Agricultural Productions and Its Implications on Economic Growth in Ivory Coast: The Use of the Econometric Approach

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Abstract

The objective of this article is to assess the effect of the agricultural sector on the economic growth in Ivory Coast.

The data used are those of the World Bank and cover the period from 1985 to 2015. The analysis of the data required the use of the AutoRegressive Distributed Lag (ARDL). It emerges from this study that there is a positive and significant relationship between manufacturing agriculture and economic growth in the short and long term. On the other hand, the food-crop production has a negative effect on GDP, even if it is significant. The variable of interest such as agricultural investment has a positive and significant effect on economic development, while cash crop production have a positive but not significant effect on long-term economic growth. Therefore, in view of these results, the State must promote the processing of agricultural products in order to create more value added.

Keywords: agricultural value added, food production index, export, ARDL, Ivory Coast

1. Introduction

Agriculture is the main economic activity in most developing countries and employs a large proportion of the working population (Food and Agriculture Organization of the United Nations [FAO], 2009). As such, it is central to employment, government revenues and food security. Ivory Coast, a West African country, will not remain on the sidelines. Thus, following its rise to independence, it embarked on a process of large-scale development of food production, export crops and agribusiness through the creation of state-owned companies.

The ultimate goal was to satisfy domestic food needs, bring foreign exchange to the country, tax revenue to the State, income to farmers and agricultural intermediaries, curb manufacturing imports through local manufacturing and finally, valorise local primary resources.

Thus, from 1960 to 1980, the agricultural sector experienced a meteoric rise due mainly to the high production and exports of the coffee-cocoa binomial which boosted economic development and allowed the advent of what was called "the Ivorian miracle". The contribution of agriculture to GDP growth was estimated at 45% over this period. Today, agriculture provides 40% of export earnings and about 30% of tax revenues. They contribute 33% of GDP (Banque Mondiale [BM], 2016).

Despite the strong growth and the boom in the main agricultural export products, the agricultural sector is still characterized by a lack of major technology transfer, extensive agriculture, low mechanization, low level of private and public investment, and a lack of agricultural financing structures (Ducroquet, Tillie, Louhichi et Gomez-Y-Paloma, 2017). The Ivorian economy remains dependent on exports and is very sensitive to external shocks. For example, the agricultural or even economic bankruptcy experienced by Ivory Coast in the 1980s, when world prices for cash crops fell. The slump in this sector had a negative impact on the incomes of the majority of Ivorians and led many to food insecurity, as households spent nearly 47.82% of their expenditure on food (Institut National de la Statistique [INS], 2008).

The purpose of this work is to assess the real effect of the agricultural productions on economic growth from 1987 to 2016.

This general objective is broken down into three (3) specific objectives:

-   Objective 1: to estimate the effect of manufacturing agriculture on economic growth;

-    Objective 2: to determine the effect of the food-crop production on economic growth;
-    Objective 3: to assess the causal link between the cash crop production and economic growth.

In relation to our specific objectives, three hypotheses are made:

-    H 1: there is a positive and significant long-term relationship between the manufacturing agriculture and economic growth in Ivory Coast;
-    H 2: there is a positive and significant long-term relationship between the food-crop production and economic growth in Ivory Coast;
-    H 3: there is a unidirectional causal relationship between the cash crop production and economic growth in Ivory Coast.

2. Literature Review

The effect of the agricultural sector on a country's economy is reflected in its contribution to economic growth. Many studies have used different methods to indicate the contribution of the agricultural sector to economic growth.

Tolulope and Chinonso (2013) studied the contribution of the agricultural sector to economic growth in Nigeria using the growth accounting framework and time series data from 1960 to 2011. Using the Granger causality test, they find that the agricultural sector has made a positive and consistent contribution to economic growth in Nigeria, reaffirming the importance of the agricultural sector in the economy. However, no inverse relationship was found.

Gunawardena (2012) provides a quantitative assessment of the likely impacts of improvements in agricultural productivity on the overall economy in Sri Lanka. The results of the multisectoral computable general equilibrium model indicate that agricultural productivity increases lead to positive economic benefits. However, improvements in productivity would lead to a reduction in employment in agriculture, which in turn could have an impact on real household income in the short term.

