HOW RELIABLE ARE NIGERIAN PUBLISHED STATISTICAL DATA FOR DEVELOPMENT PLANNING? EVIDENCE FROM AN INDIRECT APPROACH

Aliyu A. Ammani

National Agricultural Extension and Research Liaison Services, Ahmadu Bello University, Zaria-Nigeria

ABSTRACT

The Johannesburg Declaration (2002) conceptualized "a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development—economic development, social development and environmental protection—at local, national, regional and global levels." However, it is the position of this paper that it will be extremely difficult to achieve whatever the advocates of sustainable development seek to sustain and/or develop, without quality socio-economic research that will generate intellectual inputs required to guide and inform sound policy making, planning and evaluation. Data is the most crucial input that determines the quality of research output which in turn determines the quality of policy, planning and evaluation. Over the years, development scholars have question the availability and reliability of Nigerian published statistical data. This paper set out to probe the reliability of published statistics in Nigeria. To achieve this objective, the study proposed an indirect approach using a *diagnostic study* to proof the unreliability of Nigeria's published data. Rather than directly testing the accuracy of the figures of the published data, which is a complex, expensive and herculean task, the study attempt to proof the unreliability of published data by demonstrating how the analysis of such data yield outrageous results that are virtually useless for most empirical and policy studies. The implications of these findings were highlighted and the paper recommended that empirical studies should be conducted to examine the quality and reliability of officially published statistical data in Nigeria.

Keywords: development, research, reliability, published statistics, Nigeria.

INTRODUCTION

The Brundtland Commission (WCED, 1987) defined sustainable development as the "ability to make development sustainable—to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs". Though this definition does not explicitly define sustainable development, the Johannesburg Declaration (2002) conceptualized "a collective responsibility to advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development—economic development, social development and environmental protection—at local, national, regional and global levels." However, it is the position of this paper that it will be extremely difficult to achieve whatever the advocates of sustainable development seek to sustain and/or develop, without quality socio-economic research that will generate intellectual inputs required to guide and inform planning and policy. Data is the most crucial input that determines the quality of research output which in turn determines the quality of policy, planning and evaluation. Thus, unreliable data will lead to research findings of questionable validity which will ultimately lead to significant errors in policy formulation, planning and evaluation.

Published data are usually relied upon for policy making, planning and evaluation. In fact, most governments have established agencies responsible for collecting and processing macroeconomic data utilized in guiding policy decisions and evaluation (Ariyo, 1996). Sources of secondary macro-economic data in Nigeria include *Governmental Agencies*: National Bureau for Statistics (NBS), Central Bank of Nigeria (CBN), National Agricultural Extension and Research Liaison Services (NAERLS) etc.; *International Agencies*: The World Bank, IMF, FAO, IFDC etc.; and several *Non-Governmental Organizations*, NGOs. Each of these agencies collects data for one purpose or the other. Most of the data is ultimately published and thus, made available for socio-economic research. From the foregoing it is clear that the crucial importance of secondary data for socio-economic research and analysis cannot be over-emphasized. As Ariyo (1996) observed, there is an implicit assumption that data from the formal sector are reliable, and many scholars rely rather uncritically on these published sources.

The results of research are only as good as the quality of data used: garbage in garbage out. Economic literature tend to insinuate that the more underdeveloped a country the less the accuracy of the data it published. In fact, several studies on international trade, for example, suggest that trade statistics provided by developed countries are more accurate than that of developing countries (Naya & Morgan, 1969; Yeats, 1990; Rozansky & Yeats, 1994; Makhoul & Otterstrom, 1998). In fact, an evaluation of the activities of the African Economic Research Consortium identified poor data quality as a key challenge to Africa's growth and development (Thorbecke, 1996). Yeats (1990) implicated lack of means for the collection of data and the systematic distortion of statistics amongst the factors responsible for the publication of un-reliable data by developing countries.

