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Human Capital and Capital Goods Import in the Sub Sahara Africa (Ssa)

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Abstract: The study investigates the impacts of human capital and capital goods import on the economic growth of the SSA. 30 countries are used in the Panel- ARDL analysis where economic growth is the dependent variable and capital goods import, human capital, primary export, investment exchange rate, among others are used as the independent variables. The result from the panel analysis indicates that capital goods import significantly and positively influence economic growth but human capital fails to have significant positive impact on economic growth of the SSA. Earlier, the trend analysis and the correlation results have shown that there is a weak association between capital goods import and human capital in the SSA. The results offer an expository analysis that reveals that the quality of the human capital is very germane to the effective utilization of capital goods import for purpose of growth in a primary goods export dominated region like the SSA.

Keywords: Capital goods import; Economic growth; Human capital; Sub-Sahara Africa

JEL Classifications: O14, O15, O40

1. Introduction

Technological progress has been identified as the main driver of sustained growth and output per capita. This fact has been established both theoretically (Solow, 1956), and empirically (Mankiw, Romer & Weil, 1992). In most empirical studies, developed countries have been shown to have very high capital labour ratio and labour augmenting technological progress. Also, developed countries are considered frontiers in technological progress and this is embedded in their capital goods. The diffusion of technology from the frontiers states to the developing state can then occur through the importation of capital goods. This has been the experience of different countries over the last eight decades, Japan importing capital goods from

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the United States and Europe in the 1940s and 1950s, Asian Tigers in the 1970s and 1980s and China in recent times. These economies have thereafter pursued export led economic strategy that is based on the technology adopted from the frontier economies.

However, to be able to use this technology efficiently these economies also invested massively in human capital development, which makes them the economies with the fastest growth rate of investment in human capital in the world in the last five decades (Osei, 2012). The reason for this massive investment is simple; it is only a well-educated labour force that can respond to the disequilibrium caused by the adoption of technology from abroad. This strategy has led to two things. First, it has increased the output per capita of these emerging economies, closing the income gap between them and the developed economies. Two, it has increased both the quantity and the quality of their human capital as they close the gap between them and the technological frontier economies.

However, this has not happened in sub-Saharan Africa. The poorest region in the world is still characterized by both poor human capital development strategy and poor linkage to foreign technology. The growth rate of the SSA region is low compared with those of the developed economies and in particular with the growth rate of the Emerging and Developing Asian countries which less than five decades ago were not more developed than the economies of the SSA. The capital/investment/GDP ratio performances of the Sub-Sahara Africa Countries SSACs had not been as fantastic as the ratios recorded by the economies of the Emerging and Developing Asia. For instance the ratios for SSA and the Emerging and Developing Asia respectively for the five year period, 2010 – 2014 had been: 20.313 percent and 41.491 percent in 2010; 19.941 percent and 42.375 percent in 2011; 20.473 percent and 42.031 percent in 2012; 20.268 percent and 41.749 percent in 2013; and 20.643 percent and 41.286 percent in 2014 (World Bank, 2016).

The SSA's human capital development had not been as robust, since most of the SSACs do not devote enough portions of their GDPs to education and health which are the ultimate proxies for human capital development. Low level of human capital development in turn hinders technological transfer, as the workforces of the SSACs are not capable of tapping and improving upon the latent and embodied technology got via capital imports. The slow pace of economic growth in the SSA has been attributed mainly by some group of authors to lack of effective utilization of capital goods by the domestic producers. While some authors disagreed that the import composition of many SSACs are more of consumables than capital goods thus increasing overreliance on foreign products and reduce the domestic production capacity.[1] Indeed, it appears that it is the twin problems of low human capital development and low level of capital imports, which manifests in poor performance

[1] See (Gyimah & Wilson, 2004).

of the manufacturing sectors and by extension results in SSA's infrastructural deficits. It also manifests as shortage of highly skilled labour force that tend to slow down the economic growth rate of the Sub-Saharan Africa.

Notwithstanding, evidence abound in the literature that most sub-Saharan African countries have large volume of imports which could aid technological transfer that can be utilized by the domestic human capital to produce outputs that will promote the overall growth of the economy.[1] Despite this, the ensuing situation is that the SSA countries are bedeviled with low per capita income, poor standard of living and slow rate of economic growth which WTO (2015) partly attributed to lack of the required synergy between human capital and capital goods import that can engender sustainable economic growth in the sub region. Past studies have concentrated on the relationships between capital goods and growth on one hand or human capital and growth on the other hand. However, with the aforementioned it appears that a study that will include both in a single model and assess their linkage as well as impacts on growth will suffice enough. This is believed will provide policy that will aid synergy between the two in order to engender sustainable growth in the SSACs. More so, most of the past studies are country based analysis which might not offer much useful recommendations for sub regional organizations and agencies like Africa Development Banks, AFDB, IMF among others that rely on outputs of studies that are based on sub regional levels for policy guidance.

