COVID-19 Pandemic and Ghana's Economy: A Deep Dive into Economic Indicators

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ABSTRACT

The study presents an in-depth analysis of the COVID-19 pandemic's effect on Ghana's gross domestic product (GDP), balance of payments and international investment position (BPM6), and inflation (INFL). Employing a pre-and post-COVID-19 comparison (2017-2022) through repeated measures ANOVA and tests of between-subject effects, it investigates whether the government's economic performance was significantly impacted. Key findings show a notable decrease in GDP and BPM6, alongside a major increase in inflation rates post-pandemic. The study concludes that the COVID-19 pandemic had a statistically significant impact on Ghana's economic performance in terms of GDP and BPM6, but not inflation. Recommendations include implementing economic stabilization policies, managing the balance of payments, controlling inflation, and focusing on sustainable growth. These insights are crucial for policymakers and stakeholders in navigating Ghana's post-COVID-19 economic situation.

Keywords: COVID-19 Pandemic, Gross Domestic Product, Balance of Payments and International Investment Position, Inflation, Ghana
JEL Classifications: E01, F62, O11, O55

1. INTRODUCTION

This paper examines empirical evidence for the Ghanaian government's assertion, as reported by Dickson and Yao (2020), that the COVID-19 pandemic adversely influenced its economic performance. The research probes the statistical significance of this claim. It examines key economic indicators such as gross domestic product (GDP), inflation (INFL), and the balance of payments and international investment position (BPM6) across two periods: The pre-COVID era (2017-2019) and the post-COVID era (2020-2022).

Martínez (2022) postulates that the GDP represents the total value of all goods and services produced over a specific time period within a country's borders. The GDP growth rate measures how fast an economy is growing (Ding et al., 2020). It is calculated by comparing the gross domestic product (GDP) of one period to that of a previous period. The growth rate, usually expressed as a percentage, indicates the increase, or decrease in the economy's output from one period to the next, typically from one quarter or year to the next (Hu and Yao, 2022). A positive growth rate signifies economic expansion, while a negative growth rate indicates a contraction. Monitoring GDP growth is crucial for policymakers, economists, and investors as it provides a broad overview of economic health and helps guide decisions in fiscal policy, investment, and economic planning.

According to Jaravel and O'Connell (2020), inflation is the rate at which the general level of prices for goods and services rises, leading to a decrease in the purchasing power of money. It means

that over time, a given amount of money will buy fewer goods and services. The balance of payments and international investment position by indicator (BPM6) provides a detailed framework for understanding a country's financial transactions with the rest of the world (Moreno-Brid et al., 2023).

Gotu and Tadesse (2023) explored the impacts of COVID-19 on inflation, unemployment, and GDP across Africa, employing a geographical analysis to understand how the virus has spread and affected economic variables. They utilized cross-sectional data from the World Health Organization and the international monetary fund, analyzing it with advanced tools such as geographic information systems (GIS), multivariate analysis of covariance (MANCOVA), and spatial statistics using software like Stata, ArcGIS, and R. Their findings revealed a clear regional pattern in the spread of COVID-19 cases and related mortality rates in Africa, demonstrating significant spatial autocorrelation. The study also showed that COVID-19 has adversely affected key economic indicators such as unemployment, inflation, and GDP across the continent. Further, it was found that environmental factors like temperature, rainfall, and humidity significantly correlate with the transmission rates of the virus in Africa. Analyzing GDP data before and after the pandemic, the research highlighted a stark decrease in GDP, with Seychelles experiencing the most severe drop at 23%. Post-pandemic, there was a notable increase in inflation and unemployment rates across all surveyed countries compared to pre-pandemic levels. The study also found strong links between the COVID-19 death rate and demographic and environmental factors like population density, temperature, and rainfall. These insights underscore the urgent need for governments and the international community to focus on mitigating the pandemic's effects on economic indicators while considering the specific demographic and environmental factors involved.

The study of Gotu and Tadesse (2023) focused on Africa hence, this specific study on Ghana. This research addresses three key gaps: Empirical, methodological, and population-focused, specifically regarding Ghana's economic performance during the COVID-19 pandemic. By employing repeated measures of ANOVA and tests of between-subject effects, the study offers an understanding of the COVID-19 pandemic's influence on Ghana's GDP, inflation, and balance of payments (BPM6), contributing valuable insights to the field.