The empirical study by Sani and Alhassan (2017) on the impact of export agriculture on economic growth, using the VEC model, found that there is a positive and significant causality between GDP and agricultural output. The study also identified a number of constraints, including lack of capital, poor infrastructure and inadequate agricultural extension services.

Tochukwu (2012) in his empirical work examined the impact of agricultural development on Nigerian growth over the period 1980 to 2010. The study uses the ordinary least squares technique. The study found empirically that there is a positive relationship between the agricultural sector and economic growth. The study also argues that government should develop and implement contemporary policies to help the industry align with other sectors of the economy.

Bako (2011) addressed the financing problems of Burkina Faso's agriculture by highlighting the potential and challenges of agriculture in order to understand the sector's financing needs and analyse the problems of its financing. An econometric analysis using an error-correction model revealed that there is a long-term relationship between agricultural production and public financing and that this financing has a positive impact on agricultural growth in the short and long term. The stimuli carried out show that with a 9% growth rate in public agricultural financing over the period 2009-2015, the country could achieve the Millennium Development Goals (MDGs) in terms of hunger reduction.

Katircioglu (2006) assessed the impact of the agricultural sector on the economy of Northern Cyprus. According to his findings, the agricultural sector has a crucial role to play in the development of all economies, particularly that of a small island in Northern Cyprus. His study revealed that there are bi-directional, long-term dynamic causal relationships between macroeconomic variables.

Matahir and Jasman (2013) used the time series of Co-integration and Johansen techniques to study the non-causality of the relationship between agriculture and other economic sectors in MalaysiaFrom their findings, it was postulated that, policy makers should consider the agricultural sector as vital tools in their analysis of cross-sectoral growth policies.

From all the above, we conclude that in most cases, agricultural dynamics would be a major determinant of economic growth, although there are indeed a multitude of policy-related variables explaining economic growth, the choice of which depends on the objectives pursued.

3. Methods

This part includes data collection, processing and analysis.

3.1 Data Collection and Processing

The data used in this study are the World Bank Development Indicators (WDI). These data cover agricultural

manufacturing, food-crop production, agricultural investment, cash crop production and gross domestic product per capita from 1985 to 2015. For processing, we used Eviews 10.

3.2 Method of Data Analysis

Given the objective of this study, our model includes as a dependent variable, gross domestic product per capita (GDP), as variables of interest, cash crop production (CAP), food-crop production (FOP), manufacturing agriculture (MAG) and finally as a control variable, agricultural investment (AGI).

The econometric model is then as follows :

$$GDP = f(MAG, FOP, AGI, CAP) \tag{1}$$

To obtain the partial elasticities of the data, logarithmic transformation took place.

The model is then written:

$$lnGDPc = \beta_0 + \beta_1 lnMAG + \beta_2 lnFOP + \beta_3 lnAGI + \beta_4 lnCAP + U_t \tag{2}$$

Where the expected sign for β1, β2, $\beta 3 et \beta 4$ is positive;

Ln: Nerian logarithm;

GDP per capita: Real Gross Domestic Product per capita;

β0: Intercept (constant);

MAG: Manufacturing agriculture;

FOP: Food-crop production;

AGI: Agricultural investment;

CAP: Cash crop production.

Ut: Stochastic term (not observed).

However, in order to better estimate the short- and long-term causality between agricultural exports and economic growth, the ARDL (AutoRegressive Distributed Lag) model was used, i.e. the autoregressive model with staggered or distributed lags.

The ARDL model can be written as follows:

$$\Delta lnGDP = \delta_0 + \sum_{i=1}^{p} \delta_{1i} \Delta lnGDP + \sum_{i=0}^{q} \alpha_{1i} \Delta lnMAG_{t-i} + \sum_{i=0}^{q} \alpha_{2i} \Delta FOP_{t-i} + \sum_{i=0}^{q} \alpha_{3i} \Delta lnAGI_{t-i} + \sum_{i=0}^{q} \alpha_{4i} lnCAP_{t-i} + \beta_1 lnGDP_{t-1} + \beta_2 lnMAG_{t-1} + \beta_3 lnFOP_{t-1} + \beta_4 lnAGI_{t-1} + \beta_5 lnCAP_{t-1} + \varepsilon_t \tag{3}$$

With:

Δ : prime difference operator;

α : a constant;

$\alpha 1......\alpha 4$: short-term effects;

$\beta 1......\beta 5$: long-term effects;

$\varepsilon_t \sim iid (0; \sigma)$: error term (white noise).