Given the peculiar SSACs' economic scenario as described above, this study becomes quite expedient to enable researchers establish the interdependency and complementary nature of the two variables, capital goods import and human capital and determine the extent to which both variables trigger economic growth in SSA.

The period covered by this study, which spans 1980-2014, is contingent upon availability of data from reliable sources. While not all the 48 countries that make up sub-Sahara Africa are considered, this study ensures that the four major economic blocs of the sub-Sahara Africa are recognized. The economic blocs are, *Communaute Economique de l' Afrique Centrale* (CEMAC), Eastern Africa Community (EAC), Economic Community of West African States (ECOWAS) and Southern Africa Development Economic Council (SADC). These economic blocs align with the geographical sub regions of Central Africa, East Africa, West Africa and Southern Africa respectively. However, countries that have been experiencing economic crisis for more than five years running are avoided while those suffering from chronic political problems are considered unfit.

In all, thirty countries which have statistical records in respect of all the variables specified in the research model are selected. From the CEMAC bloc, we have Cameroun, Chad, Equatorial Guinea, Gabon and Republic of Congo. From EAC, we

[1] See (Habiyaremye, 2013).

have Burundi, Kenya, Rwanda, Tanzania and Uganda. From ECOWAS, we have Benin Republic, Burkina Faso, Cote d'Ivoire, Gambia, Ghana, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal Sierra Leone and Togo while we have Republic of Congo, Lesotho, Namibia, South Africa and Swaziland from the SADC.

However, following this introduction aspect, the rest of the article are arranged in the following manner; literature review that discusses empirical studies on the area of focus, materials and method where the methodology adopted to achieve the objective of the study are discussed. The next section is the results and discussion, which present, analyze and discuss the empirical results and lastly the conclusions that summarizes important findings drawn from the study.

2. Literature Review

It has been observed that while study abounds on the linkage between each of the capital goods import or human capital with economic growth, few studies empirically investigated the linkages among the three variables namely; capital goods import, human capital and economic growth. However, some of the study that investigated capital goods (investment)) and economic growth drew conclusions or findings that have implications on human capital. An example is Dulleck and Foster (2008) who studied the effect of equipment investment on the growth of developing countries and the interrelationship between equipment investment and human capital. The study found that generally the relationship between equipment investment and growth is lowest and often negative for countries with low levels of human capital, highest for countries within an intermediate range and somewhat in between for countries with the highest level of human capital.

In the same vein the study by Habiyaremye (2013) establishes the evidence that supports the position that imported machinery leads to higher growth in developing economies. By employing panel data, this researcher finds that when an economy invests in domestic production of equipment, growth rate tends to slow down, whereas investment in imported equipment galvanizes the growth rate provided that there are domestic-technical-know -how that can transform this to output. Other studies in line with this are Agiomirgianakis, Asteriom & Monstiriotis, (2002) among others.

Again, some studies investigated human capital and economic growth but their findings also have implications on the physical capital especially capital goods import. Among these sets of studies is Bakare (2006) who used vector autoregressive error correction mechanism to investigate the growth implication of human capital investment in Nigeria. He established a significant functional and institutional relationship between investment in human capital and economic growth and further concluded that investment in capital goods can promote the impact of human capital

on growth. In a similar manner, Behbudi *et al* (2010) investigated the relationship between human capital (education) and economic growth of countries that are major petroleum exporters. He came up with a negative relationship between economic growth and education. His findings revealed that countries that are rich in mineral and oil exhibited the tendency to neglect the developing of their human resources by devoting inadequate attention and expenditure to education and physical capital with the resultant slow rate of growth compared to those that are not rich in mineral resources. Other studies in this line are Osei (2012), Habiyaremye (2013) and Shaari (2010) among others.

Considering all these empirical studies, it is obvious that more efforts are required to contribute to the existing literature in order to investigate the linkages among the three; human capital, capital goods import and economic growth especially in the SSA. This is because there is dearth of empirical literatures that can provide empirically grounded policy direction for sub regional agencies like the Africa Development Bank, ECOWAS among others.

