

Original research Articles

**PUBLIC SPENDING FOR GROWTH – INDUCED EMPLOYMENT: THE
NIGERIAN EXPERIENCE**

ABSTRACT

The article focused on detailed analysis of interrelationships among public expenditure, economic growth and employment in order to determine potent factors influencing the contributions of public expenditure on growth and employment. It was designed essentially as a correlational study. Data were sourced from Central Bank of Nigeria. Data were analyzed using factor analysis. Results indicate that: (1) Public spending contributed significantly to growth (2) Public spending did not contribute significantly to employment (3) Growth failed to induce employment generation (4) Deficit financing neutralized the impact of public spending on growth to induce employment generation (5) Gross consumption expenditure, private consumption expenditure, and government expenditures were active employment policy instruments (6) Inflation was inversely related to employment. It was concluded that a dynamic employment policy with tax rates, exchange rates, interest rate and pricing as its major components was highly desirable.

Key words: Public spending, growth, employment

Jel classification: E12, E20, E24, E29

1.INTRODUCTION

Nigerian economy had remained agro based till the seventies. Hitherto, agriculture was the mainstay of the Nigerian economy. Awolowo (1981) had stated that three out of every four Nigerians worked on the land and seventeen shillings out of every pound earned from export came from agricultural products. Even though the oil boom of the 1970's had led to the total neglect of the agricultural sector, agriculture still provides employment to over 70 per cent of the country's population (Oyetoye, 1981). Agricultural sector has

28 continued to remain the dominant sector of the Nigeria, economy (World Bank,
29 1992).

30 Huge revenues from export of crude oil led to total neglect of agriculture.
31 There was a shift of emphasis by successive governments from agriculture to
32 industry. This had caused a sharp decline in investment in agricultural
33 production and agricultural education. The economic consequence of this was,
34 true to expectation a sharp fall in agricultural yield, and employment level.
35 Shift of emphasis from agriculture to industry implied the channeling of
36 resources away from agriculture to industry. The resulting transfer of demand
37 rendered vocations in industry lucrative and attractive to workers in
38 agricultural sector. Rural-urban migration occurred frequently as farmers
39 abandoned their implements and tools in search of jobs in industries and the
40 public service. The declining agricultural output and increasing farmer
41 migration had constituted a drain on the revenue base and labour force of the
42 agricultural sector, thereby fuelling growing dependence on oil export and an
43 increasing need for further industrialization.

44 Nigeria's reliance on industrialization to achieve growth and development
45 was conditioned by transfer of wealth from the export of crude oil (Ayodele,
46 1993). Huge investment of oil revenues in public sector was productive in
47 fostering the growth of public enterprises. By the 1980's, public enterprises
48 had started playing dominant role in the Nigerian economy contributing about
49 50 per cent to GDP and more than 60 per cent to employment. The growing
50 importance of public enterprises in revenue and employment generation
51 provided the impetus for establishment of public enterprises in almost all
52 sectors – mining, energy, transport, agriculture, manufacturing, commerce,
53 social services and utility. By 1985, total government capital investment in
54 these enterprises stood at ₦23 billion with ₦8 billion in equity and ₦15 billion
55 in loans. With 70 non-commercial and over 100 commercial public enterprises,
56 the federal government incurred annually 40 per cent of its non-salary

57 expenditure and 30 per cent of its capital expenditure for the maintenance of
58 these enterprises.

59 Low returns to investment and poor management acted as disincentive to
60 the federal government to continue to finance public enterprises. With the
61 crash of international oil price in 1986, Nigeria's fiscal and monetary postures
62 became precarious thereby rendering further maintenance and sustenance of
63 these public enterprises almost impossible. Following the approval of federal
64 government proposal for partial and full privatization/commercialization of
65 public enterprises by Council of States in November, 1987, Nigeria adopted the
66 policy of privatization of its public enterprises. Privatization was aimed at
67 curtailing wasteful expenditure and inducing revenue generation. However, it is
68 surprising that public enterprises have continued to spread in Nigeria even
69 after privatization exercise started. Jerome (2008), cited in Efurhievwe (2014)
70 had reported that by 2008 there were 600 public enterprises in Nigeria
71 accounting for 50 per cent of GDP, 57 per cent of total investment, and 66 per
72 cent of total employment. A plausible explanation of this is that the federal
73 government has continued to pursue with extreme caution the privatization of
74 public enterprises in order to forestall displacement of labour which occurs
75 quite often when a public enterprise is transferred to private hands.
76 Privatization of Nigerian International Telephone Exchange Limited (NITEL) and
77 Power Holding Company (PHC) had displaced over 50,000 workers who now
78 exert pressure on the already overstretched labour market.

79 Thus, Nigeria is currently faced with a situation of ever-increasing public
80 expenditure and ever-decreasing returns to investment. This situation was
81 worsened by the recent collapse of international oil price which has rendered
82 the Nigerian economy insolvent and incapable of sustaining its present level of
83 employment. Anaeto (2015) reported that most state governments are unable to
84 pay workers' salaries for several months due to "economic policy constraints"
85 hinged on bad debt and salary backlog. President Muhammadu Buhari has
86 described the situation where Nigeria cannot pay its workers as a "disgrace".