The error-correction model can be written as an equation following the model as follows:

$$\Delta lnGDP_t = \delta_0 + \sum_{i=1}^{p} \delta_{1i} \Delta lnGDP_{t-i} + \sum_{i=0}^{q} \alpha_{1i} \Delta lnMAG_{t-i} + \sum_{i=0}^{q} \alpha_{2i} \Delta FOP_{t-i} + \sum_{i=0}^{q} \alpha_{3i} \Delta lnAGI_{t-i} + \sum_{i=0}^{q} \alpha_{4i} \Delta lnCAP_{t-i} + \gamma ECM_{t-i} + \varepsilon_t \tag{4}$$

Table 1 presents the variables used for this study.

Table 1. Variables used and expected signs

VARIABLES	DESCRIPTIONS	EXPECTED RESULTS
GDP	Gross domestic product per capita in units of constant local currency	
FOP	Food-crop production	+
MAG	Manufacturing agriculture	+
CAP	Cash crop production	+
AGI	Agricultural Investment	+

Source: Author (based on theory)

4. Results

4.1 Evolution of the Main Variables from 1985 to 2015

4.1.1 Economic Growth Trends in Ivory Coast

According to Figure 1, the period from 1985 to 2015 is marked by varying degrees of fluctuation in the annual growth rate. Indeed, the first decades of the country's independence were marked by a period of strong growth justified by the coffee and cocoa boom. However, from 1985 onwards, Ivory Coast experienced a severe economic crisis due to the fall in the prices of these main export products on the international market. This weakened its economy until 1990.

From 1990 onwards, the structural adjustment programme imposed by the Bretton Woods structures, including the International Monetary Fund, began to take effect, leading to a slight recovery until 1998, when the country fell into a military crisis and economic decline resumed.

From 2000 onwards, the economy rebounded again due to a noticeable stability but was quickly slowed down from 2002 onwards by a socio-political crisis. From 2002 to 2005, peace agreements were signed and the economy recovered slightly.

From 2005 to 2010, the Ivorian economy returns to positive growth rates. However, from 2010 to 2011, Ivory Coast experiences a severe post-electoral crisis. This weakened all economic activities. Moreover, it is the most severe crisis that this country has experienced because the growth rate was negative (-5%).

From 2011 to 2015, the economy recovered to achieve the marvelous performance of the double-digit growth rate (over 10%) and remained somewhat stable, before declining slightly and stabilizing at 8% from 2015 onwards.
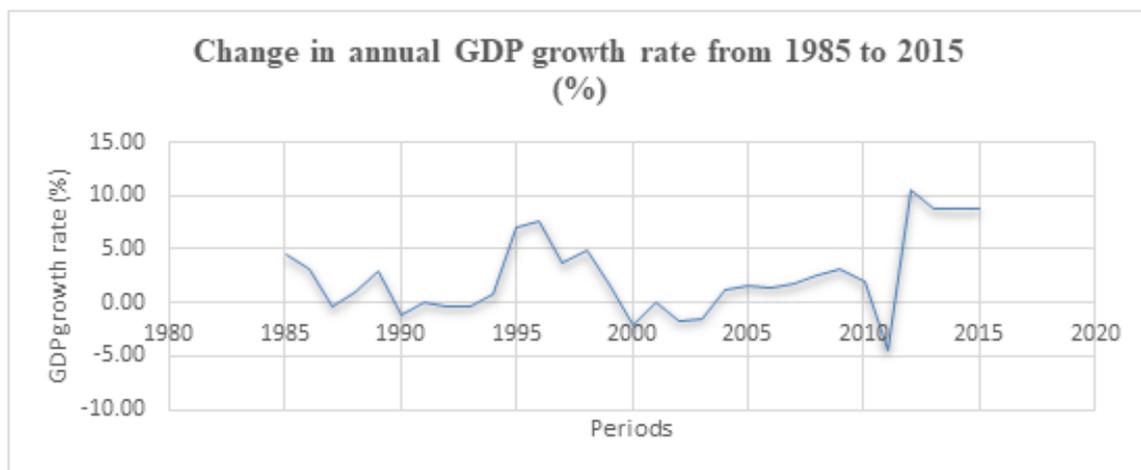
Figure 1. Change in annual GDP growth rate from 1985 to 2015

