

AGRICULTURAL GROWTH AND EXTERNAL DEBT MANAGEMENT IN DEVELOPING NATIONS: EVIDENCE FROM NIGERIA (1960-2005)

EHIRIM, N. C.

Department of Agricultural Economics

Federal University of Technology Owerri, Imo State, Nigeria

e-mail: ehinadykus@yahoo.com

Abstract

Agricultural revenue has not been able to sustain the external debt in Nigeria despite the effort made by the government in facilitating its projects using the external funds. This study adopted external debt elasticity indices as well as an ordinary least square analysis and error correction mechanism to isolate the effect of agricultural output and other macroeconomic variables on external debt using a time series data from CBN and Federal Bureau of Statistics. The result showed that the External debt elasticity indices painted a dark picture at the middle stage of Nigerian economy. Instead of shrinking the volume of the debt, the highly elastic external debt indices indicated that a slight increase in real agricultural GDP from 1960 to 2005 magnified the debt at a more than proportionate size. There was an evidence of massive food importation. Agricultural output, real government expenditure, food import, and external reserve each has a direct effect on increasing external debt volume while real private investment expenditure decreases with increase in external debt. It was suggested that agricultural activities in the country be privatized to increase income and food sufficiency and external funding should be used effectively in productive economic activities especially agriculture rather than projects that are not technically, economically and financially viable. It is important to set up an anti-corruption mechanism on debt control to ensure that debt services are sustainable.

Keywords: External debt management, External debt volume, Agricultural GDP, Agricultural growth, Debt elasticity indices.

Introduction

The capacity of agricultural sector to fulfill its traditional role of supporting the Nigerian fiscal policies has been constrained by various socio-economic and structural factors, which include the civil war of late 1960, the severe draught of the late 1970 to early 1980, the oil boom that drafted away government's attention from agriculture in early 70's and distortion in relative prices of primary product due to progressive appreciation of naira orchestrated by the oil boom (CBN, 2000). Moreover the problem of data availability, adequacy and reliability are particularly acute in Nigerian context (Okongwu, 1986). In 1960, for instance, agriculture and crude oil export contributed to 89% and 2.7 % respectively of our foreign exchange, while the reverse became the case in early 80's with agriculture and crude

oil export accounting for 2.5% and over 90% respectively of those earnings, which totaled ₦14,250 and ₦11,574 in 1980 and 1981 respectively.

In fact, Palm Oil and Vegetable Oils were imported to supplement local production. Up to the early 1970s, these commodities were exported to appreciable quantities. From 1972, however, the export quantities of these product started to drop that in 1973, palm oil export was negligible. It picked up again in 1975 and dried up completely in 1979. There was no export of raw cotton from 1974 to 1976. Export resumed in 1977 and declined since then. Groundnut and groundnut oil behaved in the same manner thus leaving the role of economic growth to the petroleum sector (CBN, 2000). If the civil war influence is removed, the cyclical swings in oil receipts showed that the sector exhibited an increasing and dominant influence on government revenue from 1974 as it grows from 1% before 1960 to over 80% in 1975. The vagaries of the oil sector has allowed some important discoveries: that the excessive reliance on crude petroleum export and essential replacement of the previous composite vector of “traditional” primary export with single, though more lucrative, crude oil vector does not provide secure foundations for economic development in Nigeria.

This trend continued to threaten economic growth despite the government intervention programmes which marked the supply of required inputs and capital allocation to farmers (Anyanwu et al., 1997). Though some of the programmes seemed to improve the economy, they did not remove the high poverty situation that is ravaging the economy. The situation became worst when Nigeria’s agricultural products lost competitiveness in the global market in 1985 to 1990. The international price of food product fell below their corresponding domestic prices as traditional export disappeared and gave way to some cheap import such as rice, maize and wheat. Output continued to decline despite government effort, living the economy at the mercy of foreign dependency. It is this act of dependency that led to their external borrowing.

