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# THE ROLE OF AGRICULTURE DEVELOPMENT IN SUSTAINABLE ECONOMIC GROWTH IN SUB-SAHARAN AFRICAN COUNTRIES

This paper investigates the relationship between agriculture growth and economic development in sub-Saharan African economies. Based on a dataset spanning from 2008 to 2021, a model was ran using least squares regression. The Pearson's correlation coefficients show that there is a bidirectional causal effect between agriculture growth and economic development. The findings based on the regression model reveal that agriculture growth has significant positive effect on economic development. This means that the development of the agriculture sectors will consequently lead to the economic growth. This is therefore instructive to governments, non-governmental agencies, and other development partners to develop and adopt policies that could boost the growth the agricultural industrial complex. This would promote development socioeconomic development as it will lead to the creation of jobs and employment for youth and boost agribusiness as well as serve as ready market of raw materials for local and foreign manufacturing and processing firms. This may not only help reduce poverty and unemployment in the sub-Saharan region but will also help in expanding it exports of agricultural products that would improve the balance of trade of these countries.

**Key words:** economic growth, sustainable development, agricultural growth, sub-Saharan Africa, Foreign direct investment, poverty reduction.

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# Сахараның оңтүстігіндегі Африка елдеріндегі тұрақты экономикалық өсудегі ауыл шаруашылығын дамытудың рөлі

Бұл мақала Сахараның оңтүстігіндегі Африка елдеріндегі ауыл шаруашылығының өсуі мен экономикалық даму арасындағы байланысты зерттейді. 2008-2021 жылдар аралығындағы деректер жиынына негізделген модель ең кіші квадраттар регрессиясын қолданып орындалды. Пирсон корреляция коэффициенттері ауыл шаруашылығының өсуі мен экономикалық даму арасында екі жақты себептік әсердің бар екенін көрсетеді. Регрессиялық модельге негізделген қорытындылар ауыл шаруашылығының өсуі экономикалық дамуға айтарлықтай оң әсер ететінін көрсетеді. Демек, ауыл шаруашылығы саласының дамуы экономикалық өсімге әкеледі. Сондықтан бұл үкіметтерге, үкіметтік емес агенттіктерге және даму бойынша басқа серіктестерге агроөнеркәсіптік кешеннің өсуіне ықпал ететін саясатты әзірлеуге және қабылдауға нұсқау береді. Бұл әлеуметтік-экономикалық дамуға ықпал етеді, өйткені бұл жастар үшін жұмыс орындары мен жұмыспен қамтуға және агробизнесті дамытуға, сондай-ақ жергілікті және шетелдік өңдеуші және өңдеуші фирмалар үшін дайын шикізат нарығына қызмет етеді. Бұл Сахараның оңтүстігіндегі аймақтағы кедейлік пен жұмыссыздықты азайтуға көмектесіп қана қоймай, сонымен бірге осы елдердің сауда балансын жақсартатын ауыл шаруашылығы өнімдерінің экспортын кеңейтуге көмектеседі.

**Түйін сөздер**: экономикалық өсу, тұрақты даму, ауыл шаруашылығының өсуі, Сахараның оңтүстігіндегі Африка, тікелей шетелдік инвестициялар, кедейлікті азайту.

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Роль развития сельского хозяйства в устойчивом экономическом росте в странах Африки к югу от Сахары

В данной статье исследуется взаимосвязь между ростом сельского хозяйства и экономическим развитием в странах Африки к югу от Сахары. На основе набора данных, охватывающего период с 2008 по 2021 год, была построена модель с использованием регрессии наименьших квадратов. Коэффициенты корреляции Пирсона показывают, что существует двунаправленный причинноследственный эффект между ростом сельского хозяйства и экономическим развитием. Выводы, основанные на регрессионной модели, показывают, что рост сельского хозяйства оказывает значительное положительное влияние на экономическое развитие. Это означает, что развитие сельскохозяйственных секторов, следовательно, приведёт к экономическому росту. Поэтому правительствам, неправительственным организациям и другим партнёрам по развитию полезно разработать и принять политику, которая могла бы стимулировать рост агропромышленного комплекса. Это будет способствовать развитию социально-экономического развития, поскольку приведёт к созданию рабочих мест и занятости для молодёжи и развитию агробизнеса, а также послужит готовым рынком сырья для местных и иностранных производственных и перерабатывающих фирм. Это может не только помочь сократить бедность и безработицу в регионе южнее Сахары, но также поможет в расширении экспорта сельскохозяйственной продукции, что улучшит торговый баланс этих стран.

