The Impact of Current Expenditure on Nation Building:
A Developing Nation Perspective

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ABSTRACT
Public expenditure is a prerequisite for economic development and a lot of examination on the subject matter has been done. This research seeks to find the impact of government recurrent expenditures on economic growth. The Nigerian data from 1961 to 2008 was used by applying a bivariate cointegration analysis on economic growth as proxied by GDP with recurrent expenditure. Our result indicates that there is a co-integrating equations at 5% significance level and also the trace statistics or the Likelihood ratio is greater than the critical value leading us to a conclusion that there is a long-run relationship among the variables which is in other words referred to as a cointegrating relationship. We therefore infer that there is a long-run steady-state relationship between GDP and RECURREXP in Nigeria during the period under review. We therefore recommend an efficient monitoring system that will possess both political and financial discipline in governance.

KEYWORDS: *Cointegration, Economic Growth, Fiscal policy, Nigeria and Recurrent Expenditure.*

INTRODUCTION
The quantity of money available for spending depends on the volume of taxes or revenue generated as well as the amount of borrowing the Government is prepared to accept or support. There have been fiscal operational deficits. This is because of a progressive increase in expenditure with a corresponding decrease in revenue. The resultant effects of this are persistent decline in real output caused by lower foreign exchange earnings and reliance on credits from the banking sector, 'to finance deficit. The main problem faced by governments is allocating scarce resources across competing activities and sectors. The theory of public expenditure may be discussed in the context of increasing public expenditure, the range of public expenditure and/or in terms of the division of a given amount of public expenditure into different items like recurrent and capital expenditure. Expenditure is an outflow of resources from government to other sectors of the economy, whether requited or unrequited. It is divided into recurrent and capital expenditures. Recurrent expenditures are payments for non-repayable transactions within one year, whereas capital expenditures are payments for non-financial assets used in production process for more than one year.

Any society that needs to prosper must have a government to run its affairs. The growth impact of fiscal policy has generated large volume of both theoretical and empirical literature. However, most of these studies paid more attention to developed economies. Over the past

decades in Nigeria, the public sector spending has been increasing in geometric term through government various activities and interactions with its Ministries, Departments and Agencies (Niloy et al., 2003). The specific objectives of government in designing and managing its budget since independence include; enhancement of increased production and productive capacity encouragement of export promotion and growth; agriculture and solid minerals, as the nation's major foreign exchange earner; improvement of capacity utilization in the manufacturing sector and local sourcing of raw materials. Bhatia (2002) states that in a developed country, through economic stabilization and stimulation of investment activity public expenditure maintains a rate of growth which is a smooth one. In an underdeveloped country, public expenditure has an active role to play in reducing regional disparities, developing social overheads, creation of infrastructure of economic growth in the form of transport and communication facilities, education and training, growth of capital goods industries, basic and key industries, research and development and so on. One wonders if the rising government expenditure has translated to meaningful development. Out of the three major instruments of fiscal policy, the concern of this paper is on recurrent expenditure. The justification for using recurrent expenditure as a percentage of the total budget as an important indicator stems from the belief that capital expenditure impacts more positively on the economy in respect of employment, investment and other growth-inducing activities.

The objective of the study is to investigate the link between government recurrent spending and economic growth in Nigeria. This paper is divided into four sections, section one introduces the work, section two reviewed the existing literature, section three highlights the methodological issues and discusses the results while section four concludes and proffer policy recommendations.

REVIEW OF RELATED LITERATURE

Classifying expenditures is important in policy formulation and the identification of resource allocation among sectors, the identification of activities of the government and the level at which performance should be assessed. Government performs two functions- protection and provisions of certain public goods. Protection function consists of the creation of rule of law and enforcement of property rights. This helps to minimize risks of criminality, ensure safety of life and property, and protect the nation from external aggression. Under the provisions of public goods are defence, roads, education, health, and power, to mention but a few. Some scholars argue that increase in government expenditure on socio-economic and physical infrastructures encourages economic growth (mention some of these scholar). Again, government expenditure on health and education raises the productivity of labour and increase the growth of national output. Similarly, expenditure on infrastructure such as roads, communications, power, etc, reduces production costs, increases private sector investment and profitability of firms, thus fostering economic growth.

