The Impact of Covid-19 On the Economic Growth of Sacu Countries

Wame Mmolawa[1], Zibanani Kahaka[2]

[1,2]University of Botswana

Abstract:

The objective of this research was to appraise the influence of COVID-19 on the economic expansion of the Southern African Customs Union (SACU) countries, using yearly averages from the period 2010 to 2021. Prior research has focused on the effect of COVID-19 on the global economy, with limited studies conducted on the economic consequences of the pandemic in the SACU region. The economies of the SACU member states depend on international trade. A panel data random of fixed effects analysis was employed. The results showed a significant negative impact of the lockdown period on GDP per capita, suggesting that the COVID-19 pandemic had a substantial negative impact on the economic growth of SACU countries. As a result, the study recommends that there be an improvement in economic activities during any pandemic that may arise in the future. Moreover, there should be a reduction in import and export levies as so to improve trade. Finally, governments should increase their expenditure to bolster consumer demand during economic downturns caused by pandemics as well as, strengthen digital trade infrastructure and e-commerce capabilities to facilitate trade continuity during periods of limited physical movement.

Key words: COVID-19, Economic Growth, SACU (Southern African Customs Union) Countries , Pandemic Impact, GDP Contraction.

1. Introduction

The year 2019 marked the emergence of the pandemic known as COVID-19, which was first documented in food markets in Wuhan, China. The World Health Organization (WHO) identifies COVID-19 as an infectious disease caused by SARS-CoV-2. Most individuals infected with the virus experienced mild to moderate respiratory symptoms and recovered without requiring any specific treatment. However, a small percentage of patients became severely ill and required medical attention. People over the age of 65, as well as those with preexisting medical conditions such as cardiovascular disease, diabetes, chronic respiratory disease, or cancer, were at a higher risk of developing serious illness. It is important to note that anyone, regardless of age, could become seriously ill or die because of COVID-19. As of 2022, the WHO reported approximately 625 million cases and 6 million deaths worldwide.

The COVID-19 pandemic initially struck the western nations before spreading to Africa. On January 20th, 2020, the United States reported its first case, while Africa recorded its first case on February 14th, 2020. As a result, several economic activities were brought to a halt due to lockdowns imposed by governments. The pandemic has not only had a significant impact on people's health but also on the economies of countries. Restrictions on movement caused by lockdowns severely affected various sectors of the economy, leading to a reduction in the macroeconomic supply of goods and services. This shift in the global economy resulted in lower output, higher prices, or stagflation, according to Maital and Barzani (2020). The World Health Organization (2020) also acknowledged the severe impact of the pandemic on the economies of countries.

SACU is a customs union comprising Botswana, Lesotho, Namibia, South Africa, and Eswatini, with a total population of approximately 55 million and a per capita GDP of approximately R29,970 (SACU, 2007). The primary objective of the SACU is to promote economic development and diversify the economies of its member states by equitably sharing the benefits derived from the common customs area. Recognized as a vehicle for promoting regional integration and economic development, the SACU pools customs and excise duties collected in the common customs area, contributing to the fiscal budget of its member states. The SACU agreement includes a common revenue pool, with the sharing formula stipulating that all customs, excises, and additional duties collected in the common customs area are to be deferred into the common revenue pool within three months of the end of each quarter of a financial year. The pool revenue consists of all customs duties collected and distributed based on each country's percentage share of total intra-SACU imports, excluding re-exports. The economies of the member states are heavily dependent on international trade. Further, the revenue pool experienced a decline of N$30.4 billion (Namibian dollars), primarily attributed to the impact of COVID-19 and this in turn affected the SACU economies (SACU, 2020 & 2021).

This study endeavored to evaluate the influence of the pandemic on the economic growth of SACU economies employing the random effects panel data analysis. Furthermore, this study incorporated a dummy variable that accounts for the lockdown periods. The primary focus of this was to determine the impact of the pandemic on the economic growth levels of the SACU countries, including the period prior to the pandemic.

---

[1] BA Economics graduate, University of Botswana
[2] Lecturer, Department of Economics, University of Botswana

2. Covid-19 And Economic Growth In Sacu

SACU serves as a trade organization with the primary objectives of fostering fair competition in the customs area, promoting economic growth in its member states, and integrating member states into the global economy through trade and investment initiatives. The five member states collaborate by maintaining a common external tariff, sharing customs revenue, and aligning policies and decision-making on a wide range of trade issues.

