Trade Policy and Economic Growth in Sub Saharan Africa: A panel data approach

By

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Abstract

Despite a number of multi-country case studies utilizing comparable analytical frameworks, numerous econometric studies using large cross-country data sets, and important theoretical advances in growth theory; there is still disagreement among economists concerning how a country's international economic policies and its rate of economic growth interact. The central objective of this paper was to empirically assess the link between trade policy and economic growth in sub-Saharan African countries. Apart from reviewing available different literature, this study also provided empirical evidence on the relationship between economic growth and trade policies. In doing so, the study used a panel data covering 47 sub-Saharan African countries over the periods 2000 – 2008. The estimation support claims that openness to international trade stimulates both economic growth and investment. Besides, trade policies such as average weighted tariff rate and real effective exchange rate have both direct and indirect impacts on economic growth.

Key Words: Tariffs, Real effective exchange rate, Growth, Cross country analysis

Introduction

Do trade policies inhibit or promote economic growth? The idea that open trade policies help poor countries is often disputed. Traditionally, economists have been argued that more open economies grow quickly. However, according to Lopez (2005), neither the existing theoretical models nor the previous empirical analyses seem to have produced a definite and positive answer to this question.

Multilateral institutions such as the International Monetary Fund (IMF) and the World Bank have provided a pessimistic answer to the question, as cited in Rodrik and Rodriguez (2000). The reason for the strong bias in favour of trade openness is partly based on the conclusions of wide range of empirical studies, which claimed that outward-oriented economies consistently have higher growth rate than economies with high level of restrictions.

For instance, Kruger (1998) and Stiglitz (1998) judge those countries that have been following more open and "outward-oriented" trade strategies exhibit empirically superior growth performance than countries with more closed and "inward-oriented" policies. Oskam et al. (2004) have identified three open trade policies argument: (i) Open international trade transfers international prices to domestic markets of less developed countries (LDCs) by getting the prices right and promoting market competition, which lead to efficient resource allocation; (ii) Trade serves as a vehicle for transfer of knowledge, technology, capital and other physical inputs, which facilitate convergence of poor and developed economies; and (iii) Open international trade disciplines governments of LDCs to pay attention to international market prices, which may have an indirect positive effect for good governance of LDCs. Kruger and Berg (2003) even suggested that if poor countries opened more, poverty would fall.

Popularizing this view, Wacziarg and Welch (2003) argued that over the period 1950-1998, countries that had liberalized their trade regimes experienced, on average, increase on annual growth rates by 1.5%, when compared to pre-liberalized times. In the neo-classical analysis of openness and growth, trade can increase the rate of technological progress. Hence, productivity growth either through expansion of market for output or through the market for input (Dowrick & Golley, 2004). They further explained that output expansion had been driving growth by allowing domestic producers to exploit economies of scale and economies of specialization. In fact, expansion for input market drives growth by allowing domestic producers to get access for wide variety of capital goods, which effectively enlarge the base of productive knowledge. Ann Harrison (1994) stated that greater openness had been associated with higher growth.

Dowrick and Golley (2004), quoting the study conducted by the World Bank (2002), showed that the more globalized developing countries had increased their per capita growth rate from 1% in the 1960s to 3% in the 1970s, and 4% in the 1980s to 5% in the 1990s. The World Bank qualifies the benefit of trade openness by noting that the more globalized group has been able to break into global markets for manufactured and services, rather than relying on primary commodities. In line with this view, Kruger (1986) argued that as a consequence of trade liberalization and other economic policy reforms, economic growth had been accelerated in most of the developing world, with the most rapid growth in the countries whose reforms were gone furthest.

However, studies by Yanikayya (2003) showed, even though there is a positive and strong association between trade openness and growth, estimation results from trade barriers contradict the conventional view on the

growth effect of trade restrictions. Thus, this suggests an adverse association between trade barriers and growth. For him, there is a positive and significant relationship between trade barriers and economic growth.

In the same framework, Oskam et al. (2004) have identified four unfavourable arguments of open trade policies: (i) inadequate institutions, governance and infrastructure hamper (or even reverse) the positive effects of outward oriented policies; (ii) infant industry argument - the development of non-agricultural sectors in the growth process of poor countries or LFAs is crucial, not only to increase national or local income but also to absorb the migrating rural labour force, whereby it contributes in poverty alleviation; (iii) Trade driven development paths increase relative income differences and make LDCs even less competitive - countries with relative open trade policies make clear that a trade driven development path is insufficient to develop LDCs, even in situations where infrastructure and institutions are functioning rather well; and (iv) Trade exposes LDCs to external (price) shocks and growth path instability. Lopez and Thirlwall (2008) had found that in the aftermath of trade liberalization, growth performance did improve in the majority of countries under study, but at the expense of trade balance deterioration.