**Ключевые слова**: экономический рост, устойчивое развитие, рост сельского хозяйства, страны Африки к югу от Сахары, прямые иностранные инвестиции, сокращение бедности.

#### Introduction

Despite significant strides in international collaboration and commendable instances of national accomplishments in development, persistent poverty continues to afflict sizable segments of the world's populace and sustainable economic advancement remains elusive in the regions comprising the Global South despite decades-long endeavors at development cooperation and national initiatives. The attainment of economic growth remains a complex undertaking that has yet to yield a definitive solution. Moreover, there is a conspicuous absence of a prescribed methodology for promoting sustainable development. It is noteworthy that despite the predominant role of agriculture in nearly all traditional economies (Collier & Dercon, 2014), many developing nations have failed to prioritize this sector as a pivotal component in achieving sustainable development. In light of the aforementioned circumstances, the prime aim of this conclusive thesis is to probe the query pertaining to the significance of agriculture in promoting sustainable development. This will be achieved through an extensive investigation encompassing literature review and a comprehensive scrutiny of the case study involving sub-Saharan African nations (Frankema & van Waijenburg, 2012; 2018).

This academic text presents a comprehensive examination of the intersection between agricultural-led economic growth, environmental stewardship, and societal advancement. Drawing upon the most recent research findings, it analyzes India's experience and extrapolates valuable insights that can inform policymaking for comparable developing nations.

Many countries in sub-Saharan Africa are currently experiencing growth transformation. Even though challenges still exist, and the level of progress varies from country to country, nevertheless, a wide range of evidence indicates that several countries in the region have witnessed improvements since the 2000s (as presented in figure 1). The economic transformation happened thanks to better political and macroeconomic environments as well as increasing global commodity prices. Jayne et al. (2018) posit that this has driven agricultural development, rural employment as well as local and foreign investments.

As can be observed on the chart above, economic growth of sub-Saharan Africa has been fluctuating over the years due to several reasons such as volatile commodity prices on the global market, natural disasters such as droughts, floods, fiscal and currency imbalances and so on. The region observed a continuous growth between 2016 and

2019, however, the consequences of COVID-19 like lockdowns, fall in commodity prices as well as its effects on trade caused growth to fall from 2.4%

to below -2%. But growth has since picked up and the region's economy has recorded a growth rate of a little beyond 4%.

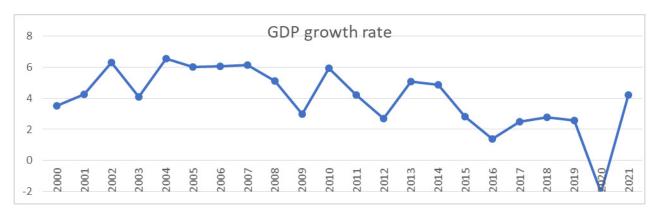


Figure 1 – The growth rate of gross domestic product Note: Constructed by authors

How long-lasting this growth shift is, even though, it has remained a mystery for almost 25 years. The question; Is the current expansion caused by agriculture likely to continue and outpace sustainable economic development, or is it just a boom that might fizzle out?

This question is particularly relevant given that some economies of sub-Saharan Africa have previously witnessed similar extended period of development Broadberry and Gardner (2019). For instance, Fioramonti (2017) and Gollin et al. (2016) espoused that the current growth just like

the previous ones is vulnerable and volatile. They argued further that the growth transformation, which is not supported through structural transformation, innovation, poverty reduction and so on, is hinged on commodity prices and exports as well as foreign direct investments (figure 2). Thus, to ascertain the impact and/or the nature of agriculture induced development it is relevant to juxtapose it with the level poverty reduction and employment as well as its correlation with structural transformation, industrialization, and technical innovation.