According to the United Nations (2022), the year 2020 brought about significant declines in trade and production not seen since World War II. The drop in global manufacturing output and trade in goods during the first half of 2020 was on par with that during the peak of the Global Financial Crisis. A study by the United Nations (2022) indicated that global trade decreased by approximately $2.5 trillion in 2020 (or by around 9% compared to 2019). In contrast to goods trade, services trade suffered more and recovered more slowly. Trade in services connected to travel and tourism was severely impacted, with the value of trade in the travel sector declining by over 50% during the pandemic. The number of international tourist arrivals declined by 73% in 2020 compared to the previous year, with some developing countries experiencing declines of up to 90%. In 2021, tourist arrivals remained at about 70% below pre-pandemic levels, while trade in digitally delivered services, such as telecommunications and information technology services, increased significantly due to global lockdowns.

The economic development of the five member states within the SACU varies significantly, with Botswana and South Africa categorized as upper middle-income countries, while Namibia and Eswatini are categorized as lower middle-income countries, and Lesotho is classified as the least developed country. Previous research has primarily focused on the effect of COVID-19 on global economic growth, with fewer studies exploring the impact of the pandemic on the SACU region.

The need for a thorough investigation into the economic impact of COVID-19 on the SACU region cannot be overstated. The region has faced numerous challenges, including resource disparities, infrastructure issues, and a lack of awareness about epidemic prevention and control, which has led to unequal COVID-19 prevention and control capabilities (Shi, 2021). Moreover, managing healthcare supply chains has proven to be difficult, and family violence has increased due to isolation and the lack of socialization. Hence, it is vital to understand the specific economic consequences of the pandemic to develop targeted policy responses and interventions that can mitigate the adverse effects on economic growth, trade activity, and industrial-level performance. Such a study can also provide valuable insights into the indirect effects of the pandemic and help formulate effective strategies to address the economic fallout and promote sustainable recovery in the SACU region. Further, the study can encourage coordinating joint policy responses to future pandemics.

3. Literature Review

The studies on the impact of COVID-19 on economic growth have covered various aspects such as unemployment, poverty, and economic vulnerability. Forecasts have been made to predict the long-term effects of the pandemic on economic growth and poverty, while examining the relationship between government measures and their effectiveness.

According to Khondker, Bidisha, & Razzaque (2012), the aim of an economic growth theory is to demonstrate the influence of certain variables on the rate of growth of an economy's overall level of production. Over the years, various theories have been proposed to explain how factors such as technological advancements, savings rates, and monetary policy contribute to an economy's production level.

The three most significant theories of economic growth are classical theory, neo-classical theory, and modern theory. Classical economists, such as Smith and Ricardo, believe that the significance of economic growth can be discovered by examining how economies grow and contract. On the other hand, neo-classical thinkers such as Solow and Swan argue that the key to growth lies in how individuals engage in the economy within a framework that is essential to growth. Their model related output growth to capital accumulation, exogenously given labor growth, and technological growth. The Solow model's most crucial component was technological growth. Mankiw, Romer, and Weil's 1992 research showed that the Solow model correctly predicted the effects of saving and population growth but underestimated their magnitudes. They introduced the Augmented Solow Growth Model, which includes human capital accumulation as a variable in cross-country regressions. They argued that higher savings or slower population growth would lead to higher income, resulting in more human capital for a given human capital accumulation rate. Modern theory emphasizes that growth addresses the central economic paradox of how to meet unbounded needs with finite resources.

According to Puaschunder (2020), exogenous growth theory was developed to account for factors outside an economy. This theory asserts that external and independent factors, such as exogenous shocks like technological innovations or natural crises like pandemics, are major drivers or downturns of economic growth, as measured by capital and labour impact. The central assumption is that these factors ultimately determine economic prosperity.

In the empirical literature, Yothin, Allan, and Quy (2021) contribute new data to the existing body of research on the economic consequences of pandemics. Their study examines the economic effects of the 1968 H3N2 Flu pandemic across 52 countries. By using excess mortality rates as a measure of pandemic severity, the authors found that the 2.4% drop in output over the two pandemic waves was correlated with the average mortality rate (0.0062% per pandemic wave).