Studies conducted in Central America by Moore (1990) revealed that in the absence of redistribution of the return from land and capital, the impact of trade liberalization had been to increase the inequality of distribution of income thereby increasing the incidence of poverty. Chang (2009), in his article, *Economic History of the Developed World: Lessons for Africa*, pointed out that in terms of trade policy, with few exceptions such as Switzerland and the Netherlands, all of today's rich countries used protectionism. He believed that the success of developed countries is partly

because of the adoption of infant industry protection argument. He further explained that developed countries' (DCs) advocacy of free trade policy had been an act equivalent to "kicking away the ladder", with which it climbed up to the top.

For Birdsall and Hamoudi (2002), "openness" or "closedness" is orthogonal to the problem of poor, slowing growth, commodity producing countries. Rather, they emphasized that commodity trap (which may become poverty trap) had been a significant explanatory variable for the slow economic growth of poor nations. Rodrik (2006) stated that not only the "Washington Consensus" (which aimed at trade liberalization among other things) had registered very few successes in sub-Saharan. However, the reform proved ill-suited to deal with the growing public health emergency in which the continent became embroiled.

According to Rodrik and Rodriguez (2000), the nature of the relationship between trade policy and economic growth remains very much an open question. The issue is far from having been settled on empirical grounds. In fact, they are skeptical in that there is a general, unambiguous relationship between trade openness and growth. They suspect that the relationship is a contingent one, dependent on a host of country and external characteristics. In line with this view, Rodrik (1997) has argued that there are clear limitations to what trade policy, or outward orientation, can accomplish. For him, growth depends primarily on investment on human resources, infrastructure, and institutions of macroeconomic management, which takes time to achieve. Opening an economy to international trade is not a quick fix that can substitute these harder tasks. Rather, excessive emphasis on trade liberalization can backfire if it diverts the scarce energies and political resource of government leaders from the growth fundamentals.

Although the issue of trade policy for developing countries is an old one, each period demands new answer to fit new circumstances and to reflect new experience (Bliss, 1989). Different scholars have different views on the relationship between trade policy and growth. Some of them are skeptical (e.g. Rodrik & Rodriguez, 2000) about openness promote economic growth. While others (e.g Frankel & Romer, 1999) argued that outward policies are the means for achieving faster economic growth. Hence, the purpose of this study was to empirically assess how trade policies can influence economic growth within the context of sub-Saharan African countries.

After the author has introduced the problem and developed, it is worth stating the hypothesis and describing how it is derived from theory or is logically connected to previous data and argumentation. This study hypothesizes that trade policies have direct impact on productivity growth and it has indirect impacts that operate through investment. In the neo-classical analysis of welfare gains through exploitation of comparative advantage, a reduction on trade barriers increase trade and the level of productivity; while GDP rises through the reallocation of resources and capital accumulation. In the models of endogenous technological change, open trade policies can increase the rate of technological progress. Hence, productivity growth either through expansion of the market for output or through expansion of the market for input.

Objectives of the Study

The general objective of this study is to empirically assess the link between trade policy and economic growth in sub-Saharan African countries and to come up with policy implication recommendations for higher economic growth rate.

In accordance with this general objective, the study has the following specific objectives:

- To present a review of theoretical and empirical literature with the aim of understanding what the existing literature says about the relationship between trade policies and economic growth;
- To examine the link between institution, trade and economic growth; and
- To empirically assess whether restrictive trade policies have slowed down economic growth in sub-Saharan African (SSA) countries or not.

Literature Review

Whether trade policies promote innovation in a small economy or not depends upon if the force of comparative advantage push the economy's resources towards activities that generate long-run growth (externalities in R&D), expand product variety and improve quality, or divert them from such processes.

According to Krueger (1980), countries adopting an export-oriented trade strategy have generally experienced rapid growth of traditional exports, but even more rapid growth of non-traditional exports. Experience suggested that growth performance had been more satisfactory under export promotion strategies than under import-substitution strategies. Krueger further explains why outward oriented policies enhance economic growth compared to inward trade policies by raising the market size. According to him, domestic markets are also extremely small in most developing countries, and attempts to replace imports result in the construction of many less-than-efficient minimum size new markets, while generating an oligopolistic or

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monopolistic market structure simultaneously. As import substitution proceeds, new activities become more capital intensive and inefficiencies from below minimum-efficient size increase. Instead export promotion permits entrepreneurs to base their plans on whatever market size seems appropriate. Moreover, given the vast disparity in capital-labour ratios of the industrial sectors of developed and developing countries, the opportunity for trade represents a means for shifting the demand for labour outward more rapidly than the import-substitution strategy.