Over the years, development scholars have question the availability and reliability of Nigerian published statistical data. First, there is the absence of hard facts necessary for development planning in Nigeria since independence (Stolper, 1966). Second, there is the difficulty in obtaining data due to poor record keeping (Ogunfowora, 1993). Third, there is doubt casted on the accuracy of the available data (Morgan, 2008). Consequently, data collection efforts, and the reliability of the data itself, are clouded with uncertainty. Ammani et al (2010a), for example, expressed particular concern on the potential non-reliability of Nigerian published data on agricultural crop growth.

This paper is intended to question the reliability of officially published statistics in Nigeria for development planning. If the paper succeeds only in creating doubts in the minds of the readers on the reliability of indices of growth published in Nigeria, it will have achieved its purpose, as its significance lies in initiating debate on the reliability of such data and its implications for socio-economic research, and by extension sustainable development in Nigeria.

METHODOLOGY

Conceptual Framework:

The argument upon which the methodology of this study is based is that: valid research results are produced from the analysis of reliable data. It then follows that outrageous research results will be produced from the analysis of data with questionable reliability, which may, consequently, yield misleading conclusions and recommendations.

The methodology of the study therefore involves conducting a separate study based on the data in question and using the results of the data analysis to proof the reliability or otherwise of the data used. For our purpose, the separate study conducted is referred to as the *diagnostic study*. The findings of the diagnostic study is interpreted based on the following rule of thumb: (a) data is reliable if the results of the data analysis agree with what is established in theory and the literature (b) data is unreliable if the results of the data analysis radically departure from what is established in theory and

the literature. Thus, rather than testing directly for the accuracy of the figures of the published data, which is a complex, expensive and herculean task, the paper intends to demonstrate the unreliability of published data and how the unreliability of published data in Nigeria, make it virtually useless for most empirical and policy studies.

The Diagnostic Study

The following diagnostic study, as afore mentioned, is designed to test the reliability of published statistics in Nigeria based on the degree at which its findings conforms to what is established in theory and the literature. The diagnostic study seek to find answer to the question: Does inadequate funding affects the performance of the ADP system in Nigeria vis-à-vis its set objectives of increasing food production and raising the income level of small scale farmers? To make this illustration, data published by the CBN was utilized. CBN published data are used by several government agencies in analyzing economic conditions, forecasting future trends, and determining current economic policy. They are also widely used by businesses and the academia in production planning and market analysis.

Assumptions of the diagnostic study

(a) All increases in agricultural crop production in Nigeria over the study period (1976-2005) were assumed to be attributable to the ADPs. This is because the ADPs are the main organ of the extension delivery system in Nigeria and, within the framework of the ADPs, the extension component is conceptualized as the medium through which improved technologies are channeled to farmers

(b) Maize is taken as proxy to crop production because the ADPs, especially the enclave ADPs, were credited with adopting the deliberate policy of promoting maize, which initially was on a minimal scale, but assumed an unprecedented and disproportionate level over other crops in both acreage and production (Postwal, 1981).

(c) The contribution of agricultural crop sector to National GDP is assumed as proxy for farmer's income. This is because in macro-economics the GDP is considered a crude yardstick for measuring well-being.

Literature Review for the Diagnostic Study: Funding of the ADP System in Nigeria.

The integrated Agricultural Development Projects, ADPs, were conceived in the early 1970s to attain 2 objectives: (a) increase food production and (b) raise the income level of small scale farmers in the rural areas through the provision of improved seeds, fertilizer, pesticides, credit facilities and infra-structure (Akpobo, 2007; Garba, 2000). The ADPs have evolved to be "permanent" institutions for rural infrastructural development and agricultural services (World Bank, 2001).