3. Materials and Methods

The endogenous growth model shows that the sustained and persistence increase in output per capita over time is not determined by exogenous technological progress. This model developed and extended by several authors (Romer, 1986; Lucas, 1988; Rebelo, 1991) has introduced different endogenous factors to the growth process.

The study takes its theoretical framework from the extended endogenous growth model as developed by Lucas (1988). According to Lucas, it is the investment in human capital and not physical capital that has spillover effects that increase the level of technology. For firm i, the output based on Lucas position will take the form:

$$Y_i = A(K_i).(H_i).H^e \quad \text{.....(1)}$$

Where A =technical Coefficient, K_i =physical input, H_i=human capital input, H=the economy's average level of Human capital, e=degree of external effects from human capital to each firm's productivity. Constant return to scale is assumed for this model to thrive. In this Lucas model, technology is endogenously provided as a side effect of investment decision by firms. From the point of view of the user, technology is regarded as a public good thus making it possible to treat the firms as price takers. According to Dulleck and Foster (2008), physical capital has two important sources; local and international and can be achieved via technological transfer. The Lucas model predicts easy arrival at equilibrium as the price-taking firms are on the same page with many other firms under perfect competitive market situation.

Model Specification

Based on the Lucas model presented in equation 1 and with special reference to the studies of Osei (2012) and Habiyaremye (2013), the model for this study is stated as follows to examine the relationship among capital goods import, human capital and economic growth SSA.

$$GDPgr_{i,t} = f\left(ICG_{i,t}INV_{i,t}TOP_{i,t}LBF_{i,t}PER_{i,t}FDI_{i,t}SSE_{i,t}EXR_{i,t}\right)\ldots\ldots[2]$$

Where:

$GDPgr_{i,t}$ = growth rate of GDP of country i at period t. $ICG_{i,t}$ is ICG/GDP = ratio of imported capital goods to GDP of country i at period t. $INV_{i,t}$ is INV/GDP = ratio of investment to GDP of country i at period t. $TOP_{i,t}$ is TOP/GDP = ratio of trade openness to GDP of country i at period t. $LBF_{i,t}$ = Labour Force Participation of country i at period t. $PER_{i,t}$ = Primary goods export of country i at period t. $FDI_{i,t}$ is FDI/GDP = ratio of foreign direct investment to GDP of country i at period t. $SSE_{i,t}$ = Secondary School enrolment of country i at period t. $EXR_{i,t}$ = Exchange rate of country i at period t.

Estimating technique: ARDL MODEL

Since the major objective of this study is impact analsysis consequently, the Panel Auto-Regressive Distributed Lag PARDL is adopted because it makes it possible to split the impact to both long and short run analysis. Because the three variables may have either significant long run or short run association or even significant in both periods. These have policy implications on the relationships. An important preliminary test that is necessary before this technique can be used is the unit root test.

From the unit root test the levels of integration of the variables are ascertained and the results show that the variables are either order one or order zero. The study uses Panel-ARDL since not all the variables are I(1) and there is no I(2) among them. The long run test is referred to as the cointegration test and the guide that is followed to test for the cointegration is bound test (Pedroni, 2004). Under the Bound testing, a set of critical values are based on the assumption that variables are I(0) while the other set is based on the assumption that variables are I(1) in the model. The selection criterion is then that H_0 is rejected if the F-statistic is greater than the upper boundary. Hence, we conclude that there is long run relationship but otherwise there is no long run relationship (Pedroni, 2004). The cointegration test is deemed inconclusive when the F-statistic value falls within the two boundaries.

4. Results and Discussion

This aspect of the research work presents and discusses the results from all the analysis explained in the methodology. According to the methodology, the model to be estimated is mainly on the effect of capital goods import and human capital on the growth of the SSA.

Panel Unit Root Test for the SSA

Ascertaining the order of integration of the variables used in the panel model is very germane to the selection of the estimating technique to be used for our analysis. Therefore, the usual practice is to use more than one method of panel unit root test to be able to confirm the level of consistency in the panel unit root test (Madalla, 1998). In this study, the Im Peresan and Shin (2003), IPS, the Livin-Lin chu (2002), LLC and the Augmented Dickey Fuller, ADF tests are used for the panel unit root test. The results are presented in table I.

The results show that all the variables used in the analysis are integration of both order one and zero I(1) and I(0).