Indeed, it is surprising that the huge public expenditures and huge oil revenues which had facilitated a favourable combination of factor of production to yield the largest GDP in Africa cannot even sustain its workforce, let alone create new jobs. Twenty-two states out of the thirty-six states in Nigeria could not pay their workers for several months, and over 40 million Nigerians are unemployed, without any chances of securing jobs in the next ten years.

Unemployment in Nigeria has assumed a most dangerous dimension. The incidence of unemployment in Nigeria in this 21st century is alarming. The rates keep on rising without any appreciable effort to cushion the effects (Asaju et al., 2014). Social vices associated with unemployment in Nigeria include prostitution, human trafficking, drug trafficking, kidnapping, armed robbery, terrorism, etc. 'Boko Haram', a deadly terrorist group in Nigeria exploits the large reserve of unemployed Nigerians to boost their strength and capacity to unleash acts of terror. Unemployment now threatens the very existence of the Nigerian nation. It has evoked the concern of statesmen, academics, policy-makers and public-spirited individuals. Successive governments in Nigeria had adopted several measures aimed at creating jobs and reducing unemployment. Despite the efforts of successive governments, unemployment has continued to rise endlessly. This is partly because the measures were half hearted, being products of political considerations which thrive on political slogans and hatch in political propaganda. Or how could one justify the extension of retirement age of civil servants by a government committed to elimination of unemployment in a country characterized by 'chronic' unemployment? It is simply a matter of fact that Nigeria has no dynamic employment policy. Therefore, there is a dire need to embark on the present study aimed at isolating potent factors to activate government spending to generate revenue and employment maximally.

The paper was organized into six sections including the running section on 'Introduction'. Section 2 deals with recent studies in related field. Section 3 deals with method and procedure. Section 4 deals with the results of data

117 analysis while Section 5 deals with recommendations. Finally, Section 6 deals
118 with conclusion.

119 **2. RECENT STUDIES IN RELATED FIELD**

120 Studies in related field were reviewed under the following sub-headings:-

- 121 - Public expenditure – Economic Growth Nexus
- 122 - Public expenditure – Revenue/Employment Nexus
- 123 - Economic growth - Employment Nexus

124 **Public Expenditure – Economic Growth Nexus**

125 Studies in this area are not new. Public expenditure-economic growth
126 nexus has evoked the interest of researchers in Nigeria and overseas.

127 Barro (1991) reported that the ratio of real government consumption
128 expenditure to real GDP had a negative association with growth and
129 investment, and growth was inversely related to the share of government
130 consumption in GDP.

131 Hulten and Shwab (1991) and Tatom (1991) reported findings which
132 indicate that public expenditure on economic infrastructures such as health
133 and education has negative impact on economic growth or at least has no
134 significant effect on output of private sector.

135 Oyinlola (1993) carried out a study on the relationship between defence
136 sector and economic development. He found that defence expenditure had
137 positive impact on economic growth.

138 Hansson and Henrekson (1994), in their study found that an increase in
139 total government spending by 10 percentage points would reduce the growth
140 rate of total factor productivity by 0.92 per cent per annum.

Ogiogio (1995) found a long-term relationship between government expenditure and economic growth in Nigeria. Moreover, his findings revealed further that recurrent expenditure exerted more influence on growth than did capital expenditure.

Folster and Henreks (1999) found a tendency toward a more robust negative growth effect of large public expenditure.

Fajingbes and Odusola (1999) reported a finding which indicates that real government capital expenditure has a significant positive influence on real output.

Al-Yusuf (2000) reported that government spending had a positive relationship with economic growth in Saudi Arabia.

Bose, et al. (2003) found that the share of government capital expenditure in GDP was positively and significantly correlated with economic growth.

Ramirez (2004) using Mexican data for the period, 1955-1999, concluded that public infrastructure comprised of transport, communication, water and sewer systems, education and health care positively affected growth.

Akpan (2005) used a disaggregated approach to determine the components of government expenditure that enhance growth, and those that do not. He concluded that there was no significant association between most components of government expenditure and economic growth.

Ismihan, Metin-Oczan and Tansel (2005) in their study for Turkey during the period, 1963-1999, found a significant impact of public and public core investment on growth in the medium but not in the long term.

Komain and Brahmasrene (2007) studied the association between government spending and economic growth in Thailand. They employed

167 Granger causality test to analyze the data. The results indicate that
168 government spending and economic growth were not co-integrated.

169 Olugbenga and Owoye (2007) investigated the relationship between
170 government spending and economic growth for a group of 30 OECD countries
171 for the period, 1970-2005. The results of regression analysis revealed the
172 existence of a long-run relationship between government expenditure and
173 economic growth.

174 Rajan and Sharma (2008) studied the effect of government development
175 expenditure on economic growth for India for the period, 1950-2007. They
176 found a significant positive impact of government expenditure on economic
177 growth.

