Resource Gaps and Economic Growth in Nigeria: 1970-1999

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ABSTRACT The study examined the effects of, and the most significant and binding resource gaps (Investment-Savings, Export-Import and Budgetary gaps) on economic growth in Nigeria between 1970 and 1999. The study made use of secondary data and econometric analysis, which involved specifying models to estimate the effects of the resource gaps on economic growth in Nigeria. The models adopted error correction modeling (ECM) technique. The equations were estimated simultaneously using the Two Stage Least Squares (2SLS) techniques. The results showed that a unit increase in the Investment-Savings gap worsened the output gap by 1.5 units, while a unit increase in the Export-Import gap worsened the output gap by 0.04unit. However, a unit increase in the Budgetary gap worsened the output gap by 2.5units. Thus, the three resource gaps combined together to limit economic growth in Nigeria. The Budgetary gap was found to be the most significant and binding constraint on economic growth in Nigeria, while Investment-Savings gap and Export-Import gap followed in that order. The result validated the original Chenery hypothesis to the effect that countries in their pre-take-off stage of development usually have Investment-Savings gap predominance, as the Nigerian economy was found not to be suffering from low monetised savings. Furthermore, the results showed that Investment-Savings gap and Export-Import gap were not of the same magnitude as reported by some other studies. The study concluded that economic management authorities should pursue policy to reduce output gap, as this is an important way to ensure sustainability of economic growth. This could be pursued through a frequent reassessment of the relationships between potential and actual output as well as the desired resources to fill the gap.

INTRODUCTION

One of the goals of every economy is the pursuit of economic growth. Thus, a growing economy could ensure an expanding real output and is in a superior position to meet new needs and resolve the economizing problems, both domestically as well as internationally. To achieve economic growth would require the manipulation of some resources which are economic goods and relatively scarce. For a resource to adequately perform its function it should be in a desired state i.e. at equilibrium, (Lee and Liu, 1988). Disequilibrium gives rise to a resource gap and poses economic problem.

The Nigerian economy witnessed many significant changes, during 1970-99. The hitherto broad-based agricultural economy during 1970-1980 gave way to a less diversified oil dominated production and export structures towards the end of the decade. During 1981-1990, the economy experienced a deep recession, attributed to instability in crude oil prices and collapse in commodity prices. During 1991-1999, the economy faced the problem of managing the huge public debt, restoring economic growth and how to diversify the economy away from the heavy reliance on oil, (Oyejide and Raheem 1993, and Obadan and Odusola, 1999). The average growth rates of GDP for the sub-periods progressively declined and stood at 6.03, 1.69 and 1.49 per cent respectively. The above problems might have combined to cause significant output gap and poor economic growth.

Iwayemi (1995) argued that the inadequacy of domestic savings to support planned investment to satisfactory level had been a serious constraint in LDCs and could generate Investment-Savings gap. Developing countries would require imported inputs into current production. The foreign exchange for the imports could come from increased exports, compressed imports and foreign aid, which were rather difficult in Nigeria because of capital flight, (Ajayi, 1991). Budgetary constraints could create a gap between desired and actual growth rates through the public sector accounts. Public sector investment in Nigeria has been facing serious problems from the unimpressive revenue performance and a fast growing public expenditure, especially in the past two and a half decades, (Olusi and Abiola, 1998) and (Olaloye and Abiola, 2000).

The above explanations raised some key research questions. What had been the effects of the resource gaps on economic growth in Nigeria? Which of the gaps had been the most significant binding constraint on economic growth? Did the Nigerian evidence corroborate

the original Chenery hypothesis, (Chenery and Bruno, 1962), (Adelman and Chenery, 1966), and (Chenery and Eckstein, 1970)?