The first generation ADPs started as enclave projects which covered few areas in three states: Funtua ADP (1975) in old Kaduna state, Gusau ADP (1975) in old Sokoto state and Gombe ADP in old Bauchi state. The success recorded by the enclave ADPs led the federal Government to establish 6 more enclaves at Ayangba, Lafia, Bida, Ilorin, Ekiti-Akoko and Oyo North between 1979 and 1982 (Akpobo,2007; Oladele, 2004). Today, ADPs have spread to all 36 states and the FCT. Zamfara state even has a parallel ADP called the Zamfara State Comprehensive Revolutionary Agricultural Programme, ZACAREP.

The ADPs are the main extension delivery organ of the extension delivery system in Nigeria. According to Ekpere (1990), restructuring a new role for agricultural extension within the ADPs derived from the argument that the previous concept and scope of extension in the Extension Services Division of Ministries of Agriculture was too broad, with the result that it could only provide limited service to the majority of farmers in their basic farming enterprises. Thus, within

the framework of an ADP, the extension component is conceptualized as the medium through which improved technologies are channeled to farmers in the project area.

There was a general consensus of opinion in the literature that public extension systems are facing serious funding constraints and that inadequate funding is a major problem bedeviling agricultural extension delivery system in Nigeria and other developing countries (Riveira & Alex 2004; Riveira & Cary, 1997; Chukwuone et al, 2006; Agwu & Chukwuone, 2005; Akinbale, 2008; Saliu & Age, 2009). From the beginning, the ADPs were jointly funded by the Federal Government, State Governments and the World Bank up to 1995 when the World Bank's support ceased (Garba, 2000; Oladele, 2004). More than 60% of the ADPs in Nigeria have weak or very weak funding status (NAERLS, 2008a; NAERLS 2008b).

From the inception of the ADP system in Nigeria, it has been jointly funded by the Federal Government, the State Governments and the World Bank. The initial funding ratio, according to Madukwe et al (2002) was World Bank (66%), Federal Government (20%) and State Governments (14%). The World Bank's support ceased in 1995. Table 1 revealed that the funding of the ADPs was shared almost equally between the Federal Government, States Government and the World Bank from 1981-1985. Between 1986-1993 the share of the Federal and States Government fell to 13.33% and 28.42% respectively, while that of the World Bank rose to 50%. Over the period 1981-1993, the share of the Federal Government, States Government and the World Bank in the funding of the ADP system were 21.24%, 30.00% and 43.67% respectively. Thus, the World Bank has been the major financier for the ADP system in Nigeria. In fact, the World Bank has committed $1.2 billion for Agricultural Development Projects (ADPs) to increase farm production and welfare among smallholders in Nigeria (World Bank, 2001). As noted by Madukwe et al (2002), the ADP system has sought to involve Local Government Councils and Non-Governmental Organizations (NGOs) in the funding arrangement.

Table 1: Capital Allocations to ADPs 1981-1993

Period	Federal Government (%)	States Government (%)	World Bank (%)
1981-1985	34.06	32.51	33.43
1986-1993	13.33	28.42	50.10
1981-1993	21.24	30.00	43.67

Source: Adapted from Garba (2000).

Considering the fact that the number of ADPs in Nigeria increased from 7 in 1981 to 22 in 1993, it was argued that as the number of ADPs increased, the volume of the Federal and States Government counterpart funds to the system decreased (Ammani et al, 2010b).

NAERLS (2008a) reports a categorization of State ADPs based on the availability of funds from their respective State Governments. Analysis of the report revealed that only 4 State ADPs: Bauchi, Kano, Kebbi and Kogi can be said to have reached the status of good funding. The bulk of the State ADPs have weak to very weak funding status (Ammani et al, 2010b).

Methodology of the Diagnostic Study

Aggregate data on maize production in Nigeria and the contributions of the agricultural crop sector to the National GDP, at 1990 constant basic prices, were collected from publications of the Central Bank of Nigeria for the years 1976-2005 and 1981-2005 respectively (CBN, 2007).