178 Nurudeen and Usman (2010) investigated the effect of government
179 expenditure on economic growth in Nigeria. They employed disaggregated
180 analysis. The results indicate that government total capital expenditure, total
181 recurrent expenditure and government expenditure on education had negative
182 effect on economic growth.

183 **Public Expenditure-Employment Nexus**

184 Sizeable volume of literature exists on public expenditure – employment
185 nexus. Recent studies were reviewed in this section.

186 Okoh (1993) had reported that an increased in public expenditure led to
187 reduction in employment in Nigeria.

188 Samuelson and Nordhaus (1995) observed that public expenditure grows
189 in the same direction to achieve growth in labour.

190 The Joint Economic Committee of U.S. Congress, JEC (1995) cited in
191 Efurhievwe (2014), had published a report which revealed that government
192 spending reduced labour force participation and increased unemployment,
193 while reducing labour productivity.

Fu, Taylor, and Yucel (2003) observed that increases in government spending or taxes led to persistent decreases in the rate of job growth.

Wells (2008) reported that public investment on highways led to enhanced employment generation in U.S.

Schwartz, Andres, and Dragoiu (2009) had reported that the direct and indirect short-term employment generation potentials of infrastructure capital project may be considerable.

Heintz and Pollin (2009) and Romer and Bernstein (2009) cited in Schwartz et al. (2009), reported that infrastructure investment impacted on short-term employment generation in three levels: primary impact in the form of those directly employed on the site, secondary impact in the form of those indirectly employed in the manufacture of materials and equipment; tertiary impact in the form of the induced employment generation by direct and indirect jobs created.

Economic Growth – Employment Nexus

Studies on economic growth and employment relationship have been reviewed in this section.

Ogunrinola (1991) reported that the urban informal sector of Ibadan had contributed significantly to employment generation, skill development and entrepreneurial development.

The Joint Economic Committee of U.S. Congress (1995) had published a report which concluded that economic growth was created over the long run by a labour force which possessed the incentive to work and produce, and by entrepreneurs who had incentives to invest in capital stock. However, the committee had maintained that government spending reduced labour force participation, increased unemployment, and reduce productivity.

Walterskirchen (1999) analyzed the linkage between economic growth and the labour market. He reported a strong positive correlation between GDP growth and changes in the level of employment.

Onwuoduokit (2006) studied the linkage between unemployment and several macroeconomic variables in Nigeria. He concluded that the shift in the composition of unemployment in Nigeria since 2000 is very instructive. Result has brought to the fore the inadequacies of the received theory toward explaining the unemployment phenomenon in the country.

Swane and Vistrand (2006) examined the GDP-employment growth relationship in Sweden. They reported that there was a significant and positive relationship between GDP and employment growth.

Yogo (2008), in an empirical survey of the linkage between employment and growth in Sub-Saharan African countries, attributed the weak employment performance to weakness of economic growth over time.

Sodipe and Ogunrinola (2011) reported that there was a positive and statistically significant relationship between employment level and economic growth in Nigeria.

Summary of Review

Literature review has revealed that there are conflicting findings on public expenditure-economic growth nexus, public expenditure –employment nexus and economic growth-employment nexus. Significant positive relationships among public expenditure, economic growth and employment did not come as a surprise. Since the results are a validation of Keynesian theory on income and employment determination. Keynes had argued that injection of income, in particular, would result in greater spending in the economy and employment generation which, in turn, would stimulate more production and investment, thereby creating a multiplication of original investment. On the contrary, the findings of negative correlation among public expenditure,

economic growth and employment are in violation of orthodox expenditure-income-employment theories. No plausible explanation was provided for the negative relationships among these variables. There was therefore the need to embark on the present study. Apart from yielding results to mediate among the conflicting findings of earlier studies, the paper explored the causes of distortion in the functional relationship among public spending, economic growth, employment and revenue. Moreover, the paper focused on isolating factors which could activate public expenditure and economic growth for revenue and employment generation. There is a consensus that with a neutral revenue policy, government revenues move with output in a proportion that is determined by certain structural factors (Arpaia & Turrini, 2010). This provides a priori reason to expect that public expenditures, government revenues, output and employment move in a proportion which is determined by certain structural factors. To identify these factors is the declared objective of this study.

3. METHOD AND PROCEDURE

The method and procedure adopted in the conduct and advancement of this study have been discussed under the following:

- Design of study
- Area of study
- Sources of data
- Factor model
- Model specification
- Method of data analysis.

Design Of Study

The study adopted correlational design. Correlational design was considered to be appropriate since the analysis of relevant data involved the condensing of inter-correlations.

Area Of Study

The study covered the total expenditures of federal, state and local governments in Nigeria. Revenue and employment figures were totals of federal, state and local governments. The period covered in the study was 1970-2014.

Sources Of Data

Data were sourced from the offices of the National Bureau of Statistics (NBS) and the Central Bank of Nigeria (CBN).

Factor Model

Common factor model was used for this study. The a priori justification for the choice of common factor model was the Keynesian income-expenditure theory establishing linear functional relationship between the variables. Common factor model is appropriate when the variables are assumed to be a linear function of a set of latent variables (Tucker et al., 1969; Ford et al., 1986). This model assumes that the variance in a variable can be divided into common and unique components, with the unique variance being further divided into specific and random error variance (Rummel, 1970).