The research question and null hypothesis:
1. Is there a significant difference between the pre-and-post-COVID-19 pandemic era on Ghana's economic indicators when considering:
   a. Gross domestic product (GDP)?
   b. Inflation (INFL)?
   c. The balance of payments and international investment position (BPM6)?
2. H_0: There is no significant difference between the pre-and-post-COVID-19 pandemic era on Ghana's economic indicators when considering:
   a. Gross domestic product (GDP),
   b. Inflation (INFL),

c. The balance of payments and international investment position (BPM6).

2. EMPIRICAL REVIEW OF RELATED LITERATURE

2.1. Gross Domestic Product (GDP)

Semieniuk (2024) postulates that gross domestic product (GDP) measures a country's economic performance, reflecting the total market value of all final goods and services produced within its borders over a specific period, usually a year or quarter. It is a key indicator of economic health, used to compare the economic performance of different countries and to track economic growth or decline over time (Hoekstra, 2019).

Maliszewska et al. (2020) study used a conventional global computable general equilibrium model to simulate the likely consequences of COVID-19 on gross domestic product and trade. The shock is represented as the underutilization of labor and capital, an escalation in international trade costs, a decline in transport services, and a shift in demand away from activities that need physical closeness between individuals. In a typical global pandemic scenario, the gross domestic product (GDP) decreases by 2% below the standard level worldwide, 2.5% for developing nations, and 1.8% for industrialized nations. The decreases are around 4% lower than the global norm, under a scenario of an intensified pandemic where containment is expected to take longer and is now considered more probable. The most significant adverse impact is observed in the production of domestic services, which have been greatly damaged by the pandemic, as well as in the sold tourism services. Due to the model's inability to accurately represent the negative effects of social isolation on reduced demand and decreased investor confidence, the actual economic consequences may vary. This exercise is demonstrative, as it is premature to make a well-informed evaluation of the whole ramifications of the pandemic. However, it effectively indicates the probable magnitude of the forthcoming global economic hardship, particularly for poorer nations and their prospective want for aid.

The study by Gagnon et al. (2023) represents an initial exploration into the impact of the COVID-19 pandemic on global real GDP trends during 2020 and 2021. It notably differentiates between domestic influences and international trade in assessing the economic effects of COVID-19. Employing panel data regression analysis, the study evaluates quarterly real GDP growth across 90 countries from Q1 2020 through Q4 2021, focusing on pandemic-related factors. Their findings indicate that the number of COVID-19 fatalities had a limited effect on GDP. In contrast, the severity of lockdown measures significantly influenced GDP, particularly affecting emerging and developing economies more harshly than affluent ones. The study also notes that the pandemic's economic impacts were not confined within national borders, spreading through global trade and underscoring the interconnectedness and vulnerability of nations to both medical and economic challenges in the face of globalization.

Salisu et al. (2021) utilized a multi-country threshold-augmented global vector autoregressive (TGVAR) model to assess the response of real GDP in developing economies like India, China, Brazil, and South Africa to the COVID-19 pandemic, compared to selected advanced economies like UK, US, and Germany. Their counterfactual analysis extending beyond the fourth quarter of 2019 shows that the impact of the COVID-19 shock was more significant in advanced economies than in developing ones. The study finds that the model effectively predicts a rise in the real GDP of developing countries. However, it suggests that the estimates for advanced economies may be underrepresented due to the positive effects of fiscal policies and unconventional monetary interventions that likely expedited their economic recovery.

Amewu et al. (2020) discuss how countries worldwide, including those in sub-Saharan Africa, have enacted social distancing, travel restrictions, and economic shutdowns to curb the spread of COVID-19. These measures are expected to have profound socioeconomic impacts, especially in regions like sub-Saharan Africa where many depend on daily earnings and lack robust social safety nets. The study highlights that the 3-week urban lockdown in Ghana in April 2020 led to a significant GDP reduction of 27.9% for the period. Additionally, the lockdown temporarily pushed an estimated 3.8 million Ghanaians into poverty. While the Ghanaian government projected a GDP growth of 1.5% for 2020, the social accounting matrix multiplier model used in the study predicts a GDP decrease of 0.6-6.3%, depending on the speed of economic recovery. The $200 million allocated for Ghana's coronavirus alleviation program is noted to cover only a small portion of the anticipated $2.3 billion shortfall in GDP, assuming an optimistic recovery scenario compared to the government's revised forecasts.

