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DOES EXPORT DESTINATION MATTER FOR THE ECONOMIC GROWTH OF GHANA?°

*¿IMPORTA EL DESTINO DE LAS EXPORTACIONES PARA EL
CRECIMIENTO ECONÓMICO DE GHANA?*

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Abstract

This study investigates whether export destinations matter for economic growth. This important question is answered by utilising annual time series data spanning the period 1996–2018 on Ghana. Two main export destinations for Ghana – sub-Saharan Africa (SSA) and Europe and Central Asia (ECA) regions are selected for the analysis. The results from the autoregressive distributed lag (ARDL) model show that export destinations really matter for economic growth. Specifically, exports to the SSA region are not growth-enhancing in the long-run, but exports to the ECA region are growth enhancing in both the short- and long-run. Based

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on the findings, we provide policy suggestions, which seek to improve economic growth through exports for consideration.

Keywords: Economic growth, trade, export destination, sub-Saharan Africa, Europe and Central Asia.

JEL Classification: C22, F10, O40

Resumen

Este trabajo investiga si los destinos de exportación son importantes para el crecimiento económico. Esta importante pregunta se responde utilizando datos de series temporales anuales que abarcan el período 1996–2018 en Ghana. Para el análisis, se seleccionaron dos destinos principales de exportación ghaneses: las regiones de África Subsahariana (SSA) y Europa y Asia Central (ECA). Los resultados del modelo autoregresivo de rezagos distribuidos²⁷ (ARDL) muestran que los destinos de las exportaciones son realmente importantes para el crecimiento económico. Específicamente, las exportaciones a la región SSA no mejoran el crecimiento a largo plazo, pero las exportaciones a la región ECA sí lo hacen tanto a corto como a largo plazo. En base en los hallazgos, proporcionamos sugerencias de políticas que buscan mejorar el crecimiento económico a través de las exportaciones para su consideración.

Palabras clave: crecimiento económico, comercio, destino de exportación, África Subsahariana, Europa y Asia Central.

JEL Classification: C22, F10, O40

INTRODUCTION

Globally, promoting and sustaining economic growth has been the main focus of stakeholders in both developed and developing economies of which Ghana is no exception. This is so because of the benefits derived from economic growth such as higher living standards, increase in income, reduction in poverty and lower unemployment, among others (see, Ahmed et al., 2011; Mabugu & Chitiga Mabugu, 2014; Okyere & Jilu, 2020; Egyir et al., 2020; Van Niekerk, 2020; Baidoo et al., 2021; Dawood et al., 2021; Ofori-Abebrese et al., 2021; Yameogo & Omojolaibi, 2021). Moreover, when it comes to issues of economic growth and development, it is reported that countries depend on one another; and this is mostly through trade and the transfer of technology, among others (see, Hausmann et al., 2005; Jong-A-Pin & De Hann, 2011; Calderon et al., 2020). It is, therefore, not surprising that the United Nations and other development organisations encourage countries to improve their bilateral and multilateral trade relations with each other.

Export of goods and services has been given much attention in the policy discourse of most countries given its crucial role in fostering economic growth and development. The reason is that, exports lead to an increase in foreign exchange, revenue/income, transfer of ideas and technology among several others, which tend to stimulate economic growth and development (see, for instance, Ahmed et al., 2011; Sakyi & Egyir, 2017; Sultanuzzaman et al., 2019; Egyir et al., 2020; Okyere & Jilu, 2020). In addition, according to Rangasamy (2009) and Njikam (2017), export is key to economic growth and development as it helps countries to generate the foreign income needed to finance their imports as well as other developmental projects.

In the Ghanaian context, exports are also viewed as crucial to economic growth due to the associated benefits such as foreign exchange earnings (see, Tuffour, 2010; Darkoh, 2015). Ghana is a well-known exporter of different commodities such as mineral products (including gold, diamond and bauxite) and other primary and agricultural products (like cocoa and coffee). Ghana has benefited enormously from export after it liberalised its economy and began trading with other economies. According to the World Bank (2020a), the value of Ghana's export (in thousands of US dollars) was US\$2,466,951.17 in 1996. The value increased to US\$3,613,993.66 in 2006, and further to US\$10,655,796.41 in 2016. For 2017 and 2018, the values increased again to US\$14,358,509.95 and US\$17,099,588.40 respectively. This clearly shows that, on average, Ghana's export to the rest of the world has been increasing over the years. With regard to economic growth performance, in spite of the enormous benefits from exports, Ghana's growth still remains

an issue of concern. For instance, Ghana recorded a growth rate of 6.39% in 2006 and 14.05% in 2011. The figure reduced to 3.45% in 2016 and later increased to 6.26% in 2018. The growth rate averaged 5.81% from 1996 to 2018 (World Bank, 2020b).