The objectives of this study were to examine the effects of resource gaps (Investment-Savings gap, Export-Import gap and Budgetary gap) on economic growth in Nigeria between 1970 and1999, and to identify the most significant binding resource gap by examining their relative impacts on economic growth during the review period. Apart from the above introduction, this study has been divided into five sections. In section two we present the literature review. Methodology, analysis and conclusion are presented in sections three, four and five respectively.

LITERATURE REVIEW

Studies have used gap analysis to investigate effects of resource constraints on economic growth. El-Shibly and Thirlwal (1981) used the two-gap model to investigate the dominant resource constraints in Sudan on two alternative growth rate assumptions. First, 5.5 per cent per annum being the historical average between 1960-75 and second, 7.5 per cent, being the target of the Sudanese six-year plan, 1977/1978-1982/ 83 were used. They argued that the plan understated the size of the domestic savings gap, and that the foreign resource inflows would have to be approximately 50.0 per cent higher than envisaged for the target growth rate of 7.5 per cent to be achieved. Their result was also consistent with the original Chenery hypothesis. However, in estimating the Investment-Savings gap and the Export-Import gap, the authors treated the two gaps as being mutually exclusive, whereas they are not. Taylor (1994) argues that for gap models to be effective would demand incorporating the identified resource gaps in a single model. This we attempted to address by using simultaneous equation approach.

Mwega et al. (1994) examined the binding resource gap on capacity utilization in Kenya, using a three-gap model: saving, foreign and fiscal. They reported that the three gaps were binding at different levels, but the foreign exchange gap was dominant. They also found that the policies and forecast outcomes of the 1989-93 Kenyan development plan were inadequate to reduce macro-economic dis-equilibrium. The target for the reduction in the budget deficit from 4.5 per

cent to 3.3 per cent of GDP was also ambitious, such that the increase in macroeconomic imbalances if the forecast outcomes of the plan were achieved was under-estimated. What the authors did was to estimate the sizes of the resource gaps. However, the effects of the gaps on output deserve greater research attention. We also know that the resource gaps exist together (may even cause one another) and may combine together to exert effects on the economy simultaneously. Thus, estimating the binding resource gaps was not sufficient and estimating the gap equations individually may not help much.

Taylor (1994) examined savings, foreign exchange, investment, and inflation restrictions on capacity utilization. He argued that constraints to economic growth should grow at a steady state to attain macro-equilibrium. Subject to demand-driven and foreign exchange closures, the model was used to illustrate the effects of devaluation and heterodox shock anti-inflation package, and to analyze policy problems posed by adverse shocks and incoming resource transfers. He reported that devaluation stimulates cost-push inflation, cuts real spending, such that excess of savings over investment makes output to decline. Whereas, availability of investible fund does not guarantee increased investment because investors and savers are different economic agents and will consider different factors before taking their decisions. In fact, potential investors may not borrow, even if investible fund is present, thereby creating the Investment-Savings gap.

Some generalisations emerged from the review above. One, some of the studies notably El-Shibly and Thirwall (1981), Taylor (1994) and Mwega et al. (1994) only traced and estimated the sizes of the gaps. Attentions of most researchers had not been directed at using simultaneous equation system to examine the effects of the resource gaps, especially on economic growth. We employed the error correction modelling (ECM) technique, as none of the known studies in this area had used this modelling technique. This was considered necessary because in the short run relationships between the dependent and independent variables could give rise to some fluctuations.

METHODOLOGY

This section discussed model specification, techniques of analysis and data requirement.

Model Specification

We specified a three-gap model. The specification was anchored on the endogenous growth model as postulated by Romer (1994). Thus we have:

$$Y = (R, K, L, F)\dots\dots\dots\dots\dots\dots\dots(1)$$

Where Y represented total output (GDP), R represented research and development carried out by economic agents in the economy, K represented accumulated capital stock, L represented accumulated stock of human capital and F represented other factor inputs.