2.2. The Balance of Payments and International Investment Position by Indicator (BPM6)

The balance of payments and international investment position by indicator (BPM6) categorizes these transactions into accounts like the current account, financial account, and capital account, tracking trade, investments, and transfers (Valdivia-Velarde and Razin, 2014). The international investment position is a component of this, detailing a country's external financial assets and liabilities, and giving insight into its net financial position with the rest of the world (Robinson, 2020).

The article by Bortz et al. (2020) focuses on examining the impact of the COVID-19 pandemic on emerging market and developing economies (EMDEs), particularly through the lens of their balance of payments (BOPs). These economies are dealing with multiple simultaneous shocks to their BOPs because of the pandemic's internal and external pressures. This situation calls for a reevaluation of some aspects of the Keynesian approach to BOPs and underscores the hierarchical and volatile nature of international financial markets. The adverse effects on EMDEs are manifested through four primary channels: Significant capital outflows leading to currency depreciation, foreign currency shortages, debt challenges, and widening spreads in domestic currencies. A drop in commodity prices, which are crucial to the export portfolios of many EMDEs. A reduction in global demand and supply, exacerbating the decline in export revenues due to lower commodity prices. A decrease in remittances, which are vital for foreign currency reserves in many EMDEs and low-income countries. These compounded challenges limit the capacity and effectiveness of governments in these regions to deploy fiscal and monetary stimuli and to meet healthcare needs. Additionally, the extensive presence of the informal sector in EMDEs further complicates governmental response efforts.

Andrzejczak (2021) study delves into the financial impacts of the COVID-19 pandemic on economic organizations, particularly focusing on financing structures, investments, and dividend policies within European Union countries. This focus reflects the unique interrelations among EU nations. The research methodology involves categorizing these countries based on selected international investment position (IIP) and balance of payments (BP) statistics, alongside macroeconomic data from 2018-2019, to gauge average levels relative to GDP. It also tracks the progression of specific monthly BP statistics starting from January 2020, highlighting shifts in GDP share from the first half of 2020 compared to the same period in 2019, and noting year-on-year changes. The data for this study was sourced from Eurostat, which provides figures on an annual, quarterly, and monthly basis, expressed in millions of euros. These figures were adjusted to align with the harmonised index of consumer prices (HICP). Analyzing data from the pre-pandemic period proved challenging in identifying trends in the flows of the mentioned financial categories by the end of November 2020. The research points to a novel division among EU nations spurred by the pandemic, which could potentially shift operational priorities across the union and necessitate a revision of regulations governing EU financial transfers. This study introduces a unique perspective by linking decisions about capital structure, investment, and dividend policies to the dynamics of balance of payments flows, offering fresh insights into how such external shocks as COVID-19 can reshape financial strategies and regulatory frameworks within interconnected economies.

Ajide and Osinubi (2020) explore how social distancing measures, and the broader impacts of the COVID-19 pandemic might disrupt international investments, especially focusing on foreign direct investment (FDI) inflows. Despite the anticipation of significant disruptions, there is a notable gap in empirical research demonstrating the correlation between the pandemic's health impacts and FDI movements. This study presents preliminary findings on how COVID-19 has influenced FDI outflows, using cross-sectional data from the first quarter of 2020 across 43 countries. The analysis, employing ordinary least squares (OLS) and quantile regressions, reveals a direct relationship between the number of confirmed COVID-19 cases and an increase in FDI outflows. Interestingly, the study also notes a positive correlation between confirmed COVID-19 fatalities and the rise in FDI outflows across various quantile estimates. This increase in FDI outflows is attributed to several factors: Reduced investment capacity within firms due to a focus on health and safety, a decline in corporate profitability, and rising financing costs. Additionally, a general decrease in investment willingness was observed across most economies, compounded by heightened risk perceptions in financial markets. This comprehensive analysis highlights how the

pandemic has reshaped the landscape of international investment, emphasizing the need for further research in this area.