The external debt in Nigeria started since 1958 when a sum of US \$28 was borrowed for railway construction to aid the transportation of agricultural raw materials from hinterlands to the sea for onward shipment to Europe. Thereafter more loans were contracted though very low as the economy was able to withstand its shock at that time (CBN, 2005). The astronomical rise in external debt stock in Nigeria, according to World Bank (1989), was triggered off by the decline in international oil prices in the early 80’s. The decline, according to Omar (1985), was due to a downturn in the world economy and fall in demand for energy in the international market. The revenue from crude oil dropped, Nigerian reserve contrasted and more loans were contracted to finance their deficits. Nigeria became a serious victim of external debt shock. It became obvious that the economy is dependent mainly on crude oil revenue and foreign policies. CBN (2005) noted that the external debt crisis worsened with the entry of state government into external loan contractual obligations with Paris and London Clubs. Most of the loan repayment was not accounted for and a general rise in recapitalization of accrued arrears became eminent, thus culminated to a heavy debt stock (Anyanwu et al., 1997).

The heavy debt overhang triggered off two major problems on agriculture. First, returns were used to service the external debt and foreign investment in agriculture dropped drastically as the uncertainties in foreign policies could not give enough room for a long term plan. The debt could not finance agriculture neither is agriculture ready to sustain the debt. This vicious cycle of debt burden has become a primary concern to Nigeria and most developing nations that contracted the debt. The question is what level of agricultural output

is required to clear this debt stock and its interest to give room for a smooth economy? This study used a time series data to give answers to this central issue. The study tested the hypothesis that agricultural output does not have a significant effect on external debt reduction in Nigeria. It is shown in the study that a good agricultural performance reduces the heavy external debt burden on the economy.

Methodology

Nigeria is an African country situated on latitude 4⁰.14' and 3⁰ 15' East of Greenwich. It has a population of over 140 million people with about 150 persons per square kilometer (NPC, 2006). It has six major ecological zones, which include mangrove and rainforest zones, others are forest, guinea Sudan and Sahel savannah zones in the north. Agriculture is a dominant economic activity, but it has large deposits of crude oil especially in the southern part and enough solid minerals deposits.

Annual data were obtained from Central Bank of Nigeria statement of accounts and statistical bulletin which contain data on the volume of external debt stock, volume of real agricultural gross domestic product, level of aggregate importation of food and real aggregate non-agricultural gross domestic product, real investment expenditure, real government expenditure and external reserves. Other sources of data are the Bureau of Statistics and National Population Commission as well as Debt Management Office. The data are mainly time series in nature, running annually for 45 years from 1960 to 2005.

External Debt elasticities were estimated at 5 years interval for both agriculture and non agricultural outputs. The ratio of changes in mean external debt to slight changes in mean output of agriculture or non-agricultural gross domestic product within the study period explains the elasticity of external debt to a change in output. This is expressed as:

$$\xi_d = \gamma(\text{Mean } A_{GDP}) / \lambda_a(\text{Mean } E_{XD}) \text{ -----}1.0$$

Where ξ_d is the elasticity of external debt to change in agricultural GDP, γ is the percentage change in average external debt of every 5 years interval and λ_a is the change in the mean output of agricultural output within every 5 years. Mean A_{GDP} is the mean agricultural GDP within 5 years interval.

In the same way, the elasticity of external debt with respect to a slight change in aggregate output of non agricultural sector including services in the Nigerian economy is estimated thus:

$$\xi_d = \gamma (\text{MeanNA}_{GDP}) / \lambda_n (\text{Mean } E_{XD}) \text{ -----}2.0$$

Where, ξ_d is the elasticity of external debt to change in agricultural GDP, γ is already defined; λ_n is the change in the mean output of non-agricultural output within every 5 years. Mean NA_{GDP} is the mean non-agricultural GDP within 5 years interval.

The factor that explains the variation in external debt volume is isolated using an Ordinary Least Square Regression Analysis. However, the data used for this analysis is a time series data and may constitute a risk of spurious causality result if subjected to ordinary least square regression analysis (Omonona et al, 2004; Omotor, 2006; Ehirim, et al., 2007). In examining the causality test procedure, attention is focused on the need to examine the time series properties by testing for the unit root and co-integration. This means that the variables are stationary or they are co-integrated, which means they are integrated of the same order and errors are stationary. This also means that the model defines a long equilibrium relationship among the co-integrated variables, hence reducing the risk of spurious causation results.