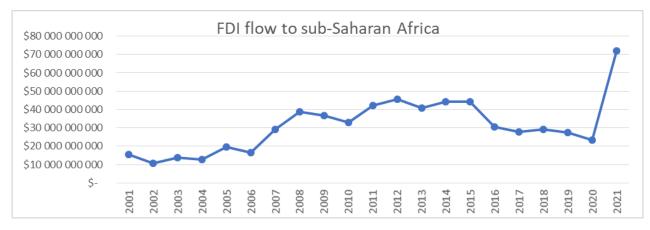


Figure 2 – The flow of foreign direct investment to sub-Saharan Africa Note: Constructed by authors

The flow of foreign direct investment (FDI) has been positive albeit the constant fluctuations. The region recorded increased inflows of FDI between 2002 and 2015. But there was a sharp decline between 2016 and 2020, which is attributable to the fall of commodity prices within that period since most FDI in the region are usually in the extraction and mining industry. FDI flow has increased almost

threefold after the COVID-19 related economic slowdown in 2020.

It is evident that the current economic transformation has had a little impact on poverty reduction and employment. While poverty (figure 3) and unemployment have relatively declined in some countries, however absolute unemployment levels have not reduced.

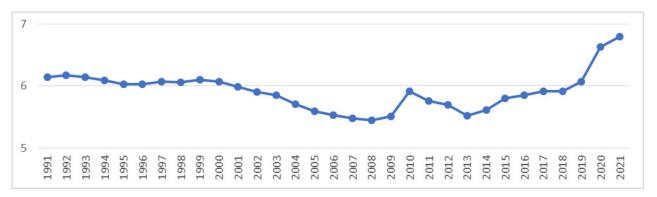


Figure 3 – Poverty rate in sub-Saharan Africa

It is desire of every nation or economic block to harness available resources for its socioeconomic development, and thus improve the sources of livelihood of its citizens, standard of living, and reduce poverty. Although, most Sub-Saharan African countries have made significant progress in poverty reduction in the region since 1991 till 2008, however, poverty rate increased in the period 2008-2010, which was triggered by the global financial crisis

in the same period. After the year 2010, the poverty gap shrunk until 2013, and has been increasing significantly over the years. The problem of poverty has been a serious economic issue and several governments have attempted it in various ways to alleviate poverty and inequality, however, its fundamental cause; unemployment (presented in figure 4) is well tackled as the rate of unemployment continues to remains high.

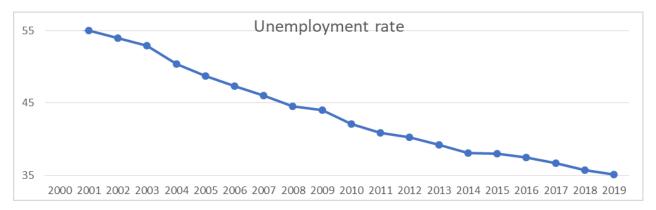


Figure 4 – Unemployment rates in sub-Saharan Africa Note: Constructed by authors

Unemployment, which has been the root cause of most social, economic, and political problems in several countries in the region, has seen significant reduction from over 55 percent to about 36%. Despite this the region still has a large number of unemployed youths. The issue of high unemployment in the region is as a result of low or poor industrialization and lack of proper incentives to attract the youth into the agribusiness sector. Aside that previous and current economic bailouts particularly structural adjustment programs have always put embargos on employment in the public sector. Also, the discontinuation of certain social programs like the Nation Builders Corps (NABCO) in Ghana have exacerbated the already

ballooning unemployment bubble. It is worth mentioning that, although the rate of unemployment has reduced, nonetheless, the numbers in real terms remain high.