The gross domestic product (GDP) was our proxy for level of total output, which could be influenced by some factors. One, was the quantity and quality of research and developmental efforts proxied by total expenditure on education at all levels by the government. For our purpose, gross capital formation in the country was used as capital, (Obadan and Odusola, 1999). The size of the labour force was determined relative to the total population, (Odedokun, 1996) and (Sogotemi, 2000). The justification for including labour force was because it possesses the potentials to contribute positively to national output. Other factor inputs notably, level of technology, efficiency profile (F), measurement had been a major problem, especially in less developed countries including Nigeria. Therefore, F is regarded as residual factors such that their effects were assumed captured by error terms (e).

Thus, rewriting (equation (1)) above in a structural form gave:

$$Y = a_0 + a_1R + a_2K + a_3L + e\dots\dots\dots\dots\dots\dots.(2)$$

From the national income accounting identity for an open economy, we have:

$$Y = C + I + (T-M)\dots\dots\dots\dots\dots\dots\dots\dots\dots.(3)$$

Where Y represented total output (GDP), C represented aggregate consumption (private plus government) expenditures $(C_0 + G_0)$, I represented total investment expenditures, T represented total exports of goods and services, M represented total imports of goods and services and (T-M) represented net exports or external trade balance. Solving for I from (equation (3)) gives:

$$I = (Y-C) + (T-M)\dots\dots\dots\dots\dots\dots\dots\dots\dots.(4)$$

Total investment was divided into private sector investment: X_1 and public sector investment: X_2. Total capital expenditure of the

Federal Government was used as proxy for public sector investment, X_2. Private sector investment was calculated by subtracting public sector investment from total investment. This was given as:

$$X_1 = I - X_2\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(5)$$

To finance total investment I, would require savings, which could come from two sources, notably domestic savings (DOMSAV) and foreign transfers/foreign savings (NFT). The level of investment depends on factors such as the growth of actual output (GGDP), the level of domestic savings (DOMSAV), net foreign transfer (NFT), the difference between potential output and actual output which we simply referred to as output gap (YG), rate of interest especially the lending rate of interest (LRATE) and the level of capital imports (CAPIMP). Theoretically, we expected positive relationship between investment on one hand and GGDP, DOMSAV and CAPIMP on the other hand. Nalo (1993) had argued that investment determined the rate of growth of output from which additional saving could take place. However, we expected a negative relationship between investment on one hand and output gap and rate of interest on the other hand. The investment equation was therefore specified in a linear form as given below:

$$I = d_0 + d_1GDP + d_2DOMSAV + d_3NFT + d_4YG + d_5LRATE + d_6CAPIMP\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(6)$$

Subtracting savings, which is S, (being DOMSAV plus NFT) from both sides of (equation (6)) gave the Investment-Savings Gap equation. Thus we have:

$$I - S = ISGAP = c_0 + c_1GDP + c_2YG + c_3LRATE + c_4CAPIMP\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (7)$$

It should be noted from (equation (1)) above that our specification assumed that the economy was frugal, governed and opened. Frugal implied that savings, which could be channeled towards investment, could take place. Existence of government sector suggested that revenue was raised and expenditure undertaken, while openness implied existence of imports and exports. Thus, the three assumptions implicitly suggested that the three resource gaps co-existed. Furthermore, a preliminary Granger causality test found a causal relationship between Investment-Savings gap and other resource gaps notably Export-Import gap as well as Budgetary gap. By incorporating these resource gaps into (equation (6)) above we have:

$$ISGAP = c_0 + c_1 GDP + c_2 YG + c_3 LRATE + c_4 CAPIMP + c_5 BGAP + c_6 EMGAP…...................................…….......(7)$$

where

$c_0, c_1, c_2, c_3, c_4, c_5$ and c_6 are parameters while other notations are as previously defined.