Apergis & Apergis, (2021) investigates the influence of certain OECD economies exposed to the COVID-19 pandemic shock on the macroeconomy. The analysis employs a panel of OECD countries from March 2020 to January 2021 and uses two proxies for

COVID-19 shocks: i) total confirmed incidences/cases and ii) total deaths. The study utilizes the Bayesian Panel Vector Autoregressive (BPVAR) method. The results indicate that the COVID-19 shock significantly negatively impacted industrial production.

In a panel study, Asare and Barfi (2021) examined the effects of the pandemic on poverty alleviation and global GDP by considering the varying impacts of individual countries. They sought to investigate the social and economic consequences of the pandemic on the global economy. This study utilized 170 countries and econometric panel techniques, such as OLS and robust least square regression methods. They utilized data on total COVID-19 cases, total deaths, stringency index, human development index, and gross domestic product per capita. According to the study's results, the stringency and disease contraction had an inverse impact on poverty alleviation and economic growth. However, the deaths recorded had a positive impact on both poverty alleviation and economic growth. This highlights the importance of limiting population growth, which impedes economic growth and poverty alleviation.

Norouzi et al, (2020) developed a comparative regressive and neural network model to analyze the impacts of COVID-19 on electricity and petroleum demand in China. According to the environmental analysis, the severity of the epidemic has a significant direct and indirect impact on electricity and petroleum demand. The findings indicated that the pandemic had a significant impact on energy demand, and its consequences was observed in every aspect of human society.

The literature further examines COVID-19's impact on unemployment. Su et al. (2021) studied the pandemic's effect on unemployment rates in European countries, while Tang & Abosedra, (2023) highlighted the pandemic's significant influence on developing nations' unemployment rates. Romdiati & Kusumaningrum, (2021) conducted a case study in Indonesia, revealing the rise in poverty due to the pandemic. These studies demonstrate the pandemic's profound impact on unemployment and poverty, and the multifaceted nature of its impact on economic growth with both short-term and long-term consequences, reflecting its significant economic effects.

The reviewed literature provides a thorough understanding of the impact of COVID-19 on economic expansion, covering aspects such as unemployment, poverty, economic susceptibility, and broader economic consequences. Collectively, these studies contribute to the understanding of the diverse and far-reaching effects of the pandemic on various aspects of economic growth.

4. Methodology

This research utilized secondary data from the World Bank Development Indicators database for each country in the SACU region (World Bank, 2022). The variables included GDP per capita, Government Expenditure, Trade, Foreign Direct Investment, Gross Capital Formation, Exchange Rate, Inflation, and Lockdown period. The study examines the key macroeconomic indicators of each nation's economic growth and establishes a short-term causal effect. A simple linear regression model is employed to investigate economic growth using key macroeconomic variables, including lockdown periods, in the analysis for each individual nation. The variables for macroeconomic indicators and economic growth were selected based on the availability of data for the period under study.

4.1. Model Specification

This study adopted the methodology of Thaddeus et al. (2021) and Siswantoro (2022) and adds to the study by Thaddeus et al. (2021) by adding COVID-19 as another exogenous variable. This is done by proxying the pandemic with a dummy variable that corresponds to the lockdown phase. The model specification for economic growth, macroeconomic indicators, and dummy variable is presented as follows:

GDP = MEI (GOVEXP, TRD, FDI, INVEST, EXCHRATE, INFLA, LOCK)

Hence, the econometric model is specified as:

$$LNGDP = \beta_0 + \beta_1 LNGOVEXP_{it} + \beta_2 LNTRD_{it} + \beta_3 LNFDI_{it} + \beta_4 LNINVEST_{it} + \beta_5 LNEXCHRATE_{it} + \beta_6 LNINFLA_{it} + \beta_7 LNLOCK$$

4.2. Definition of Variables and Expected Signs

GDP per capita is a measure of a nation's total economic production divided by its population, which gives an average assessment of the nation's economic performance per person.

General Government Expenditure is defined as the percentage of a country's GDP that the government spends on various activities such as public services, infrastructure, education, healthcare, defense, and social welfare. A positive sign is expected, as increased government expenditure, especially on productive sectors, is expected to stimulate economic growth. Studies have shown that an increase in government expenditure, particularly on investment, physical infrastructure, education, and healthcare, can have a positive impact on economic growth (Maingi, 2017). *Trade* refers to the exchange of goods and services between countries. A positive sign is expected since trade openness and expansion are normally associated with increased economic growth. Further, research has indicated that trade has a positive effect on economic growth (Oumarou & Maiga, 2019).