Grossman and Helpman (1990) argue that knowledge is a public good, since non-rival and non-excludable. Hence, spillover benefit can be created in the process of innovations, where country can exploit this benefit by opening up their economies to international trade. This is because the same idea can be used in different applications and in different locations at the same time and the origination of an idea may have difficulty extracting compensation from all agents that make use of it. This approach may facilitate hypothesis according to which international trade in tangible commodities facilitate the exchange of intangible ideas. Popularizing this view, Harrison (1994) even pointed out that openness to trade provides access to imported inputs, which embody new technology, increase the effective size of the market producers, that raising the returns of innovation.

However, in the presence of intellectual property right, the hypothesis does not hold water. For instance, at the global level, one of the most important international public law governing intellectual property rights is the 1995 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) administered by the World Trade Organization (WTO). TRIPS reflect the interest of the intellectual property owners. TRIPS extends patent rights for 20 years, requires developing countries to offer patent protection

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for pharmaceuticals, sharply circumscribes the conditions under which states may issue compulsory licenses, and reduces states autonomy in crafting domestic intellectual property policies (Sell, 2007).

According to Dynamic Trade Theory, the static gains from trade - due to specialization and reallocation of *existing* resources - are small compared to the dynamic gains due to an increase in the growth rate and the volume of additional resources made available to, or employed by, the trading country (Kreinin, 1998 cited in Nowak-Lehmann, 2000). Dynamic gains are caused by an accelerated accumulation of physical capital and human capital (perhaps due to a higher rate of domestic and/or foreign saving), enhanced technological transmissions and improvements in the quality of macroeconomic policy.

However, according to Lall (2000), technology cannot simply be transferred to a developing country like a physical product: its effective implantation has to include important elements of capability building since the simple providing of equipment and operating instructions, patents, designs or blueprints does not ensure that the technology will be effectively utilized.

Many opponents of trade openness argued that open trade policies could be detrimental to countries lagging behind technological development and have an initial comparative advantage in non-dynamic sectors. According to Rodrik and Rodriguez (2000), there is a theoretical link between trade protection policies and growth, once real world phenomena such as learning, technological change, and market imperfection are taken into account.

As more and more countries acquired their independence from their colonial powers after the end of the Second World War (WWII), the wide spread view to develop was industrialization by pursuing import-substitution

policies. There seemed to have a number of sound reasons for support from such a strategy at that time. The leaders of the independent nations were aware that their colonizers had higher per capita income. Then, these nations are more industrialized. Besides, their rulers were taking anti-industrialization actions to keep the colonized nations underdeveloped (Baldwin, 2003). Hence, to these new leaders the issue of industrialization seems to be top agenda. An economically sensible way of achieving industrialization seemed to be restriction of imports of manufactured goods, for which there was already a domestic demand, in order both to shift this demand toward domestic producers and to permit the use of the country's primary-product export earnings to import the capital goods needed for industrialization.

In addition, the impressive degrees of industrialization achieved by the Soviet Union in the 1920s and 1930s and by China after 1949 by pursuing inward-looking policies were additional historical examples that impressed the leaders of the newly independent nations.

However, protectionism can be a dangerous tool. Apart from the cost it imposes on consumers, it in fact dilutes the incentive to invest in capability development, the process it is meant to really foster. Firms are very sensitive to competitive pressures in deciding to invest in capabilities, and the protection offered in typical import-substituting regimes tends to detract from costly and lengthy investments in competitive skills and knowledge development sector (Lall, 2000). There may be many solutions: offer limited protection; impose performance requirements or enforce early entry into export markets, while maintaining domestic protection. The lasone has the added advantage that it taps the information externalities of export activity, and was the one used by the larger Asian NIEs.