In the first half of 2020, foreign direct investment (FDI) into Central, East, and Southeast Europe (CESEE), encompassing 23 economies, saw a sharp decline of 58% from the same period in 2019, according to Adarov and Hunya (2020). This reduction was more pronounced than the global FDI downturn of 49% reported by UNCTAD, yet not as severe as the 75% drop experienced by developed economies. Within the CESEE region, the impact varied. EU-CEE countries witnessed a 35% decline, the Western Balkans saw an 8% decrease, and both the CIS countries along with Ukraine and Turkey experienced around a 40% reduction. Russia saw a notable decline in FDI inflows, following an unusually high influx in the previous year. The EU-CEE area had already been experiencing a downturn since 2019, ending a 3-year growth streak. Investment in greenfield projects within the CESEE region decreased by 23%, which, while significant, was less than the global decline of 34% during the same period.

The most substantial drop occurred in the second quarter of 2020, followed by some stabilization in the third quarter. Total capital commitments from January to September 2020 were down by 41% compared to 2019. The manufacturing sector felt the recession's impact more acutely than other sectors in terms of both FDI flows and greenfield investments. Global value chains were disrupted by fluctuating demand and supply, affecting manufacturing, commerce, and supply networks. This disruption could potentially shorten the length of value chains, move cross-border production-sharing closer to home countries, and thereby reduce FDI. Looking ahead, technological advancements might redistribute manufacturing production and tradable services geographically. Despite initial disruptions, European value chains are expected to recover, and global investors are not seen as needing to undertake costly relocations immediately. Re-shoring will likely be gradual, especially if Asia remains a key driver of global economic growth. The automotive sector is expected to undergo significant changes as it adapts to new technologies but will likely retain most of its current facilities in the region. The majority of CESEE countries are positioned to benefit from European corporations relocating manufacturing from more distant locations. For comprehensive FDI statistics starting from 1990, the WIIW FDI Database offers online access through a modern query tool, enabling easy data search and download.

2.3. Inflation

According to Machlup (2020), inflation can be a result of demand-pull, cost-push, or both. Jain et al. (2022) summarized demand-pull, and cost-push inflation as follows. Demand-pull inflation occurs when demand for goods and services exceeds supply, causing prices to rise. It is often linked to a growing economy. Cost-push inflation happens when the costs of production increase like raw materials. Osei and Ogunkola, (2022) asserted that inflation in Ghana has been driven by a combination of factors, including fiscal expenditure, non-monetary issues, and the country's heavy reliance on imports. The taste of Ghanaians for foreign goods and services makes worse inflation, as the country struggles to control it due to its import-driven economy. Government expenditure, particularly

in sectors like agriculture, has not been effectively aligned with efforts to stabilize or reduce inflation. The Central Bank's attempt to use a high monetary policy rate to mop up excess liquidity has not been successful in controlling inflation.

Martinho, (2021) study assessed COVID-19's impact on GDP per capita in OECD countries from late 2017 to the third quarter of 2020. Using spatial autocorrelation and convergence theory, it found the pandemic disrupted the convergence trends observed until 2019, posing new challenges. The research suggests the need for policies by the EU and international bodies to foster balanced global development and mitigate broader socioeconomic impacts.

Gagnon et al. (2023) study investigated the COVID-19 pandemic's impact on global real GDP trends during 2020 and 2021, focusing on the influence of domestic factors and global trade. Using panel data regressions for 90 countries, the research found minimal impact from COVID-19 deaths but significant effects from government lockdown measures on GDP. The economic impact varied between advanced and emerging economies, with the latter more affected by lockdowns. Global trade emerged as a key channel for economic contagion, highlighting the vulnerabilities in a globalized world.

Bortz et al. (2020) article examines the impact of the COVID-19 pandemic on emerging market and developing economies (EMDEs), focusing on their balance of payments (BOPs). It highlights the simultaneous challenges EMDEs face due to domestic and external pandemic effects, suggesting a reevaluation of the Keynesian BOP approach. Key external impacts include capital flight, causing currency depreciation and financial strain; falling commodity prices affecting exports; global demand and supply contraction reducing export earnings; and decreased remittances, crucial for many EMDEs' hard currency supply. These factors hinder government responses, including fiscal and monetary interventions, especially with the significant presence of informal sectors in EMDEs.