Theoretical Model

The choice of relevant variables and their ordering in this schedule conformed to the neo-Keynesian income-expenditure model expressed in the equation:

299 $Y = E = C + I + G$

300 Where Y is total output in the economy

301 E is total expenditure in the economy

302 C is consumption expenditure

303 I is investment expenditure

304 G is government expenditure

305 **Model Specification**

306 The model has captured all five variables.

- 307 - Real gross domestic product (GDP) stands for output (Y)
- 308 - Total government expenditure (GEX) stands for total expenditure (E)
- 309 - Private consumption expenditure (PCE) stands for consumption
- 310 expenditure (C)
- 311 - Gross capital formation (GCF) is a proxy for investment expenditure (I)
- 312 - Real government expenditure (GCE)stands for government consumption
- 313 expenditure (G)
- 314 - Total employment (TEM) entered the model as criterion variable.
- 315 - Total Revenue (REV) was captured to reflect the nature of returns to
- 316 public expenditure.
- 317 - Inflation (INF) was included in the model to ascertain whether or not
- 318 employment generation through increased public spending was
- 319 inflationary.

320 Factor analysis model requires that the variables included in the analysis
 321 should be linearly related to each other (Cornish, 2007). Scatterplots of pairs of
 322 variables conformed to linearity.

Since there are eight variables, the number of factors that could be extracted is one-third of eight which is approximately three. Therefore, the factor analysis model has been expressed in the form:

$$TEM = \alpha_{i1}F_1 + \alpha_{i2}F_2 + \alpha_{i3}F_3 + e_i$$

Where α_{i1} is the factor loading of factor 1

α_{i2} is the factor loading of factor 2

α_{i3} is the factor loading of factor 3

e_i is the part of the criterion variable, TEM that cannot be explained by the factors.

Method of Data Analysis

Data were analyzed using factor analysis. The major focus of factor analysis was to determine the nature of the factor structure of GEX – TEM nexus in Nigeria. The principal axes method was used for the factorization of the inter-correlation matrix. This method is also known as the method of principal factor solution.

To keep the number of independent dimensions to the essential minimum, extraction of factors was restricted to only those values of the correlation coefficients equal to or greater than unity. Furthermore, a conservative rule of thumb for accepting a factor as real is as follows: “No attempt is made to take decision on the significance of unrotated loadings, e.g., as obtained from the centroid method or the method of Principal Axes” (Nunnally, 1967). Thus, following this principle, the Varimax rotation of the matrix was carried out.

By rotating the factors slightly in a clockwise direction, the strength of the relationship between the factors and the variable clustered near each other was increased (Popham, 1965; Kline, 1994). Rotation improves the

meaningfulness, reliability and reproducibility of factors (Weiss, 1976; Ford et al., 1986). Interpretation of results was based on the new values of factor loadings obtained through the use of 'Orthogonal Rotation' formula expressed in the form of $X_1 = X \cos \theta + Y \sin \theta$. Factor loadings which were equal to or greater than ± 0.300 were considered to be significant (Guilford, 1959; Frick et al., 1959; Flescher & Erwin, 1963; Nunnally, 1967; Rummel, 1970). For the sake of elaborate discussion, however, loadings of ± 0.250 or little below were also included. Ford et al. (1986) had suggested the inclusion of factor loading ± 0.400 . Factor loadings of the criterion variable were given for all factors disregarding the level of significance so as ascertain whether or not the factors represented correlates of TEM. The process of factor extraction was discontinued when the product of two higher factor loadings exceeded the value of $\frac{2}{\sqrt{n}}$ where n is the total number of variables included in the analysis.

"Extracting too many factors may present undesirable error variance but extracting too few factors might leave out valuable common variance". (Yong & Pearce, 2013).

4. RESULTS

The results of data analysis have been present in tables and discussed under the following sub-heading:

- Inter- correlation matrix
- Factor structure of GEX-TEM nexus
- Varimax (rotated) factor structure of GEX-TEM nexus
- Factors affecting the contributions of GEX to TEM.

376 **Inter-correlation matrix**

377 Inter-correlations among the criterion variable, TEM and seven
378 independent variables have been presented in Table 1.

379 Table 1. Correlation Matrix (8x8) Among TEM(CRN), GDP, GEX, INF, PCE,
380 GCE, GCF and REV.

381

S/NO.	Variable Code	1	2	3	4	5	6	7	8
1	REV	X							
2	TEM	-0.212	X						
3	GDP	0.949	-0.227	X					
4	GEX	0.913	-0.125	0.914	X				
5	INF	-0.330	-0.085	-0.311	-0.405	X			
6	PCE	0.977	-0.201	0.984	0.929	-0.341	X		
7	GCE	0.971	-0.200	0.981	0.931	-0.334	0.999	X	
8	GCF	0.888	-0.192	0.925	0.859	-0.279	0.939	0.953	X

382 **NB:** All figures were rounded to three places of decimal.