The stationarity (unit root) properties of the included variables is done by considering the first order autoregressive process AR (1) using Augmented Dicker Fuller (ADF) test (Dicker and Fuller, 1979 and 1981; Engle and Granger 1987 and Johansen, 1988). The null hypothesis to be tested in this case is that there is no relationship between the stochastic processes that generated the series with time. The ADF is specified when t is autoregressive to eliminate serial correlation of error and it takes the form

$$\Delta X_t = \alpha + \delta X_{t-1} + \sum \lambda X_{t-1} + 1 + \xi \text{-----} 2.0$$

This is followed by the investigation of the order of integration by applying the maximum likelihood of Johansen and Juselius (1990) and Engle and Granger (1987) test, to examine the long run equilibrium relationship among variables. If co-integration is established, it suggests the presence of causality between the external debt (E_D), agricultural growth and other Macro Economic variables at least in one direction. The causal relationship can be examined with Granger-causality test as:

$$E_{Dt} = \alpha + \sum \beta_i E_{Dt-1} + \sum \gamma X_i + \mu \text{-----} 3.0$$

Where, E_D is the volume of external debt measured in naira, X_i are the level of aggregate agricultural output and other Macro Economic variables such as real government expenditures, real investment expenditure, aggregate food import, non-agricultural output and external reserves all measured in naira value. E_{Dt-t} and μ are the lagged external debt volume and stochastic (error) term respectively. Granger causality test is related to γ conditional on optimal lag lengths a,b,c and d (Jackson et al., 1998). A priori, the agricultural and non-agricultural output levels are expected to have an inverse effect on the external debt volume in Nigeria. The An E-view software was used to run this causality and the F-statistics or Wald statistics estimate established was used to test the null hypothesis that the included variables do not have a significant explanation to the variations in external debt volume from 1960 to 2005.

Result and Discussion

i. External Debt Response to Agriculture and Non Agricultural GDP in Nigeria

The degree of responsiveness of external debt due to a slight change in agricultural and non-agricultural output is shown in Table 1.

Table 1. External Debt Elasticity Indices

Boundaries Year	Mean E_{XD} mNaira	Mean A_{GDP} mNaira	Mean NA_{GDP} mNaira	ΔE_{XD} mNaira	ΔA_{GDP} mNaira	Elastic Index Ratio	ΔNA_{GDP} mNaira	Elastic Index Ratio
Before 1960	94.5	19500.0	14300.0	n.a	n.a	n.a	na	na
1960-1964	122.7	20120.0	15920.0	28.2	620.0	9.4	1620	2.6
1965-1969	162.8	18420.0	20780.0	40.1	-1700.0	-3.9	4860	1.07
1970-1974	243.7	22180.0	46900.0	80.9	3760.0	2.4	26120	0.48
1975-1979	790.6	19740.0	69300.0	547.0	-2440.0	-20.4	22400	4.70
1980-1984	7680.8	24140.0	48883.9	6890.1	4430.0	38.8	-20416.1	-29.58
1985-1989	106778.4	30731.0	43507.9	99097.7	6561.5	47.5	-5376	-117.32
1990-1994	490578.0	37190.2	56697.7	383799.6	6377.3	17.3	13189.8	11.86
1994-1999	1028101.8	43638.3	66324.9	537523.7	6529.1	6.24	9627.2	6.45
2000-2005	3915031.7	53274.7	78903.6	2886929.9	9636.4	4.08	12578.7	14.81

Source: Analyzed from CBN Annual statistical Data from 1960 to 2005 Legend: Mean E_{XD} = Mean external debt, Mean A_{GDP} = Mean Real Agricultural GDP, Mean NA_{GDP} =

Mean real Non-Agricultural GDP, ΔE_{XD} = Change in External Debt, ΔA_{GDP} = Change in Real Agricultural GDP and Change in Real Non-Agricultural GDP.

It is evident from Table 1 that real agricultural output fluctuated within the period of study. It rose appreciably from 1960 to 1964 and later dropped by less than 9 percent in 1969 due to the effect of the civil war. It rose again and fell slightly in 1979 due to some neglect suffered by the agricultural sector at the beginning of crude oil boom and severe drought effect on food production (Anyanwu et al., 1997), coupled with the fall in the world economy, which affected some countries that depended on the developed economies. Surprisingly, the sector picked up again gradually and rose progressively from 1980 till 2005.