The data was grouped into 3 according to the magnitude of funds available to the ADP system:

(a) Period 1 covers 1976-1985: a period characterized with massive injection of funds into the ADPs by the Federal Government, States Government and the World Bank; Funding of the River Basin Development Authorities (RBDAs) and the Accelerated Development Area Programme (ADA), 75% subsidy on fertilizer, establishment of the Agricultural Credit Guarantee Scheme Fund (ACGSF), funding of the Nigerian Agricultural and Cooperative Bank (NACB) as well as the funding of sectoral programmes such as the Operation Feed the Nation (OFN) and the Green Revolution (Garba, 2000).

(b) Period 2 covers 1986-1995: a period ironically characterized with increase in the numbers of ADPs in Nigeria and decrease in the volume of Federal Government and States Government's counterpart funding; the period ends with the withdrawal of World Bank's support for the ADPs in 1995.

(c) Period 3 covers 1996=2005, a period characterized with the drying up of funds, not only to the ADP system but the entire agricultural sector in Nigeria: the withdrawal of most international donor agencies, withdrawal of different forms of subsidies, notably fertilizer, and other incentives by the Federal Government; poor budgetary allocation to the agricultural sector, and the ADPs, by both the Federal and States' Governments (NAERLS, 2008a; NAERLS, 2008b).

The one-way analysis of variance technique was used to determine whether differences exists in (i) the mean aggregate maize production and (ii) the mean contribution of the agricultural crop sector to national GDP between the 3 periods (see Keller & Warrack, 2003 and Snedecor & Cochran,1980; for a description of this technique).

The following hypotheses were formulated and tested: (i) there are no significant differences between the mean aggregate maize production in Nigeria for the 3 periods (ii) there are no significant differences between the mean contributions of the agricultural crop sector to National GDP in Nigeria for the 3 periods.

The Tukey's Multiple Comparison method was employed to determine which mean(s) differ, in both cases, in the one-way analysis of variance tests conducted. The data collected for this study were analyzed using SPSS Statistics 17.0.

Results and Discussions: for the Diagnostic Study.

1. *Aggregate Maize Production*

The value of the test statistic is F=73.235 and its *p*-value is 0.000 which indicates a very strong statistical evidence (Highly significant) to reject the null hypothesis and conclude that mean aggregate maize production differ in at least 2 of the periods. (See Table 2, below).

Table 2: One-way ANOVA for Aggregate Maize Production

Source of Variation	Sum of Squares	DF	Mean Square	F	Sig.
Between Group	2.158E8	2	1.079E8	73.235	0.000
Within Group	3.831E7	26	1473279.456		
Total	2.541E8	28			

To determine which among the three periods means differ in the one-way analysis of variance test conducted, the Tukey's Multiple Comparison method was employed. Results of the test, Table 3, indicate that the mean for Period 1 was significantly lower than that of both Periods 2 and 3. And that of Period 2 was significantly lower than that of Period 3, though significantly greater than that of period 1. The mean for period 3 was significantly greater than those of both Period 1 and 2. Thus, the mean aggregate maize production for period 3 is statistically significantly higher than that of both Periods 2 and 1. This result indicates that there is an inverse relationship between volume of aggregate maize production and availability of funds: aggregate maize production increase with decrease in magnitude of available funds to the ADPs.

Table 3: Tukey's Multiple Comparison for Aggregate Maize Production

Magnitude of Funds Period		Mean Differences (I - j)	Standard Error	Sig.
(i)	(j)			
1	2	-4496.100000*	5.4282E2	0.000
	3	-6547.14444*	5.5769E2	0.000
2	1	4496.10000*	5.4282E2	0.000
	3	-2051.04444*	5.5769E2	0.003
3	1	6547.14444*	5.5769E2	0.000
	2	2051.04444*	5.5769E2	0.003

*The mean difference significant at 0.005 level.

2. *Contribution of the Agricultural Crop Sector to National GDP*

The value of the test statistic is F=49.251 and its p-value is 0.000 which indicates a very strong statistical evidence (Highly significant) to reject the null hypothesis and conclude that mean contribution of the agricultural crop sector to national GDP differ in at least 2 of the periods. (See Table 4, below).