383 As can be seen in Table 1, all the correlation coefficients are of zero
384 order. The table also evinces that, with the exception of TEM, inter-
385 correlations were greater than ± 0.30 and hence in conformity with Tabachnick
386 and Fidell's (2007) requirement that "the correlation r must be 0.30 or greater
387 since anything lower would suggest a really weak relationship between the
388 variables." Now, the generally low r between TEM and the other variables has
389 raised the fundamental issue bordering on whether or not Nigeria has any
390 properly articulated employment policy.

391

392

Factor Structure of GEX-TEM Nexus

The factor structure of GEX-TEM nexus has been presented in Table 2 and 3 to facilitate the extraction of factors lying concealed in the interrelationships among the criterion variable and the independent variables.

Table 2. Principal Axes (Original) Factor Structure for GEX-TEM Nexus (N=45).

S/No	Variables Codes	Factor1	Factor 2	h ²
1	GDP	0.981	-0.053	0.965
2	TEM	-0.224	0.821	0.724
3	GEX	0.949	-0.096	0.909
4	INF	-0.394	-0.634	0.558
5	PCE	0.994	-0.016	0.989
6	GCE	0.995	-0.019	0.990
7	GCF	0.946	-0.047	0.897
8	REV	0.973	-0.028	0.947

NB: Factors loadings are rounded to three decimal places

Table 2 presents the original principal component factor matrix. The last column reveals the communalities (h²). On the whole, factor analysis led to the extraction of two factors (according to the criterion mentioned earlier).

Table 3. Varimax (Rotated) Factor Matrix for GEX- TEM Nexus (N=45)

S/No	Variables Codes	Factor 1	Factor 2	h ²	u ² =(1-h ²)
1	REV	0.973	0.011	0.947	0.053
2	TEM	-0.257	0.812	0.724	0.276
3	GDP	0.982	0.014	0.965	0.035
4	GEX	0.944	0.133	0.909	0.091
5	INF	-0.369	-0.650	0.558	0.442

6	PCE	0.994	0.024	0.989	0.011
7	GCE	0.995	0.021	0.990	0.010
8	GCF	0.947	-0.009	0.897	0.103
SUM OF SQUARES		5.878	1.100		
PERCENTAGE OF TOTAL VARIANCE		73.47	13.75		
PERCENTAGE OF COMMON VARIANCE		73.47	13.75		

403 **NB:** Factor loadings are rounded to three decimal places.

404 Table 3 represents the rotated Varimax factor matrix along with the
 405 communalities and uniqueness of the variables. The total variance of any
 406 variable comprises of common variance (h^2) as well as specific variance and
 407 error variance. Now, since it is usually difficult to separate specific variance
 408 from error variance, both are always combined and denoted by unique variance
 409 (u^2). This has been revealed in the last column of this table. At the end of each
 410 column of the factor, percentages of total variance and common variance
 411 contributed by the factor were entered.

412 **Factors Affecting Contributions of GEX to TEM**

413 To identify Factors 1 and 2 which had crystallized from data analysis,
 414 Table 3 was further split into two sub-tables (Tables 3.1 and 3.2). This has
 415 facilitated the discussion on the significant factors loadings of each of the
 416 factors.

417 **Factor 1**

418 Significant factor loadings of Factor 1 are shown in Table 3.1 for sake of
 419 convenience of discussion of results. As has been explained earlier, the
 420 Varimax rotation of the original factor matrix involving the dimension of GEX
 421 and TEM was carried out. The Varimax rotated version was presented in Table
 422 3.1.

423

424 Table 3.1. Varimax Factor 1.

S/NO.	Description of Variable	Code	Factor Loading
7	Gross consumption expenditure	GCE	0.995
6	Private consumption expenditure	PCE	0.994
3	Real growth domestic product	GDP	0.982
1	Revenue	REV	0.973
8	Gross capital formation	GCF	0.947
4	Government expenditure	GEX	0.944
5	Inflation	INF	- 0.369
2	Total employment	TEM(CRN)	- 0.257

425 Table 3.1 shows that Factor 1 had its highest loadings on dimensions of
426 consumption expenditures, GCE (0.995) followed by PCE (0.994). With the high
427 loading on GEX (0.944), Factor 1 comes close to 'Recurrent Expenditure'. The
428 significant negative loading on INF (-0.369) indicates that the recurrent –
429 expenditure component of Factor 1 caused a reduction in inflation rate. In neo-
430 classical economists' perspective, with mooring in money-price proportionality
431 rule, only a decrease in money supply causes a reduction in inflation rate. It
432 then becomes reasonable to assert that the federal government incurred its
433 recurrent expenditures from domestic borrowing thereby causing a reduction
434 in money supply and inflation rates. Viewed thus, it is not now difficult to clear
435 the ground for identifying and terming Factor 1. Government borrowing to
436 finance its expenditures is simply 'Deficit financing'. Therefore, Factor 1 has
437 been appropriately identified as deficit financing. Significant positive loading on
438 GDP served further to confirm this outcome as evidences abound that deficit
439 financing enhances economic growth. Also, significant positive loadings on
440 REV, and GCF had reinforced the finding considering that domestic or foreign
441 borrowing enlarges the revenue and capital bases of the government. Negative,
442 though nonsignificant loading of -0.257 on TEM implies that countries applying
443 deficit financing of recurrent expenditures would usually have negative valence
444 for TEM.

