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THE MYTH AND REALITY OF GOVERNMENT EXPENDITURE ON PRIMARY HEALTH CARE IN NIGERIA: WAY FORWARD TO INCLUSIVE GROWTH

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THE MYTH AND REALITY OF GOVERNMENT EXPENDITURE ON PRIMARY HEALTH CARE IN NIGERIA: WAY FORWARD TO INCLUSIVE GROWTH

Abstract

The health sector remains a vital tool for sustainable development of any nation and therefore investment in this sector cannot be overemphasized. The present state of Primary Health Care (PHC) system in Nigeria is alarming, with only about 20% out of the 30,000 PHC facilities relatively distributed throughout the 774 Local Government Areas (LGAs) across Nigeria working partially. This study examines government expenditure on primary health care in Nigeria as well as its relations to real national output within the period 1980 to 2015 using secondary data and the Ordinary Least Square (OLS) econometric technique. The results of the model used revealed government health expenditure to be efficacious for economic growth, and for the well-functioning of primary health care in Nigeria. Nonetheless, such efficacy duly was also understood to be limited in three select aspects: funding/financing strategy, personnel/manpower quality and mobilization, and implementation framework. The paper, in conclusion, attests to the rationale that money spent wisely on capital health expenditure pays off well in both short-run and long-run for individuals, the society and nation at large.

Key words: *Nigeria, Government Capital Expenditure, Primary Health Care, Inclusive Growth, Ordinary Least Square*

1. Introduction

The health sector is widely acclaimed to be vital for the sustainable development of any nation, and therefore investment in this sector cannot be overemphasized. Also remarkably, government expenditure on primary health centers in Nigeria has notably led to improvement in various areas such as reduction in mortality rates, morbidity and increase in life expectancy rate. (Nixon and Ulmann, 2006; Anyanwu and Erhijakpor, 2009; Novignon, Olakojo and Nonvignon, 2012). However, the efficiency and effectiveness of the health sector is argued to depend on the extent to which it is all-embracing, that is, meeting the health needs and interest of varying categories of people in the economy, most especially people that are vulnerable with low income, the destitute, the less privileged and the likes found in the society who are in dire need for improvement in their health status (Abimbola, 2012; Taiwo, Soyele, and Ndubuizu, 2014). Meeting the needs of such ones as these consequently could help achieve one of the Sustainable Development Goals (SDGs) which is eradicating poverty (AFDB, OECD and UNDP, 2017).

Furthermore, in facilitating human capital development, a vibrant and an all-inclusive health sector is also put forth to be fundamental. Stated differently, policies that favor investment in the health sector is noted to foster improvement in productivity, socioeconomic development, and quality of lives of the people which enables them to be more productive, skillful, and industrious thereby translating into economic growth (Oluwatobi and Ogunrinola, 2011; AFDB et al, 2017). Whereas, with all or most of the investment in health been derived from the public sector, such questions that may arise include: Could government spending on primary health care be always productive? Could government spending on health always achieve the desired positive result?

The financing of the health sector is reiterated also in literature to directly and or indirectly affect per capita income and economic growth. Thus, as economic growth may be defined as the sustained increase in national output overtime, promotion of primary health care financing can lead to increase in human capital through capital accumulation and impact economic growth directly (Saad and KalaKech, 2009). It also improves labour efficiency through increased longevity and reduction in working days due to illness which affects productivity incidentally (Berger and Messer, 2002; Herrera and Pang, 2005; Novignon et al, 2012).

But over the years in Nigeria, while the health sector has been placed on top priority by several administrations, the health care system is still underdeveloped to face the challenges of the 21st century. The present state of Primary Health Care (PHC) system in Nigeria is alarming, with only 6000 out of the 30,000 PHC facilities partially functional though with poor funding, inadequate equipment and facilities, sparse distribution of health workers, and lack of the supply of vital drugs. Saddening, Nigeria's health system was ranked 197th of 200 nations by the World Health Reports (World Health Organization, 2000; World Health Organization, 2005; Obalum and Fiberesima, 2012; Tajudeen and Ismail, 2013; Kress, Su, and Wang, 2016; Okoli, Eze-Ajoku, Oludipe, Spieker, Ekezie and Ohiri, 2016).

Besides as of the Nigerian case, the manner which the provision of health services is handled reflects the structure of government. The federal government is responsible for tertiary health care, state governments for secondary health care, and the local governments handle primary health care. Meanwhile, the impact of local government administration on the people with regards to primary health care however still remains a subject of debate. Conversely, the Alma Ata

Declaration of 1978 has been successfully implemented by countries such as Thailand, Cuba, China, and Mexico. The financing of public health in Nigeria is tied to the flow of funds from the federation account (Abimbola, 2012; Budget Office of the Federation, 2014).