Furthermore, a key issue when it comes to exports is the trading partners involved, as well as the destinations of these exports. Authors (such as, Arora & Vamvakidis, 2005; Vacek, 2010; Ababio, 2015; Njikam, 2017; Calderón et al., 2020) have indicated that export destinations are very essential to countries' economic growth; because the value of the goods exported will be highly influenced by the destination country – whether same goods are produced domestically or not. Ghana's trade partners have increased over the past few decades with each partner receiving varying shares of the total export value from one year to another. According to World Integrated Trade Solutions of the World Bank, Ghana trades with about 180 different countries across the globe in the 7 major economic regions – Europe and Central Asia (ECA), sub-Saharan Africa (SSA), South Asia, East Asia and Pacific (EAP), Latin America and the Caribbean (LAC), Middle East and North Africa (MENA) and North America (based on the International Monetary Fund classifications). For instance, from 1996 to 2018, Ghana's total value of export (in Thousand US dollars) to these regions averaged US\$59,933,770.55 (for ECA), US\$46,122,806.26 (for SSA), US\$ 17,918,245.94 (for EAP), US\$ 13,138,889.04 (for South Asia), US\$ 4,914,992.21 (for North America), US\$1,621,232.75 (for LAC) and US\$468,397.54 (for MENA) (World Bank, 2020a). From these statistics, it is observed that ECA and SSA have been the largest recipient of Ghana's exports over the years. This apparently shows that the impact of exports destination(s), on economic growth of Ghana cannot be subverted.

Given the importance of exports to economic growth highlighted above, researchers have empirically delved into this phenomenon (see for instance, Tuffour, 2010; Chigusiwa et al., 2011; Aidam et al., 2014; Darkoh, 2015; Mahmoodi & Mahmoodi, 2016; Quaicoe et al., 2017; Siaw et al., 2018; Okyere & Jilu, 2020; Mensah & Okyere, 2020). However, it is important to note that these studies have focused on the effect of exports on economic growth without taking into consideration the relevance of export destination(s). Given this and considering the fact that different regions receive different amounts of Ghana's exported goods, it is imperative that studies take into consideration the export destinations – to ascertain whether export destinations matter for economic growth. Interestingly, to the best of the authors' knowledge, there is no empirical evidence on whether the destinations of Ghana's exports drive its economic growth.

Therefore, the present study seeks to investigate whether export destinations matter for Ghana's economic growth. The study makes some contributions to literature, knowledge and most importantly how the economic growth of Ghana can be enhanced through exports. First, undertaking such an investigation provides policy directions to stakeholders regarding which region(s) [destination(s)] should be the target of Ghana's exports to ensure maximum benefits and eventually economic growth. Moreover, deciding on export destination(s) for Ghana's goods/products is paramount as this will definitely have an impact on the economy. This, therefore, means that such decisions need to be guided by empirical research, hence demystifying why the present study is very crucial. In addition, this study is important as it fills the lacuna that has been created in literature, regarding export destinations and economic growth nexus, especially in the Ghanaian context.

The remainder of the paper is structured as follows. The next section focuses on the literature review and this is followed by the empirical methodology. The fourth section is devoted to the results and discussion. Conclusions and policy implications of the study are presented in the last section.

I. THEORETICAL REVIEW

The theoretical and empirical literature underpinning this study are discussed in this section. Specifically, the study reviews theories that are related to exports and economic growth and subsequently reviews existing empirical studies. The theoretical literature that the study considers are mercantilist theory, international trade theory, and the export-led growth theory.

The mercantilist theory posits that nations should export domestically produced goods in exchange for gold and silver. The pioneers (including Jean Baptiste Colbert), opine that the quantity of gold and silver that a country possesses determines its wealth or growth. Thus, *Bullionism* perceived the amount of precious metals owned by a country as a measure of its wealth. The key feature of the mercantilist theory is that it championed the export of domestically produced goods and restricted the import of finished goods from abroad. However, import of raw materials that were not domestically available was permitted. This theory supported the idea of export leading to growth from the 16th century – the period when mercantilism was the order of the day and possibly the recognised potential way for nations to achieve economic growth. Additionally, the founders advocated for the regulation of international trade by the government so as to generate the needed wealth/income to help strengthen the economy. Therefore, as nations

engage in trade, foreign exchange/income is earned and this is used to stimulate economic activities such as job creation and improved living standards and this in turn promotes economic growth.

Furthermore, the international trade theory is of the view that when countries trade freely, both parties benefit enormously. Thus, free trade is regarded as a positive sum game and not a zero sum game as posited by the mercantilist scholars. Following this, Adam Smith in 1776 proposed in his absolute advantage theory that, if a nation is efficient in the production of a particular commodity but less efficient in another commodity that is also produced by another country, then both nations can gain, by each specialising in the production of the commodity that it has an absolute advantage. Afterwards, a country can exchange part of its output with the other for the commodity in which it has absolute disadvantage. According to Smith, this will ensure that resources are efficiently utilised and higher output is achieved relative to if each country was to produce both goods. Smith therefore advocated for specialisation as a tool to promote free trade which allows both nations to gain from trade. On the other hand, according to the comparative cost advantage theory propounded by David Ricardo in 1817, if one country is more efficient than the other in the production of all commodities, trade between the two can still be of mutual benefit. The principle of comparative cost advantage hypothesises that, a country should specialise in the production and export of the commodity in which it has relative or comparative advantage and import commodities in which it has comparative cost disadvantage. This may lead to economic gains which will eventually lead to economic-growth.