Foreign Direct Investment represents the investment made by a company or individual in one country into business interests located in another country. A positive sign is expected, as FDI is expected to contribute to economic growth through technology transfer, job creation, and capital inflows.

Studies have shown that FDI can have a positive impact on economic growth (Kunle et al., 2014). FDI inflows often bring in new technologies, managerial expertise, and capital, which can contribute to economic growth.

Gross Capital Formation is the measure of the net increase in physical assets (investment) within an economy. An increased capital formation is associated with higher levels of investment, which can lead to economic growth (Maingi, 2017). Hence, a positive sign is expected.

Exchange Rate represents the value of one currency for the purpose of conversion to another. Research has indicated that a stable and competitive exchange rate can have a positive impact on economic growth (Koroma et al., 2023). A stable exchange rate can promote trade and investment, contributing to economic growth therefore, a positive sign is expected.

Inflation is the rate at which the general level of prices for goods and services is rising. Inflation is generally considered to have a negative impact on economic growth (Jayathilaka et al., 2022). High inflation can erode purchasing power and lead to economic instability hence a negative sign is expected.

Lock Dummy Variable represents the impact of lockdown measures during the COVID-19 pandemic. The expected sign is negative, as lockdown measures are expected to constrain economic activity and hinder economic growth. Moreover, research has shown that lockdown measures, such as restrictions on economic activities, can have a negative impact on economic growth (Kumajas et al., 2022).

5. Empirical Analysis and Results

Table 1: Correlation Test

	lnGDP	lnGOVEXP	lnTRD	lnFDI	lnINVEST	lnEXCHRATE	lnINFLA	LOCK
lnGDP	1.000	-0.646	-0.730	-0.098	0.575	-0.200	-0.044	-0.068
lnGOVEXP	-0.646	1.000	0.723	-0.032	-0.751	0.061	-0.031	0.020
lnTRD	-0.730	0.723	1.000	0.229	-0.573	-0.162	0.086	-0.114
lnFDI	-0.098	-0.032	0.229	1.000	0.062	-0.043	0.012	-0.234
lnINVEST	0.575	-0.751	-0.573	0.062	1.000	-0.156	-0.085	0.007
lnEXCHRATE	-0.200	0.061	-0.162	-0.043	-0.156	1.000	-0.280	0.362
lnINFLA	-0.044	-0.031	0.086	0.012	-0.085	-0.280	1.000	-0.423
LOCK	-0.068	0.020	-0.114	-0.234	0.007	0.362	-0.423	1.000

Source: Authors computation using Eviews

The correlation analysis was carried out between various economic variables and the lockdown period in relation to the economic impact of COVID-19 on the SACU countries. Results showed a negative correlation between the lockdown and GDP per capita, suggesting a decrease in economic growth during the lockdown. Additionally, the lockdown period had a positive correlation with government expenditure, indicating that governments may have increased spending to mitigate the economic impact of COVID-19. On the other hand, the lockdown period negatively impacted trade activities and foreign investments but had no significant impact on gross capital formation. The lockdown period also had a moderate positive correlation with the exchange rate and a moderate negative correlation with the inflation rate.

Table 2: Hausman Test

	Model 1	Model 2
chisq	11.537	10.413
df	6	7
p-value	0.07313	0.1664

Source: Authors computation using Eviews

Table 3: Lagrange Multiplier Test

	Model 1	Model 2
chisq	197.73	204.12
df	2	2
p-value	0.000	0.000

Source: Authors computation using Eviews

The Hausman Test was performed to determine the suitability of the fixed effect model or Random Effect Model in estimating panel data. The null hypothesis posits that the random effect model is the preferable choice, while the alternative hypothesis suggests that the fixed effect model is more appropriate. The findings indicated that the random effect model is an appropriate estimator since the fixed effects were correlated with the response variable (GDP). Furthermore, The Lagrange multiplier test was carried out with the aim of determining the most suitable method for panel data regression, either common effect or random effect. The findings also

suggested that the random effect model is more appropriate for capturing the underlying heterogeneity and unobserved individual-specific effects in the panel data analysis.