Thus, the goal of this work is to consider these issues. This study therefore as a matter of necessity and as a contribution to literature, examines government expenditure on primary health care in Nigeria as well as its relations to real national output, with the view to empirically investigate the root cause(s) of problems such as those which has plagued the primary health care system in Nigeria for decades. Subsequent sections of this research follows with the literature review (section 2) highlighting the conceptual issues, recounting the primary health care provision (theoretical) framework, and exploring selected empirical studies. Section 3 introduces the stylized facts, which traces the historical antecedents in Nigeria's primary health care services delivery, makes spotlights of the constraints, and undertakes a descriptive analytics of selected health sector outcomes. In section 4 which entails the methodology, we restate the theoretical underpinnings and adopt a modified model. Section 5 presents the results and discussions while section 6 provides the conclusion and recommendations.

2. Literature review

2.1 Conceptual issues

The primary health care system is a grass-root approach meant to address the main health problems in both rural and urban centers, by proffering preventive, curative and rehabilitative solution-based health services at an affordable and accessible rate for all individuals (Gofin, 2005; Olise, 2012). More so, the Alma Ata declaration of 1978 defined primary health care as the "essential care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation, and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination" (WHO, 2012; Aigbiremolen et al, 2014a).

On the other hand, as the popular form of economic organization for economic progress is of a capitalist orientation, and which obviously had led for 'side-lined' growth even in contemporary times is de-emphasized, the notion or concept of inclusive growth - a participatory measure in both

the development process as well as an encapsulated stake in resulting benefits and all forms of accrued outcome – remains highly upheld either explicitly or implicitly. Any discourse thus about sustainable development as a Post-2015 Agenda draws to mind the issue of realizing inclusive growth (United Nations Department of Economic and Social Affairs, 2015). However, such enviable feat in recent times has more often than not been notably undermined whereby employment provision is not ensured, sectoral imbalance prevails, and particularly when non-participatory development measures are held in high esteem amidst innumerable negative consequences. As a result, such limitation to development especially in developing economies and of which Nigeria is one that remains a concern.

In a recent conference on sustainable development, economic growth and economic development were opined as not synonymous. Thus, economic development requires sound foundations which are not just inclusive of universal access to education, access to financial services, new technologies and affordable bank loans, gender equality and more equal distribution of resources but also of universal access to health services since all can support economic development. Investments in infrastructure are notable as vital for economic growth and accessibility and affordability of the services provided is expected to be taken into consideration already when planning these investments. Popular public-private-partnerships are a valued option for financing infrastructure, and a wide funding mix, suitable for each project, could be utilized so that institutions fostering growth may be in a manner that becomes sensitive to the needs of people (United Nations Department of Economic and Social Affairs, 2015).

Inclusive growth talks not just of participation or sharing benefit but also sharing or taking part in outcome i.e. not taking a back-seat approach or role in development process but taking an active part or venturous approach or participatory contribution in the development process. Thus, a framework or milieu offering opportunities, improving people's capabilities as expected by Sen (1985) capabilities approach is such envisaged or such that is germane. An implication here refutes in no manner an appeal for a growth process that means a broad-based growth, a growth process that is all encompassing or a growth process that is all embracing. Hence, the case of social protection, welfare extension services or establishing welfare provision structure complimentary to the capitalist approach in development process are such that are implied factors inherent as necessary in attaining or achieving or engendering inclusive growth.

2.2 Provisional framework on Primary Health Care

The Wagner's Law of Increasing State Activities which argues that there are inherent tendencies for the activities of different layers of a government (such as central and state governments) to increase both intensively and extensively, is one that continually resonate in literature focused on functional relationship between the growth of an economy and the growth of the government activities (Wagner, 1893; Nitti, 1903; Musgrave and Musgrave, 1989; Brown and Jackson, 1990; Bhatia, 2002).

Whereas, Nitti (1903), Musgrave and Musgrave (1989) and Brown and Jackson (1990) had laid bare the traditional functions of the state to include defence, justice, law and order, maintenance of the state and social overheads, but over time the government's interest to enrich the cultural life of the society and to provide social security to the people would accommodate efforts that account for redistributing income and wealth (Brown and Jackson, 1990). Thence, the need to provide and expand the sphere of public goods becomes increasingly recognized, and one of such goods obviously is the provision of health services – of which a possible framework to ensure its sustainable provision and optimum contribution to society's welfare is as illustrated (Figure 1) (Bakare and Olubokun, 2011; Kress, Su and Wang, 2016).