The excess of exports over imports was our Export-Import gap (EMGAP) and was equal to trade balance. Total import was divided into two different categories: capital imports (CAPIMP), and non-capital imports, M_2. This was because not all aspects of total imports could have positive impact on capacity growth. Let us represent the difference between total exports, T, and non-capital imports, M_2 by A, such that we have:

$$A = T – M_2….................……………......…......…….(8)$$

Nalo (1993) argued that in developing countries trade balance, which could be determined by world demand, could not likely exceed A. We expected equation (8) above to be positive, suggesting a positive relationship between capital import (CAPIMP) and Export-Import gap (EMGAP). Apart from capital imports, the Export-Import gap would also be influenced by some other factors, notably the output gap (YG) and growth rate of output (GGDP), which we expected, would have positive relationships with EMGAP.

The preliminary Granger causality test also found that Investment-Savings gap caused Export-Import gap. However, we know that one of the ways to reduce domestic Investment-Savings gap could be through foreign transfers. We substituted Investment-Savings gap (ISGAP) for net foreign transfer (NFT). The net foreign transfers (NFT) being the balance after foreign transfers had been used to fill part of domestic Investment-Savings gap (ISGAP). The higher the net foreign transfers the lower would be the Export-Import gap (EMGAP). Thus suggesting a negative relationship. Specifying our Export-Import gap (EMGAP) in a linear form, we have:

$$EMGAP = b_0 + b_1 NFT + b_2 CAPIMP + b_3 YG + b_4 GGDP….....................…………………….............… (9)$$

where

$b_0, b_1, b_3, b_3,$ and b_4, are parameters while other notations are as previously defined.

We defined the Budgetary gap (BGAP) as the discrepancy between what the public sector planned to spend and what it actually spent. This would be largely determined by the quantity of fund from where the public sector could fill the discrepancy. The quantity of fund on the other hand would be determined by three factors. They were quantity of domestic savings (DOMSAV), the quantity of public investment measured by its capital expenditures (PUBINV) and the net foreign transfers, (NFT). Thus, we specified BGAP as follows:

$$BGAP = f (DOMSAV, PUBINV, NFT)..................(10)$$

We defined a saving as income less consumption, which other things being equal, should increase investment. The neo-classical synthesis argued that for an economic agent, savings plus borrowings should equal asset acquisition. Obadan and Odusola (1999) found for Nigeria, savings unidirectionally Granger causing investment. We expected, therefore, positive relationships between Budgetary gap on one hand and domestic saving, public investment and net foreign transfers on the other hand.

Furthermore, to close the Budgetary gap would require increasing the growth rate of output and reducing the output gap. The smaller the output gap and the higher the growth rate of actual output the higher would be the level of welfare of the citizens, all other things being equal. At higher level of welfare the amount of public expenditures on capital should reduce as the economy become more matured. We expected a positive relationship between Budgetary Gap on one hand and output gap and growth rate of output on the other hand.

Thus, assuming a linear relationship our Budgetary Gap could be specified as follows:

$$BGAP = f_0 + f_1 DOMSAV + f_2 PUBINV + f_3 NFT + f_4 YG + f_5 GGDP…………………... (11)$$

where

f_0, f_1, f_3, f_3, f_4 and f_5, are parameters while other notations are as previously defined.

It should be noted that the broad objective of this study was to examine the effects of resource gaps on economic growth in Nigeria. To achieve the objective we incorporated the three resource gaps in an equation. Thus we have:

$$YG = h_0 + h_1 ISGAP + h_2 EMGAp + h_3 BGAP....... (12)$$

We know that the labour force (LFORCE) should influence the level of output gap in an economy. The justification being that the labour force produces the actual output and the potential of the labour force would also determine the feasibility of producing the potential output, which if achieved should

increase per capita income (PCI). Thus we expected a negative relationship between output gap on one hand, and labour force and per capita income on the other hand. Assuming a linear relationship (equation (12)) could be rewritten as:

$YG = h_0 + h_1ISGAP + h_2EMGAP + h_3BGAP + h_4PCI + h_5LFORCE$.......................………......................……. (13)

where

h_0, h_1, h_3, h_3, h_4 and f_5, are parameters while other notations are as previously defined.