Source: Author, based on data from WDI (2017)

4.1.2 Cash Crop Production Trends

From 1985 to 2010, Ivory Coast gradually increased its export volume of agricultural products, reaching a peak in 1990 (Figure 2). From 2010 to 2014, agricultural exports remained stable. However, the period 2015 is marked by a drop in export volumes due to the effect of climate change, which causes seasonal variations and the appearance of devastating caterpillars.
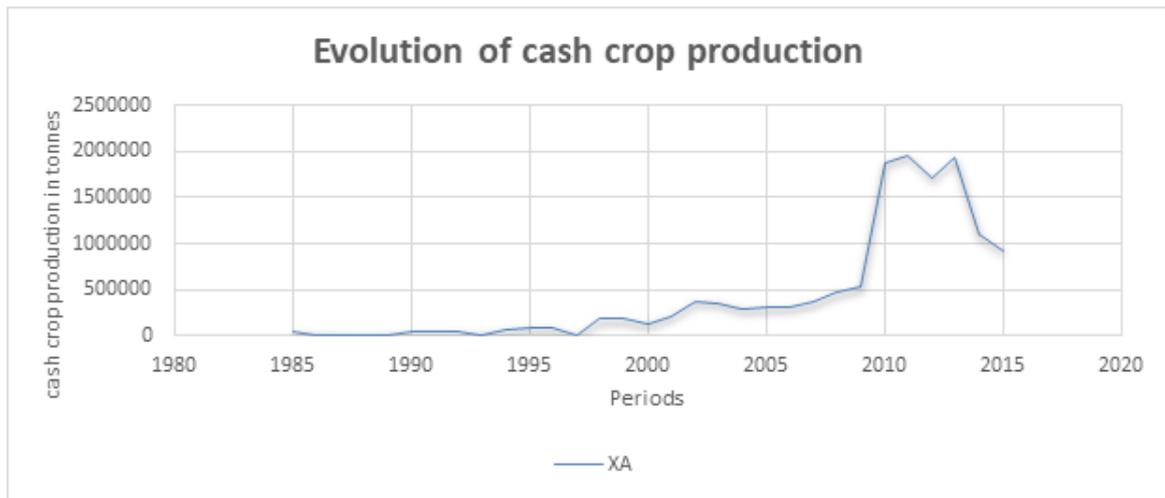
Figure 2. Evolution of agricultural exports in volume terms from 1985-2015

Source: Author, based on data from WDI (2017).

4.1.3 Manufacturing Agriculture Trends

Figure 3 shows that, from 1985 to 2015, the processed agricultural products increased over time. However, this increase was strong from 1994 onwards because of the processing policy for agricultural raw materials implemented by the Ivorian government.
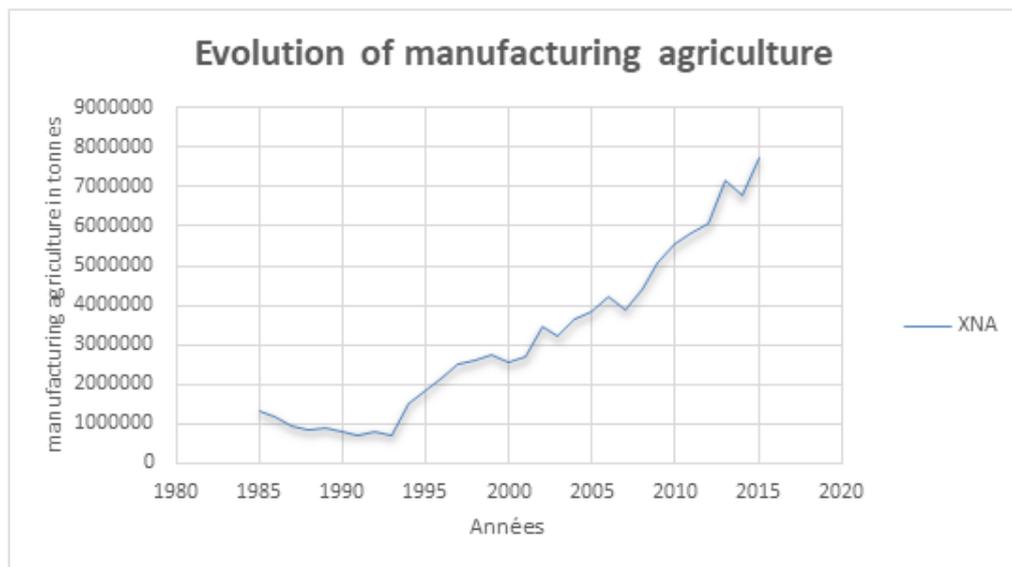
Figure 3. Evolution of non-agricultural exports over the period 1985-2015

Source: Author, based on data from WDI (2017).