This study's results were consistent with those of other studies, especially considering the COVID-19 pandemic. Hassaballa (2022), concluded that the random effect model was more effective than the fixed effect model in panel data analysis. This finding is particularly significant when examining the influence of the COVID-19 pandemic on economic growth, as it allows for the consideration of unobserved individual differences that may affect the pandemic's impact on various regions or countries (Onyechege et al., 2022; Rajarathinam & Suba, 2022). Furthermore, the random effect model is the preferred approach for analyzing the COVID-19 pandemic's impact on economic growth in panel data analysis because of its ability to capture unobserved individual heterogeneities and dynamic effects, as well as its applicability in the context of the pandemic.

Table 4: Random Effect Model

Variable	Model 1	Model 2
(Intercept)	12.476126 (0.000)	12.4034100
lnGOVEXP	-0.242738 (0.248825)	-0.2182518 (0.2810766)
lnTRD	-0.524460 (0.001369)	-0.5412601 (0.0006236)
lnFDI	0.025029 (0.256634)	0.0145790 (0.5017227)
lnINVEST	-0.017936 (0.314840)	-0.0148259 (0.3887324)
lnEXCHRATE	-0.294250 (0.000)	-0.2652124 (0.000)
lnINFLA	0.038674 (0.453432)	0.0040375 (0.9382639)
LOCK		-0.1231411 (0.0457345)
R-Squared:	0.40148	0.44535
Adj. R-Squared	0.33373	0.37069
F-statistic	35.5524	41.7536
p-value	0.000	0.000

Source: Authors computation using Eviews

The findings of the Random Effect Model reveal the coefficients and statistical significance of the variables in both Model 1 and Model 2. In Model 1, among the variables included, lnTRD exhibited a significant negative coefficient (-0.524460, p-value = 0.001369), indicating that trade as a percentage of GDP has a detrimental impact on lnGDP. Additionally, lnEXCHRATE displays a significant negative coefficient (-0.294250, p-value = 0.000), suggesting that exchange rate fluctuations exert a negative influence on lnGDP.

However, lnGOVEXP, lnFDI, lnINVEST, and lnINFLA lack statistically significant coefficients, implying that they do not possess a substantial relationship with lnGDP. This absence of statistically significant results in the examination of the influence of government expenditure, foreign direct investment (FDI), investment, and inflation on economic growth during the COVID-19 pandemic might be ascribed to several factors. These include the exceptional nature of the COVID-19 pandemic, the unique context of the pandemic, the interplay of unobserved or omitted variables such as changes in consumer behavior, supply chain disruptions, and shifts in government priorities, the timing and duration of the analysis, and the unequal impact of the COVID-19 pandemic on various countries, sectors, and demographic groups even in the SACU region (Onyechege, 2022; Bianchi et al, 2023).

In Model 2, the variable lnLOCK representing the lockdown period exhibits a significant negative coefficient (-0.1231411, p-value = 0.0457345), indicating that the lockdown period was associated with a decrease in lnGDP. This suggests that the lockdown measures taken during the COVID-19 pandemic had a detrimental impact on economic growth in the SACU countries. Furthermore, the random effect model results, which included the lockdown variable assets, showed that the lockdown period had a significant negative impact on lnGDP. It presents a coefficient with (-0.1231411) which is in line with the expected sign. The included variables collectively have a significant impact on lnGDP, which is consistent with the study by Thaddeus, et al. (2021). The F-statistics for both models were statistically significant (p-value = 0.000), indicating that the overall models are significant, and the included variables collectively have a substantial impact on lnGDP.

6. Conclusion

This study sought to evaluate the effect of COVID-19 on the economic growth of SACU countries, using annual average data. Specifically, the study aimed to determine whether the pandemic had a detrimental impact on economic growth in these countries. To achieve this, the study analyzed the impact of the pandemic on various variables, including government expenditure, trade, investment, foreign direct investment, lockdown phase, exchange rate, and inflation, for the period under study.

Firstly, a correlation analysis was conducted between the variables of interest for the year of lockdown, which was 2020. The results indicated that GDP per capita, trade, foreign direct investment, and inflation had a negative correlation with the lockdown variable. The correlation between lnGDP and LOCK was found to be consistent with a study by Apergis & Apergis (2021), which found that COVID-19 had a negative impact on economic growth.