The common factor variance accounted for by deficit financing was 73.47 per cent which is 73.47 per cent of the total variance explained by the two factors.

The results indicate that: (1) Public spending enhances economic growth in Nigeria (2) Government borrowing enlarges the revenue and capital bases of Nigeria (3) The potent factor which inhibits the contribution of public spending to employment generation is deficit financing of recurrent expenditures.

Factor 2

Significant loadings on Factors 2 have been presented in Table 3.2 to facilitate discussion of results. As was discussed earlier, the Varimax rotation of the original factor matrix involving the dimensions of GEX and TEM was carried out. The Varimax rotated version has been presented in Table 3.2.

Table 3.2. Varimax Factor 2

S.NO.	Description of Variables	Code	Factor Loading
5	Inflation	INF	-0.650
2	Total employment	TEM (CRN)	0.812

Table 3.2 shows that Factor 2 had significant loadings on two variables, INF (-0.650) and TEM (0.812). With only two significant loadings, it could not be called a factor in the true sense of the term. Thus Factor 2 could not be identified. Tabachnick and Fidell (2007) had stated, inter alia, that “for something to be labeled as a factor it should have at least 3 variables...” Factor 2 can then be, at best, ‘pseudo factor’.

However, negative significant loading on INF and positive highly significant loading on the criterion variable TEM are both interesting, instructive and thought evoking. The results indicate that reduction of inflation rates in Nigeria was compatible with employment generation. It could be rightly inferred from the signs of the loadings on INF and TEM that the domestic

borrowing through CBN's instrument of open market operations (OMO) caused a reduction in inflation rates while at the same time stimulating job creation in Nigeria.

The common factor variance accounted for by this pseudo factor was 13.75 per cent which is 13.75 per cent of the total variance explained by the two. By the sheer size and direction of its contribution, this unnamed factor has far-reaching implications for employment generation in Nigeria. It is important to state that this unnamed factor has been interpreted with extreme caution to be OMO. Yong and Pearce (2013) had stated that "as a general guide, rotated factors that have 2 or fewer variables should be interpreted with caution."

Diagrammatic Representation of Factors

For at a glance appreciation, the factors have been presented diagrammatically in Fig.1 and 2.

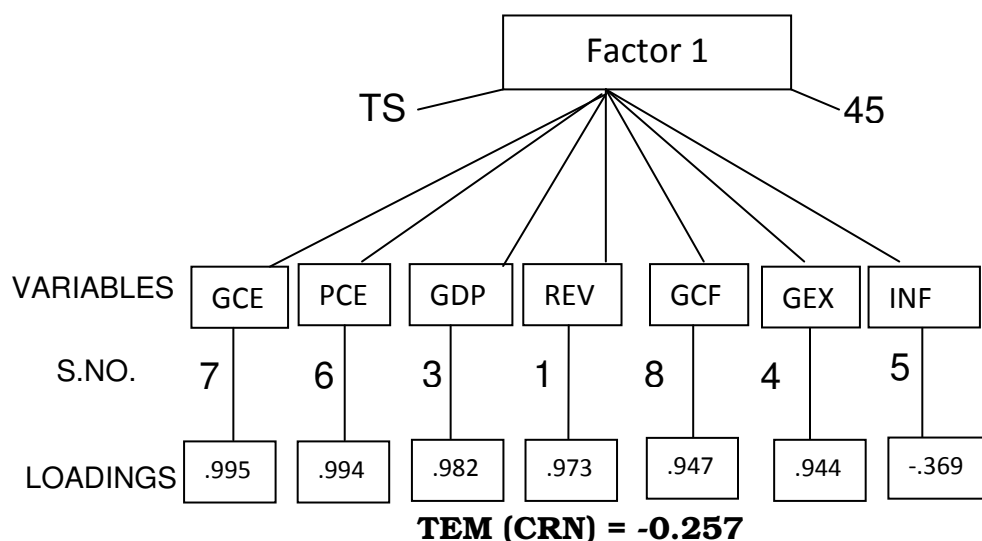


Fig. 1. Factor 1: Deficit Financing

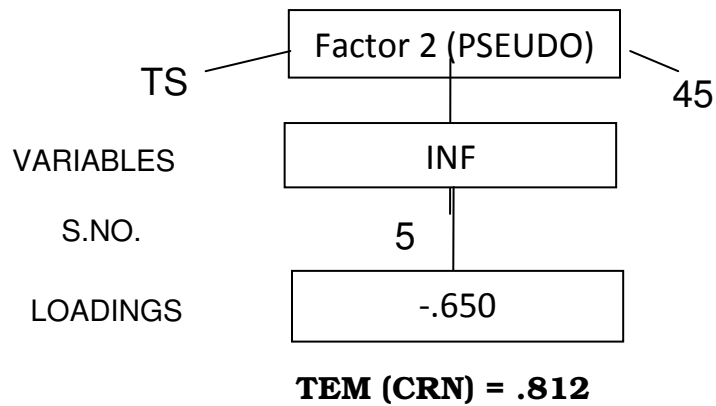


Fig. 2. Factor 2: Un-named

Modal Summary

The results of factor analysis have been aptly summarized in the following equation:

$$TEM = - 0.257DFI + 0.812 OMO$$

Summary of Major Findings

The major findings which have emerged from this study include the followings:

1. Public spending contributed significantly to economic growth in Nigeria.
2. Public spending did not contribute significantly to job creation in Nigeria.
3. Economic growth failed to induce employment generation in Nigeria.
4. Deficit financing was a single potent factor which acted as an inhibitor of public spending from stimulating growth-induced job creation.
5. Deficit financing comprised of a constellation of GCE, PCE and GEX in conjunction with TEM.
6. There was a significant negative relationship between inflation and employment, which was boosted by OMO.

5. DISCUSSION OF FINDINGS, POLICY IMPLICATIONS, AND CONCLUSIONS

Discussion of Findings

The finding of the study were discussed elaborately in this section in order to integrate the article into the existing economic literature.

The results which indicate that public spending contributed significantly to economic growth in Nigeria would serve to mediate among conflicting findings of earlier studies. On one side, Barro (1991), Hulten and Shuwab (1991), Hansson and Henrekson(1994), Fosler and Henrekson(1999) and Nurudeen and Usman(2010) had reported that government spending impacted negatively on economic growth. On the other side, Oyinlola(1993), Ogiogio(1995), Fajinagbesi and Odusola(1999), Al-Yusuf(2000), Bose et al. (2003), Ramirez(2004), Olugbenga and Owoye(2007), and Ranjan and Sharma (2008) found that public expenditure exerted positive impact on economic growth. And to Akpan (2005) and Kohmain and Brahmasrane (2007), public expenditure and economic growth were not co-integrated. It is the need to reconcile the conflicting findings of the three groups of researchers which has put a halo around the results of the present study. This need was immediately satisfied with the confirmation of the results which indicate that public spending contributed significantly to economic growth in Nigeria. There is no a priori reason why the present finding would not be apt to mediate among conflicting findings of earlier studies considering that factor analysis has the capacity to combine its inherent exploratory and confirmatory powers with the predictive powers of multiple regression to yield results with robust applications.

Another important finding of the study is that public spending did not contribute significantly to job creation in Nigeria. This has not come as a surprise. No nation which commits over 70 per cent of its annual budgets to recurrent expenditure can ever hope to generate surplus sufficient to create

new jobs. This was precisely the situation in Nigeria where capital expenditures of federal, state and local governments constituted only a small chunk of their annual budgets. The generally low returns to public sector investment were grossly inadequate to sustain the existing labour force, let alone create new jobs. Besides, Nigeria's private sector was characterized by declining marginal efficiency of capital. This had undermined the productive capacity of the private sector, thereby inducing it to resort to retrenchment of workers to reduce cost and stay afloat. This finding is in agreement with the findings reported by Okoh (1993), JEC (1995), and Fu et al. (2003). On the contrary, however, this finding is a contradiction of the results which indicate that public spending impacted positively on employment generation. This has raised the pertinent question on what the extraneous variable was, which had activated public expenditure in one situation and inhibited it in another situation. Fortunately, the excavation of the factor structure of public spending-growth-employment nexus has yielded some clues for answering the question.

Still, there is the finding that economic growth failed to induce employment generation in Nigeria. This finding corroborates the fact that there was a clear manifestation of growthmanship syndrome in Nigeria. Bronfenbrenner et al. (1992) had coined up the concept, growthmanship to refer to an economic situation where economic growth of a country is not reflected in its economic development indicators. Okafor and Uchendu (2000) had reported that management in the country's public sector was fraught with apparent difficulties such as inefficiency, capacity underutilization and low productivity which were rooted in lack of managerial capabilities and corruption. It is, therefore, not surprising that Africa's largest economy and World's Third fastest growing economy is still grossly underdeveloped. No wonder then Okafor et al. (2010) found that job creation strategies did not contribute significantly to total employment in Nigeria. While this finding is in conformity with JEC's (1995) finding, it contradicts the finding of positive significant contribution of growth to employment reported by Ogunrinola (1991), Walterskirchen (1999), Swane

and Vistrand (2006), Yogo (2008) and Sodipe and Ogunrinola (2011). Perhaps, it could be possible to trace the discernible lack of conformity between the findings to the differences in methods of data analysis, and periods of study.