An expenditure classification system provides a normative framework for both policy decision making and accountability. The mechanism in which government spending on public infrastructure is expected to affect the pace of economic growth depend largely upon the precise form and size of total public expenditure allocated to economic and social development projects in the economy. The public sector provides economic infrastructure such as roads, railways, water supply and sanitation. As economic growth take place, the balance of public investment shift towards human capital development through increase spending on education, health and welfare services. An important way in which public expenditure can accelerate the pace of economic growth is by narrowing down the difference between social and private marginal productivity of certain investments.

From previous researches done by different authors as was specified below, we found different view on the relationship between expenditure and growth in different countries. Many authors from Nigeria have analysed this relationship, example, in the study done by (Onyiyola-1993) he examined the relationship between the Nigeria's defence sector and economic development, and reported a positive impact of defence expenditure on economic growth. Another author (Akpan-2005) used a disaggregated approach to determine the components (that include capital, recurrent, administrative, economic service, social and community service, and transfers) of government expenditure that enhances growth, and those that do not. The author concluded that there was no significant association between most components of government expenditure and economic growth in Nigeria. Also Fajingbesi (1999) empirically investigated the relationship between government expenditure and economic growth in Nigeria. He did an econometric analysis which showed that real government capital expenditure has a significant positive influence on real output. Nevertheless, the results showed that real government recurrent expenditure affects growth only by little. A study by Ogiogio, (1995) revealed a long-term relationship between government expenditure and economic growth. From his findings, it is shown that recurrent expenditure exerts more influence than capital expenditure on growth.

In the study conducted by Cooray (2009) through the application of an econometric model that takes government expenditure and quality by governance into consideration, in a cross-sectional study that includes 71 countries. The results revealed that both the size and quality of the government are associated with economic growth. In their own study, (Abu-Bader and Abu-Qarn, 2003), employed multivariate co-integration and variance decomposition approach to examine the causal relationship between government expenditures and economic growth for Egypt, Israel, and Syria. In the bivariate framework, the authors observed a bi-directional and long run negative relationships between government spending and economic growth. Moreover, the causality test within the trivariate framework which looked at the share of government civilian expenditures in GDP, military burden, and economic growth, illustrated that military burden has a negative impact on economic growth in all the countries. Furthermore, civilian government expenditures have positive effect on economic growth for both Israel and Egypt.

Folster and Henrekson (2001) analysed the relationship between government expenditure and economic growth for a sample of wealthy countries for 1970-95 period, using various econometric approaches. The authors submitted that more meaningful results are generated, as econometric problems are addressed. In India, Folster, (2001) examined the effect of government development expenditure on economic growth during the period 1950-2007. The authors discovered a significant positive impact of government expenditure on economic growth. They also reported the existence of cointegration among the variables. Al-Yousif (2000) indicated that government spending has a positive relationship with economic growth in Saudi Arabia. Ram (1986) in his own study looked at the linkage between government expenditure and economic growth for a group of 115 countries during the period 1950-1980. He used both cross section, time series data in his analysis, and established a positive influence of government expenditure on economic growth.

Mitchell (2005) argues that the American government expenditure has grown too much in the last couple of years and has contributed to the negative growth. The author suggested that government should cut its spending, particularly on projects/programmes that generate least benefits or impose highest costs. Analysing the case of Sweden, Peter, (2003) examined the

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effects of government expenditure on economic growth during 1960-2001 period. The author emphasized that government spends too much and it might slowdown economic growth. Devarajan et. al. (1996) studied the relationship between the composition of government expenditure and economic growth for a group of developing countries. The regression results illustrated that capital expenditure has a significant negative association with growth of real GDP per capita. However, the results showed that recurrent expenditure is positively related to real GDP per capita.