This is as a result of the population growth rate, which, as shown in figure 5, has negated the positive changes in the area. Sub-Saharan Africa experienced constant population growth between the period 2000-2010, the region has since been witnessing a reduction in its population growth. Even though the population of the region increases at a reduced rate, however, the necessary conditions and infrastructure needed have not been put in place to accelerate sustainable inclusive socio-economic development.

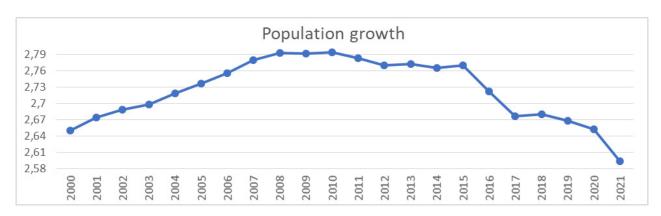


Figure 5 – Population growth rate in sub-Saharan African countries
Note: Constructed by authors

Cheru et al. (2019) have therefore defined the rapid growth as disappointing as it has not led improved welfare and poverty reduction in most of these economies. Thus, it is imperative to study how the region could harness it natural and human resources for agricultural development, which remains the main source of livelihood for a proportion of the population, to enable it grow sustainably.

## Literature review

Literature shows agriculture has manifold impacts on sustainable development: Agriculture is providing livelihoods, is feeding the population and supplying raw materials for the other sectors, it can make labour and capital available for the other sectors, it is in itself a market with a big potential, it creates foreign exchange earnings, it determines largely about the health of the environment and people, and

also strongly influences poverty rates and equality among people. Thus, the role of agriculture for development is doubtless a crucial one. Looking at the history of development paradigms, agriculture got in and out of fashion as an important contributor for development. At first agriculture was regarded by development economists as an ancillary to industrialization only, concretely as a mere source of labour and transferable capital surplus. Much later, when in 2000 the Millennium Development Goals were introduced, it was agreed to have pro-poor economic growth – and which sector was better suited for this than agriculture which was and still is occupying most of the poorest of the poor? Since the World Development Report 2008, famously titled "Agriculture for Development", agriculture was again in the spotlight for the global challenge to combat poverty and facilitate economic growth. The already presumed dead sector has shown to be too important to ignore.

Evidence from historical perspectives points to the crucial role of structural transformation in an economy (Kuznets, 1966; Chenery and Syrquin, 1975). Barrett et al. (2010) argue that structural transformation is the only catalyst to poverty reduction and employment. Thus, the pathway to ensure that any form of growth has substantial and sustainable effect on poverty and employment is structural transformation, which includes the transfer of labor from low to high productivity areas as well as labor productivity growth. Although, this transfer of labor previously seemed to suggest the movement of labor from agriculture to manufacturing, but Cheru et al. (2019) posit that there is a thin or blur line between the sectors as high-productive activities currently exist in agricultural and service industries too.

Thus, structural transformation is determinant element in defining sustainability of growth, particularly the nature of agriculture induced development. One major aspect that needs to be carefully looked at is whether the current agricultural growth is driven by the export of cash crops, and minerals because of foreign direct investments and/or better terms of trade. In any case, this current growth is like those experienced in the 1950s as well as the 1960s, which could stand the test of time. Hence, Andersson and Andersson (2019) argue that a broad and inclusive development that tend to provide welfare gains to a substantial section of the population is what can be seen as sustainable economic growth. Some scholars like Derson and Gollin (2014) have begun to question the role of agriculture in leading and boosting sustainable economic development in Africa due to the relative low success in raising agricultural productivity and poor agricultural transformation. For instance, Ellis (2004) does not see agriculture as a precursor of sustainable growth as it is not effective in reducing poverty Hasan (2004) and Hart (1998) questions the capacity of agriculture to establish the necessary growth links with a modern globalized world. As evident from the work by Diao et al. (2010), which assessed the effect of agriculture on sustainable inclusive development; they revealed that there is scanty evidence indicating low income could achieve sustainable inclusive growth through agricultural transformation.