Based on the foregoing, Panel Auto-regressive Distributed Lag, ARDL which is another estimating technique that permits variables that are stationary at levels to be used in the analysis is employed. As explained in the methodology, Panel ARDL emphasizes that none of the variables should have order of integration greater than one, in other words both variables that are I(1) and I(0) are acceptable. Again for better results, it is necessary that the dependent variable be a non-stationary variable. All these conditions have been met by the panel unit root test. Consequently, Panel ARDL is used in this study to investigate the impacts of capital goods import and human capital on the economic growth of the SSA.

Table I. Panel Unit Root Test for the SSA

	IPS unit root test		ADF-Fisher Chi-square unit root test		Levin-Lin-Chu unit-root test	
Variables	t* Statistics	Order of integration	t* Statistics	Order of integration	t* Statistics	Order of integration
GDPGR	-4.6106***	I(1)	610.020***	I(1)	-18.4889***	I(1)
ICGINV	-2.0141***	I(0)	112.325***	I(0)	-26.8044***	I(1)
EXR	-4.4913***	I(1)	528.580***	I(1)	-21.3203***	I(0)
INV	-2.1726***	I(0)	116.088***	I(0)	-10.2203***	I(0)
TOP	-5.5286***	I(1)	573.7799**	I(1)	-2.7701**	I(1)
LBF	-2.3175***	I(1)	186.820***	I(1)	-5.6588**	I(1)
PER	-2.3854***	I(0)	149.415***	I(0)	-8.8345***	I(0)
SSE	-5.2259***	I(1)	735.005***	I(1)	-18.4814***	I(1)
FDI	-7.2414***	I(1)	898.8633**	I(1)	-24.8036***	I(1)

Source: Authors' computation

Statistical significance at 1%(***), 5%(**), 10%(*)

Panel ARDL for the SSA

Estimating Panel ARDL require three steps; first is the assessment of panel cointegration and the second one is the Panel ARDL model estimation.

Panel cointegration test

The panel cointegration test is to confirm or reject the hypothesis that there is long run relationship among capital goods import, human capital and economic growth of the SSA.

Table II. Pedroni Residual Cointegration Test- Deterministic intercept

Pedroni Residual Cointegration Test				
Trend assumption: **Deterministic intercept and trend**				
Alternative hypothesis: common AR coefs. (within-dimension)				
			Weighted	
	Statistic	Prob.	Statistic	Prob.
Panel v-Statistic	0.434302	**0.3320**	-0.033181	**0.5132**
Panel rho-Statistic	-0.186695	**0.4259**	-0.518450	**0.3021**
Panel PP-Statistic	-4.971984	**0.0000**	-5.499263	**0.0000**
Panel ADF-Statistic	-5.232978	**0.0000**	-5.610129	**0.0000**
Alternative hypothesis: individual AR coefs. (between-dimension)				
	Statistic	Prob.		
Group rho-Statistic	0.574993	**0.7174**		
Group PP-Statistic	-6.375847	**0.0000**		
Group ADF-Statistic	-6.761605	**0.0000**		

Source. Author's Computation

Applying the Pedroni residual cointegration under the trend assumption: deterministic intercept and trend. Out of the eleven probability outcomes, six of the probability outcomes result show that they are significant at 5% which implies that there exist a long run relationship among the variables examined.

Panel ARDL estimation

After the confirmation of cointegration and lag length selection the panel auto-regressive distributed lag ARDL estimation follows. The result shows the relative importance of capital goods import and human capital in determining the economic growth of the SSA. The result is presented in table III

Table III explains the impacts of capital goods import and human capital on the economic growth of SSA in both long and short run periods. The results indicate that capital goods import has significant positive impact on economic growth of the SSA in the long run. But this is not the case in the short run.

The long run coefficient of capital import in the table is 0.132601 and the value is significant at 1%. However, in the short run the value is negative and also significant. The implication of this result is that importation of capital goods in SSA will initially have adverse effect on growth of the sub region but as the period progresses to the long run the effect turns positive that is it will later begin to promote economic growth in the long run period. The result here further gives better explanation than what we obtained under the correlation matrix. The results of the correlation matrix on capital goods import only explain the situation in the short run and not in the long run period.

For human capital, the long run coefficient is -0.045093 the value is negative but not statistically significant. The short run equation also follows the same direction. The implication is that human capital proxy by secondary school enrolment does not have significant impact on economic growth both in the short long periods. The result is in line with the correlation matrix results where a positive relationship is obtained between capital goods import and economic growth. Notwithstanding, the relationship is not significant meaning that both transitory and permanent impacts of human capital on economic growth of the SSA are not significant.