4.2 Description of Variables

Looking at Table 2, the standard deviation (stad. Dev) indicates that the food-crop production (FOP) is the most volatile indicator, while gross domestic product (GDP) is less volatile compared to the other variables. Moreover, the Jarque-Bera probability is greater than 5% and therefore the variables selected for the study are normally distributed.

Table 2: Descriptive statistics of the variables

Rubrics	lnFOP	lnMAG	lnCAP	lnAGI	lnGDP
Mean	92.64067	22.10926	22.57377	21.31657	6.849814
Median	92.99000	22.01745	22.43628	21.19185	6.789871
Maximum	131.6500	22.75346	23.33777	22.73042	7.358785
Minimum	57.51000	21.46535	21.86290	20.39769	6.380631
Std. Dev.	**22.23202**	**0.363101**	**0.541100**	**0.637609**	**0.267432**
Skewness	0.199872	0.439414	0.088219	0.822239	0.376183
Kurtosis	2.030677	2.036432	1.467797	2.826936	2.175630
Jarque-Bera	1.374228	2.126004	2.973470	3.417823	1.557050
Probability	**0.503026**	**0.345417**	**0.226110**	**0.181063**	**0.459083**
Sum	2779.220	663.2779	677.2130	639.4971	205.4944
Sum Sq. Dev.	14333.62	3.823429	8.490876	11.78983	2.074070
Observations	30	30	30	30	30

Source: Author, estimation from Eviews 10

4.3 Stationarity Test

The results in Tables 3 and 4 explain that, at the level, not all variables are stationary in their form according to the ADF, PP and KPSS models (the probabilities of variables are greater than 5%). But, after a first differentiation, all the series used in this study are stationary and are integrated of order I(1).

Table 3. Results of the stationarity tests

In Level				
		ADF		**PP**
KPSS				
	(1)	(1)	(1)	
(2)		(2)	(2)	
LnGDP	0.9117	0.9117	0.513335	
0.5452		0.6126	0.177302	
			(0.463000)	
			(0.146000)	
LnMAG	0.9768	0.9329	0.584411	
0.6082		0.6767	0.168846	
			(0.463000)	
			(0.146000)	
LnFOP	0.9819	0.9743	0.705048	
0.1180		0.1442	0.098545	
			(0.463000)	
			(0.146000)	
LnAGI	0.9778	0.9817	0.603386	
0.6462		0.6462	0.159905	
			(0.463000)	
			(0.146000)	
LnCAP	0.8190	0.8100	0.660291	
0.7854		0.6281	0.090395	
			(0.463000)	
			(0.146000)	
In Difference				
ΔLnGDP	0.0001	0.0001	0.277290	
0.0003		0.0000	0.162885	
			(0.463000)	
			(0.146000)	
ΔLnMAG	0.0005	0.0000	0.229825	
0.0013		0.0000	0.130242	
			(0.463000)	
			(0.146000)	
ΔLnFOP	0.0000	0.0000	0.500000	
0.0000		0.0000	0.500000	
			(0.463000)	
			(0.146000)	
ΔLnAGI	0.0015	0.0017	0.242825	
0.0035		0.0033	0.074229	

			(0.463000)
			(0.146000)
ΔLnCAP	0.0024	0.0025	0.143954
0.0124		0.0133	0.139132
			(0.463000)
			(0.146000)

Source: Author, estimation from Eviews 10

*Note: * significant at the 5% threshold for the ADF and PP tests. For the KPSS test, the F-statistic is compared to the critical value at the 5% threshold. If its F-stat is lower than the critical value at the 5% threshold then the series is stationary. (1) constant; (2) linear trend.*