One can understand that, from the theoretical framework, the theoretical prediction about the link between trade policy and growth is ambiguous, highly dependent from the scenario in which they work. A potential source for the presence of an unambiguous relationship between trade barriers and growth is highlighted by a variety of theoretical models that suggest that the relationship between trade barriers and growth may be contingent on the level of development. For example, Lucas's (1988) cited in De Jong and Ripoll (2006), skill-acquisition model of endogenous growth suggests that by allowing countries to establish a comparative advantage in the production of high-learning goods, the erection of trade barriers during early stages of development may enhance their long-term growth prospects. Young's (1991) learning-by-doing model carries similar implications, showing that the growth rate of a less-developed country may decrease in going from autarky to free trade, because comparative advantage induces these countries to specialize in goods in which the learning externality has already ceased.

Considering the ambiguities in the theoretical literature, a number of empirical studies were undertaken to examine the relationship between trade policy and economic growth. The empirical findings of many authors suggest that it is impossible to sign the effect of trade policy on growth unambiguously based on the theoretical consideration alone. Hence, the impact of either open or closed trade policy on economic growth remains a matter of empirical testing. In this study, the relationship between trade policy and economic growth was examined by using a panel data approach.

Methodology

This study basically examined the empirical relationship between trade policies and economic growth. Based on detail documentary analyses, the study makes use of the two prominent trade restriction indices, simple trade-weighted average tariff and real effective exchange rate. Hence, inferences about the relationship between growth and other forms of trade policies are not implied from the conclusions of this study. Moreover, the empirical part of this study focuses solely on sub-Saharan African regions during the period 2000-2008. Hence, any definitive conclusion about other trade policies or time periods may not be made basing on the results of this study.

Data

First of all, the data on trade policy in SSA are in a "sorry" state. According to Yeats (1997), data on trade in Africa is patchy and trade policy is generally tremendously difficult to measure. However, this study attempted to capture the effects of trade policy on economic growth by using weighted mean average tariff rate and real effective exchange rate, where relatively consistent information are obtained. Particularly, the study utilized a balanced panel data gathered from trustworthy web sites such as the UN, the World Bank, WDI, PWT, etc.

Data Analysis

Both documentary analysis and advanced statistical techniques, especially econometric modeling techniques were employed in the study. This study attempted to explain theoretically and to assess empirically the impact of trade policy on economic growth. Theoretically, the study got well-informed about existing theoretical and empirical literature about the relationship

between trade policies and economic growth. Empirically, the econometric techniques were specified and employed in the study. As an econometric technique, the paper employed Generalized Least Square (GLS) estimation technique on a balanced panel data gathered for the period 2000 – 2008 to see how trade policies affect economic growth of the regions in the SSA.

In order to specify model, this study used a time-series cross country analysis. Roderick and Rodriguez (2000) argued robust result would be obtained on the relationship between trade policy and economic growth if one makes use of data over a decade or more. Panel data analysis allows the study of dynamic as well as cross-sectional aspects of the problem. Because of this, the researcher found out that using panel data is a better way of model estimation.

It is argued that there is little of policy relevance to be gained from analyzing the relationship between current levels of development and current variable (Dowrick & Golley, 2004). Much more informative about the process of development is to examine the impact of current and lagged variables on the rate of economic growth. This thus enables to capture the determinant of medium run economic performance and may provide some guidance to countries which are seeking to raise living standard via higher rate of income growth, irrespective of their current level of development. Some of the methodology and data used in the previous studies may prove to be useful additions to the analysis of growth rates. Particularly, this study included institutional impact as a potentially important determinant of economic growth (Acemoglu et al., 2005).

As the study focused on the analysis of the impact of trade policy on economic growth, it had used average tariff rate and real effective exchange

rate as the major explanatory variable. Besides, using the two prominent trade policy instruments (i.e. average tariff rate and real effective exchange rate) helps the researcher to avoid problems of multi-collinearity - if one uses both 'revealed openness' and 'policy openness' together as an explanatory variable in a single equation, which may lead to unreliable estimates with high standard errors and of unexpected sign or magnitude (Verbeek, 2004). The study also tried to distinguish the direct impact of trade policy on growth and the indirect impact that operates through investment.

Hence, the study attempted to estimate a structural model consisting of a growth equation, an investment equation and an equation explaining openness. The growth equation allows estimating the direct impact of policy measures on per capita income and investment equation and an equation explaining openness helps measure the indirect effect of trade policy that has been operating through investment.