However, such general tendency of expanding state activities is reiterated to be of a long term trend, though in the short run, financial difficulties could come in the way; and by implication therefore in the long run, the desire for development by a progressive people is recounted to always overcome these financial difficulties (Bhatia, 2002; Bakare and Olubokun, 2011).

Figure 1: Primary Health Care Provision Framework

Source: Kress, Su, and Wang (2016)

2.3 Empirical Review

Several studies have been conducted to examine the impact and effect of government public expenditure with regards to the health sector. Most of the studies have utilized the Benefit Incidence Approach (BIA), and their results shows that health public expenditures are either progressive or regressive depending on the level/share of their per capita income. (Norman, 1985; Gupta et al., 1998, 2001; Younger, 1999 ; David et al., 2000; Castro-Lealet al., 2000; Rasmuset al., 2001 ; Jorge , 2001; Christian, 2002 ; Roberts, 2003 ; Hamid et al., 2003; SPDC, 2004; Sakellariou and Patrinos, 2004; Lamiraud et al., 2005; Hyun, 2006; and Cropper and Sahin, 2009).

Younger (1999) exhibited that public sector expenditures are progressive in Ecuador using a combination of benefit and behavioral approaches to show that public expenditures on health has improved the health indicators in the most developing countries. Also, Gupta et al. (1998) in a cross country analysis using 56 country data, concluded that the increase in public expenditures on health reduces the mortality rates in infants and children.

Toor and Butt (2005) examined the role played by socio-economic factors in determining health care expenditure outcome in Pakistan and their results show that the share of health expenditure in total government expenditure is a significant variable affecting health status in the Pakistan economy. They further stated that literacy rate and GDP growth were also very important variables, which exhibited a positive relationship with health care expenditure.

Norman (1985) concluded that increase in public expenditure on health services eventually benefits those in the upper income groups than those in the lower income groups. Castro-Leal et al. (2000) analyzed government spending on curative care in several African countries and found that the public sector spending mostly favor the rich rather than the poor. Hamid et al. (2003) conducted a study using the benefit incidence approach (BIA) with data from 56 countries, and the result shows that the average expenditure on health in sub-Saharan Africa countries are very poor and progressive in western hemisphere.

The result of Cropper and Sahin (2009), shows that government public expenditures on health has some impactful effects on good health and sound education which has provided a sound base for alleviating poverty. Whereas, Olufeagba (2014) pointed out that investment in health sector promote economic growth. He further reiterated that quality investment in the health is a measure

in alleviating poverty and a key in human capital development. Gupta et al. (2001), analyzed the health status of 70 growing and underdeveloped nations, and results indicated that the wealthy part of the population had better health than the poor populace of the nation, but government investment had an influence on ensuring a better health care system for all.

To meet the needs for quality health in the society notably require huge monetary investment. Riman and Akpan (2012) stated tax driven public financing, health insurance coverage for employees in private employment, individual family spending, payments for the use of public facilities, corporate social responsibilities and assistance from donor agencies as the sources for providing good health care in Nigeria. It is the sole responsibility of the federal government to provide quality and good affordable health care to her citizenry by making budgetary provision to achieve good primary, secondary and tertiary health care system in the nation, despite it being the duty of the local government to monitor the functionality of the health care system in their localities.

3. Stylized facts

3.1 Historical antecedents of Primary Health Care in Nigeria

Primary health care in Nigeria was adopted into the national health policy of 1988 as the pillar of the Nigerian health system, with efforts as to improving the bedrock of the Nigerian health system particularly in terms of accessing and utilizing the basic health service. The eventual health care objectives as described are as contained in the national health care policy. There were three major attempts recorded in history at improving and sustaining a community and people-oriented health system in Nigeria. The first was between 1978 and 1980, and this was when the Basic Health services scheme (BHSS) was introduced (Federal Ministry of Health, 2004).

With the adoption of PHC in the mid-1980s, the Nigerian health sector recorded some successes in the health conditions of Nigerians. The primary health care system was developed and strengthened and this helped to improve some of the health status indicators. Among other activities, routine immunization coverage increased and this led to reduction in infant and child mortality rates. Unfortunately, this success was not sustained. Notably, there has been a downward trend in the quality of health care service delivery since 1993. The performance of the health sector in terms of coverage of people by health services in various forms, including access to health

services in general, the doctor-patient ratio, the number of births attended by skilled health personnel and the immunization of children against Diphtheria, Pertussis and Tetanus (DPT) attest to this (Federal Ministry of Health, 2004).