Table 4. Summary of stationarity tests

Variables	ADF Test	PP Test	KPSS Test	Constat
LnGDP	I(1)	I(1)	I(1)	I(1)
LnMAG	I(1)	I(1)	I(1)	I(1)
LnFOP	I(1)	I(1)	I(1)	I(1)
LnAGI	I(1)	I(1)	I(1)	I(1)
LnCAP	I(1)	I(1)	I(1)	I(1)

Source: Author, estimation based on Eviews 10

4.4 Determination of the Optimal Delay and Graphical Representation of the Optimal ARDL Model

4.4.1 Determining the Optimal Delay

Criteria AIC, FPE, SC and HQ show an optimal delay of 4, while criterion LR shows a delay of 1 according to Table 5. However, the AIC criterion of delay 4 is the optimal delay because its value is the smallest of the three criteria and gives better estimates.

Table 5. Determination of optimal delay

Delays	**Test Criteria**					
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-50.82315	NA	5.04e-05	4.294089	4.536030	4.363759
1	44.31188	146.3616*	2.39e-07	-1.100914	0.350736	-0.682892
2	68.37695	27.76738	3.27e-07	-1.028996	1.632362	-0.262621
3	106.6638	29.45143	2.46e-07	-2.051062	1.820004	-0.936335
4	189.0519	31.68774	2.44e-08*	-6.465533*	-1.384759*	-5.002454*

(*) indicates lagorder selected by the criterion

Source: Author, estimation from Eviews 10

4.4.2 Graphical Representation of the Optimal ARDL Model According to the AIC Information Criterion.

The ARDL model (1, 3, 0, 0.0) is more optimal among the other 19 models chosen because it has the lowest value of the AIC criterion. Also noteworthy is the absence of autocorrelation of errors and the presence of error normality. Finally, there is no heteroskedasticity and the model is well-specified (Figure 4).
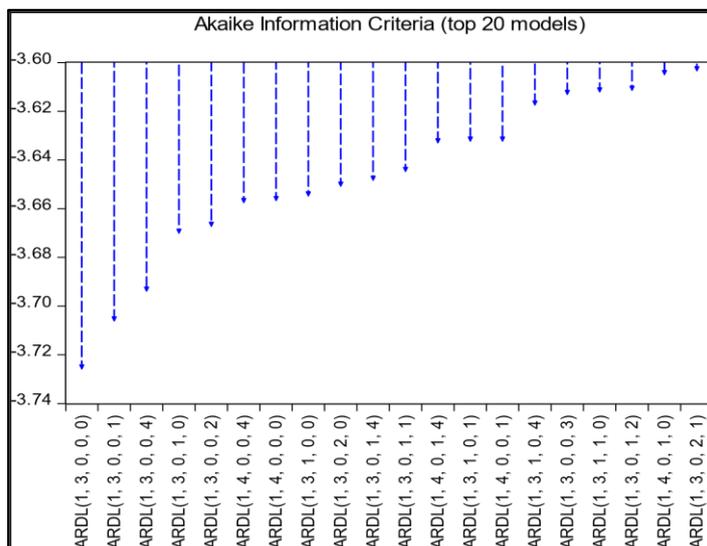
Figure 4. Graphical representation of the optimal ARDL model according to the AIC information criterion

Source: Author, estimation based on Eviews 10

4.5 Cointegration Test

According to Table 6, the calculated F-statistic is equal to 18.39916. It is greater than the critical value read at the upper bounds (3.09, 3.49, 3.87 and 4.37) at the 10%, 5%, 2.5% and 1% threshold, respectively. The null hypothesis of the existence of a cointegrating relationship is not accepted. Then, there is a long term relationship between the variables in the model.

Table 6. Result of the bound test

Statistical test	value	K
F-statistics	18,39916	4
Significance	Lower terminal	Top terminal
10%	2.2	3.09
5%	2.56	3.49
2,5%	2.88	3.87
1%	3.29	4.37

Source: Author, estimation based on Eviews 10

4.6 Estimation of Short and Long Term Coefficients

According to Table 7, the coefficient associated with recall force is negative and significant at the 1% threshold (0.0000 < 0.01). There is therefore a long-term relationship between the variables. Moreover, according to these same results, in the short and long term, manufacturing agriculture and agricultural investment have a positive and significant effect on economic growth. Furthermore, cash crop production positively but not significantly accelerate economic growth in the short and long term. Finally, the food-crop production has a negative and significant influence on GDP in the short and long term.

