MIGRANTS' REMITTANCE, AGRICULTURAL PRODUCTION AND ECONOMIC GROWTH IN NIGERIA

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Introduction

- Remittance is the portion of migrant workers' earnings sent from the country of employment to the migrants' country of origin.

- Remittances has been a source of foreign ecchange, vital in poverty reduction, and contributes to improved standard of living all of which contribute to increased economic growth.

- Agriculture deals with the provision of food, livestock, fisheries and forestry. It serve as source of food, provision of employment,,source of foreign exchange and provider of raw materials for industries and contributes to the growth of the Nigerian economy.

- In terms of employment, the agricultural sector employs more than 36% of Nigeria labour force (ILO, 2019).

- Very few studies have researched on the relationship between the three key variables; migration remittance, agricultural production and economic growth which is the major focus of this study

Methodology

- The study was carried out in Nigeria comprising of 36 states including the Federal Capital Territory.

- The study employed annual time series data from World Development Indicator (WDI) with the key variables being Remittance, Gross Domestic Product (GDP) and Agricultural Production.

- The data were analyzed using the Augmented Dickey Fuller Test (ADF), Error Correction Model (ECM) and Toda-Yamamoto test.

- The Error Correction Model (ECM) is stated as follows:

$$\Delta Y_t = a_0 + a_1 \Delta X_i + a_2 u_{t-1} + \varepsilon_t$$
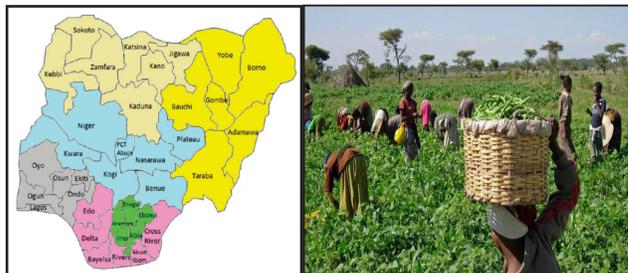
Results and Discussion

- The Augmented Dickey Fuller (ADF) test result indicated that all the variables were stationary at first difference that is integrated of order one.

- There is co-integration among the variables used for data analysis.

Table 1: Augmented Dickey Fuller Test

Variables	Test Stat.	Critical Value (5%)	Critical Value (10%)	P-Value	Integrated order
LNRGDP	-4.217	-2.968	-2.623	0.0027	I(1)
LNREM	-6.346	-2.968	-2.623	0.0000	I(1)
LNAGRP	-4.388	-2.968	-2.623	0.0017	I(1)
LNREXCHR	-5.064	-2.968	-2.623	0.0003	I(1)
INFL	-4.436	-2.968	-2.623	0.0015	I(1)

RGDP = Real Gross Domestic product, REM = Remittance, AGRP = Agricultural Production, REXCHR = Real Exchange Rate, INFL = Inflation

- Remittance has a positive and significant impact on economic growth.

- Agricultural Production has a positive and significant impact on economic growth.

- Inflation has a negative and significant impact on economic growth.

Table 2: Impact of Remittance on Economic Growth (ECM)

Variables	Coefficient	T-Statistics	Probability
D(DGP(-1))	-0.0085	-0.0863	0.9334
D(DGP(-2))	-0.2874	-3.7353	0.0057
D(AGRP)	1.7418	6.1188	0.0000
D(AGRP(-1))	0.0705	0.8602	0.4147
D(AGRP(-2))	0.3968	6.0506	0.0003
D(EXCHR)	0.3091	8.5756	0.0000
D(EXCHR(-1))	0.7762	9.4019	0.0000
D(EXCHR(-2))	0.5447	7.1360	0.0001
D(INFL)	0.0013	1.7705	0.1146
D(INFL(-1))	-0.0099	-8.3400	0.0000
D(INFL(-2))	-0.0073	-6.2871	0.0002
D(REM)	0.0436	2.8358	0.0220
D(REM(-1))	0.1586	10.7488	0.0000
D(REM(-2))	0.0930	3.7146	0.0004
CointEq(-1)*	0.6589	-9.3535	0.0000
R²	0.9839		

RGDP = Real Gross Domestic product, REM = Remittance, AGRP = Agricultural Production, REXCHR = Real Exchange Rate, INFL = Inflation

Table 3: Impact of Remitance on Agricultural Production (ECM)

Variables	Coefficient	T-statistics	Probability
D(AGRIC(-1))	-0.1182	-2.6656	0.0286
D(AGRIC(-2))	-0.2539	-6.4520	0.0002
D(REM)	-0.0326	-4.4059	0.0023
D(REM(-1))	0.0959	-13.6988	0.0000
D(REM(-2))	-0.0542	-7.5535	0.0001
D(GDP)	0.5018	14.7661	0.0000
D(GDP(-1))	0.0595	1.1177	0.2961
D(GDP(-2))	0.1729	3.9363	0.0044
D(INFL)	-0.0011	-2.6568	0.0289
D(INFL(-1))	0.0058	13.9122	0.0000
D(INFL(-2))	0.0045	9.9219	0.0000
D(EXCHR)	-0.1858	-12.1866	0.0000
D(EXCHR(-1))	-0.4666	-19.5977	0.0000
D(EXCHR(-2))	-0.3347	-12.0073	0.0000
CointEq(-1)*	-0.8062	-20.3094	0.0000
R²	0.9958		

RGDP = Real Gross Domestic product, REM = Remittance, AGRP = Agricultural Production, REXCHR = Real Exchange Rate, INFL = Inflation

- Remittance has a negative and significant impact on agricultural production.

- Gross Domestic product has a positive and significant impact on agricultural production.

- Exchange rate has a negative and significant impact on agricultural production.

Table 4: Toda-Yamamoto (Causal Relationship) Test

Hypotheses	Chi-Square	P-Value
EXCHR does not cause GDP	2.1927	0.3341
AGRP does not cause GDP	3.4247	0.1804
INFL does not cause GDP	0.4655	0.7923
REM does not cause GDP	7.1723	0.0277
EXCHR, AGRP, INFL and REM do not jointly cause GDP	29.2974	0.0003
GDP does not cause AGRP	0.1373	0.9336
EXCHR does not cause AGRP	10.9385	0.0042
INFL does not cause AGRP	0.2481	0.8834
REM does not cause AGRP	6.4461	0.0398
GDP, EXCHR, INFL and REM do not jointly cause AGRP	30.6654	0.0002
GDP does not cause REM	5.5651	0.0619
EXCHR does not cause REM	0.8541	0.6524
AGRP does not cause REM	7.1179	0.0285
INFL does not cause REM	2.6931	0.2601
GDP, EXCHR, AGRP and INFL do not jointly cause REM	15.9485	0.0431

- Remittance, agricultural production, inflation and real exchange rate all jointly affect Gross Domestic Product.

- Remittance, GDP, Inflation and real exchange rate all jointly affect agricultural production.

- GDP, agricultural production, inflation and real exchange rate all jointly affect remittance.

Conclusion

- There exist a positive and significant relationship between remittance and economic growth but remittance has a negative impact on agricultural production.

- The study therefore recommends that there is need to ensure that remittances received are put into productive use most especially in the agricultural sector.

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