In the same way, the real non-agricultural GDP increased progressively from 1960 to 1979. The high marginal increase in non-agricultural revenue was from crude oil production and sale. It rather made the economy stupid and lazy as other sectors were abandoned due to excess crude sales. The proceeds were rather diverted to ‘white elephant’ projects such as “Udorji Awards” and FESTAC festivals of 1973 and 1977 respectively. The revenue dropped by 29.5 percent in early 1980. There was a decline in the world demand and prices of fuel and energy in early 80’s. The severity of this decline led to a further decline in real non-agricultural GDP by 37.2 percent between 1985 and 1989. Omar (1985) noted that this period marked a period of a serious economic down turn in Nigeria and other Third World nations as fiscal deficits increased tremendously with a reduction in total capital formation. Expanded external debt volume became an only survival strategy for Nigerian economy, which not only “crowded out” private investment especially in agriculture but also cut down the number of projects, thus creating room for some selective prestigious projects of doubtful social and economic relevance in some regions of political interest in Nigeria (Anyanwu et al., 1997).

The External debt elasticity indices painted a black picture of the economy at the middle stage of Nigerian economy. Instead of shrinking the volume of the debt, the highly elastic external debt indices indicated that a slight fall in real agricultural GDP from 1960 to 2005 magnified the debt at a more than proportionate size. Further twists in the direction of the curve were observed in 1965 to 1969 and 1975 to 1979 with negative indices of 3.9 and 20.4 respectively. These were due to sharp falls in agricultural output within these intervals from the proceeding period of intervals resulting to further increase in external debt. There was an evidence of massive food importation from 1960 to 1994 to ensure sustainability, thus leading to the collapsed agricultural sector to sustainable debt management in 1980 to 1984 and 1985 to 1989.

ii. The Unit Root/Stationary Test and Co-integrating Vector

The factors that determine the level of variation in external debt volume within the period under survey is isolated using the ordinary least square multiple regression analysis by examining the causality test procedures. The time series properties of all the included variables obtained from Augmented Dickey-Fuller (ADF) test is shown in Table 2.

Table 2. The Unit Root/ Stationary Test Result

Variable	At level $I(0)$		At first Difference $I(1)$		At second Difference $I(2)$	
	ADF	Remark	ADF	Remark	ADF	Remark
External Debt	-6.047	Stationary	—	—	—	—
Real Agric GDP	-2.960	Non Stationary	-4.960	Stationary	—	—
Real non-agric GDP	-3.162	Non Stationary	-2.208	Non Stationary	5.756	Stationary
Real Govt. expenditure	-4.073	Stationary	—	—	—	—
Food Import	-0.918	Non Stationary	-7.749	Stationary	—	—
External Reserve	-6.158	Stationary	—	—	—	—
	-2.486	Non Stationary	-3.258	Non Stationary	3.677	Stationary

Source: Result Print-out from E-view software, 2007. Makinnon Critical value @ 99% confidence interval is 3.66

It is clear from the result that at levels $I(0)$, the Augmented Dicker Fuller statistics for all the included variables are less than the Makinnon critical value of 3.66 except the external debt, real investment and level of food importation. The null hypothesis is thus accepted that all the affected variables are non stationary at levels $I(0)$. A particular level of differencing is sort when all the included variables are stationary to preclude further diagnosing the variable for co-integration. At first difference, real non agricultural GDP and level of external reserve further demonstrated non stationarity, hence calling for a diagnosis at second difference. At this level, the two variables that were non stationary at first difference became stationary, hence suggesting a confirmation of the level of stationarity result of the variables using both Johansen and Augmented Engle-Granger (AGE) (1987) test. The test also helps to show at least univariate causation between the series. It is at this level that co-integration test and error correction vector are estimated. The result of Johansen test for a co-integration assuming a test assumption of linear deterministic trend in the data is presented in Table 3.

Table 3. Test for the Number of Co-integrating Vector using Johansen Procedure

Hypothesis		Johanson (AGE) Test		Critical Values		Remarks	Hypothesized No. of CE(s)
H_0	H_A	Eigen value	Trace Statistic	@5%	@1%		
$K \neq 0$	$K = 1$	0.995	564.673	124.24	133.57	Significant @ 5 and 1%	None**
$K \leq 1$	$K = 2$	0.984	333.721	94.15	103.18	Significant @ 5 and 1%	At most 1**
$K \leq 2$	$K = 3$	0.864	155.077	68.52	76.07	Significant @ 5 and 1%	At most 2**
$K \leq 3$	$K = 4$	0.629	74.000	47.21	54.46	Significant @ 5 and 1%	At most 3**
$K \leq 4$	$K = 5$	0.400	31.938	29.68	35.65	Significant @ 5% only	At most 4*
$K \leq 5$	$K = 6$	0.174	9.932	15.41	20.04	Not Significant	
$K \leq 6$	$K = 7$	0.039	1.711	3.76	6.65	Not Significant	

Source E-view print-out 2007. *(**) = rejection of null hypothesis @ 5% (1%) significant level respectively. The log likelihood ratio (trace statistics), indicates 5 co-integrating equation (s) at 5 % significant level.