Other variables that have significant impacts on economic growth in the SSA are investment and primary good export. Their long run coefficients are 0.199316 and 0.043500 respectively. The result is also in tandem with the correlation matrix result in terms of relationship. But the panel ARDL has shown that the relationship is only significant in the long run and not in the short run. These findings conform to the *apriori* expectation as well as the theoretical postulations that both investment and export are growth promoters. The situation is expected in the SSA where their major export is dominated by primary goods.

However, trade openness, FDI and labour force fail to have significant positive impacts on SSA growth both in the long run and in the short run periods. The coefficient of trade openness is -0.152632. Apart from the fact that the coefficient is negative, it is also significant. The implication is that increase in trade openness of the SSA will significantly reduce the economic growth of the sub region. For labour force participation, the coefficient is positive but it is not significant both in the long run and in the short run. This simply implies that the rate at which labour participates in economic growth process in the SSA is still far from the desired level. This finding appears to be supporting what we obtained on human capital as explained in the previous paragraph since both labour and human capital are related as inputs in growth model. Again, the lagged value of GDP growth rate, the primary export and investment all have significant impact in the short run.

Table III. Long run and Short run Coefficients, dependent variable: GDPGR

Dependent Variable: D(GDPGR)				
Selected Model: ARDL(3, 3, 3, 3, 3, 3, 3, 3)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
	Long Run Equation			
ICG_INV	0.132601	0.029663	4.470205	0.0000
EXR	0.000800	0.000738	1.084215	0.2792
INV	0.199316	0.018204	10.94914	0.0000
LBF	0.000221	0.000136	1.626323	0.1050
POP	-0.154540	0.059960	2.577370	0.0104
PER	0.043500	0.014529	2.993980	0.0030
SSE	0.045093	0.068078	2.494406	0.3132
	Short Run Equation			
COINTEQ01	-1.098959	0.176888	-6.212742	0.0000
D(GDPGR(-1))	0.185715	0.121193	1.532388	0.1265
D(GDPGR(-2))	0.037737	0.057036	0.661642	0.5087
D(ICG_INV)	-0.181685	0.116284	-1.562425	0.1193
D(ICG_INV(-1))	-0.326708	0.102926	-3.174193	0.0017
D(ICG_INV(-2))	-0.017644	0.095461	-0.184832	0.8535
D(EXR)	0.023938	0.359503	0.066588	0.9470
D(EXR(-1))	-0.321165	0.421361	-0.762208	0.4465
D(EXR(-2))	-0.366412	0.268575	-1.364279	0.1735
D(INV)	0.144589	0.131420	1.100199	0.2721
D(INV(-1))	-0.199005	0.169158	-1.176448	0.2404
D(INV(-2))	-0.116008	0.099046	-1.171246	0.2425
D(LBF)	0.026844	0.042939	0.625156	0.5324
D(LBF(-1))	0.044450	0.073852	0.601879	0.5477
D(LBF(-2))	-0.030191	0.077204	-0.391056	0.6960
D(POP)	-11.01257	32.14772	-0.342562	0.7322
D(POP(-1))	-12.08317	42.67741	-0.283128	0.7773
D(POP(-2))	23.28927	21.79035	1.068788	0.2860
D(PER)	0.004670	0.084520	0.055251	0.9560
D(PER(-1))	0.231451	0.369424	0.626519	0.5315
D(PER(-2))	-0.067642	0.119480	-0.566138	0.5717
D(SSE)	-0.052401	0.274149	-0.191140	0.8485
D(SSE(-1))	-0.332649	0.657352	-0.506044	0.6132
D(SSE(-2))	-0.178874	0.189867	-0.942103	0.3469
C	-20.02068	3.575762	-5.598997	0.0000
Mean dependent var	0.064880	S.D. dependent var		9.196984
S.E. of regression	4.782140	Akaike info criterion		4.900821
Sum squared resid	6700.576	Schwarz criterion		8.474254
Log likelihood	-1815.931	Hannan-Quinn criter.		6.255754

Statistical significance at 1%(***), 5%(**), 10%(*)