3.2 Constraints to Primary Health Care Delivery in Nigeria

Although there have been the establishment of PHC centers in both rural and urban areas in Nigeria with the intention of easy access and equity, Abdulraheem, Oladipo and Amodu (2012) had stated that the population of the rural areas has seriously been underserved when compared with their urban dwellers. Such observations notably attest to limitations in primary health care delivery in Nigeria. The absence of political will, insufficient funding, disaggregated inter- sectoral planning and non-collaboration between the state and local institution constitute the governmental limitations to primary health care delivery, while the human limitations can be traced to low quality and insufficient services in the primary health care, under-utilization of PHC service and low community enlightenment. Others limitations include inappropriate motivation strategy, unwarranted competition among various health staff, low remuneration, private health sector alienation from the planning and execution of primary health care, high reliance on external policies and finance which may not always be readily available and inadequate management of information technology system (Abdulraheem et al., 2012; Tajudeen et al., 2013; Okoli et al., 2016).

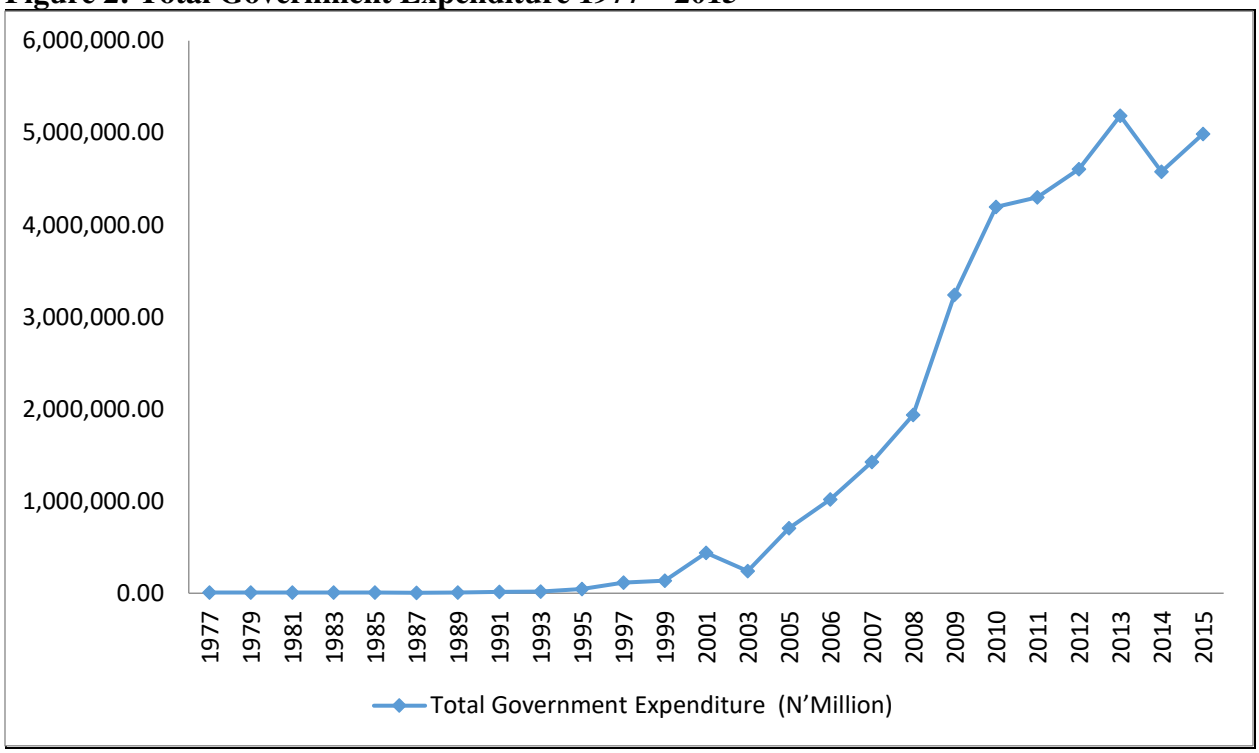
In addition, the perception some Nigerians have about PHC is nothing to reckon with, while most are grossly unaware about certain PHC services. This has resulted to individuals seeking treatment for ailment that would have been efficiently and effectively treated by PHC facility closer their place of residence elsewhere, particularly secondary and tertiary health facilities. They believe that PHC is for low income earners or people who reside in rural environs. Also the perceived status of staff in PHC facilities are such that they are inefficient and not highly educated, thus not capable and experienced handling the ailment to be treated compared to their counterpart in tertiary health care facilities. Also, unaccountability and embezzlement of fund perpetuated by local government officials are seen as a norm and so people believe that such health facilities are of sub- standard quality (Abdulraheem et al., 2012).