Although it is difficult to predict the future economic conditions of any country, there are various components and features that show how sustainable any growth process is given historical perspectives and evidence. Studies by Kuznets (1966), Valde and Foster (2010) as well as Barrette et al.

(2010) indicate that with structural changes agricultural growth process can achieve the necessary welfare gains for most part of the population, thus making it sustainable and boosting socio-economic development.

Thus, this situation is applicable to African countries as these economies cannot isolate themselves from the global economy (Cramer, 2020). Although some the factors impeding the achievement of sustainable growth in low-income countries are unique, nonetheless, some of the challenges encountered by these countries are not new but existed in other economies, which are now high income. And despite the drawbacks, these countries still achieved sustainable growth through the development of permissive environment (by eliminating the right obstacles) and the implementation of the necessary policies. Thus, sub-Saharan African countries can create the pathway and drive their sustainable development by learning from these success policies. The creation of broad-based inclusive policies will help these countries leverage on the current agricultural growth to reduce poverty and increase welfare gains among a large section of the population.

The suitability of agriculture as a driver of economic growth is expounded through the evaluation of empirical data. For development to be sustainable, it must be achieved through the efficient use of natural resources to ensure social progress without degrading the environment. This uses the following three (3) dimensions to argue the role of agriculture in sustainable development. 1) Environmental sustainability: Agriculture has the potential to significantly affect the environment, and as such, sustainable practices are essential to ensure the long-term health of ecosystems and the maintenance of biodiversity. Therefore, it is imperative to adopt sustainable agricultural practices to achieve sustainable development. For instance, Matthew et al. (2019) argue that the struggles that farmers bring about are improvements in the preparation of land for cultivation, improved by farmers' efforts in preparing land for cultivation, treating fertilizers, and watering crops and plants, which can protect the environment by allowing plants to absorb atmospheric CO<sub>2</sub>. In countries with a clean environment, economic activities run smoothly owing the presence of healthy livestock resources and healthy human resources. Similarly, Thornton et al. (2018) analyzed how agricultural funding affects national economic development and they revealed that access to simple finance for agriculture enables investments in forests, plantations, crops, or livestock nutrition, which are the primary sources of raw materials, food, and energy resources.

2) social progress: Agricultural development can contribute to social welfare by increasing food security, creating job opportunities, and improving rural infrastructure. Haider et al. (2018) posit that the provision of financial services in rural farmers enhances their social and economic well-being. Financial institutions in rural areas give money to the locals so they can engage in economic activities like forestry, agriculture, tourism, and rural industries. The production of goods and services through these economic activities in rural areas promotes sustainable economic development while making a sizable contribution to the gross domestic product. 3) Inclusive growth: In order to address the challenges and demands of modern society, significant technological advancements and substantial public investments in infrastructure, research, healthcare, and human capital development are imperative. The scholarly works of renowned economists such as Kuznets (1966) who specialize in the field of structural economics have been widely recognized and analyzed. Empirical evidence has corroborated the notion that growth is instigated by structural transitions. One fundamental concept posits that the economic advancement of a developing nation entails a structural transformation that involves a shift from an agriculture-centric economy to one that features a dominant industry and services sector. This highlights the fundamental premise underlying the ensuing impact evaluations pertaining to economic growth in this thesis. The potential contribution of agriculture to economic development can be analysed and categorized into distinct classifications.

Thus, the implementation of environmentally responsible practices in agriculture can result in the creation of sustainable conditions that both foster a healthy ecosystem and promote the well-being of individuals. Agricultural goods have been a significant source of food and income for human societies throughout history. These commodities are produced by farmers, who cultivate the land and raise livestock to provide a variety of crops, dairy products, and meat. Agriculture has played a central role in the economic development of many countries, particularly those with a strong tradition of farming. In recent times, agricultural technologies have been developed to improve crop yields and increase profitability for farmers. These advancements have facilitated the growth of industrial agriculture, which has transformed the way that food is produced and

distributed globally. The study of agriculture is essential for understanding the interrelationship between human society and the environment.