The result revealed that the trace statistics using the likelihood ratio at 5 percent significant level rejects the null hypothesis that there is less than or equal to 4 co-integrating vectors. The alternative hypothesis is thus accepted that there are 5 co-integrating equation at 5 percent significant level. This implies that at least 5 variables will have a long run relationship with external debt as causality exists between external debt and some macro economic variables and agricultural and non agricultural real GDP.. iv. **The Predictors of External Debt Volume and Error Correction Mechanism**

The Ordinary least square regression and the error correction vector estimates in Table 4 revealed that at 1 percent significant level, all the included variables in the model have strong explanation to the variation in external debt except the volume of external reserve. Contrary to a priori expectation, the foreign reserve has a direct effect on external debt volume, but the insensitive behaviour of external reserve to external debt volume in this regard is disturbing. It reflects the fact that despite high stable foreign reserve, Nigeria cannot service its debt as this is channeled to other need in the economy. It gives a wrong perception to external debt control as the picture Nigerian economy displays to the foreign economy is not exactly what debt and economic planning unit is having (Soludo, 2006).

Table 4

Variables	Least Square Estimate			Remarks
	Co-efficients	Standard Error	/t-value/	
Constant	-52895.94	—	—	
AGDP _{t-1}	0.0096	9.0 X 10 ⁻⁴	10.67	Significant @ 1 %
NAGDP _{t-1}	0.099	0.0123	8.05	Significant @ 1 %
Real Private INV _{t-1}	-0.0746	0.0085	8.78	Significant @ 1 %
Real Govt Expt _{t-1}	0.1886	0.031	6.08	Significant @ 1 %
Food Impt _{t-1}	0.9762	0.211	4.73	Significant @ 1 %
External Reserve	7.44 X 10 ⁻⁵	0.0023	0.032	Not Significant
ECM _{t-1}	—	1.2425	2.12	Significant @ 5 %
F-Statistics	-2.635	—	—	Significant @ 1 %
R ²	5.359	—	—	
Adj R ²	0.749	—	—	
N	0.609			
	46			

Source: E-view result print out 2007

Real government expenditure no doubt increases the external debt volume as it expands the fiscal deficits. It is surprising to note that agricultural and non-agricultural GDP have significant and increasing effect on external debt. This could be because agriculture and non-agriculture revenues were not used in servicing the debt or were diverted to other use by corrupt measures. The revenue from these sectors were supposed to multiplier effect on private investment and productivity and output so as to decrease the debt volume but the reverse is the case here. This is further explained by the inverse effect of real private investment expenditure. A percentage reduction in private expenditure resulted to about 0.19 percent increase in external debt volume in Nigeria. Similarly a unit rise in food import increases the debt volume by about 0.97 percent. Nigeria has through this demonstrated that most external debt contracted were used to solving problems of food insecurity and hunger

through expanded food importation. A scenario that does not improve production and sustainable economic management of any society

A co-efficient of multiple determinations of about 0.749 and the F-statistics of about 5.359 showed that the model is well fitted. The F-value is higher than the theoretical value of ----, hence the null hypothesis that the entire included variables do not have a significant effect with the external debt is rejected, thus accepting the alternative hypothesis that the entire included explanatory variables have significant explanation to the variation in external debt volume. Further more the error correction vector has a negative estimate and it is significant at 5 percent as shown in Table 4. The negative estimate is consistent with Omotor (2006) finding. Again, it showed that the stochastic error process generated by the series and its movement with time can be corrected with a speed of adjustment of 2.63 for a 2 years lag, as shown in the result.