Coulibaly (2021) study advances the understanding of COVID-19's socioeconomic impacts by employing a panel fixed effects model to evaluate the effect of government policy responses on the consumer price index (CPI) in West African economic and monetary union (WAEMU) countries from January 2019 to July 2020. Using OLS and IV regression analyses, the research reveals three key findings. Firstly, confirmed COVID-19 cases correlate positively with the CPI, whereas government policy responses generally have a negative impact. Secondly, supportive policies from other countries regarding COVID-19 positively influence the host country's CPI. Thirdly, global food and oil prices significantly affect the CPI. These insights suggest the need for policymakers to enhance public policy implementation during worsening COVID-19 situations to maintain price stability. The study also underscores the influence of international prices on WAEMU inflation and highlights the critical role of regional collaboration in mitigating COVID-19's negative socioeconomic effects.

Yuniarti et al. (2021) suggest in their research that the COVID-19 pandemic has profoundly affected Indonesia, especially within

the economic realm. The Central Bureau of Statistics (BPS) recorded a slight deflation of −0.01% in July 2020, indicating a weakening in Indonesia's inflation, which is thought to be a result of increased layoffs and the widespread adoption of work-from-home policies. The study sets out to develop a model that links the inflation rate in Indonesia with the number of new COVID-19 cases. Employing panel data regression and a one-way fixed-effects model, the study aims to capture individual effects across different provinces from January to July 2020, examining both inflation rates and new COVID-19 case counts monthly. This analytical model establishes a significant relationship between rising COVID-19 cases and inflation trends, revealing that each new case slightly reduces the inflation rate by approximately 5.14×10^{-5}. This finding underscores the intricate ways in which the pandemic has influenced economic indicators, particularly through the mechanism of layoffs and changes in work arrangements. The study provides crucial insights into the dynamic interaction between health crises and economic variables in a developing country context.

Armantier et al. (2021) explore how inflation perceptions evolved during the first 6 months of the COVID-19 pandemic, using data from the New York Fed's Survey of Consumer Expectations. Their findings indicate that while household inflation expectations adjusted gradually and immediately, there was a sharp and unprecedented increase in individual uncertainty regarding inflation, as well as in the variation of inflation opinions among participants. The study links the heightened concerns about inflation to how individuals used their stimulus checks received from the 2020 CARES Act, suggesting behaviors aligned with the theory of precautionary saving. Moreover, the research uncovers significant differences in inflation perceptions across various generational groups, pointing to a notable divide in how different age cohorts view inflationary pressures.

Bobeica and Hartwig (2023) assess the impact of COVID-19 on inflation forecasting within the Eurozone by employing a vector autoregression (VAR) model. Their findings indicate that the pandemic has significantly affected the model's parameters, leading to estimates that are sometimes divergent and unrealistic. To improve the accuracy of the VAR model, they suggest modifying it to allow residuals to follow a fat-tailed distribution, rather than a Gaussian distribution, which has been shown to be superior in terms of unconditional projections. The study also highlights that integrating substantial external information, like that from the survey of professional forecasters, markedly enhances forecast precision during the pandemic. While the fat-tailed VAR model maintains some advantages over its Gaussian counterpart in real-time conditional inflation forecasting, it does not preserve all its benefits. Additionally, incorporating fat-tailed errors within a multi-equation modeling framework significantly increases the robustness of models against extreme data fluctuations, a feature that single-equation models struggle to match. This approach helps in better capturing the unpredictable impacts of the pandemic on economic indicators.

Taiwo and Uwilingiye (2023) highlight in their study the rising inflationary pressures in advanced economies and their significant

repercussions on emerging markets, illustrating the global transmission of economic shocks. Their research utilized a global vector autoregressive (GVAR) model to assess how inflationary shocks from the United States, United Kingdom, Eurozone, and China affect macroeconomic variables in 21 Sub-Saharan African countries. These countries were grouped into three categories: Those rich in oil, those rich in resources other than oil, and those not dependent on natural resources. The findings reveal that inflation shocks from these major economies play a crucial role in driving macroeconomic instability in the region, impacting key economic indicators like real gross domestic product (rGDP), inflation rates, currency exchange rates, and short-term interest rates. The study also delves into the differential impacts of these shocks based on the unique economic structures of the Sub-Saharan nations. Notably, countries with substantial oil resources were found to be most vulnerable to inflationary disturbances from the United States, China, and the Eurozone, underlining the variable susceptibility of different economic sectors to international shocks.