The Hausman test was conducted to determine if the fixed effect or random effect model is more appropriate for panel data estimation. The results indicated the random effect model as the most suitable estimator, as fixed effects are correlated with the response variable, GDP per capita. The Lagrange Multiplier test was also conducted to determine the most appropriate method, either common effect or random effect, for panel data regression. The results also showed that the random effect model was more appropriate for capturing the underlying heterogeneity and unobserved individual-specific effects in the panel data analysis.

Trade was negatively impacted by the lockdown, resulting in a negative correlation. Foreign Direct Investment during the lockdown was low due to investors' lack of confidence in their investment interests during the pandemic, resulting in a negative correlation coefficient. Additionally, Inflation had a negative correlation with the lockdown variable, which might have been due to reduced consumer demand for goods and services during the lockdown period.

Government expenditure increased during the year 2020, particularly on medical expenditure, including testing, vaccinations, and food grants, resulting in a positive. Exchange rates showed a positive correlation, indicating that SACU countries experienced currency appreciations in the year 2020. Moreover, the study revealed that the lockdown period had a significant negative coefficient, indicating that the lockdown measures implemented during the COVID-19 pandemic had a detrimental impact on economic growth in the SACU countries. This conclusion aligns with previous studies, by Apergis & Apergis (2021) and Thaddeus, et al. (2021).

To enhance economic activities during future pandemics, the study suggests that import and export levies be reduced to facilitate trade (Onyechege et al, 2022). Additionally, the government is advised to increase its expenditure to stimulate consumer demand and mitigate the adverse effects of economic downturns resulting from pandemics. Moreover, there is need to establish adaptable and responsive trade policies that allow for the continuation of trade activities while adhering to public health protocols (especially for lockdowns and or similar situations), to navigate the disruptions resulting from mobility limitations. The SACU regional trade block also needs to strengthen digital trade infrastructure and e-commerce capabilities to facilitate trade continuity during periods of limited physical movement. These recommendations are intended to foster trade resilience, mitigate the effects of exchange rate fluctuations, and adapt to the evolving trade landscape in the context of mobility restrictions and lockdowns.

References

1. Apergis, E. and Apergis, N. (2021). The impact of COVID-19 on economic growth: evidence from a bayesian panel vector autoregressive (bpvar) model. *Applied Economics*, 53(58), 6739-6751. https://doi.org/10.1080/00036846.2021.1946479

2. Asare, P., & Barfi, R. (2021). The impact of COVID-19 pandemic on the Global economy: emphasis on poverty alleviation and economic growth. *Economics*, *8*(1), 32-43.

3. Bianchi, F., Bianchi, G., & Song, D. (2023). The long-term impact of the COVID-19 unemployment shock on life expectancy and mortality rates. *Journal of Economic Dynamics and Control*, 146, 104581. https://doi.org/10.1016/j.jedc.2022.104581

4. Hassaballa, H. (2022). Studying the relationship between women and the environment in developing countries. *Journal of Chinese Economic and Foreign Trade Studies*, 15(3), 298-315. https://doi.org/10.1108/jcefts-09-2021-0056

5. Jayathilaka, R., Rathnayake, R., Jayathilake, B., Dharmasena, T., Bodinayake, D., & Kathriarachchi, D. (2023). Exploring the growth direction: the impact of exchange rate and purchasing managers index on economic growth in Sri Lanka. *Quality & Quantity*, *57*(3), 2687-2703. https://doi.org/10.1007/s11135-022-01490-x

6. Khondker, B. H., Bidisha, S. H., & Razzaque, M. A. (2012). The Exchange Rate and Economic Growth; An empirical assessment on Bangladesh . *International Growth Centre*.

7. Koroma, P. S., Jalloh, A., & Squire, A. (2023). An empirical examination of the impact of exchange rate fluctuation on economic growth in Sierra Leone. *Journal of Mathematical Finance*, 13(01), 17-31. https://doi.org/10.4236/jmf.2023.131002

8. Kumajas, L. I., Rarung, N., & Malau, N. A. (2022). The anomaly of leading indicator. *Journal of International Conference Proceedings*, 5(2), 539-544. https://doi.org/10.32535/jicp.v5i2.1716

9. Kunle, M. A., Olowe, S. O., & Oluwafolakemi, F. O. (2014). Impact of foreign direct investment on Nigeria economic growth. *International Journal of Academic Research in Business and Social Sciences*, 4(8). https://doi.org/10.6007/ijarbss/v4-i8/1092

10. Maingi, J. (2017). The impact of government expenditure on economic growth in Kenya: 1963-2008. *Advances in Economics and Business*, 5(12), 635-662. https://doi.org/10.13189/aeb.2017.051201

11. Maital, S., & Barzani, E. (2020). The global economic impact of COVID-19: A summary of research. *Samuel Neaman Institute for National Policy Research*, *2020*, 1-12.