3.3 Trend analysis

Good health notably has been emphasized as very essential to improve the income stream of the population irrespective of the age distribution. It is a major factor which attributes to sound learning because access to education is an off-shoot from it. Clearly, as good education is a driver of sound health, sound health thus drives good education. Thence, it is of great importance to pursue the development and sustainable provision of good health worldwide (Cueto, 2005).

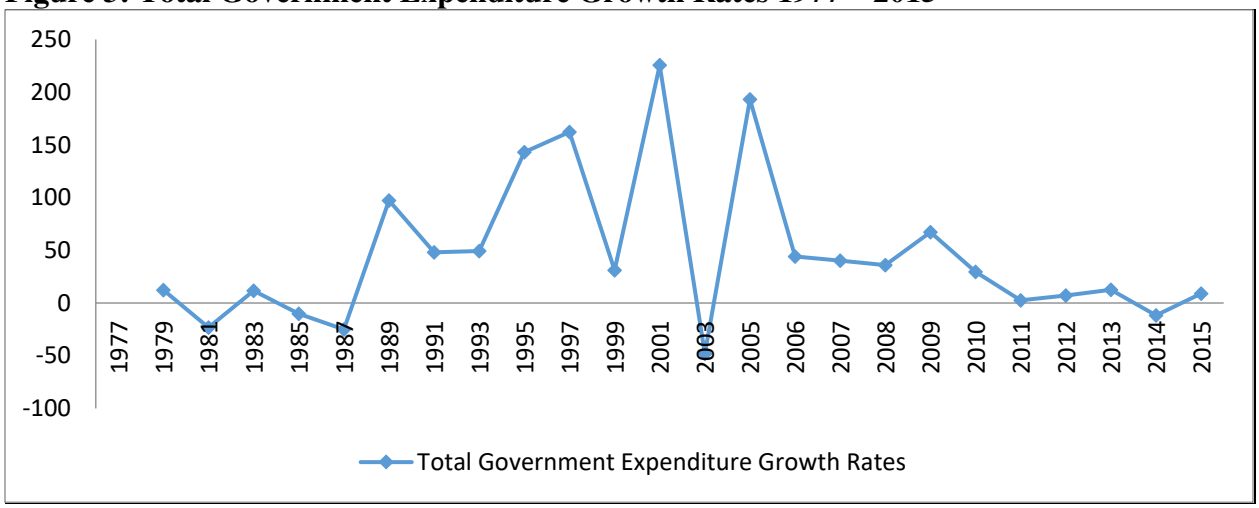
During the years under review, government expenditure and its segments on the Nigerian health sector, vis-à-vis total fiscal spending (figures 2 & 3 and figures 4 & 5 respectively), has been declining drastically. This is evident as only 3.2% of the aggregate government spending on average has been allotted to the health sector. In 2012 about 6% of aggregate government spending was proposed as government spending on health contrary to the agreement of the African Union's Abuja declaration of 2001 (which appropriate 15% of the government's spending on health). We could recall also that, government expenditure on health grew to NGN266.7 billion in 2011 from NGN154.6 billion in 2009 with a 67% growth rate. This accounts for 5.4% of the total government budget and 0.7% of the gross domestic product in Nigeria during the reviewed period (Savedoff, 2003; Uzochukwu, et al, 2015).