Last but not least, the export-led growth (ELG) theory hypothesises that export expansion is one of the key determinants of economic growth of countries. Therefore, according to the ELG hypothesis, the overall growth of economies is not only achieved by increasing the amounts of labour and capital, but also by increasing exports of its products (Rangasamy, 2009; Medina-Smith & CNUCED, 2001; Kappa, 2020). In sum, the advocates of the ELG indicate that trade is the main engine of economic growth. This means that, if countries increase their export capacity base, they will generate enough foreign income and this could be used to finance developmental projects which are growth enhancing.

In confirming these theories regarding the role of trade (exports) in enhancing economic growth, some empirical studies have been conducted. For instance, Arora & Vamvakidis (2005) employ panel estimation technique for over 100 countries to examine whether a country's economic growth is influenced by its trading partners for the period 1960-1999. The results from the fixed effect show that

economic growth of trading partners has a strong positive effect on the economic growth prospects of the domestic economy.

Baliamoune-Lutz (2010) investigates the growth effects of Africa's trade with China using panel data over the period 1995-2008. The study employs the Arellano-Bond first differenced generalised method of moments (DIF-GMM) estimation technique to distinguish between the effects of imports and exports while controlling for the role of export concentration. The results show that Africa's export to China enhances growth. However, exports to OECD countries exhibit an inverted U-shaped relationship, indicating a nonlinearity growth effect in Africa. The results further indicate that export concentration enhances the growth effect of export to China. The study also finds that imports from China have a robust positive effect on the economic growth of Africa.

Similarly, Vacek (2010) examines whether exporters benefit by exporting more, and also whether productivity gains from exporting more are heterogeneous across export destinations of Czech firms. Primary panel data was collected from 671 Czech firms on the volume of export and the destination of export. The study employs the system GMM estimation technique and concludes that firms do benefit from exporting more. The results also reveal a significant heterogeneity in productivity spillovers across destination markets. Exporting to developed countries leads to higher productivity gains for Czech firms.

In a related study on Mexico, Waithe et al. (2010) examine the effect of export-oriented policy reforms in the mid-1980s on economic growth. The study tests the validity of the Export-Led Growth hypothesis using an export-augmented neoclassical production function over the period 1960-2003. The Multivariate Johansen cointegration technique is employed for the analysis. The study finds evidence in support of the hypothesis in the short-run. However, the long-run results reveal a negative relationship between export and economic growth.

Using the ordinary least squares estimation technique, Ugochukwu & Chin-yere (2013) investigate the impact of oil and non-oil export on the economic growth of Nigeria for the period 1986-2011. The Granger causality test is also used to determine the direction of causality among the variables. The study finds significant positive effects of oil export, non-oil export and foreign reserve on economic growth. The Granger causality test also shows that economic growth Granger causes oil export while oil export Granger causes non-oil export. Foreign reserves are also revealed to Granger cause economic growth.

Using panel data on 23 out of the 27 European Union member countries and applying both random and fixed effect estimation techniques, Santos et al. (2013) find that export specialisation in high-value-added products such as high-technology induces economic growth of the domestic economy. Export diversification induces higher economic growth prospects across trading partners. However, evidence from the study reveals that enlarging the portfolios of partners especially to less developed and distant countries has a negative effect on the economic growth of the European Union. Also, capital is revealed to have a positive effect on economic growth.

Furthermore, Cebeci (2014) investigates the effect of export destinations on productivity, employment and wages of Turkish firms. This is done by comparing the performance of firms that export to low-income and high-income destinations over the period 2000-2011. The study adopts a combination of propensity score matching and difference-in-difference methods of estimation. The results reveal that export to low-income destinations does not result in higher total factor productivity. The employment effect of export to low-income destinations is comparable to export to high-income destinations.

Also, Ababio (2015) investigates the relationship between intra and inter-SSA exports and economic growth using panel data on 29 countries in sub-Saharan Africa for the period 1995-2013. The results from the GMM estimation technique show that export has a positive effect on economic growth confirming the export-led-growth hypothesis. The results further reveal that both intra and inter-SSA exports have a positive significant effect on economic growth. However, the effect of the intra-SSA export on economic growth is greater than the inter-SSA export effect. Also, capital exhibits a positive effect on economic growth.

From the review above, it is evident that no study has investigated the effect of export destination(s) on economic growth in the Ghanaian context. To this end, this study fills a major research gap by being the first to examine empirically the extent to which the destination(s) of exports can stimulate Ghana's economic growth. Doing so is vital, as the outcome will inform policymakers and stakeholders with regard to the decision of choosing export destination(s) for Ghana's export.

II. METHODOLOGY

This section is devoted to the methodological framework of the study. Specifically, it presents the model specification, data type and sources, and the estimation technique.