Furthermore, another finding is that deficit financing was a potent factor which acted as inhibitor of public spending from stimulating growth-induced job creation. The isolation of deficit financing as a potent factor inhibiting public expenditure from simulating job creation in Nigeria has not come as a surprise. For several years, Nigeria had adopted deficit budgets in which over 70 per cent was allocated to recurrent expenditures and less than 30 per cent to capital projects. It is only reasonable to assert that deficit financing of recurrent expenditures is, to say the least, most unproductive. In this context, deficit financing could be viewed as an extraneous variable that boosted the strength of relationship between public spending and growth on the one hand and inhibited the contribution of economic growth to employment on the other. In one situation, deficit financing enhanced economic growth (Gaber, 2010). In such a situation, deficit financing acted as a booster to public expenditure to ignite economic growth to generate employment. In another situation, in conformity with Bamidele and Englama's (1995) finding, cited in Paiko (2012) deficit financing impacted negatively on economic growth. In this particular situation, deficit financing was an inhibitor of public spending which neutralized its potency to ignite economic growth to induce job creation. In this way, deficit financing emerged as a key factor which mediated among conflicting findings on impact of public spending on economic growth.

Yet there is the finding that deficit financing was comprised of a constellation of GCE, PCE and GEX in conjunction with TEM. It is not surprising that GCE, PCE and GEX were, by implication, plausible correlates of TEM. What is perhaps startling is the negative sign of loading on TEM which indicates that TEM was inversely related with GCE, PCE and GEX. However, an insight into governance in Nigeria would reveal almost immediately that this was a true reflection of situation where there was a total dependence on

imported consumer goods such as food, textiles, cosmetics, furniture, etc. It is not surprising then that GCE and PCE contributed highest positive significant loadings to deficit financing in conjunction with GEX. Government expenditure on consumption and debt financing of budget deficits on consumption had eroded the country's capital stock and reduced considerably, private investment. Rama (1993) cited in Paiko (2012) and Paiko (2012) had earlier reported that deficit financing crowds out private investment. Under the prevailing circumstances, the capacity of private sector to create jobs was reduced drastically thereby forcing governments at all levels to grapple to cope with the problem of rising unemployment in Nigeria.

Finally, there is the finding that there was a significant negative relationship between inflation and employment in Nigeria. It is reasonable to expect significant negative relationship between inflation and unemployment, which is in conformity with the results of Philip's curve analysis of inflation-unemployment nexus. Even then, the observed inverse relationship between inflation and employment is not an isolated evidence. "Low growth rates and inflation rates are correlated with large overall budget deficit in parts because the financing was done with Central Bank borrowing, as was the case in Nigeria." (World Bank, 1996). Relating the evidence to this finding facilitated the understanding that deficit financing of consumption through CBN borrowing caused a decline in growth, accompanied by discernible mismatch between aggregate supply and aggregate demand that resulted to inflation.

Policy Implications

The findings of this study have several policy implications for both developed and developing countries. First is the need to adopt high-employment budget norm, otherwise known as budget balance at-high-level income and employment. The application of this norm ensures that public spending results to high-level income and employment.

Second, as fiscal instrument for achieving sustainable growth and full employment, a suitable budgetary framework is important, together with effective and evenhanded implementation of government budget. However, misapplication of budgeting principle during economic recession or boom tends to be perverse in their effects. Deficit financing of capital projects is an important policy prescription during economic recession in order to expand the economy under conditions of cyclical depression. During the period of economic boom, the adoption of surplus budgets remains the preferred policy option of the government to constrain the pressure of demand inflation and to establish a deficit budget to expand the economy. Therefore, any decision on the use of deficit financing to stimulate growth and employment should be based purely on the consideration of the state of the economy.

Third is the desire to formulate a dynamic employment policy- a need which is often highlighted by lack of clear policy objectives. A constellation of expenditure dimensions including GCE, PCE and GEX which constituted deficit financing has placed a high premium on GCE, PCE and GEX as key elements in any dynamic employment policy. It is therefore important that in formulating a dynamic employment policy, all variables which impinge on GCE, PCE and GEX such as pricing, exchange rate, tax rate wage rate, etc. should be modelled as employment policy instruments.

Fourth, given the deficit financing of consumption and the inverse relationship between inflation and employment, the next priority is arguably the adoption of a tax policy which could yield sufficient tax revenues to offset expenditures and so reduce any inflationary gap.

Conclusion

The generalization warranted by this study is that public spending might not necessarily stimulate growth-induced employment generation. Deficit financing was isolated as a potent factor which had inhibited government expenditure from exerting its positive effect on growth to generate employment.

This is a true reflection of the situation in developing economies where governments allocate chunks of their annual budgets for recurrent expenditures and only small chunks for capital expenditures. Under the prevailing circumstance, several governments were unable to create new jobs or maintain the existing labour force. Quite often, they resorted to retrenchment of workers as a Hobson's choice, thereby swelling the army of unemployed persons. With teeming population of jobless youths, unemployment has continued to pose a serious law and order problem in both developed and developing countries. Rising unemployment in both developed and developing countries has offered excellent opportunities to terrorist outfits such as Boko Haram, Al-Shabab, Al-Qaeda, Islamic State of Iraq and Levant (ISIL), Islamic State of Iraq and Syria (ISIS), Taliban, etc. to recruit willing restive youths into their rank and file. Unless measures are evolved to reverse the rising trend of unemployment in different countries, the world would soon be sitting on a seething volcano. Any conscientious effort to evolve measures to curb unemployment would begin essentially with the formulation of a dynamic employment policy. And this paper has derived its relevance from its effectiveness in isolating active employment policy instruments.

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