Figure 2: Total Government Expenditure 1977 – 2015



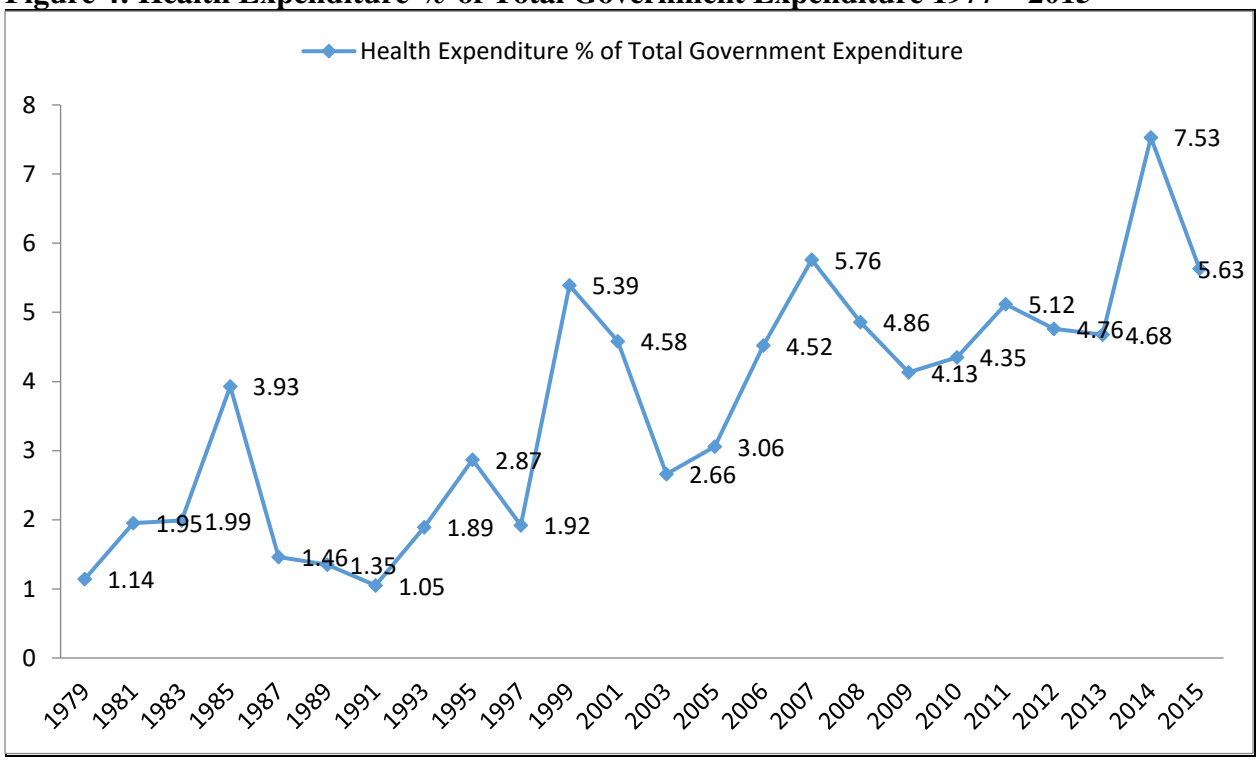
Source: CBN and NBS Statistical Bulletin (various issues); Authors

Figure 3: Total Government Expenditure Growth Rates 1977 – 2015



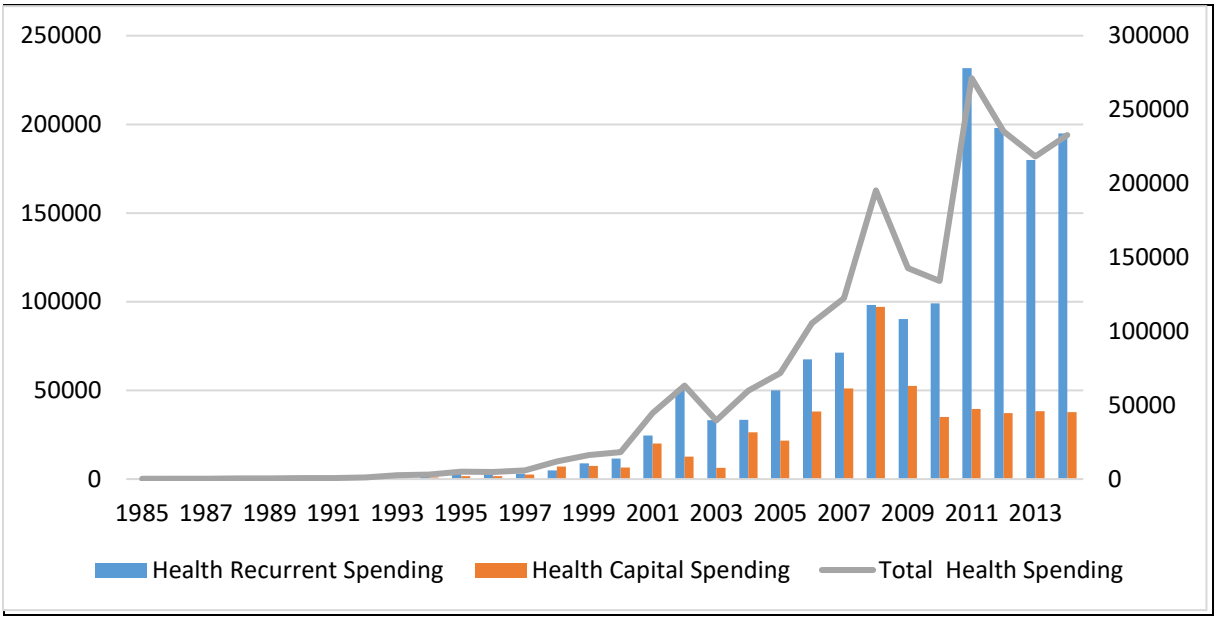
Source: CBN and NBS Statistical Bulletin (various issues); Authors