The manner in which commodities are generated has a direct bearing on various factors such as the calibre of subterranean water and dietary products, and by extension, our physical well-being. Additionally, it is imperative to consider the extent to which this industry is contributing to the issue of climate change. The growth of agriculture typically corresponds with the emergence of novel technologies, practices, and inputs, which possess significant implications for both human and environmental well-being. In the context of long-term impacts, the sustainability of this development holds significant importance.

Economic growth is a phenomenon characterized by an increase in a nation's aggregate output of goods and services over a given period of time. It is considered a key indicator of a country's overall economic performance and is often influenced by a range of macroeconomic factors, including investments, technological progress, workforce productivity, and government policies. Economic growth is a crucial factor in enhancing living standards, reducing poverty, and facilitating sustainable development. The attainment of social progress necessitates the implementation of measures aimed at promoting equality within the development processes. The three interrelated spheres that comprise the concept of sustainability are the economic, ecological, and social dimensions. Furthermore, this concept serves as the foundation of the Sustainable Development Goals. Scholars specializing in the field of development have, in opposition to the initial principles of modernization theory, which primarily shaped the genesis of development policy as a political arena during the 1950s, gravitated towards a more multifaceted approach that expands beyond strict monetary considerations and emphasizes broader development objectives. The advancement of agriculture is fundamentally altering societal structures. The process of economic transformation is frequently coupled with simultaneous changes in health, nutrition, and other societal factors, necessitating the development and implementation of policies that effectively adjust current social security systems. Simultaneously, progressions of growth frequently yield both advantageous and disadvantageous outcomes. Therefore, in the context of agricultural development, which contributes to economic advancement, the issue of social ramifications during the course of such growth is also a pertinent consideration. Sustainable growth can potentially manifest itself through various channels, such as participatory processes or a paradigm of inclusive, equitable growth. Significant transformations have been observed in the economies of developing nations, particularly in the domain of agriculture, within the Global South. Agricultural and food security policies hold a central position in addressing numerous urgent societal concerns.

Taking into consideration the premise of striving towards sustainable and all-encompassing development, the economic advancement of India is assessed considering sustainability metrics derived from the Sustainable Development Goals (SDG), with due emphasis on the integral role of agriculture. The concept of sustainability is commonly regarded as a developmental process that duly accounts for the economic, socio-cultural, and ecological dimensions, alongside the welfare of forthcoming generations.

This study holds significant academic relevance given that a substantial proportion of the populations of developing countries are involved in agricultural activities, and persistent issues of hunger and malnutrition continue to affect several regions across the globe. Indeed, the reduction of poverty in general remains a significant challenge for the international community. A consensus was internationally established with the Sustainable Development Goals with the primary objective of combatting poverty and global difficulties by means of a sustainable development roadmap. Consequently, both the framework and the interpretation of sustainability presented in the Brundtland Report are employed in this study as points of reference.

#### **Table 1** – Descriptive data

Variable	Obs.	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation		
GDP per capita income	14	14	1277377168011.380	1888943895042.630	1618512043134.700	203521500767.973		
Agric	14	14	220862820978.853	338130563522.665	278371466784.943	38343220836.966		
Note: Constructed by authors								

# Results and discussion

A linear equation regression model was applied to the dataset presented in the data and methodology section to explore the causal relationship between agricultural growth and economic development. Using Pearson's correlation, the relationship between

# Data and methodology

The World Bank and International Monetary Fund (IMF) databases on sub-Saharan African countries for the years 2008 to 2021 were used as secondary sources for this study. To determine the association between the variables and the causal impacts of agricultural activities on GDP per capita income (the proxy variable for socioeconomic development), the data was run, analysed, and interpreted using the least squares regression model. The effect of agriculture on economic development was assessed using the least squares regression technique. As a result of this mathematical regression, the linear relationship between variables may be examined. The least squares method was used for this research since this regression procedure helps to identify the best fit line to a certain dataset, which is important for this work. As a result, the following linear regression equation was created to precisely study how agricultural activities affect economic development:

$$y_i = \alpha_0 + \alpha_1(Agric)_i + \epsilon_i$$
 (1)

where y stands for socioeconomic growth (GDP per capita income) and agric. stands for agricultural activity.