Table 4: One-way ANOVA for Contribution of Agricultural Crop Sector to National GDP at 1990 Basic Constant Prices

Source of Variation	Sum of Squares	DF	Mean Square	F	Sig.
Between Group	3.045E10	2	1.523E10	49.251	0.000
Within Group	6.801E9	22	3.091E8		
Total	3.725E10	24			

To determine which among the three periods means differ in the one-way analysis of variance conducted, the Tukey's Multiple Comparison method was employed. Results of the test, Table 5, indicate that the mean for Period 1 was significantly lower than that of both Periods 2 and 3. And that for Period 2 was significantly lower than that of Period 3, though significantly greater than that of period 1. The mean for period 3 was significantly greater than those of both Period 1 and 2. Thus, the mean contribution of the agricultural crop sector to national GDP for period 3 is statistically higher than that of both Periods 2 and 1. From the foregoing, it can thus be concluded that there is an inverse relationship between contribution of the agricultural crop sector to national GDP and availability of funds: contribution of the agricultural crop sector to national GDP increase with decrease in magnitude of available funds to the ADPs.

Table 5: Tukey's Multiple Comparison for Contribution of Agricultural Crop Sector to National GDP at 1990 Basic Constant Prices

Magnitude of Funds Period		Mean Differences (I - j)	Standard Error	Sig.
(i)	(j)			
1	2	-3.65046E4*	9.6302E3	0.003
	3	-9.0176E4*	9.6302E3	0.000
2	1	36504.61000*	9.6302E3	0.003
	3	-5.3671E4*	7.8630E3	0.000
3	1	90176.07400*	9.6302E3	0.000
	2	53671.46400*	7.8630E3	0.000

*The mean difference significant at 0.005 level.

CONCLUSIONS

This paper questions the reliability of published statistics in Nigeria for development planning. To achieve this objective, a *diagnostic study* is proposed and conducted, to test the reliability of published statistics in Nigeria based on the validity of its findings. The assumed study seek to find answer to the question: Does inadequate funding affects the performance

of the ADP system in Nigeria vis-à-vis its set objectives of increasing food production and raising the income level of small scale farmers? The empirical findings of the *diagnostic study* indicates that inadequate funding enhances the performance of the ADP system in Nigeria as it leads to significant increase in both food production and income level of small scale farmers. These findings clearly contradict both theory and the general consensus in the literature cited earlier. According to Bem (2003), the integrity of the scientific enterprise requires the reporting of disconfirming results. Thus, these invalid findings must be squared with theory or explained away. After a closer look at the methodology and the data used in the diagnostic study: examining the relationship between the data and the conclusions drawn from it, this paper concludes that these outrageous findings are attributable to the questionable reliability of the data used. Thus, Nigerian published statistical data are of questionable reliability.

Implications of the Study

The findings of this study have the following implications for sustainable development, policy, and planning:

(i) That statistical data published in Nigeria are not reliable make them almost useless for policy, development planning and evaluation. Purposeful planning, as a prerequisite for efficient management of resources, cannot be realized in the absence of reliable data. This suggests that our national development planning strategies are based on wobbly foundations.

(ii) That policy and development research findings based on such un-reliable data are of questionable validity, and may likely yield misleading policy recommendations.

This paper recognizes its limitations in that it only made observations which are not substantiated by primary research, thus, the observations of the paper are suggestive and not conclusive. In view of the observations of this study, it is recommended that studies should be conducted to examine the quality and reliability of officially published statistical data in Nigeria.

REFERENCES

Agwu, A. E. and Chukwuone, N. A. (2005). Funding of Agricultural Extension in a Democratic and Deregulated Economy: The Cost-Sharing Approach. *Journal of Agricultural Extension*. **8** 90-98.