According to (Liu Chih et all, 2008) after examining the causal relationship between GDP and public expenditure for the US data during the period 1947- 2002, found a causality result which showed that total government expenditure causes growth of GDP. On the other hand, growth of GDP does not cause expansion of government expenditure. Moreover, the estimation results indicated that public expenditure raises the US economic growth. The authors concluded that, judging from the causality test, Keynesian hypothesis exerts more influence than the Wagner's law in US. In addition, Loizides, (2005) employed the trivariate causality test to examine the relationship between government expenditure and economic growth, using data set on Greece, United Kingdom and Ireland. The authors found that government size granger causes economic growth in all the countries they studied. The finding was true for Ireland and the United Kingdom both in the long run and short run. The results also indicated that economic growth granger causes public expenditure for Greece and United Kingdom, when inflation is included.

An analysis of federal government budget is divided strictly between recurrent and capital expenditures. While recurrent expenditure as a percentage of total government expenditure was 79.22 per cent at the beginning of the 1970s, it had declined to 43.03 per cent by the end of the 1970s . It rose to 49.30 per cent by the end of the Second Republic in 1983, further rising to 63.36 per cent by the end of the 1980s. The dramatic rise in export earnings due to the oil boom of the 1970s resulted in a reduction in the proportion of the budget allocated to recurrent expenditure. Correspondingly, the drastic fall in the price of crude oil in the early 1980s equally raised the proportion of the budget apportioned to recurrent expenditure. Though there was a decline in the proportion of the budget allotted to recurrent expenditure, from 60.10 per cent to 36.56 per cent in 1990, it has since risen to 80.29 per cent in 2003, 74.62, 70.20 in 2004 and 2005 respectively (CBN Statistical Bulletin, 2005)

According to the IMF (2004), government involvement in financing infrastructure needs to be justified by the existence of some type of market failure. Numerous studies have been conducted to investigate the relationship between government spending and economic growth (Landua, 1986) found that Economic growth was positively related to total investment in education. Nitoy *et al*. (2003) employed a disaggregated approach. They examined the growth effects of government expenditure for a panel of thirty developing countries (including Nigeria) over the decades of the 1970s and 1980s, with a particular focus on sectorial expenditures. The primary research results show that the share of government capital expenditure in GDP is positively and significantly correlated with economic growth, but current expenditure is insignificant. Adenuga (2006), examines the relationship between economic growth and human capital development using Nigerian data from 1970 to 2003. They applied cointegration theory incorporating the error correction mechanism and found that investment in human capital, through the availability of infrastructural requirements in the education sector accelerates economic growth.

METHODOLOGY AND DISCUSSION OF RESULT

In this research work, we applied a bivariate data analysis which used recurrent expenditure as a percentage of the total budget and the justification for using this stems from the belief that capital expenditure impacts more positively on the economy in respect of employment, investment and other growth-inducing activities. For the analysis, we applied the causality test by first of all carrying out the ADF (Augmented Dickey Fuller) test of unit root on the variables, GDP (economic growth) and RECURREXP (recurrent expenditure). This was done by testing the series in their log forms at level and intercept with 1 lag and also at level and intercept/trend with 1 lag. By specifying 1 lag in the stationarity test, we were able to find out the order of integration. After that, we proceeded with the cointegration test where we tried to ascertain the long-run relationship between economic growth and recurrent expenditure in Nigeria. We are also using 1lag in the cointegration test. For us to obtain a clear picture of what the relationship is in the short-run, we undertook a granger causality test, which also helped us to know the direction of causality.

The model is estimated as:

$$GDP_i = \beta_0 + \beta_1 RECURREXP_i + u_i$$

Where; GDP = economic growth (dependent variable)

RECURREXP = (recurrent expenditure)

$\beta 0$ = intercept

$\beta 1$ = slope

Ui = error term

Table 1: DESCRIPTIVE STATISTICS

	LOG_GDP	LOG_RECURREXP
Mean	11.78814	9.394986
Median	11.06085	8.801568
Maximum	17.00584	14.56570
Minimum	7.766925	4.573267
Std. Dev.	2.988674	3.076899
Skewness	0.260657	0.077573
Kurtosis	1.767406	1.831469
Jarque-Bera	3.582114	2.779070
Probability	0.166784	0.249191
Observations	48	48

The ordinary least square test as displayed in the table 2 below showed a significant result of recurrent expenditure on economic growth as depicted in the regression output, 0.963886/0.017692 = 54.48033. The wald test also showed a significant value of 0.00000 which is less that the level of significance.