The previously defined model was thus used to test the acquired data (the descriptive data is displayed in table 1), and the findings are shown in graphical and tabular form in the next section. They underwent a comprehensive statistical analysis utilizing methods like sum of squares, standard deviation, mean, and others.

the variables was investigated; the results are displayed in table 2.

The results of Pearson's correlation indicate that there is high bidirectional relationship between agriculture growth and economic development. Thus, a growth in one will lead to the expansion of the another. The model results are presented in table 3.

Table 2 - Correlation matrix

	Agriculture	GDP per capita income				
Agriculture	1	0.984				
GDP per capita income	0.984	1				
Note: Constructed by authors						

Table 3 – Model results

Source	DF	Sum of squares		Mean squares		F	Pr > F		
Model	1	521112757443272000000000		521112757443272000000000		360.211	<0.0001		
Error	12	17360259129754000000000		1446688260812840000000					
Corrected Total	13	538473016573026000000000							
Computed aga Y=Mean									
Model parameters (GDP):									
Source	Value	Standard error	t	Pr >  t	Lower bound (95%)	Upper bound (95%)			
Intercept	164960945395	77258131847	2.135	0.054	-3370063236.551	333291954027.275			
Agric	5.222	0.275	18.979	<0.0001 4.622		5.821			
Type I Sum of Squares analysis (GDP)									
Source	DF	Sum of squares		Mean squares		F	Pr > F		
Agric	1.000	521112757443272000000000		521112757443272000000000		360.211	0.000		
Type III Sum of Squares analysis (GDP									
Source	DF	Sum of squares		Mean squares		F	Pr > F		
Agric	1.000	521112757443272000000000		521112757443272000000000		360.211	0.000		
Note: Constructed by authors									

Given the R<sup>2</sup>, 97% of the variability of the dependent variable GDP per capita income is explained by the explanatory variable. Given the p-value of the F statistic computed in table 3, and given the significance level of 5%, the information brought by the explanatory variables is significantly better than what a basic mean would bring. The results show a positive causal relationship between agriculture growth and economic development. Thus, the growth of agricultural sector will promote and stimulate growth of the national economy and vice versa.

#### Conclusion

The paper defined the root cause of the low socioeconomic development of sub-Saharan that is accompanied by high unemployment and large poverty gap, despite the current agriculture induced growth experienced in most economies in the region. The paper identified that although the current growth may be triggered by high inflow of foreign direct investment and high commodity prices, however, this type of growth is like the previous ones that could be sustained due to certain core factors. One major element of sustainable growth is that it must be tailored to the welfare gains of the population in general through job creation, value addition, and so on. But the current growth does not improve the welfare conditions of the people, hence making unsustainable. However, governments of the region could make the necessary policies through which agriculture could be used to transform their economies and promote socioeconomic growth. To test the effect of agriculture growth on economic development, least squares regression was used to run a model using a dataset that covered the years 2008 to 2021. The Pearson's correlation coefficients demonstrate that there is a two-way causal relationship between the expansion of agriculture and the expansion of the economy. According to the results of the regression model, the expansion of agriculture has a strong beneficial impact on economic growth. This implies that economic growth will result from the development of the agricultural sectors. Governments, non-governmental organizations, and other

development partners should thus learn from this to create and enact policies that could promote the growth of the agricultural industrial complex. This would encourage socioeconomic growth because it will result in the creation of jobs and employment for young people, enhance agribusiness, and provide a ready market for local products.