Agyei et al. (2021) analyzed the impact of the COVID-19 pandemic on the prices of various staple foods in Sub-Saharan Africa, including maize, sorghum, imported rice, and indigenous rice. Utilizing the general method of moments, they estimated dynamic panel data models that accounted for macroeconomic factors. Their findings indicated that the pandemic led to an increase in food prices across the sampled nations. Notably, restrictions on movement and lockdown measures were specifically linked to a rise in maize prices. The study also identified that exchange rates, inflation, and crude oil prices negatively influenced food costs. Based on these insights, Agyei et al. (2021) recommend that governments in Sub-Saharan Africa invest in infrastructure improvements to boost the efficiency of food supply chains during pandemics. Additionally, they suggest providing more support to businesses within the food value chain to help stabilize food supply and prices in the aftermath of the COVID-19 pandemic.

Degtev et al. (2022) highlighted that the COVID-19 pandemic had catalyzed shifts in the global economy, notably increasing inflationary risks across various countries. The study critiqued traditional inflation risk prediction models for their focus on domestic variables, such as energy and commodity prices, while often neglecting the broader impacts of globalization. The authors argued for a more comprehensive assessment of inflation risks by incorporating various globalization factors, examining their types and levels of impact. The research aimed to uncover and describe the relationship between globalization variables and inflation levels. Employing correlation analysis and multiple linear regression methods, the study supported the hypothesis that there was a significant relationship between the growth rates of consumer prices and factors associated with globalization. Specifically, the findings suggested that components of economic, financial, interpersonal, informational, and cultural globalization correlated with inflation risks. However, political globalization components appeared to have a minimal impact on inflation risks. Interestingly, the study also discovered a negative association between globalization degrees and inflation rates, indicating that higher levels of globalization within a country were linked to reduced inflation risks. This suggested that more globally

Table 1: Selected Ghana's economic indicators

Economic indicators	2017	2018	2019	2020	2021	2022
GDP growth rate (%)	8.13	6.20	6.51	0.51	5.08	3.08
BPM6 (million $)	−2.003	−2.045	−1.864	−2.134	−2.541	−1.517
INFL (%)	11.82	9.43	7.76	10.47	12.62	54.10

Data obtained from the international monetary fund database. GDP: Gross domestic product, BPM6: Balance of payments, INFL: Inflation

Table 2: Descriptive statistics

Economic Indicators	Mean	SD	n
GDP pre-COVID-19	6.95	1.04	3
GDP post-COVID-19	2.89	2.29	3
BPM6 pre-COVID-19	(1.970.40)	94.53	3
BPM6 post-COVID-19	(2.064.11)	515.80	3
INFL pre-COVID-19	9.67	2.04	3
INFL GDP post-COVID-19	25.73	24.59	3

GDP: Gross domestic product, BPM6: Balance of payments, INFL: Inflation, SD: Standard deviation

integrated economies might better manage or mitigate inflationary pressures.

3. METHODOLOGY

This quantitative study adopted a longitudinal research design. Based on repeated measured ANOVA, and tests of between-subject effects, the significant difference investigation is analyzed to determine the test of the between-subject effect of Factor 1 pre-COVID-19 (2017-2019), and Factor 2 post-COVID-19 (2020-2022) era data of GDP, INFL, and BPM6 as shown in Table 1. According to Blanca et al. 2023 the assumption of sphericity is always met when the repeated measures have only two factors as in this study. The data of GDP, INFL, and BPM6 were treated as continuous dependent variables analyzed over time of the pre-and post-COVID-19 pandemic era.

4. RESULTS AND DISCUSSION

The descriptive results in Table 2 and Figures 1-3 revealed the following: There was a notable decrease in Ghana's gross domestic product (GDP) post-COVID-19. The mean GDP before COVID-19 was 6.95, which reduced to 2.89 post-pandemic. The BPM6 also saw a decline. The mean BPM6 pre-COVID-19 was −1,970.40, which further decreased to −2,064.11 post-COVID-19. There was a major increase in inflation rates post-pandemic. Pre-COVID-19, the mean inflation rate was 9.67, which escalated to 25.73 post-COVID-19.