Table 7. Short- and long-term coefficient

Dependent variable: Log GDP			
Short-term coefficients			
Explanatory variables Prob	Coefficients	Standard deviation	T-Statistic
Δ Ln MAG 0.0000	0.569747	0.066925	8.513181
ΔLnFOP 0.0107	-0.005002	0.001756	-2.848588
ΔLnCAP 0.0807	0.088857	0.048019	1.850462
ΔL*n*AGI 0.0001	0.223888	0.044027	5.085219
CointEq(-1)* 0.0000	-0.849765	0.071548	-11.87688
Long-term coefficients			
Explanatory variables Prob	Coefficients	Standard deviation	T-Statistic
L*n*AGI 2.398313	0.0275	0.133823	0.055799
L*n*MAG 11.22080	0.0000	0.670476	0.059753
LnFOP -3.061306	0.0067	-0.005886	0.001923
0.0783	0.104566	0.056019	1.866609

Source: Author, estimation from Eviews 10

4.7 Granger Causality Test

The results reported in Table 8 show that when manufacturing agriculture is considered as a dependent variable, there is a presence of unidirectional causality between variables such as gross domestic product, agricultural investment and the food-crop production. On the other hand, there is an absence of causality when the other variables are considered as the dependent variable.

Table 8. Causality test

Null		**hypothesis**:
F-Statistic	Prob	
Dependent variable: LnGDP		
LnAGI		
4.739607		0.0935 LnMAG
3.658918		0.1605 FOP
2.898178		0.2348 LnCAP
3.685393	0.1584	
Dependent variable: LnAGI		
LnGDP		
0.286837		0.8664 LnMAG
0.788124		0.6743 FOP
2.101143		0.3497 LnCAP
1.644045	0.4395	
Dependent variable: LnMAG		
LnGDP		
14.26872		0.0008 LnAGI
9.226187		0.0099 FOP
7.761286		0.0206 LnCAP
3.158354	0.2061	
Dependent variable: FOP		
LnGDP		
3.773380		0.1516 LnAGI
3.296478		0.1924 LnMAG
2.615176		0.2705 LnCAP
6.903409	0.0317	
Dependent variable: LnCAP		
LnGDP		

1.753603			0.4161	LnAGI
3.629851			0.1629	LnMAG
0.823262		0.6626		
FOP				
1.985459		0.3706		

Source: Author, estimation from Eviews 10

4.8 Robustness Test of the Estimated ARDL Model

The autocorrelation LM test as well as the correlogram and regression residuals support the absence of autocorrelation. In addition, the white and ARCH tests confirm the absence of heteroskedasticity of the residuals while the Jarque-Bera test shows that the residuals follow a normal distribution. Finally, the Ramsey test indicates that there are no functional shape problems in the model. We also note that the probabilities are all greater than 5%, so our model is statistically validated (Table 9).

Table 9. Results of the robustness tests

LM Breusch-Godfrey Serial Autocorrelation Test			
Null hypothesis: Absence of autocorrelation			
F-statistic	2.584945	Prob. F(2,16)	
0.1065			
Obs*R-square	6.593658	Prob Chi-square (2)	
0.0370			
White's Heteroskedasticity Test			
Null hypothesis: Absence of heteroskedasticity			
F-statistic	0.507232	Prob. F(8.118)	0.8354
Obs*R-squared	4.967035	Prob.	Chi-Square(8)
0.7611			
Scaled explained SS	2.460532	Prob.	Chi-Square(8)
0.9635			
			ARCH
Heteroskedasticity Test			
Null hypothesis: Absence of heteroskedasticity			
F-statistic	0.785333	Prob. F(4.18)	
0.5495			
Obs*R-squared	3.417506	Prob. Chi-Square(4)	
0.4905			
JarqueBera normality test			
Null hypothesis: Normality			
Jarque-Bera	0.171865		Prob
0.917656			
Ramsey's RESET test			
	Null hypothesis: The model is correctly specified		
T-statistic	1.046480		Prob.
0.3100			
F-statistic	1.095121		Prob.
0.3100			

Source: Author, estimation from Eviews 10

5. Discussion

In the short term, manufacturing agriculture has a positive and significant influence on economic growth. Thus, an increase of 1% leads to an economic growth of 0.569747%. This means that manufactured agricultural raw materials have an important impact on economic development because they provide greater added value. This could mean that the current reforms of Ivorian agricultural policy have been relatively effective in promoting industrial agriculture as an engine of economic growth. These results are confirmed by the empirical study conducted by Akilou (2009) which establishes a positive and significant association between gross domestic product and processed agricultural products.