#### References

- 1. Andersson, J., & Andersson, M. (2019). Beyond Miracle and Malaise. Social Capability in Côte d'Ivoire and Senegal during the Development Era 1930–1980. Studies in Comparative International Development, vol.54, pp.210-232.
- 2. Barrett, C., Carter, M., & Timmer, P. (2010). A Century-Long Perspective on Agricultural Development. American Journal of Agricultural Economics, vol. 92, №2, pp.447-468. https://doi.org/10.1093/ajae/aaq005
  - 3. Broadberry, S., & Gardner, L. (2019). Economic Growth in Sub-Saharan Africa, 1885-2008.
- 4. Economic History Working Papers no 296: London School of Economics and Political Science. Chenery, H., & Syrquin, M. (1975). Patterns of Development, 1950–1970. Oxford University Press.
- 5. Cheru, F., Cramer, C., & Oqubay, A. (2019). Introduction. In F. Cheru, C. Cramer, & A. Oqubay (Eds.), The Oxford Handbook of the Ethiopian Economy. Oxford University Press. Collier, P., & Dercon, S. (2014). African Agriculture in 50 Years: Smallholders in a Rapidly Changing World? World Development, vol.63, pp.92-101.
- 6. Cramer, C., Sender, J., & Oqubay, A. (2020). African Economic Development: Evidence, Theory, Policy. Oxford University Press.Dercon, S., & Gollin, D. (2014). Agriculture in African Development: Theories and Strategies. Annual Review of Resource Economics, vol.6(1), pp.471-492.
- 7. Diao, X., Hazell, P., & Thurlow, J. (2010). The Role of Agriculture in African Development. World Development, vol.38(10), pp.1375-1383.
- 8. Ellis, F. (2004). Occupational Diversification in Developing Countries and the Implications for Agricultural Policy. Programme of Advisory and Support Services to DFID (PASS). Project No. WB0207.
- 9. Fioramonti, L. (2017). The Africa Rising Story Was Based on Faulty Logic Here's How to Fix It. The Conversation https://theconversation.com/the-africa-rising-story-was-based-on-faulty-logic-heres-how-to-fix-it-86327
- 10. Frankema, E., & van Waijenburg, M. (2012). Structural Impediments to African Growth? New Evidence from Real Wages in British West Africa, 1880–1965. Journal of Economic History, vol.72, pp.895-926.
- 11. Frankema, E., & van Waijenburg, M. (2018). Africa Rising? A Historical Perspective. African Affairs, vol.117(469), pp.543-568.
- 12. Gollin, D., Jedwab, R., & Vollrath, D. (2016). Urbanization with and without Industrialization. Journal of Economic Growth, vol.21(1), pp.35-70.
- 13. Haider, L. J., Boonstra, W. J., Peterson, G. D., et al. (2018). Traps and sustainable development in rural areas: a review. World Development, 101, 311-321. doi:https://doi.org/10.1016/j.worlddev.2017.05.0 38
- 14. Hart, G. (1998). Regional Linkages in the Era of Liberalization: A Critique of the New Agrarian Optimism. Development and Change, vol.29(1), pp.27-54.
- 15. Hasan, R., & Quibria, M. (2004). Industry Matters for Poverty: A Critique of Agricultural Fundamentalism. Kyklos, vol.57(2), pp.253-264.
- 16. Jayne, T., Chamberlin, J., & Benfica, R. (2018). Africa's Unfolding Economic Transformation. The Journal of Development Studies, vol.54(5), pp.777-787. https://doi.org/10.1080/00220388.2018.1430774
- 17. Kuznets, S. (1966). Modern Economic Growth: Rate, Structure and Spread. Yale University Press. Matthew, O., Osabohien, R., Urhie, E., et al. (2019). Agriculture as a stimulant for sustainable development in ECOWAS. Sustainability: The Journal of Record, 12(4), 215-225. doi:https://doi.org/10.1089/sus.2018.0039
- 18. Thornton, P., Dinesh, D., Cramer, L., et al. (2018). Agriculture in a changing climate: Keeping our cool in the face of the hothouse. Outlook on Agriculture, 47(4), 283-290. doi:https://doi.org/10.1177%2F00307270188153 32
- 19. Valdés, A., & Foster, W. (2010). Reflections on the Role of Agriculture in Pro-poor Growth. World Development, vol.38(10), pp.1362-1374.