II. 1. Model specification

The study follows the AK model used by Arrow (1962) and past papers such as Mansouri (2008), Sakyi (2011) and Quashigah et al. (2016) to specify the econometric model for estimation. Using the Cobb-Douglas production function, the following growth model is specified.

$$Y_t = f(K_t^\alpha L_t^{1-\alpha}) \quad (1)$$

where Y_t is economic output (measuring economic growth), K_t represents capital, and L_t denotes labour. The subscript t represents time whereas α and $(1 - \alpha)$ are the elasticities of capital and labour respectively. Equation (1) is then modified to include the variables of interest – export destinations, as well as other control variables that are likely to affect economic growth – as specified in Equation (2).

$$Y_t = f\left(K_t^\alpha L_t^{1-\alpha} EXPSSA_t^\beta EXPECA_t^\gamma W_t^\delta\right) \quad (2)$$

where Y_t , K_t , L_t , α and $(1 - \alpha)$ are as already explained, EXPSSA and EXPECA denote export destinations – export to countries in sub-Saharan Africa (SSA) and Europe and Central Asia (ECA) respectively and W_t represents control variables – democracy and exchange rate. The parameters β , γ and δ are the elasticities of the respective variables. Dividing both sides of Equation (2) by L_t to obtain per capita variables and taking natural logarithm, the estimable form of Equation (2) is specified in Equation (3).

$$\ln y_t = \alpha \ln k_t + \beta \ln EXPSSA_t + \gamma \ln EXPECA_t + \delta_1 \ln DEM_t + \delta_2 \ln EXCHR_t + \mu_t \quad (3)$$

where DEM and $EXCHR$ denote democracy and exchange rate respectively, the remaining variables are those earlier explained and \ln represents natural logarithm.

II. 2. Estimation technique

Following Pesaran et al. (2001), the study applies the autoregressive distributed lag (ARDL) model and the error correction model (ECM) in estimating Equation (3). This method is adopted due to its advantages over other estimation techniques. First, this method is appropriate in the case of relatively small sample size and makes it applicable for using the ordinary least squares technique in estimating the cointegration relationship (Duodu & Baidoo, 2022). Second, this approach is also appropriate whether the variables under investigation are stationary at levels, $I(0)$, first difference, $I(1)$ or a mixture of both. In ascertaining the stationarity property of the series, the study employs the Augmented Dickey-Fuller (ADF) unit root test proposed by Dickey & Fuller, (1979, 1981) and the Phillips-Perron (PP) unit root test by Phillips & Perron (1988). In these tests, the null hypothesis of the presence of unit root is tested against the alternative hypothesis of no unit root. On one hand, rejecting the null hypothesis implies that the series is stationary. On the other hand, failing to reject the null hypothesis implies the presence of a unit root and for that matter, the series is not stationary.

After establishing the stationarity property of the series, the next issue is to ascertain whether there exists a valid long-run relationship (cointegration) among the variables. To this end, the ARDL bounds test approach is used. The study then applies the F-test for joint significance of the parameters following Pesaran et al. (2001). This approach to cointegration is chosen because it is asymptotically efficient in finite and small sample studies and also applicable even in the case where the regressors are endogenous (Sakyi, 2011). The null and alternative hypotheses of the ARDL bounds test for cointegration are specified as follows:

$$H_0: \lambda_1 = \lambda_2 = \lambda_3 = \dots = \lambda_n = 0 \quad (4)$$

$$H_1: \lambda_1 \neq \lambda_2 \neq \lambda_3 \neq \dots \neq \lambda_n \neq 0 \quad (5)$$

In this test, two critical bound values – lower and upper bound critical values are provided $I(0)$ and $I(1)$ respectively] (see, Pesaran et al., 2001). The null hypothesis of no cointegration is rejected if the computed F-statistic is greater than the upper bound critical value and the implication is that the variables are cointegrated; there exists a valid long-run relationship among the variables. The existence of the long-run relationship means that the model is able to return to long-run equilibrium after any exogenous shock to any of the variables in the model. Also, if the computed F-statistic is less than the lower bound critical value, we fail to reject the null hypothesis of no cointegration and the implication is that there

is no valid long-run relationship among the variables. The result is inconclusive if the computed F-statistic falls within the lower and upper bound critical values.

Once the ARDL bounds test confirms the presence of cointegration, the long and short-run parameters of Equation (3) are estimated. Equation (6) is the ARDL form of Equation (3) which captures both the long and short-run coefficients.

$$\begin{aligned} \Delta \ln y_t = & \alpha_0 + \sum_{i=1}^q \partial \Delta \ln y_{t-i} + \\ & \sum_{i=1}^q \gamma \Delta \ln k_{t-i} + \sum_{i=1}^q \phi \Delta \ln EXPSSA_{t-i} + \sum_{i=1}^q \theta \Delta \ln EXPECA_{t-i} + \sum_{i=1}^q \rho \Delta \ln DEM_{t-i} + \\ & \sum_{i=1}^q \sigma \Delta \ln EXCHR_{t-i} + \beta_0 \ln y_{t-1} + \beta_1 \ln k_{t-1} + \beta_2 \ln EXPSSA_{t-1} + \beta_3 \ln EXPECA_{t-1} + \beta_4 \ln DEM_{t-1} + \\ & \beta_5 \ln EXCHR_{t-1} + \omega ECM_{t-1} + \varepsilon_t \end{aligned} \quad (6)$$

where the variables are those explained already in Equation (3). The short-run parameters of the model are ∂ , γ , ϕ , θ , ρ , and σ whereas β_1 to β_5 are the long-run parameters. Δ and q represent the first difference operator of the variables in the short-run and the lag length of each variable of the model respectively. The lag selection is chosen using the Schwarz Bayesian Criterion (SBC). This option is selected because it is suitable for relatively smaller sample size (see, Pesaran & Pesaran, 2010) and moreover, it offers parsimonious specification of the model (see, Duodu & Baidoo, 2020). Also, α_0 is the intercept term and ε represents the stochastic error term. ω is the coefficient of the error correction term (which is expected to be negative, statistically significant and the value falling between 0 and 1) which measures the speed of adjustment.