Akinbale, L. A. (2008). Tackling the Challenges of Sustainable Agricultural Research and Extension Policy for Nigeria – a Framework. In *Developing Agricultural Extension Policy for Nigeria*. Proceedings of the 13th Annual Conference of the Agricultural Extension Society of Nigeria. 8th – 11th April.

Akpobo, J. G. (2007). Review of Agricultural Extension Approaches Implemented in Nigeria. In a *Training Manual for Orientation/Refresher Course on Extension Communication Techniques for Extension Workers in the ADPs/LGAs in the North West Zone*. Zaria: NAERLS/ABU.

Ammani, A. A., Sani, B. M. and Alamu J. F. (2010a). Challenges to the Reliability of Officially Published Statistics for Extension Work. *Journal of Agricultural Extension* **14** (1): 48-52.

Ammani, A. A., Auta, S. J. and Aliyu, J. A. (2010b). Challenges to Sustainability: Applying the Problem Tree Analysis Methodology to the ADP System in Nigeria. *Journal of Agricultural Extension* **14** (2):35-45.

Ariyo, A. (1996). Quality of Macroeconomic Data on Africa: Nigeria as a Case Study. *African Economic Research Consortium Special Paper 22*. Nairobi: AERC.

Bem, D. J. (2003). Writing the Empirical Journal Article. In Darley, J. M., Zanna, M. P., andRoediger III, H. L. (Eds). *The Complete Academic: A Practical Guide for the Beginning Social Scientist, 2ⁿᵈ Edition*. Washington, DC: American Psychological Association.

CBN (2007). *Central Bank of Nigeria Statistical Bulletin Volume 18*. Abuja: Central Bank of Nigeria.

Chukwuone, N. A., A. E. Agwu and Ozor N (2006). Constraints and Strategies toward Effective Cost-Sharing of Agricultural Technology Delivery in Nigeria. *Journal of International Agricultural and Extension Education*. **13** (1):29-41

Ekpere, J. A. (1991). *Agricultural Extension Searchlight of the Nigerian Small Farmer. 1990 University Lectures.* Ibadan: University Press.

Garba, P. K. (2000). An Analysis of the Implementation and Stability of Nigerian Agricultural Policies 1970-1993. *AERC Research Paper 101*. Nairobi: African Economic Research Consortium.

Keller, G. and Warrack B. (2003). *Statistics for Management and Economics 6th Edition*. Pacific Grove: Thomson Brooks/Cole.

Madukwe, M. C, E.C. Okoli and S.O. Eze (2002) Analysis and Comparison of the Agricultural Development Programme and University Agricultural Technology Transfer Systems in Nigeria. *ATPS Working Paper Series No. 35.* Kenya: African Technology Policy Studies Network (ATPS)

Makhoul, B., and S. Otterstrom (1998): Exploring the Accuracy of International Trade Statistics. *Applied Economics* **30**: 1603-1616

Morgan, M. S. (2008). "On a Mission" with Mutable Mobiles. *Working Papers on the Nature of Evidence: How Well Do 'Facts' Travel?* No. 34/08. London: London School of Economics.

NAERLS (2008a). *Agricultural Performance Survey of 2008 Wet Season in Nigeria: National Report*. Zaria: NAERLS Press.

NAERLS (2008b). *National Agricultural Extension Review and Planning Meeting (2007/2008). NAERP Report No 009*. Zaria: NAERLS Press.

Naya, S., and T. Morgan (1969): The Accuracy of International Trade Data: the Case of Sourth Asian Countries, *Journal of the American Statistical Association* **64**: 452-467.

Oladele, O.I. (2004). Effects of World Bank's loan Withdrawal on the Performance of Agricultural Extension in Nigeria. *Nordic Journal of African Studies* **13** (2): 141-145.

Ogunfowora, O. (1993). Analysis of Fertilizer Supply and Demand in Nigeria. In Mijindadi, N. B., Philip, D. O. A. and Jayaraman, P. (Eds). *Alternative Pricing and Distribution System for Fertilizer in Nigeria*. Ibadan: FACU.