Conclusion

Agricultural output over the years has claimed to sustain Nigerian economy which includes her debt management. It is unfortunate that despite the several external debt servicing and control measures, the external debt was increasing beyond the control and the consequences are so much on the tax payers especially the poor. A look at agricultural performance and external debt control has revealed that despite the increasing revenue by agricultural sector, external debt were gradually moving out of control as private investment especially on agriculture was reducing (crowding out), food importation increases, while government expenditure expanded and external debt continues to increase. It was also shown that most revenue generated was diverted to other uses such as distressed projects other than productive economic activities and external debt control. Therefore instead of decreasing with increase in revenue from agricultural sector, external debt was finding its route to an unending crisis in the poor nation so much so as to attract external sympathy.

Policy Recommendations

Base on these findings, it is recommended that:

- i. Agricultural activities in the country should be privatized and with serious encouragement on private sector participation to increase income and food sufficiency.
- ii. External funding should be used effectively in productive economic activities especially agriculture. The agricultural projects selected should undergo technical, economic and financial viability test to ensure sustainability and avoid failure or distress
- iii. The external reserve should be ploughed back to production to set up a multiplier effect on revenue
- iv. It is important to set up an anti-corruption mechanism on debt control to ensure that debt services are sustainably maintained in the economy.

Ehirim, N. C. Agricultural growth and External debt management in developing nations: Evidence from Nigeria (1960-

References

Anyanwu, J.C., A. Oyefusi, H. Oaikhenan and F.A. Dimowo (1997) *The structure of Nigerian Economy (1960-1997)* Joanee Educational Publishers LTD. Onitsha Anambra State, Nigeria.

Central Bank of Nigeria (2000) *The Changing Structure of Nigerian Economy and Implication for Development.* Lagos. Realm Communication, Lagos State.

Central Bank of Nigeria (2005) *Annual report and Statement of Account, 2005.* Abuja

Dickey, D.A. and W.A. Fuller (1979) "Distribution of Estimators for Autoregression time series with unit-root" *Journal of American Statistical Association* 79. 355-367

Dickey, D.A. and W.A. Fuller (1981) Likelihood Ratio Statistics for Autoregressive Time series with unit-root *Econometrica*. 49: 1057-72

Ehirim, N.C., M.A.Y Rhaji and D. P. Nguzet (2007) "Determinants of Groundnut Supply in Nigeria 1960-2005 Response" *International Journal of Agriculture and Rural Development*, Vol 10 No 2. pp. 34.

Engle, R.F. and C.W.J. Granger (1987) Co-integration and Error Correction Representation, Estimating and Testing. *Econometrica* 55, pp.251-276

Jackson, P. M., M. D. Fethi and S. Fethi (1998) "Co-integration, and Causality in Wagner's Law: A test for Northern Cyprus (1977-1996)" Paper presented at second international congress on Cyprus studies; Eastern Mediterranean University, Gazim Agusa, Turkish Republic of Northern Cyprus 24-27

Johansen, S. (1988). Statistical Analysis of Co-integration Vectors. *Journals of Economic Dynamics and Control* 12, 231-254.

Johansen, S. and R. Juselius (1990) Maximum Likelihood Estimation and Inference on co-integration with Application to Demand for Money. *Oxford Bulletin of Economics and Statistics* 52.

Okonjo-Iwela, N. (2006) Debt Relief, a Lesson for Developing Nations. *Vanguard Newspaper*, 24th May 2006.

Okongwu, C. S. P. (1986) *The Nigerian Economy: Anatomy of a Traumatized Economy with Some Proposal for Stabilization. Issues in Nigerian Development.* Fourth Dimension Publishing Company Limited. Enugu, Nigeria. pp. 32-36

Omar, O (1985) 'Austerity: Opportunity to Avoid Past Mistakes'. *Daily Times*, February 8, 1985.

Omonona et al, (2004) Determinants of Output Supply Response of Selected Cereals in Nigeria. *Nigerian Journal of Agriculture, Food and Environment* 1(1): pp. 52-62

Omotor, D. (2006) Causality Test of the relationship between Domestic savings and Economic Growth: Evidence from Nigeria. *Oceanic Bank Economic and Business Journal*, Vol. 1, Issue 1.

Soludo, C. C. (2006) Deep Poverty and Inequality: Towards an Exit Strategy for Nigeria and Africa. *Enugu African Institute for Applied Economics (AIAE)*.

World Bank Report (1989) *Trend in Developing Economy*. Oxford University Press.