The study further performs several diagnostic tests to ensure that the results obtained are reliable and consistent for effective policy purposes. These diagnostic tests are autocorrelation, normality, heteroscedasticity, functional form, model stability and chow test for structural break. The autocorrelation test is conducted using the Breusch-Godfrey LM test whereas that of normality is done using the Jarque-Bera test. The heteroscedasticity and functional form tests are performed using the Breusch-Pagan-Godfrey and Ramsey reset tests respectively. Finally, the plots of cumulative sum (CUSUM) and cumulative sum of squares (CUSUMSQ) are employed to ascertain the stability of the estimated model. In these tests, the null hypotheses of absence of these problems are tested against the alternative hypotheses of their presence in the model. The non-rejection of the null hypotheses indicate that the estimated model is free from the aforementioned econometric problems and their rejection implies otherwise.

II. 3. Data and variable description

This section focuses on the type of data, sources and provides a brief description of the variables used.

The study uses secondary annual time series data spanning the period 1996-2018; the period for the study is influenced by data availability. The sources of data for the study are World Bank's World Development Indicators (WDI), World Bank's World Integrated Trade Solutions (WITS) database, and Polity5 project. Specifically, data on economic growth, capital and exchange rate are obtained from WDI, data on exports to SSA and ECA are sourced from WITS database and that of democracy is obtained from Polity5 project.

With regard to variable measurement, the annual growth rate of gross domestic product is used as a measure of economic growth. Studies such as Baum et al. (2013) and Baidoo et al. (2021) have also measured economic growth in a similar manner. Capital is measured using gross fixed capital formation as a percentage of gross domestic product. The study expects a positive relationship between capital and economic growth. This is so because as the capital stock increases, investments across the productive sectors also improve and this increases productivity, and hence improvement in economic output. For SSA (sub-Saharan Africa) and ECA (Europe and Central Asia) export destination variables, the total volume of Ghana's export to these regions are used as a measure. It must be emphasised that SSA and ECA are purely geographical names for all the countries within these regions. They are not specific to specific national boundaries but to all the countries found in them. These two destinations of Ghana's export are selected mainly because of the large share of the total export value that goes to these regions. Exports to SSA and ECA are both expected to exert a positive effect on economic growth. This a priori expectation is motivated by the Keynesian aggregate demand function which shows that exports are positively related to aggregate demand and for that matter, as a country's exports increase, it enhances economic growth and when exports reduce, economic growth also reduces. These two variables are the main variables of interest that will provide answers to the research question that motivates this study. Polity2 score is used as a proxy for democracy. Democracy is used here as an institutional variable to measure the effectiveness of peaceful democratisation in relation to economic growth. Polity2 score ranges from -10 to +10. Moving towards the +10 score indicates improvement in the level of democracy and general improvement in democratic institutions that drive economic growth. Movement towards the -10 score signals an increasing level of autocracy

and an absence of democratic institutions. While -10 signals complete autocracy, +10 indicates complete democracy. This study therefore hypothesises a positive relationship between democracy and economic growth. Political instability and any form of civil unrest is at its minimum in a democratic state, and this is needed to boost investors' confidence, increase production and hence economic growth. Sakyi (2011) also uses polity2 score as a measure of democracy. Exchange rate is the price at which one currency is exchanged for the other. In this study, the real effective exchange rate which is the value of a domestic currency against a weighted average of several foreign currencies is used as a measure. This measure of exchange rate is particularly important as it takes into account changes in relative prices and shows the amount of goods of the foreign country that can actually be bought at any given period of time. An increase in a country's real effective exchange rate implies that its exports are becoming more expensive relative to its imports and this increases the net imports of the country. As a result, exports reduce and this negatively affects economic growth. The present study therefore expects a negative relationship between real effective exchange rate and economic growth. The negative effect is hypothesised because higher values of imports reduce economic growth as indicated by the Keynesian aggregate demand function.

The choice of democracy and exchange rate as control variables in this study is motivated by their crucial role in international trade. For instance, exchange rate facilitates international trade as there is the need to convert home country's currency to the foreign currency. Also, countries that are more democratised are more likely to liberalise their economies and this enhances trade among countries. Furthermore, foreign investors usually feel more secured in democratic countries than the autocratic ones.

III. RESULTS AND DISCUSSION

This section presents the results of the study. It specifically focuses on the descriptive statistics, trends of the key variables, unit root test, cointegration test, the short and long-run results and finally, the diagnostic tests.

III.1. Descriptive statistics

The summary of the descriptive statistics and the trends (of the key variables – export to SSA, export to ECA and economic growth) of the variables are reported in Table 1 and Figure 1 respectively.