As shown in Table 3, gross domestic product (GDP) analysis indicated a large statistically significant difference in GDP performance pre- and post-COVID-19 (F-value = 160.053, P = 0.006, partial Eta Squared = 0.988). This suggests that the pandemic had a substantial impact on Ghana's economic performance. Balance of payments and international investment position (BPM6) results showed a large statistically significant change in BPM6 pre- and post-COVID-19 (F-value = 131.663, P = 0.008, partial Eta Squared = 0.985). This implies a marked large effect of the pandemic on Ghana's balance of payments and international investment position. Differences in inflation (INFL)

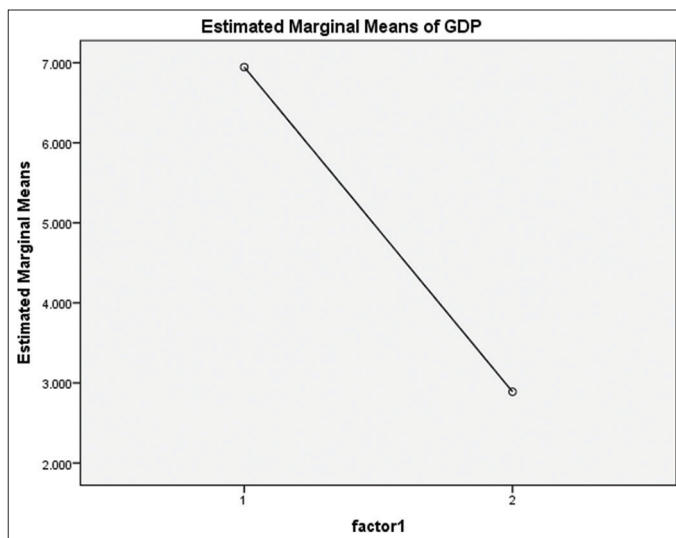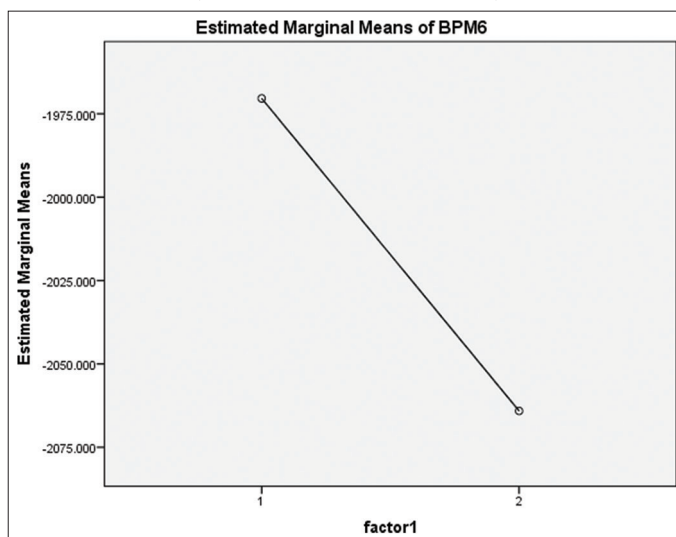**Figure 1:** Gross domestic product (2017-2019 = 1, 2020-2022 = 2)

Figure 2: Balance of payments and international investment position (2017-2019 = 1, 2020-2022 = 2)

rates pre- and post-COVID-19 were not statistically significant (F-value = 7.160, P = 0.116, partial Eta Squared = 0.782). This indicates that while there were large fluctuations in inflation rates, these changes were not statistically significant during the studied period.

The significant changes in GDP and BPM6 affirm that the COVID-19 pandemic profoundly affected Ghana's economy, particularly in terms of its overall economic output and international financial transactions. The COVID-19 pandemic assessment impact results are confirmed by (Martinho, 2021; and Gagnon et al., 2023). The results of the BPM6 did not deviate

Table 3: Tests of between-subjects effects

Source	Average	Transformed variable					
		Type III sum of squares	df	Mean square	F	Significant	Partial eta squared
Intercept	GDP	145.091	1	145.091	163.053	0.006	0.988
	BPM6	24,415,935.01	1	24,415,935.01	131.663	0.008	0.985
	INFL	1879.705	1	1879.705	7.16	0.116	0.782