12. Mankiw, N. G., Romer, D., & Weil, D. N. (1992). A contribution to the empirics of economic growth. *The quarterly journal of economics*, *107*(2), 407-437.

13. Norouzi, N., de Rubens, G. Z., Choupanpiesheh, S., & Enevoldsen, P. (2020). When pandemics impact economies and climate change: Exploring the impacts of COVID-19 on oil and electricity demand in China. *Energy research & social science*, *68*, 101654.

14. Onyechege, D. C., Nor, N. M., & Omer, A. S. F. (2022). The indirect effect of coronavirus disease (COVID-19) pandemic on economic growth in Malaysia: evidence from the ARDL approach. *International Journal of Economics and Management*, 16(Special Issue 1), 99-115. https://doi.org/10.47836/ijeamsi.16.1.007

15. Oumarou, I. & Maiga, O. A. (2019). A causal relationship between trade, foreign direct investment and economic growth in niger. *Journal of Social and Economic Statistics*, 8(2), 24-38. https://doi.org/10.2478/jses-2019-0003

16. Puaschunder, J. M. (2020, September). Economic growth in times of pandemics. In *ConScienS Conference Proceedings* (pp. 1-9). Scientia Moralitas Research Institute..

17. Rajarathinam, A. & Suba, S.S. (2022). Panel data modeling for indian food grain production. *YMER Digital*, 21(01), 314-329. https://doi.org/10.37896/ymer21.01/30

18. Romdiati, H. and Kusumaningrum, D. (2021). Poverty during COVID-19 pandemic in indonesia: a case study in java-bali region. *Jurnal Kawistara*, 11(3), 239. https://doi.org/10.22146/kawistara.v11i3.69438

19. Shi, W. (2021). Dynamically adjusted strategy in response to developments in the COVID-19 pandemic as a new normal. Globalization and Health, 17(1). https://doi.org/10.1186/s12992-021-00746-9

20. Siswantoro, S. (2022). Economic growth versus COVID-19 pandemic in east java province: estimating the role of internet. *Journal of Interdisciplinary Socio-Economic and Community Study*, 2(2), 07-15. https://doi.org/10.21776/jiscos.02.02.02
    Southern African Customs Union. (2007). Annual Report.
    Southern African Customs Union. (2020). Annual Report.
    Southern African Customs Union. (2021). Annual Report.

21. Su, C., Dai, K., Ullah, S., & Andlib, Z. (2021). COVID-19 pandemic and unemployment dynamics in european economies. *Economic Research-Ekonomska Istraživanja*, 35(1), 1752-1764. https://doi.org/10.1080/1331677x.2021.1912627

22. Tang, C. F. & Abosedra, S. (2023). Unemployment behaviour in the COVID-19 pandemic: evidence from developing countries. *International Journal of Business and Society*, 24(1), 164-183. https://doi.org/10.33736/ijbs.5610.2023

23. Thaddeus, K. J., Ngong, C. A., Nebong, N. M., Akume, A. D., Eleazar, J. U., & Onwumere, J. U. J. (2021). Selected macroeconomic determinants and economic growth in cameroon (1970–2018) "dead or alive" an ARDL approach. *Journal of Business and Socio-Economic Development*. https://doi.org/10.1108/jbsed-05-2021-0061

24. United Nations. (2022). Impact of COVID-19 on Trade and Development- lessons learned. United Nations Conference on Trade and Development.

25. World Bank. (2022). Trade Overview. Retrieved from World Bank: https://www.worldbank.org/en/topic/trade/overview

26. World Health Organization. (2020). Botswana bordering Africa's epicenter: How early action and careful border control policies have so far contained COVID-19 to clusters. https://www.who.int/publications/m

27. World Health Organisation. (2022). WHO Coronavirus (COVID-19). Available at: https://covid19.who.int/