Based on Dowrick and Golley (2004), the estimating equation is given in standard form as follows:

(1) Growth real GDP per capita

$\ln Y_{it} = \eta_0 + \eta_1 \ln OPENit + \eta_2 \ln LB_{it} + \eta_3 \ln(I/Y)_{it} + u_{it}$ ....equation (1)

(2) Investment ratio

$\ln(I/Y)_{it} = \delta_0 + \delta_1 \ln Y_{it} + \delta_2 \ln OPEN_{it} + \delta_3 INST_{it} + \delta4 \ln PI/P_{it} + v_{it}$ .... equation (2)

(3) Trade Ratio

$$\ln OPEN_{it} = \theta_0 + \theta_1 GEO_i + \theta_2 \ln TAR_{it} + \theta_3 \ln REER_{it} + \theta_4 \ln POP_{it} + \theta_5 POPDNST_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots \text{equation (3)}$$

Where,

- Y is Real GDP per Capita,
- LB is Active Labour Force,
- I/Y is Investment GDP ratio,
- TAR is Average Tariff Rate,
- REER is Real Effective Exchange Rate,
- OPEN is Openness (Ratio of Trade to GDP),
- PI/P is Ratio of Price of Investment Goods to Price of GDP,
- GEO is Geographic Factor,
- INST is Institutional Quality,
- POP is Total Population, and
- POPDNST is Population Density.

The subscript "i" indexes countries, the subscript "t" indicates the time period, and the absence of a time subscript shows that the variables are averaged over the whole period. The system of equation is recursive, allowing us to use single equation estimation if there is no correlation between the error terms – a condition in which we test. The point estimate of the direct impact of openness on economic growth is 'η_1'. The indirect impact of openness that operates through investment channel is 'δ_2'. The impact of trade policy variables on economic growth is captured by the formula $(\theta_2 + \theta_3)(\eta_1 + \delta_2)$.

The diagnosis tests result indicates that there is high autocorrelation and hetroskedasticity problem in the model. Therefore, using fixed effects or

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random effect model may result in inefficient estimates. With the presence of autocorrelation and hetroskedasticity problems' using the Feasible Generalized Least Square (FGLS) estimation technique is appropriate to come up with efficient estimates. Hence, the model specified in this study is estimated with FGLS estimation method using annual data for the period 2000-2008.

Results and Discussion

The findings of the study show that all the variables in the growth equation are found to be statistically significant. The sign of the labour force, investment output ratio and openness is positive as expected. Openness is significant at 10% significance level, but both labour force and investment are significant at 1% level of significance. The overall trade share is an important explanatory variable of growth in addition to human and physical capital.

The significance of openness variable implies that country's economic growth is positively correlated with the more open the economy becomes to the global market. A one percent increase in openness will result in 1.81 percent increase in economic growth. Moreover, a higher human and physical capital is positively correlated with economic growth. However, the marginal contribution of an increase in physical capital for economic growth is larger as compared to the marginal contribution to human capital.

It is found out that share of real investment in GDP contributes significantly to growth. In the study, it is also observed that openness positively and significantly affects economic growth. However, it is possible that openness

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may have additional, indirect effect on economic growth by operating through the investment channel.

Table 1 – Growth Regression Estimates

Dependent Variable: Log of Growth Rate of Real GDP per capita			
Independent Variable	**Coefficient**	**z-ratio**	**p-value**
ln of (openness)	*0.2254684*	*3.21*	*0.063**
ln of (investment output ratio)	*0.4363692*	*6.12*	*0.000***
ln of (labour force)	*0.3751579*	*2.21*	*0.001****
Number of observations = 289			
Number of groups = 41			
Wald chi^2(10) = 40.22			
Prob > chi^2 = 0.0000			

* Significant at 10%, ** Significant at 5% and *** Significant at 1%

Source: Outputs of own data analysis, 2010.

Table 2 summarizes the result of the investment regression, following the specification of equation (2). With the exception of institutional quality, all the remaining variables were found to be significant at 1% and 5% level of significance. We confirm the finding of Dowrick and Golley (2004) that the price of investment goods relative to GDP has a significant negative impact on investment. Both GDP growth rate and openness have positive sign as it is expected. By looking at the effect of openness on investment, it can be argued that more open economies are conducive for the growth of investment. The positive effect of openness on investment could be attributed through the transfer of technology as the neo-classical economists argued. A 10 percent increase in trade share is predicted to increase the

investment rate by 5.37 percent. The overall impact of openness on economic growth is the sum of the direct and indirect effect. The magnitude of the indirect effect is the product of two regression coefficients $\eta_3 * \delta_2$ **(0.25), which is positive and considerable in magnitude.** Moreover, the insignificance coefficient of institutional quality deviates from both the expectation and what the other studies, such as Dowrick and Golley (2004), on the issue stated.