We first estimated separately the ISGAP, EMGAP and BGAP equations as contained in equations 7, 9 and 11 respectively. Thereafter we shall estimate a simultaneous model because the resource gaps are also functions of the output gap (YG). We defined output gap (YG) as deviations between potential and actual output. The simultaneous model is as contained in the summary of the system of equations below:

$ISGAP = c_0 + c_1GDP + c_2YG + c_3LRATE + c_4CAPIMP + c_5BGAP + c_6EMGAP + ECM_{t-1}$ (13a)

$EMGAP = b_0 + b_1NFT + b_2CAPIMP + b_3YG + b_4GGDP + ECM_{t-1}$…......................…………….............… (13b)

$BGAP = f_0 + f_1DOMSAV + f_2PUBSAV + f_3NFT + f_4YG + f_5GGDP + ECM_{t-1}$ ....…………....(13c)

$YG = h_0 + h_1ISGAP + h_2EMGAP + h_3BGAP + h_4PCI + h_5LFORCE + ECM_{t-1}$……...................................… (13d)

where

ECM_{t-1}= error correction modeling and other notations are as previously defined.

Simultaneous equation models are usually beset with some problems especially when independent variables could be correlated with the error term. Johnston (1960), and Pindyck and Rubinfeld (1985) identified three of such instances. They included when one or more of the independent variables were: measured in error; determined in part by the dependent variables; and a lagged dependent variable in a model in which the error term was serially correlated. As a way out, new variables called instruments should be used to replace the variables measured in error and a new instrumental variable estimation technique should be used to replace ordinary least squares. A valid instrument should be highly correlated with the independent variable (in this case the determinants of the resource gaps: ISGAP, EMGAP and BGAP) that it was designed to replace, uncorrelated with the error term in the equation and without affecting the dependent variable (in this case the output gap: YG). Thus,

one instrument would be needed to replace each of the designated independent variable as contained in (equations 13a- 13d). Predetermined variables in our models would serve as excellent instrumental variables. The fact that they were present in the model suggested that they were correlated with the endogenous variables and the fact that they were predetermined guaranteed (by assumption) that they were uncorrelated with the error term. The justification for the position could due to the fact that a variable in year 't' (X_t) should be highly correlated with the same variable in the previous year (X_{t-1}). Thus instrumental variables for (equations 13a –13d) are as given below for each of the independent variables respectively:

ISGAP equation: GDP_{t-1}, YG_{t-1}, $LRATE_{t-1}$ $CAPIMP_{t-1}$ $BGAP_{t-1}$ and $EMGAP_{t-1}$ and $ISGAP_{t-1}$.

EMGAP equation: NFT_{t-1}, $CAPIMP_{t-1}$, YG_{t-1}, GDP_{t-1} and $EMGAP_{t-1}$.

BGAP equation: $DOMSAV_{t-1}$, $PUBSAV_{t-1}$, NFT_{t-1}, YG_{t-1}, $GGDP_{t-1}$, and $BGAP_{t-1}$.

YG equation: ISGAP (ECM_{t-1}), EMGAP (ECM_{t-1}), BGAP (ECM_{t-1}), PCI_{t-1}, POP_{t-1}, and YG_{t-1}.

Techniques of Data Analysis

We adopted the Two Stage Least Squares (2SLS) estimating technique, as developed by Basmann (1977) who reported that 2SLS was appropriate for the estimation of over-identified equations. The relative impact of the three resource gaps on output, as given in equation (13) were estimated through the beta (β) coefficients for the resource gaps. For the purpose of analysis the values were taken in absolute terms i.e. we disregarded the accompanying signs. The study used time series data. It was therefore necessary to address the econometric problem of whether the time series data were stationary or non-stationary. This was because the statistical properties of regression analysis using non-stationary time series data could be spurious, (Phillips, 1986). For our purpose we adopted the Augmented Dickey Fuller (ADF) test for unit root, as given by Dickey and Fuller (1981). Time series data for the period 1970-1999 were applied to the system of equations as contained in 13a-13d. We drew our data from World Bank publications, being much more detailed and to enhance easy and meaningful international comparisons. Where necessary, we supplemented the data with information from

Central Bank of Nigeria and Federal Office of Statistics (FOS).