Table 2: ORDINARY LEAST SQUARE ESTIMATION RESULT

Dependent Variable: LOG(GDP)
Method: Least Squares
Date: 12/21/11   Time: 09:28
Sample: 1961-2008
Included observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.732443	0.174730	15.63807	0.0000
LOG(RECURREXP)	0.963886	0.017692	54.48033	0.0000
R-squared	0.984738	Mean dependent var		11.78814
Adjusted R-squared	0.984407	S.D. dependent var		2.988674
S.E. of regression	0.373206	Akaike info criterion		0.907399
Sum squared resid	6.406991	Schwarz criterion		0.985366
Log likelihood	-19.77758	F-statistic		2968.106
Durbin-Watson stat	0.515217	Prob(F-statistic)		0.000000

H_0: t = 0.963886/0.017692 = 54.48033

Estimation Command:

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LS LOG(GDP) C LOG(RECURREXP)

Estimation Equation:

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LOG(GDP) = C(1) + C(2)*LOG(RECURREXP)

Substituted Coefficients:

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LOG(GDP) = 2.732442937 + 0.9638860579*LOG(RECURREXP)

WALD TEST:

Equation: Untitled

Null Hypothesis:	C(2)		
F-statistic	2968.106	Probability	0.000000
Chi-square	2968.106	Probability	0.000000

To make sure that the presence of serial correlation is not in the residuals of the estimated equation, we estimated a more general Breusch-Godfrey test for serial correlation in the residuals. This is basically because, if the estimates are uncorrected, serial correlation in the residuals will lead to incorrect estimates of the standard errors, and invalid statistical inference for the coefficients of the equation. From the probability figure in Breusch-Godfrey test in table 3 below, we found an absence of serial correlation. The null hypothesis is rejected because the probability value is less than the size of the test 0.05.

Table 3: BREUSCH-GODFREY SERIAL CORRELATION LM TEST

F-statistic	22.75739	Probability	0.000000
Obs*R-squared	24.40613	Probability	0.000005

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 12/21/11   Time: 09:37
Pre-sample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.004175	0.125388	-0.033298	0.9736
LOG(RECURREXP)	0.000737	0.012706	0.057970	0.9540
RESID(-1)	0.772588	0.150307	5.140080	0.0000

RESID(-2)	-0.083920	0.152015	-0.552052	0.5837
R-squared	0.508461	Mean dependent var		2.46E-16
Adjusted R-squared	0.474947	S.D. dependent var		0.369214
S.E. of regression	0.267534	Akaike info criterion		0.280518
Sum squared resid	3.149285	Schwarz criterion		0.436452
Log likelihood	-2.732438	F-statistic		15.17160
Durbin-Watson stat	1.900364	Prob(F-statistic)		0.000001

From the table of the ADF (Augmented Dickey Fuller) Unit root test below (table 4), all the computed test statistics are greater than their critical values at 1%, 5% and 10% significant level respectively, that is, integration of order one and therefore we cannot reject the null hypothesis of a non-stationarity. This shows that log of GDP (a proxy for economic growth) and RECURREXP (recurrent expenditure) series have a unit root problem and are non-stationary. The series were integrated of order one 1(1). This supports the conclusion that the series are stationary only after being differenced once.

Table 4: UNIT ROOT TABLE

	Test Statistics	Critical values	
UNIT ROOT At level and intercept with 1 lag			
ADF Test Statistic LOG_GDP	-0.018613	1% Critical Value*	-3.5778
		5% Critical Value	-2.9256
		10% Critical Value	-2.6005
ADF Test Statistic LOG_RECURREXP	-0.018613	1% Critical Value*	-3.5778
		5% Critical Value	-2.9256
		10% Critical Value	-2.6005
At level and intercept/trend with 1 lag			
ADF Test Statistic LOG_GDP	-2.499528	1% Critical Value*	-4.1678
		5% Critical Value	-3.5088
		10% Critical Value	-3.1840
ADF Test Statistic LOG_RECURREXP	-2.697589	1% Critical Value*	-4.1678
		5% Critical Value	-3.5088
		10% Critical Value	-3.1840
*MacKinnon critical values for rejection of hypothesis of a unit root.			