Figure 4: Health Expenditure % of Total Government Expenditure 1977 – 2015



Source: CBN and NBS Statistical Bulletin (various issues); Authors

Figure 5: Government Recurrent and Capital Health Expenditure Nexus 1985 - 2014



Source: CBN and NBS Statistical Bulletin (various issues); Authors

Also in Nigeria, government spending on health was less than $8 per capita compared to the $34 recommended globally; and private expenditures is estimated to be over 70% of total health expenditure with most of it coming from out-of-pocket expenditures in spite of the endemic nature of poverty. More so, there is no broad-based health financing strategy (Federal Ministry of Health, 2004). Despite the governments' resolution to allocate reasonable budgets to the health sector, there had been evidence of erratic and non-release of such allocated budgets. The non-release of these allocated budgets thereof provides an indication amidst other reasons for the significant poor performance of the sector (Uzochukwu, et al., 2015).

Budgetary funding for health care systems thus as well have not proved supportive to the less privileged in the society, because most of these persons have settlements in the rural areas while the government more often focus on the urban areas. In consequence, rural areas comprising these indigent persons thereby depend majorly on erratic funding from donor agencies, social responsibilities from corporate agencies and the few wealthy in these rural areas (Taiwo, et al., 2014).

4.0 Methodology

4.1 Theoretical Framework

Public spending is made apparent from Keynesian macroeconomics as such, which can have a significant impact on economic growth. A rise in government spending is therefore effective in producing some beneficial results (Herrera and Pang, 2005). According to economic theory, expenditure on public health, the amount of capital formation and labor productivity are anticipated to partially determine the level of economic growth in Nigeria (Ichoku and Fonta, 2006; Odior, 2011).

Public health expenditure is anticipated to have a favorable sign as it is anticipated that a rise in public health expenditure will enhance the health of the labor force (Filmer and Prittchet, 2007) and thus boost their productivity. In the same vein, it is inevitable that enhanced labor productivity will boost gross national production (Novignon et al, 2012).

On the other hand, capital formation is anticipated to have a favorable effect primarily because an increase in capital formation represents a rise in investment, which is supposed to result in a rise in domestic production. While the impact of productivity of labour-power is also anticipated to be positive, because increased productivity in the labor force will result in higher production. It also enhances overall supply and sustainability (Saad and KalaKech, 2009).

4.2 Analytical Framework of the Model

The economic growth model used in this research is based, with little alteration, on the neo-classical Solow production function. According to Romer's definition, economic growth is a function of capital accumulation, an extension of labour-power and an "exogenous" factor, technological advancement which makes physical capital and labor more productive (Mankiw, Romer and Weil, 1992), Hartshorne (1985) as quoted in Saad and KalaKech (2009), Romer (1996) as quoted in Novignon et al. (2012), and Odusola (2002).

However, this model was remodified with the inclusion of human capital ($H_t\beta$), thus:

As, $Y_t = K_t\alpha(A_tL_t)$..... (1)

Where,

Yt = Aggregate real output; K = Capital stock; A = Efficiency factor; t = Time dimension;

L = Labour

We modify by adding human capital ($H_t\beta$) ;

So, $Y_t = K_t\alpha + H_t\beta(A_tL_t)$ …….. (2)

The linearized equation for the above will appear as:

$LogY_t = \alpha \log K_t + \beta \log H_t + \gamma \log(A_tL_t)$.....(3)

Re-written as:

$LGDP = \alpha_0 + \alpha_1 LGFCF + \alpha_2 LTGEH + \alpha_3 LF + \mu$.....(4)

where,

$LogY_t$ = Real output proxied as Log of Gross Domestic Product ($LGDP$) ; log K_t = log of capital stock proxied as Log of Gross Capital Formation ($LGFCF$) ; $LogH_t$ = log of human capital proxied as Log of Health Care Expenditure ($LTGEH$) ; log L_t = Log of labour force proxied as Log of Secondary School Enrolment (LF).

The apriori economic expectations are:

$\alpha 0 > 0, \alpha 1 > 0, \alpha 2 > 0, \alpha 3 > 0$

4.2.1 The Hypotheses

This study verifies the null and the alternative hypotheses stated below:

H_0: There exist no significant relationship between government health care expenditures and economic growth in Nigeria.

H_1: There is a significant relationship between government health care expenditures and economic growth in Nigeria.