ANALYSIS

The Estimated Results of the Systems of Simultaneous Equations

The results of the systems of simultaneous equations were as given below.

$ISGAP = $ 1464.439 $-$ 0.030080YG $-$ 0.112380EMGAP $+$ 0.356467BGAP

(0.503)   (-1.782)   (-3.817)   (1.259)

3607.438 LRATE $-$ 1.178866ECM$_{t1}$...(5.4.2.1)

(-3.275)   (-2.548)

*The figures in parentheses are student "t" statistic

$R^2 = 0.6799$ Durbin Watson statistics $= 1.68$ F-statistics $= 6.401$

Lists of instruments used for the regression are the followings:

YG_{t-1}, $EMGAP_{t-1}$, $BGAP_{t-1}$, $LRATE_{t-1}$ $CAPIMP_{t-1}$ and $ISGAP_{t-1}$

$EMGAP = $ - 4881.314 $-$ 2.163628NFT $-$ 2.284131CAPIMP -

(-0.259)   (-4.868)   (-1.365)

0.360103YG - 1.411390 ECM$_{t-1}$ ....…………….. (5.4.2.2)

(2.557)   (-3.363)

*The figures in parentheses are student "t" statistics

$R^2 = 0.767329$ Durbin-Watson $= 1.825$ F-statistics $= 15.223$

Lists of instruments used for the regression are the followings:

NFT_{t-1}, $CAPIMP_{t-1}$, YG_{t-1}, and $EMGAP_{t-1}$

$BGAP = $ 6732.470 $-$ 1.828589DOMSAV $+$ 0.931776PUBINV $-$ 0.161011NFT $+$

(0.642)   (-2.226)   (1.715)   (-7.346)

0.097483YG $-$ 131.7214GGDP $-$ 1.091739 ECM$_{t-1}$.............................. (5.4.2.3)

(1.825)   (-0.361)   (-0.669)

*The figures in parentheses are student "t" statistics

$R^2 = 0.896$ Durbin-Watson statistics $= 2.189$ F-statistics $= 20.313$

Lists of instruments used for the regression are the followings:

$DOMSAV_{t-1}$, NFT_{t-1}, YG_{t-1}, $GGDP_{t-1}$, ISGAP (ECM$_{t1}$) and EMGAP (ECM$_{t-1}$)

$YG = $ - 115599.2 $-$ 1.540759ISGAP $-$ 0.044381EMGAP $-$ 2.501212BGAP $+$

(-0.969)   (-1.824)   (-0.664)   (-2.186)

83.72066PCI $+$ 53081.60LFORCE $-$ 0.258171 ECM$_{t-1}$ .... (5.4.2.4)

(4.843)   (1.233)   (-2.949)

*The figures in parentheses are student "t" statistics

$R^2 = 0.975$ Durbin-Watson statistics $= 1.449$ F-statistics $= 56.104$

Lists of instruments used for the regression are the followings:

$INVRATE_{t-1}$, NFT_{t-1}, PCI_{t-1}, BGAP (ECM$_{t-1}$), ISGAP (ECM$_{t-1}$) and EMGAP (ECM$_{t-1}$)

The coefficient of multiple determination ranges from 0.68 for Investment-Savings gap (ISGAP) equation to 0.98 for output gap (YG) equation. The above suggests that between 68.0 per cent and 98.0 per cent of variations in the dependent variables were explained by the explanatory variables. All the computed F-statistics were significant at 5.0 per cent level of significance. The F-statistics ranges from 6.401 for the ISGAP equation to 56.103 for the YG equation. The Durbin-Watson test statistics for the EMGAP and BGAP equations indicated the absence of autocorrelation. However, the Durbin-Watson test statistics for ISGAP and YG equations suggest that the autocorrelation tests were inconclusive, necessitating Von Neumann ratio as a supporting test. The result sshowed that our regression results from the ISGAP and YG equations were free from the econometric problem of autocorrelation.