Table 1. Summary statistics

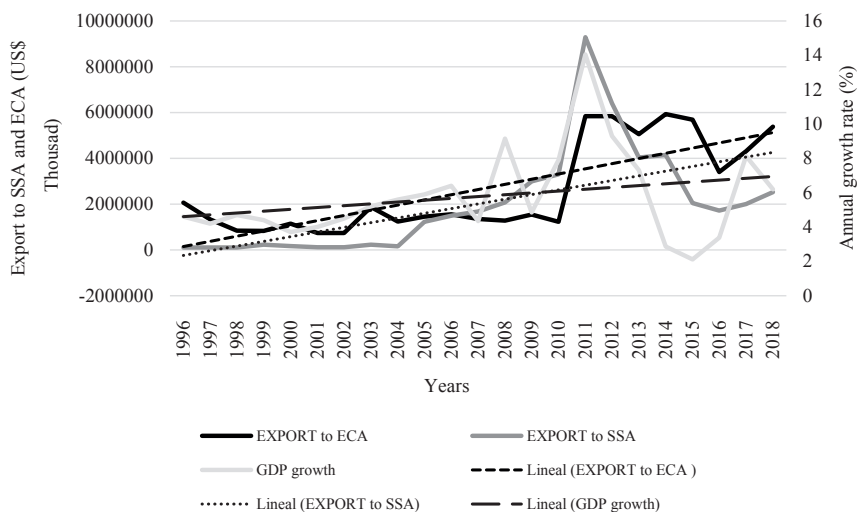
Variable	Obs	Mean	Std. Dev.	Min.	Max.
lny	23	1.882	0.258	1.429	2.221
lnEXPSSA	23	20.472	0.552	18.987	21.308
lnEXPECA	23	21.568	0.497	20.881	22.268
lnk	23	3.048	0.271	2.465	3.376
lnDEM	23	1.801	0.529	0.693	2.079
lnEXCHR	23	4.571	0.229	4.169	4.993

Source: Authors' estimation

Focusing on the dependent variable – economic growth – and the two main independent variables of interest – export to sub-Saharan African and Europe and Central Asian countries, it is revealed that economic growth, export to sub-Saharan Africa and Europe and Central Asia have mean values of 1.882, 20.472 and 21.568 respectively with minimum (maximum) values of 1.429 (2.221), 18.987 (21.308) and 20.881 (22.268) respectively. The standard deviation values for all the variables also indicate that there is not much deviation from the mean values.

From the Figure 1, it is observed that trends of export to SSA and ECA as well as the annual growth rate of GDP have followed a similar trend. Specifically, the linear trend shows that, on the average, all the variables have been increasing over the study period. However, there are some fluctuations for some periods. For example, the rise in values between 2009 and 2011 could be attributed to the commercialisation of Crude oil in Ghana. The decline in values from the period 2012 to 2016 could be ascribed to the power crises that the country experienced.

Figure 1. Trends of Ghana's export to SSA, export to ECA and economic growth (1996-2018)



Source: Authors' construction

III.2. Unit root test

The Augmented Dickey Fuller and the Philips Perron unit root tests results are reported in Tables 2 and 3 respectively.

Table 2. Augmented Dickey-Fuller unit root test results

Variable	Level		First Difference		Order of Integration
	Constant	Trend	Constant	Trend	
Lny	-0.617	-1.969	-4.658***	-4.610***	I(1)
lnEXPSSA	-3.644**	-4.177**	-6.8920***	-6.784***	I(0)
lnEXPECA	-0.895	-2.064	-4.740***	-4.632***	I(1)
Lnk	-1.919	-1.868	-3.681**	-3.589*	I(1)
lnDEM	-2.137	-1.488	-4.789***	-5.420***	I(1)
lnEXCHR	-1.398	-2.406	-4.413***	-4.333**	I(1)

Note: ***, ** and * represent 1%, 5% and 10% significance level respectively

Source: Authors' estimation.

Table 3. Phillips-Perron unit root test results

Variable	Level		First Difference		Order of Integration
	Constant	Trend	Constant	Trend	
lny	-0.649	-2.111	-4.667***	-4.626***	I(1)
lnEXPSSA	-3.712**	-4.185**	-7.645***	-7.699***	I(0)
lnEXPECA	-0.846	-2.035	-4.740***	-4.632***	I(1)
lnk	-2.107	-2.064	-3.647**	-3.548*	I(1)
lnDEM	-2.298	-1.278	-4.801***	-5.866***	I(1)
lnEXCHR	-1.363	-2.512	-4.433***	-4.359**	I(1)

Note: ***, ** and * represent 1%, 5% and 10% significance level respectively

Source: Authors' estimation.

It is observed that the ADF unit root test results are consistent with those obtained from the PP unit root test. Both test results show that the variables are stationary at either level or first difference and this confirms the appropriateness of the ARDL estimation technique the study adopts. Specifically, it is revealed that with the exception of export to the SSA region which is stationary at level, the remaining variables are all stationary at first difference. After ascertaining the stationarity property of the series, the study then proceeds to establish the existence or otherwise of a valid long-run relationship among the variables.