Postwal, M. A. T. (1981). The Emerging Imbalance in the Production of the Major Food and Cash Crops under the Agricultural Development Projects in the Northern States of Nigeria and its Effects on the Success of the Green Revolution Programme. In Abalu G. O. I, Y. Abdullahi and A. M. Imam (eds): *The Green Revolution in Nigeria?* The Proceedings of a National Seminar organized by the Department of Agricultural Economics and Rural Sociology, ABU Zaria. 21st -24th September.

Rivera, W. M. and Alex G. (2004). *Extension Reform for Development Vol 1. Decentralized Systems*. Agricultural and Rural Development Discussion Paper 8. Washington DC: The World Bank.

Rivera, W. M. and Cary J. H. (1997). Privatizing Agricultural Extension. In B. E. Swanson, R. P. Bentz and A. J. Sofranko (Eds) *Improving Agricultural Extension: A Reference Manual*. Pp 203-212.

Rozansky, J., and A. Yeats (1994): On the (In) Accuracy of Economic Observations – An Assessment of Trends in the Reliability of International-Trade Statistics. *Journal of Development Economics* **44**: 103-130.

Saliu, O. J. and A. I. Age (2009). Privatization of Agricultural Extension Services in Nigeria: Proposed Guidelines for Implementation. *Journal of Sustainable Development in Africa*. **11** (2): 160-176.

Snedecor, G. W., and Cochran, W. G. (1980). *Statistical Methods, 7th edition*. Ames: Iowa State University Press.

Stolper, W. F. (1966) *Planning Without Facts: Lessons in Resource Allocation from Nigeria's Development*. Cambridge, Mass: Harvard University Press.

The Johannesburg Declaration on Sustainable Development, 4 September 2002, http://www.housing.gov.za/content/legislation_policies/johannesburg.htm.)

Thorbecke, E. (1996). *TheAERC Research Programme: An evaluation. African Economic Research Consortium Special Paper 21*. Nairobi: AERC

Yeats, A. J. (1990): On the Accuracy of Economic Observations: Do Sub-Saharan Trade Statistics Mean Anything. *The World Bank Economic Review* **4**: 165-156.

World Bank (2001). *Agricultural Development Projects in Nigeria*. Independent Evaluation Group (IEG). Washington DC: The World Bank.

World Commission on Environment and Development (WCED) (1987): *Our Common Future.* New York: Oxford University Press

ABOUT THE AUTHOR

Aliyu A. Ammani is an Extension Specialist (Agricultural Economics) in the Agricultural Economics, Policy and Resource Management Programme of the National Agricultural Extension and Research Liaison Services, Ahmadu Bello University, Zaria-Nigeria.

Table A: Selected Time Series data on Aggregate Maize Production and the Contribution of the Agricultural Crop Sector to National GDP in Nigeria.

Year	Aggregate Maize_Production ('000MT)	Agric. Crop Sector Contribution to National GDP (at 1990 Constant Basic Prices give unit)
1976	1068	
1977	650	
1978	658	
1979	488	
1980	612	
1981	720	71224.9
1982	766	72849.8
1983	594	70761.8
1984	2058	67551.8
1985	1190	83749.1
1986	1336	93203.2
1987	4612	89474.3
1988	5268	99135.9
1989	5008	104092.7
1990	5768	108647.3
1991	5810	113508.7
1992	5840	116914
1993	6290	120304.5
1994	6902	123913.6
1995	6931	128126.7
1996	6217	132982.6
1997	6285	138700.9
1998	6435	144110.3
1999	6515	151661.6
2000	6491	156211.5
2001	8188.5	162147.52
2002	8527.9	168884.33
2003	8685.1	180706.23
2004	9503.4	192452.16
2005	10369.6	206178.4

Source: Central Bank of Nigeria (CBN) (2007).