From the ISGAP equation, all explanatory variables except BGAP and the constant are statistically significant at 5.0 per cent level of significance. Also, the explanatory variables except BGAP gave the expected signs. Increase in BGAP was expected to widen the ISGAP. Thus suggesting a negative relationship. However, the regression

result gave a positive relationship. The reason for the obtained result could be as a result of high deficit financing of the government. The deficit reduces the negative impact the BGAP supposed to have on investment. If the deficit is used to finance capital expenditure, especially infrastructures, it could increase the level of investment thereby reducing the Investment-Savings gap, thus the positive relationship. This may come in form of the crowd-in and crowd-out mechanisms.

From the estimated results of the EMGAP equation, the constant and the CAPIMP were not statistically significant at 5.0 per cent. Also NFT did not give expected sign. NFT should close the EMGAP, suggesting a positive relationship. The result obtained gave a negative relation. This could be an indication that new investment had not been sufficiently directed to sectors that earn or save foreign exchange.

At 5.0 per cent level of significance only GGDP was not statistically significant from the BGAP equation. Furthermore, only PUBINV gave the theoretically expected sign. Other explanatory variables did not. This is not surprising given the nature of Nigerian economy. For example, DOMSAV, which theoretically should give positive sign, gave negative sign. This might be due to the high poverty level, which discourages savings as well as the underdevelopment of the financial market in Nigeria. Furthermore, Obadan and Odusola (1999) argued that in an open economy domestic saving needed not be used for domestic investment (close the BGAP), it could be invested abroad if the international private rate of return is promising.

The YG equation incorporated the three gaps. At 5.0 per cent level of significance all the explanatory variables were statistically significant, except EMGAP and LFORCE. However all the explanatory variables gave the expected theoretical signs. This suggested that they all have negative impacts. A unit increase in the ISGAP will worsen the YG by 1.5 units. A unit increase in the EMGAP will only worsen the YG by 0.04 units. However, a unit increase in BGAP will worsen the YG by as much as 2.5 units. PCI and LFORCE give the expected positive signs.

We obtained –0.000030039, -0.000001362, and –0.000000031 as indexes for the relative strengths of Budgetary gap, Investment-Savings gap, and Export-Import gap respectively. Thus suggesting that Budgetary gap had been the most binding constraint on economic growth in Nigeria, while Investment-Savings gap and Export-Import gap

followed in order of importance. This result was however different from what was reported by El-Shibly and Thirwall (1981), and Mwega et al (1994), who reported the predominance of Export-Import gap. Nevertheless, our result was consistent with observed performance of the Nigerian economy where the total expenditure has been found to be growing faster than the growth of the economy, (Olaloye and Abiola, 2000). Furthermore, our result validated the original Chenery hypothesis, to the effect that countries in their pre-take-off stage of development usually have Investment-Savings gap predominance.

CONCLUSION

One, given the desirability of ensuring that resources are adequate to reduce output gap and promote sustainable economic growth, it is imperative that the authorities cultivate the habit of monitoring the relationships between desired and available resources. This would be a positive change away from the hitherto practice whereby policy makers usually attempted to fill some gaps the depth and magnitude they did not have any quantitative measure, the predictable end result of which had been failure and its attendant consequences.

The fact that budgetary gap is the most binding constraint on economic growth calls for policy action. The severity of the gap is further underscored by the monoculturality of the Nigerian economy. It is therefore imperative to diversify the economy away from the over reliance on crude oil.

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