Furthermore, to test for stationarity, we did a correlogram test to ascertain if the series are first order serially correlated. Form table 5 below, we found that the AC's are significantly positive and that AC(k) dies off geometrically with increasing lags k, it is a sign that the series obeys a low-order autoregressive (AR) process. In addition, since the partial autocorrelation (PAC) is significantly positive at lag 1 and close to zero thereafter, the pattern of auto correlation can be captured by an auto regression of order one, that is, AR(1).

Table 5: AUTO CORRELATION STATIONARITY TEST

Date: 12/22/11   Time: 19:13
Sample: 1961-2008
Included observations: 48

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
. |*******|	. |*******|	1	0.944	0.944	45.525	0.000

. |*******|	. |. |	2	0.886	-0.049	86.500	0.000
. |****** |	. |. |	3	0.826	-0.053	122.86	0.000
. |****** |	. |. |	4	0.764	-0.045	154.70	0.000
. |***** |	. |. |	5	0.701	-0.041	182.16	0.000
. |***** |	. |. |	6	0.639	-0.037	205.47	0.000
. |**** |	.*|. |	7	0.573	-0.066	224.70	0.000
. |**** |	. |. |	8	0.508	-0.032	240.21	0.000
. |*** |	. |. |	9	0.443	-0.049	252.29	0.000
. |*** |	. |. |	10	0.383	0.003	261.54	0.000
. |** |	. |. |	11	0.323	-0.037	268.33	0.000
. |** |	.*|. |	12	0.261	-0.074	272.87	0.000
. |** |	. |. |	13	0.198	-0.057	275.55	0.000
. |*. |	. |. |	14	0.143	0.022	276.99	0.000
. |*. |	. |. |	15	0.095	0.024	277.64	0.000
. |. |	. |. |	16	0.049	-0.034	277.83	0.000
. |. |	. |. |	17	0.005	-0.035	277.83	0.000
. |. |	. |. |	18	-0.034	-0.004	277.92	0.000
.*|. |	. |. |	19	-0.073	-0.040	278.36	0.000
.*|. |	. |. |	20	-0.110	-0.038	279.40	0.000

COINTEGRATION TEST

Following the fact that we have found out that the variable, GDP and RECURREXP are integrated of order 1, we will then go ahead to test for a cointegration relationship among the variable, that is to find out if there is a long-run relationship existing between them. We employed the Johasen cointegration test with e-views software in this section.

Table 6: RESULT OF JOHANSEN COINTEGRATION TEST

Date: 12/22/11 Time: 19:42
Sample: 1961-2008
Included observations: 46
Test assumption: Linear deterministic trend in the data
Series: LOG_GDP LOG_RECURREXP
Lags interval: 1 to 1

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.320698	17.79086	15.41	20.04	None *
6.84E-05	0.003144	3.76	6.65	At most 1

 *(**) denotes rejection of the hypothesis at 5%(1%) significance level
 L.R. test indicates 1 cointegrating equation(s) at 5% significance level
 Unnormalized Cointegrating Coefficients:

LOG_GDP	LOG_RECURREXP
-0.425400	0.432973
0.166687	-0.113271

Normalized Cointegrating Coefficients: 1 Cointegrating Equation(s)

LOG_GDP	LOG_RECURREXP	C
1.000000	-1.017803	-2.207607

| | (0.02844) |
| Log likelihood | 20.48263 |

From the result of the cointegration test, as shown in table 6 above, we found out that there is just one cointegrating equations at 5% significance level and once we have established a cointegration relationship between the variables we can then conclude that there is a long run relationship among the variables even if they are individually non-stationary. If the trace statistics or the Likelihood ratio is greater than the critical value, then there is a cointegration. We can therefore say that there is a long-run steady-state relationship between GDP and RECURREXP in Nigeria during the period under review.