GDP: Gross domestic product, BPM6: Balance of payments, INFL: Inflation

Figure 3: Inflation (2017-2019 = 1, 2020-2022 = 2)
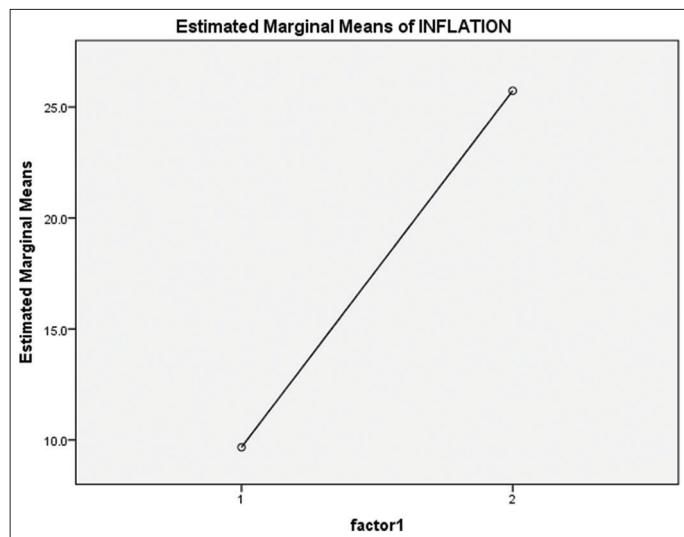
from Bortz et al. (2020) study on emerging markets like Ghana where the COVID-19 pandemic had a significant impact due to key externalities impacts including capital flight, causing currency depreciation and financial strain; falling commodity prices affecting exports; global demand and supply contraction reducing export earnings; and decreased remittances.

However, the changes in inflation rates during this period cannot be conclusively attributed to the COVID-19 pandemic based on this analysis. This outcome diverges from Coulibaly's (2021) discovery of a significant positive relationship between CPI/inflation and COVID-19 in WAEMU nations. The discrepancy can be attributed to differences in methodology, study duration, and the populations examined. Although an uptick in Ghana's CPI was observed during the COVID-19 period, this study's findings were not statistically significant. This research concentrated exclusively on Ghana over 2017-2022, contrasting with Coulibaly (2021) broader timeframe of January 2019-July 2020 and the employment of OLS and IV regression methods.

5. CONCLUSION AND RECOMMENDATION

The study confirmed that the saying that the COVID-19 pandemic affected the Ghana government's economic performance was specific and statistically significant and accurate when it comes to gross domestic product (GDP) balance of payments and international investment position (BPM6) but not in terms of inflation (INFL). This means that the pandemic caused the Ghana government to panic in its management of the economic resources. There were noticeable actions by the Bank of Ghana (2022)

supporting the government program by printing more money and adopting debt monetarization policies that caused high inflation amidst the depreciation of the Ghana currency against other foreign currencies because of the rapid decline in the balance of payments and international investment position over the period. Furthermore, whereas Ghana did not experience a shortage of imported goods, general prices increased due to the cost-push factors.

These findings and recommendations are crucial for policymakers and stakeholders in Ghana as they traverse the post-COVID-19 pandemic economic era.
1. Economic stabilization policies: Implement policies aimed at stabilizing and growing the GDP, such as investment in sectors less affected by the pandemic or showing rapid recovery
2. Balance of payments management: Strengthen measures to improve the country's balance of payments, possibly through enhancing export capacities and managing import dependencies. Ghana government's proposed import restrictions must go hand in hand with domestication strategies on goods and services
3. Inflation control strategies: Adopt monetary policies and fiscal measures to control the rising inflation rates, ensuring they do not impede economic recovery
4. Focus on sustainable growth: Invest in sustainable and resilient economic sectors to cushion against future global shocks.

The theoretical implications of the study on the impact of the COVID-19 pandemic on Ghana's economy suggest that significant economic disruptions, such as a global pandemic, can lead to substantial declines in key economic indicators like GDP and the balance of payments. The findings underscore the importance of robust economic stabilization policies and strategic financial management in mitigating the adverse effects of such crises. Moreover, the study highlights the need for policymakers to focus on sustainable growth and balance of payments management to navigate post-crisis recovery effectively. These implications contribute to the broader understanding of how external shocks impact small, open economies like Ghana, emphasizing the need for targeted interventions to ensure economic resilience.

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