III.3. Cointegration test

The cointegration test results are reported in Table 4.

Table 4. Cointegration test results

F-Statistic	Lower Bound Critical Value	Upper Bound Critical Value
5.146***	3.41	4.68

Note: *** denotes the rejection of the null hypothesis of no cointegration at 1% significance level.

Source: Authors' estimation

The results reveal an F-statistic value of 5.146 which is greater than the upper and lower bound critical values. This implies that there exists a valid long-run relationship among the variables under consideration. Given this, the study proceeds to estimate both the short- and long-run coefficients.

III.4. Short- and long-run results

Following the valid long-run relationship among the variables established, the short- and long-run coefficients of the model are estimated and the results are reported in Table 5.

Table 5. Estimated short- and long-run results

Variable	Short-run results		Long-run results	
	Coefficient	Std. Error	Coefficient	Std. Error
$\Delta \ln \text{EXPSSA}$	0.002	0.006	-0.097***	0.014
$\Delta \ln \text{EXPECA}$	0.015	0.012	0.416***	0.024
$\Delta \ln k$	0.020**	0.007	0.048**	0.018
$\Delta \ln \text{DEM}$	0.092***	0.013	0.340***	0.027
$\Delta \ln \text{EXCHR}$	0.087**	0.029	0.210**	0.078
$\text{ECM}(-1)$	-0.412***	0.051	-	-
Constant	-	-	-6.731***	0.878
R-squared	0.9997			
Adj. R-squared	0.9992			
DW-statistic	3.535			
F-statistic	2011.672			
Prob. (F-statistic)	0.000			
Number of obs.	23		23	

Note: *** and ** represent 1% and 5% significance level respectively

Source: Authors' estimation.

The results reveal that in the short-run export to sub-Saharan African (SSA) region is positive though insignificant. However, in the long-run, it is indicated that export to the SSA region is negative and significant at 5% level. Specifically, a 1% increase in export to the SSA region reduces economic growth by 0.097% in the long-run. This finding is inconsistent with the a priori expectation. However, it is plausible,

because the nature of Ghana's export goods and those from other neighbouring SSA countries provides an intuitive reason for this outcome. The type of goods produced and exported by Ghana to the neighbouring SSA countries are mainly food crops, and other primary products and these are similar to goods produced in these neighbouring countries. As a result, the international SSA market for goods becomes a keen competition for buyers of virtually the same products, thereby driving down prices. The reduction in the price of exported goods then impacts negatively on long-run economic growth of the participating countries (for example, Ghana in our case) as the full benefits associated with exports are not realised.

With regard to exports to Europe and Central Asian (ECA) countries, the results reveal a positive effect in both short- and long-run which is consistent with the a priori expectation, albeit significant only in the long-run at 1% level. The long-run coefficient indicates that increasing exports to ECA countries by 1% increases economic growth by 0.416%. This further implies that exporting to ECA countries is growth-enhancing as far as Ghana's exports and economic growth are concerned. The implication of the finding is that, unlike the SSA region that is likely to produce similar goods as Ghana which leads to lower prices, goods/products exported to ECA countries are likely to have higher prices; because goods or products (such as Cocoa, Timber, Gold and Bauxite) are not produced domestically in these destination countries. The higher value of the goods exported then enhances economic growth. Furthermore, this finding reiterates the assertions by authors (see for instance, Arora & Vamvakidis, 2005; Vacek, 2010; Ababio, 2015; Njikam, 2017; Calderón et al., 2020) that export destinations are very important to countries' economic growth as the value of the goods exported will be highly influenced by the destination country – whether same goods are produced domestically or otherwise. This result is also consistent with the Keynesian aggregate demand model where exports are indicated to exert a positive effect on economic growth.

With respect to the control variables, the study reveals a significant positive relationship between capital and economic growth in both the short- and long-run at 5% significance level which is in tandem with the expected sign. Specifically, the coefficients show that increasing capital by 1% increases economic growth by 0.020% and 0.048% in the short- and long-run respectively. As capital stock increases, there will be more investment, all other things being equal, which will in turn promote economic growth of the country. A Study by Santos et al. (2013) also reports a positive relationship between capital and economic growth. The study further reveals that there is a significant positive relationship between democracy and economic growth at 1% level in both the short- and long-run and this is also

consistent with the a priori expectation. The coefficients specifically show that improving democracy by 1 point scale improves economic growth by 0.092% and 0.340% in the short- and long-run respectively. This outcome means that, practicing democracy and improving upon the democratic institutions of the country is economic growth-enhancing. This is so because the serene political atmosphere boosts investors' confidence in the domestic economy. It assures investors of some sort of protection and security should they establish their firms in the host country. As a result, more foreign direct investment could be attracted, all other things being equal, and this tends to raise economic output and eventually economic growth is improved. This result is consistent with the finding by Sakyi (2011). It is further revealed that there is a significant positive relationship between real effective exchange rate and economic growth which contradicts the a priori expectation. The results show that a rise in real effective exchange rate by 1% increases economic growth by 0.087% and 0.210% respectively for the short- and long-run respectively at 5% significance level. The contradictory result notwithstanding, the positive effect obtained is plausible. This is because, as the real effective exchange rate rises, the domestic currency appreciates and for that matter the domestic economy has access to more foreign goods. The access to these foreign goods could include capital goods like machinery and other important raw materials which aid in production. As the economy improves on its production, economic output is increased and this eventually enhances economic growth all other things being equal. This outcome is consistent with the study by Duodu & Baidoo (2020).