In the study, it is found out that variations in trade intensity do have a significant effect on economic growth. This raises the question of what factors influence a country's trade share and what the role of policy instruments might be.

Table 2 - Investment Regression Estimates

Dependent Variable: Log of Investment Output Ratio			
Independent Variable	**Coefficient**	**z-ratio**	**p-value**
ln of(real GDP per capita)	*0.0246599*	*2.27*	*0.023***
ln of (price of investment to price of GDP ratio)	*-1.90e-0.07*	*2.68*	*0.007****
Institutional quality	*0.0015671*	*0.73*	*0.466*
ln of (openness)	*0.5370963*	*8.47*	*0.000****
Number of observations = 289			
Number of groups = 41			
Wald chi^2(10) = 58.17			
Prob > chi^2 = 0.0008			

* Significant at 10%, ** Significant at 5% and *** Significant at 1%

Source: Results of own study data analysis, 2010.

The regression estimates of Table 3 presents the determinants of openness. It was found that, with the exception of population density, all the remaining variables were found to be significant. This means that higher density does seem to allow more opportunity for internal trade, and hence reducing the

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need for foreign trade. However, a larger population seems to increase foreign trade. As it is expected, the sign of mean weighted average tariff rate and real effective exchange rate is negative. This implies that these trade policies seem to lower the degree of openness. This is because, as in the case of tariff, it restrains both the volume of import and export. Devaluation, so as to promote export, seems to negatively affect openness. Hence, this suggests that trade policies that restricts openness negatively affect economic growth.

Table 3 – Openness Regression Estimates

Dependent Variable: Log of Openness			
Independent Variable	**Coefficient**	**z-ratio**	**p-value**
Geographic factor	*0.2055576*	*5.34*	*0.000****
ln of (population)	*-0.1691782*	*-11.48*	*0.000****
Population density	*-0.0003325*	*-1.55*	*0.120*
ln of (tariff)	*-0.0242287*	*-1.84*	*0.065**
ln of (real effective exchange rate)	*-0.0181822*	*-2.06*	*0.039***
Number of observations = 386			
Number of groups = 43			
Wald chi^2(10) = 244.86			
Prob > chi^2 = 0.0000			

* Significant at 10%, ** Significant at 5% and *** Significant at 1%
Source: Outputs of own study, 2010.

Therefore, both of the above findings seem to concur with previous empirical studies on the issues under consideration. The findings of this study echo those of Wacziarg and Welch (2003) and David and Loewy (1998).

Finally, it is also found that the sign of the coefficient of landlocked is found to be positive and statistically significant at % level of significance, which is in line with our prior expectation. A country which is with sea outlets encourages openness. To put it differently, countries that have access to sea outlets trade more in the global market.

Conclusion and Policy Implications

The macroeconomic impact of trade policy on growth and development has entertained a hot debate in the literature. Empirical studies on the matter have employed diverse methodologies and ideologies. Much like the diversity of their approaches, so have been the results obtained. For the most part, these studies have arrived at conflicting pieces of evidence and the dispute seems to have continued without showing any tendency of begetting a common understanding.

This study attempted to examine the impact of trade policy on economic growth in sub-Saharan African countries by utilizing a panel data approach and employing Generalised Least Square Estimator (GLS). The panel data were generated from a total of 47 countries between the years 2000 to 2008.

The main findings of the study are openness to international trade stimulates economic growth and investment. Both the direct and the indirect effect of openness in promoting economic growth is found to be statistically significant. This implies that an increase in trade does bring, on average, benefits on economic growth of SSA countries. This also entails that outward-oriented economies exhibit faster economic growth than their counterparts. Tariff barriers do affect the level of trade and hence economic growth.

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Looking into the relationship between revealed openness and investment, the study shows that there is positive and significant relationship between these variables under consideration. This suggests that opportunities for international trade raise the marginal product of investment. Moreover, access to sea outlets raises the marginal product of openness. However, in the investment share, regression institutional quality remains to be statistically insignificant.

Finally, even though our results do appear to be robust, a note of caution must be made since the results that are presented in the Results and Discussion part of the study are potentially sensitive to econometric approaches. From our empirical findings, it could be argued that SSA should liberalize their trade sector to attain a faster economic growth, as in the case of the IMF and the WB's advocators. However, in doing so, without introducing appropriate complementary policies, trade reform alone cannot serve as magic solution. Hence, further research is clearly required to disentangle these hypotheses in order to provide clear policy guidance for the future.

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