This further underscores the importance of investment and particularly primary good export as very germane to the growth of the SSA sub region. As further shown in table V the error correction model explains the short run dynamics in the panel ARDL model. The negative coefficient sign of the ECM shows that there was disequilibrium in the past and the adjustment is in the right direction. The ECM value of -1.098959 suggests the relatively high speed of adjustment from the short run deviation to the long run equilibrium of economic growth. More precisely, it indicates that about 109% deviation from the long run GDP growth rate in SSA is corrected in the dynamic model or that the system is being adjusted towards long run equilibrium at the speed of about 109%. In addition, the ECM is statistically significant at 1% level, indicating that long run equilibrium can be attained. Our results are consistent with Dulleck & Foster (2008), who argued that a highly significant error correction term is a further proof of the existence of stable long run relationship. This result further confirms that there will be convergence (steady-state) of the system and the attainment of stable economic growth rate in SSA in the long run.

5. Conclusions

Firstly, the trend of capital goods import in the SSA follows an upward movement between 1980 and 2014 which is the period under review. Both the line trend and the summary of statistics confirmed the result. This is an indication that the AFDB 2013 report that the entire SSA sub region records increasing capital good import within the last two decades is empirically correct. Notwithstanding there has also been a drastic fall in the trend since 2010. This coincides with the period of drastic fall in the commodity prices. The implication of this is that, the fall in commodity price in recent times has reduced the revenue accruing to the SSA and hence limiting their power to import capital goods. This view was also shared by Habiyaremye (2013), Eaton and Kortum (2001) among others. Generally, these authors conclude from their various researches that capital goods is well traded during the period under review among the SSA countries and that the trade volume of capital imports has been rising continuously over the years. However, they also agreed that one of the impediments to the riding trend is the fall in commodity prices which has affected many countries in the SSA because the sub region is dominated by primary goods exporters

Secondly, the trend of human capital fails to show similar pattern with capital goods import. Especially from the summary of statistics, the mean value of secondary school enrolment distribution in the SSA is closer to minimum limit than the maximum limit. The implication is that trend of human capital in the sub region has not been encouraging. This also in line with the findings of Brempong and Wilson (2014) where panel analysis of SSA and OECD shows that human capital

contributions to the growth of the SSA has been reducing due to the rise in population compare to human capital and hence high rate of unskilled labour relative to skilled labour.

Thirdly, findings from the analysis have shown that there is a positive correlation between capital goods import and human capital. Though this correlation is also shown to be very weak, the implication is that ordinarily our findings support the fact that human capital promotes capital import in the SSA but this is contrary to the results of Appleton and Teal 2004 where and inverse relationship was discovered to be existing between human capital and capital imports of the OECDs. The reason for the difference might not be unconnected with the fact that human capital in the SSA have little drive and incentives that make them to be useful in production of capital goods domestically which might reduce their importation of capital goods unlike OECDs where there is advanced technology and incentives that can aid human capital to increase domestic production of capital goods and this will reduce their capital goods import. According to Agiomirgianakis, Asteriom & Monstiriotis (2002), human capital in less developed countries promote economic growth by leveraging on the available capital goods in their economy to improve domestic outputs through improvements in primary goods production.

From all panel results, it can be concluded that capital goods import has significant positive impacts of the economic growth of the SSA. This is in line with the findings of Maksymenko & Rabami (2011), that capital import from China has significant positive impacts on the economic growth of the SSA. Though, his study focused on capital goods import from China alone but yet the findings offered immense supportive evidence for our finding that capital goods import has influenced economic growth of the SSA significantly.

On the contrary, human capital failed to show significant impact on SSA economic growth. This further shows that the contributions of human capital to the economic growth of SSA are far below the level that can bring about sustainable economic growth. Baltagi, (2008) attributed this to the poor quality of human capital in SSA. According to him, SSA is among the least educated region in the world and this singular reason has seriously hampered the quality of their human capital. However, the results of this study have shown that the reason for insignificance of human capital in driving the growth of the SSA might not be unconnected with this.

It can also be concluded from the study that primary export is a dominant factor influencing the growth of the SSA. Statistics from the AFDB shows that 85% of the SSA GDP comes from the primary export (AFDB, 2016). Also, investment is shown to be a good driver of economic growth but the current level of FDI in the sub-region is not enough to promote the economic growth of the region significantly. Labour participation rate, which is an indicator of human capital, follow the same pattern of relationship of human capital with economic growth. The overall implication of the

results in this study is that the limitation to the effectiveness of capital goods import in promoting the growth of the SSA is the low quality of human capital. Since the skill and level of education of human capital is very germane to the utilization of the capital goods for economic growth purposes.

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