Finally, regarding the error correction term [ECM (-1)] which measures the speed of adjustment, the results show that it is negative and significant, further confirming the long-run relationship among the variables established by the bounds test. Specifically, the coefficient indicates that when there is a shock to any of the explanatory variables in the short-run, long-run equilibrium will be restored at a speed of 41%. Also, the R-squared and adjusted R-squared values indicate that about 99% of the variation in the dependent variable – economic growth – is explained by the independent variables used in the study: export to SSA countries, export to ECA countries, capital, democracy and exchange rate. Again, the probability value of the F-statistic also shows that the model is well fitted given the highly significant probability value.

III.5. Diagnostic tests

In ensuring the robustness and reliability of the results, a series of diagnostic tests are conducted and the results are reported in Table 6.

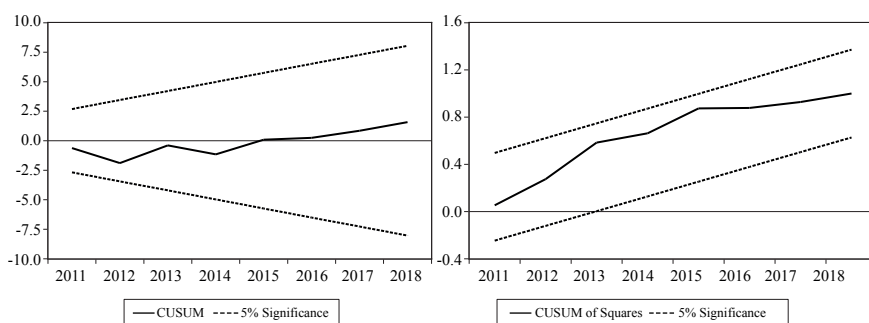
Table 6. Diagnostic test results

Diagnostic test	Test statistic	Probability value
Normality	0.427	0.807
Autocorrelation	10.101	0.082
Heteroscedasticity	1.756	0.216
Functional form	0.869	0.419
Chow test for structural break	1.605	0.227
CUSUM	Stable	
CUSUMSQ	Stable	

Source: Authors' estimation

The results from the diagnostic tests indeed show that the estimated model is free from the aforementioned econometric problems. This is because all the various tests statistic values are insignificant implying the non-rejection of the null hypotheses which state the absence of these econometric problems in the estimated model. Also, the plots for CUSUM and CUSUMSQ (see Figure 2) indicate that the estimated model is stable over the study period.

Figure 2. Plots for CUSUM and CUSUMSQ



Source: Authors' construction

CONCLUSIONS AND POLICY IMPLICATIONS

The study investigates whether export destinations matter for Ghana's economic growth. Annual time series data spanning the period 1996-2018 is utilised for the analysis. The study employs the autoregressive distributed lag (ARDL) model for the estimation. The unit root test results indicate that the stationarity properties of the series is a mixture of level and first difference [$I(0)$ and $I(1)$], confirming the appropriateness of the ARDL adopted. The bounds test results also reveal that there is a valid long-run relationship among the variables.

The short- and long-run results indicate that there is a significant negative relationship between exports to sub-Saharan African countries and economic growth in the long-run but positive in the short-run, albeit insignificant. It is also revealed that, exports to Europe and Central Asian countries have a significant positive effect on economic growth in both the short- and long-run. The study further shows that there is a significant positive relationship between capital, democracy, exchange rate and economic growth in both the short- and long-run. Based on the findings and the discussions, the study concludes that export destinations indeed matter for economic growth of Ghana.

The outcome of the study has some policy implications for Ghana as far as exports continue to be a key driver of economic growth. First, it would be prudent for the government of Ghana and all stakeholders to pursue policies that channel the country's export to the Europe and Central Asia region as it has the potential of enhancing economic growth in the long-run. This is because trade among SSA countries only generates short-term benefits, which is eventually nullified in the long-run. Second, following the result with regard to democracy, it is imperative for Ghana to continue to ensure that there is a serene political atmosphere, as this will boost foreign investors' confidence. Boosting investors' confidence will then facilitate more foreign direct investment inflows which will in turn promote economic growth in the long-run. Moreover, democracy comes with better institutions and structures that reduce conflict and civil unrest and create a peaceful atmosphere needed for economic growth. Last but not least, there is also the need to ensure capital accumulation in the economy as this has the potential of enhancing economic growth as revealed by the study. Ensuring the availability of capital has the tendency of increasing investment and hence economic growth, all other things being equal.

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Links to data sources

Data	Link
Economic growth, exchange rate, capital and inflation	https://databank.worldbank.org/source/world-development-indicators
Democracy	https://systemicpeace.org/inscrdata.html
Export destinations	https://wits.worldbank.org/CountryProfile/en/Country/GHA/Year/2019/TradeFlow/Export/Partner/by-region

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