The food-crop production has a negative and significant effect on economic development. Thus, a 1% increase in the food products causes a 0.005002% drop in economic growth. In fact, food production is extensive. It is done on small plots and is intended for self-consumption. Food crop agriculture still uses rudimentary tools and is therefore not competitive. The government policies and investments has been disproportionately focused on the agricultural exports at the expense of food-crop production. Specifically, the government has introduced policies that have not encouraged the marketing of food products. The food sector has been marginalized according to Kouakou (2017).

Agricultural investment has a positive and significant effect on economic growth. A 1% increase in this variable leads to a 0.223888% increase in GDP. This result is consistent with stylized facts regarding the positive contribution of capital in the neoclassical theory of economic growth. It is well established in the development economics literature that capital formation is a key determinant of economic growth (Awokuse, 2009).

Cash crop production exert a positive but not significant relationship on economic growth. For example, a 1% increase in exports causes a small 0.088857% change in economic growth. In fact, exports of raw agricultural products do not generate significant value added and major technology transfer. Moreover, the external shocks of international prices negatively affect these cash products. Awokuse (2009) argues that the evidence for agricultural exports as an engine of growth in Africa is quite weak and the agricultural exports coefficient is not statistically significant for sub-Saharan African.

In the long term, our estimates show that manufacturing agriculture positively and significantly influences economic growth. Thus, a 1% increase in this variable leads to a 0.670476% increase in economic growth. This finding supports recent governmental efforts to promote agriculture manufacturing in Ivory Coast.This result is consistent with those obtained by Olajide et al (2012) in their studies on agricultural resources and economic growth in Nigeria. According to these authors, there is a positive causality between gross domestic product and agricultural manufacturing.

On the other hand, the subsistence crops has a negative and significant effect, hence a 1% increase in this indicator causes a slight decline of 0.005886% in economic growth. This can be explained by the non-performance and virtual disappearance of the food crop sector in favour of export agriculture in Ivory Coast. However, the marginalization of the food production sector has been driven by domestic policies that intentionally promoted cash crop development while marginalizing the food-crop sector. Moreover, the causality remains positive between agricultural investment, cash crop production and economic development, even if that of cash crop for export in the raw state is insignificant. A 1% increase in agricultural investment and exports of raw agricultural products leads to a variation in economic growth of 0.133823% and 0.104566% respectively. This result is in line with that of Kouakou (2019). Indeed, the results obtained revealed a positive relationship between agricultural cash crops such as cocoa and coffee, agricultural investment and economic growth. On this basis, the study suggested increasing capital inputs by giving special incentives to farmers and providing adequate financing.

6. Conclusion

Ivory Coast is a developing country. Since its independence, it has experienced strong growth thanks to domestic demand, which increased sharply after the exploitation of the agricultural sector from 1960 to 1970. Nevertheless, this agriculture is dependent on exports and is very sensitive to external shocks (deterioration of raw material prices).

Therefore, the main objective of this study was to assess the contribution of this sector to economic growth.

From the results, we can retain that, manufacturing agriculture has a positive and significant influence on economic growth. They provide greater value added. Of course, this could mean that the current reforms of Ivorian agricultural policy have been relatively effective in promoting industrial agriculture as an engine of economic growth. Conversely, the food-crop production has a negative and significant effect on economic development. In fact, food production is extensive. It is done on small plots and is intended for self-consumption. Indeed, the government policies and investments has been disproportionately focused on the agricultural exports at the expense of food-crop production. Neverthless, agricultural investment has a positive and significant effect on economic growth. This result is consistent with stylized facts regarding the positive contribution of capital in the neoclassical theory of economic growth.

Finally, cash crop production exert a positive but not significant relationship on economic growth. Exports of raw agricultural products do not generate significant value added. Moreover, the external shocks of international prices negatively affect these cash products.

As a recommendation, to improve this dynamism, the Ivorian State must set up an adequate information system to help bridge the gap between local farmers and research institutions for the dissemination of innovation.

In addition, it must promote sustainable growth of the agricultural sector by addressing the thorny issues of raw material processing, water management and climate change.

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