Table 7: RESULT OF GRANGER CAUSALITY TEST

Pairwise Granger Causality Tests
Date: 12/22/11   Time: 19:48
Sample: 1961 2008
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
LOG_RECURREXP does not Granger Cause LOG_GDP	46	6.71516	0.00300
LOG_GDP does not Granger Cause LOG_RECURREXP		0.65329	0.52566

The granger causality test in table 7 shows that there is a causality from recurrent expenditure to economic growth and there is no causality from economic growth to recurrent expenditure. The F-statistic and the probability values indicate if the null hypothesis should be accepted or rejected and from the table, where we have the null hypothesis LOG_RECURREXP does not Granger Cause LOG_GDP, we have the F-statistic as 6.71516 with a probability value of 0.00300 which indicates a causality. On the other hand, the null hypothesis that LOG_GDP does not Granger Cause LOG_RECURREXP has 0.65329 as the F-statistic with a probability value of 0.52566 indicating that there is no causality. From the above observation, the null hypothesis that RECURREXP does not Granger cause GDP is rejected. While the null hypothesis that GDP does not Granger Cause RECURREXP is accepted. This shows that uni-directional relationship between recurrent expenditure and economic growth, and the causality runs from RECURREXP to GDP.

CONCLUSION AND IMPLICATION
Achieving the objective of sustainable development will require considerable resources and creative use of existing and additional resources. From our study, it can be concluded that recurrent expenditure have positive significant influence on economic growth in Nigeria based on the research analysis. It also reveals that the direction of granger causality which indicates a short-run relationship of economic growth and recurrent expenditure has a one-way or uni-directional relationship, which flows from economic growth to recurrent expenditure. We also found the existence of a long-run relationship between these two factors. However, there is every need for an improvement in government expenditure on health, education and economic services, as components of productive expenditure, to boost economic growth more. From all indications, rising government expenditure has not translated to meaningful development as Nigeria still ranks among world's poorest countries.

We recommend proper channelling of Revenue in order to influence economic growth significantly and positively in Nigeria. There should be effective channelling of public fund to productive activities, which will have a significant impact on various sectors. There should be joint partnership between the government and the private sector in providing essential infrastructural services will be a very good idea. This will promote economic growth and development. Transparency and accountability on government spending is a key issue. This should be observed at various sectors of the economy in order to prevent channelling of public funds to private accounts of government officials.

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APPENDIX A

DATA USED FOR THE ANALYSIS

Data used in their raw for			Data used in their log form		
Year	Recurrent Expenditure	GDP	year	loggdp	logrecurrexp
1961	96.86	2,361.20	1961	7.766925	4.573267
1962	103.61	2,597.60	1962	7.862343	4.640634
1963	119.64	2,755.80	1963	7.921463	4.784487
1964	143.87	2,894.40	1964	7.970533	4.968910
1965	156.84	3,110.00	1965	8.042378	5.055226
1966	177.27	3,374.80	1966	8.124091	5.177674
1967	166.73	2,752.60	1967	7.920301	5.116376
1968	218.75	2,656.20	1968	7.884652	5.387930
1969	433.42	3,549.30	1969	8.174506	6.071707
1970	716.10	5,281.10	1970	8.571890	6.573820
1971	823.60	6,650.90	1971	8.802507	6.713685
1972	1,012.30	7,187.50	1972	8.880099	6.919980
1973	963.50	8,630.50	1973	9.063058	6.870572
1974	1,517.10	18,823.10	1974	9.842840	7.324556
1975	2,734.90	21,475.20	1975	9.974654	7.913850
1976	3,815.40	26,655.80	1976	10.190762	8.246801

