. For example, if smallest and most disadvantaged firms, but women may also be adversely impacted by the closing of school's consumers continue to flee crowded markets and if the economic crisis has permanent repercussions for household spending, this will extend past the lockout. In addition, cross-border retailers are also unable to work, and street vendors and market traders who offer non-food goods remain limited in their operations. Similarly, many casual staff are particularly susceptible to contracting the virus as care workers in households. The clear tradeoff between their wellbeing and their financial survival is faced by those of the most disadvantaged. Gender inequalities in jobs can even be exacerbated by pandemic response steps. Not only are women often running daycare centers, they often leave the work force to care for infants or sick families².

D. Laws enacted by the government

In Ghana, movement restriction was authorized for the more notable and busy areas like Accra region, comprising Tema and the more famous Kumasi territory. At the time, the measures were in effect for about fourteen days and was strictly adhered to¹⁰. In effect, what was the impact on the Ghanaian economy, its people, partners? We looked into the existing situation. The effects (of the crises) on Ghana were frequently more grounded than in other countries, as Ghana's financial links with China was more integrated than at any other period in recent memory. In Ghana, for example, the virus had only recently begun to have real-world consequences. These effects were visible in two ways. One is indirect: the global economic slowdown limiting Ghana's capacity for growth within the global economy. The other was immediate: the impact on Ghana-China trade and investment, global oil and gold prices, and tourist flows between the two countries diminished¹¹. However, a portion of those outcomes were more certain than negative, for the event at any rate. The COVID19 situation was thus more mind-boggling than effectively tied to the financial turn of events in Ghana. Attempting to lessen the likelihood of cases of infected people arriving into the country from outside the country, the government proposed a lockdown of all international borders.

E. Analysis and Outcome

Trade had an unprecedented decline during the COVID 19 outbreak, and the disparity can clearly be seen between Ghana's export and import between 2018-2020 (Table 2). The possibilities of a quick trade recovery are dependent on the duration of the disease and the efficiency of policy measures. COVID 19 caused major supply and demand shocks in the global economy, which are causing significant trade disruptions¹².

According to UNCTAD, worldwide foreign direct investment will be reduced by up to 40% between 2020 and 2021, having a significant impact on global supply chains. Foreign Trade as a COVID-19 Major Channel Effect in Ghana: As a result of the lockdowns, there is a significant expectation of a trade slowdown. Before getting deeper into this section of the research, here are a few explanations why international commerce is one of the primary backbones that is assisting Ghana's economy to expand. Naturally, Ghana is blessed with enormous natural resources such as gold, chocolate, wood, bauxite, and others. The formation of Ghana following independence is not reflective of the enormous natural capital. Ghana's poverty rate has not decreased significantly, owing to the large number of unemployed graduates who are unable to find work or are working in occupations that do not match their credentials. In Ghana, better living conditions are minimal in comparison to the history of foreign trade or globalization, which has had significant effects on poverty reduction and unemployment. Despite global economic progress, particularly in affluent countries, trade liberalization has had little impact on poverty reduction. Ghana's economy has had positive results in recent years, such as rapid GDP growth, business sector development and growth, steady yet stable economic growth as a result of foreign trade and globalization with free trade as a result of globalization, increased productivity, and resource distribution in Ghana. This not only pushed merchants to specialize in the manufacture and service of specific items. Export growth is linked to labor allocation, wealth, and economic growth. Commodity exports in Ghana have been classified as conventional and non-traditional exports (NTEs). Traditional exports include cocoa beans, minerals (gold, diamond, bauxite, and manganese), lumber, and fresh fish. Many additional exports are non-traditional exports, such as art, aluminum items, and horticulture products (NTE). Non-traditional exports (NTEs) are viewed as a vital means of alleviating poverty, particularly in Ghana's rural communities, due to their high potential for job development and income generating¹³.

Table 2: Total Imports and Exports USD mn: Quarterly: Ghana

Date		Total imports, USD (million)	Total exports, USD (million)
2018	Jan.	3337.60	
	April	3933.47	
	July	3265.61	
	Oct.	3166.79	
2019	Jan.	3367.19	
	April	3375.11	
	July	3317.49	
	Oct.	3490.49	1268.32
	Nov.		1281.80
	Dec.		1404.35
2020	Jan	3227.60	1437.07
	Feb		1364.50
	March		1088.46
	April	3040.98	1244.28
	May		1074.72
	June		1177.81
	July	2853.42	1051.480
	Aug.		1182.25
	Sep.		1168.98

Adapted from Source: www.ceicdata.com

III. CONCLUSION

This study looked at the benefits of foreign trade, the limits Ghana has (both domestic and external), the influence on Ghana's economic advancement, and a description of the consequences on macroeconomic growth. COVID-19 has had and continues to have a significant positive and negative effect on Ghana. And it is beyond question, despite careful consideration, that the negative effect appears to overshadow the positive. Ghana was not prepared for the COVID-19 pandemic, much like other nations. This also makes it possible to discuss, evaluate and spell out the effect on an important

sector such as commerce, so that good and workable proposals can be used as a platform for knowledge and intellect to aid in the face of the pandemic. Trade levels and rates (both domestic and international) are still going down at present. Ghana also experienced major declines in trade volumes and prices with many countries within these few years particularly China, which represents the largest of Ghanaian imports and the second highest of Ghanaian exports. Statistics found in the above data collected shows the evolution, usage and implications of international trade in relation to smartphone usage in Ghana.

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