1977	3,819.20	31,520.30	1977	10.358387	8.247796
1978	2,800.00	34,540.10	1978	10.449876	7.937375
1979	3,187.20	41,974.70	1979	10.644822	8.066898
1980	4,805.20	49,632.30	1980	10.812397	8.477454
1981	4,846.7	47,619.70	1981	10.771002	8.486053
1982	5,506.0	49,069.30	1982	10.800989	8.613594
1983	4,750.8	53,622.50	1983	10.889724	8.466068
1984	5,827.50	59,622.50	1984	10.995788	8.670343
1985	7,576.40	67,908.60	1985	11.125918	8.932793
1986	7,696.90	69,147.00	1986	11.143990	8.948573
1987	15,646.20	105,222.90	1987	11.563836	9.657983
1988	19,409.40	139,085.00	1988	11.842841	9.873513
1989	25,994.20	216,707.50	1989	12.286304	10.165629
1990	36,219.60	267,550.00	1990	12.497062	10.497356
1991	38,243.50	312,139.80	1991	12.651206	10.551729
1992	53,034.10	532,613.80	1992	13.185552	10.878690
1993	136,727.10	683,869.20	1993	13.435522	11.825742
1994	89,974.90	899,863.20	1994	13.709998	11.407286
1995	127,629.80	1,933,211.60	1995	14.474693	11.756889
1996	124,491.30	2,702,719.10	1996	14.809769	11.731991
1997	158,563.50	2,801,972.60	1997	14.845834	11.973910
1998	178,097.80	2,708,430.90	1998	14.811880	12.090088
1999	449,662.40	3,194,015.60	1999	14.976789	13.016252
2000	461,600.00	4,582,127.30	2000	15.337674	13.042454
2001	579,300.00	4,725,086.00	2001	15.368396	13.269576
2002	696,800.00	6,912,381.30	2002	15.748825	13.454254
2003	984,300.00	8,487,031.60	2003	15.954050	13.799686
2004	1,032,700.00	11,411,066.90	2004	16.250094	13.847687
2005	1,223,700.00	14,772,239.10	2005	16.508260	14.017390
2006	1,290,201.90	18,564,594.70	2006	16.736767	14.070309
2007	1,589,270.00	20,657,317.70	2007	16.843580	14.278785
2008	2,117,400.00	24,296,329.30	2008	17.005836	14.565699

Source: Central Bank Statistical Bulletin and World Databank

APPENDIX B

Forecast: GDPF
Actual: LOG(GDP)
Forecast sample: 1961 2008
Included observations: 48

Root Mean Squared Error 0.865348
Mean Absolute Error   0.307283
Mean Abs. Percent Error 2.890006
Theil Inequality Coefficient 0.015034
   Bias Proportion   0.000000
   Variance Proportion 0.003845
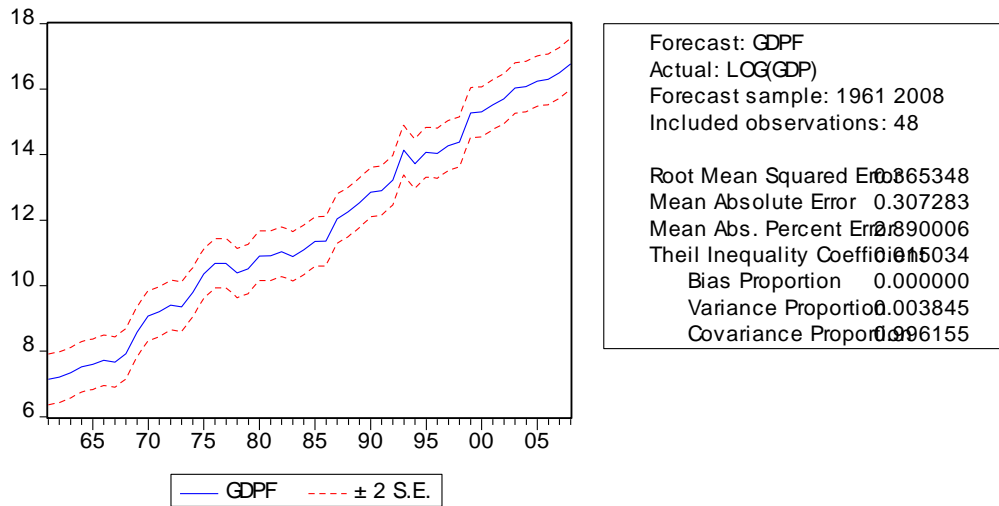   Covariance Proportion 0.996155

Figure 1 :Graph of the forecast

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: LOGGDP