4.3 Source of Data

The data utilized in this study consists of annual observation of time series data on Real Gross Domestic Product (RGDP), Gross Fixed Capital Formation (GFCF), Total Government Expenditure on Health (TGEH) and Labour Force (LF) in Nigeria from 1980-2015 as obtained from various Central Bank of Nigeria (CBN) Statistical Bulletins and National Bureau of Statistics (NBS).

5.0 Results and Discussions

5.1 Descriptive Analysis

From the descriptive statistics (Table 1), results shows on the average, Nigeria's Real Gross Domestic Product (RGDP) was N1917344.0 billion over the period under review but of which such could be considered, in view of the prevalent poor quality of life in the country, to not have impacted much in improving the living standard of the country's citizenry since the major drivers of the income growth were from non-real sectors of the economy (CBN and NBS Statistical Bulletin, various issues).

Table 1: Descriptive Statistics of Variables

	RGDP	GEH	GFCF	LF
Mean	1917344.	7794730.	392016.4	17.75245
Median	12.63273	8.365359	12.37539	17.63560
Maximum	69023930	2.81E+08	14112170	18.26655
Minimum	10.35923	3.721105	8.923231	17.10853
Std. Dev.	11503986	46768332	2352026.	0.389155
Skewness	5.747049	5.747049	5.747049	0.163066
Kurtosis	34.02857	34.02857	34.02857	1.476261
Jarque-Bera	1642.330	1642.330	1642.330	3.642213
Probability	0.000000	0.000000	0.000000	0.161847
Sum	69024376	2.81E+08	14112591	639.0881
Sum Sq. Dev.	4.63E+15	7.66E+16	1.94E+14	5.300451
Observations	36	36	36	36

Source: Authors, using EViews7

Also by implication, the foregoing thereof shows that the income growth had not much trickle down to the poor rural communities – harboring a huge quantum of the country's Labour Force (LF) though Government Expenditure on Health (GEH) averaged N 779473.0 million for the period under review. However, a less than 5 percent p-value of GEH and Gross Capital Formation (GFCF) attests of their capability of being significant predictors of RGDP.

5.2 Empirical Estimate of the model

In Table 2, the result of the equation estimated to verify the impact of government health care expenditures on economic growth is presented.

Table 2: OLS regression result for the model

Dependent Variable: RGDP				
Method: Least Squares				
Date: 11/09/18 Time: 09:22				
Sample: 1980 2015				
Included observations: 36				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
GEH	0.253963	0.005343	47.53018	0.0000
GFCF	-0.158777	0.106246	-1.494434	0.1449
LF	0.487371	0.506737	0.961783	0.3434
C	3.873197	7.820633	0.495254	0.6238
R-squared	1.000000	Mean dependent var		1917344.
Adjusted R-squared	1.000000	S.D. dependent var		11503986
S.E. of regression	0.341458	Akaike info criterion		0.793255
Sum squared resid	3.730993	Schwarz criterion		0.969201
Log likelihood	-10.27859	Hannan-Quinn criter.		0.854665
F-statistic	1.32E+16	Durbin-Watson stat		1.435187
Prob(F-statistic)	0.000000			

Estimation Command:

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LS RGDP GEH GFCF LF C

Estimation Equation:

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RGDP = C(1)*GEH + C(2)*GFCF + C(3)*LF + C(4)

Substituted Coefficients:
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RGDP = 0.253963176572*GEH - 0.15877712918*GFCF + 0.487370801436*LF + 3.87319701706
Source: Authors, using EViews7

The above result stated that government expenditure on health has positive coefficient and it is significant at 1% level (Table 2). Thereof, a direct relationship exists between government spending on health and gross domestic output in Nigeria. This suggests that a unit increase in the government spending on health increased the RGDP by 25 percent. Thus, ceteris paribus, the enhanced public expenditure policy on health in Nigeria could be reiterated to have contributed positively to real output growth in Nigeria, just as in similar terms established in Ichoku and Fonta (2006) and Odior (2011).

On the contrary, the gross fixed capital formation has a negative sign but not statically significant (Table 2). Such a relationship suggests an indirect one between gross fixed capital formation and gross domestic output in Nigeria, implying that the increase in gross fixed capital formation over the years under review has not been effective in increasing national income. The result (Table 2) shows that real Gross Domestic Product decreased by about 16% for every 1% increase in Gross Fixed Capital Formation.

Lastly, labor force has a favorable coefficient, although not significant at 10 percent, it appears to be the most efficient predictor / factor / variable contributing to Nigeria's production development, but still incomplete in terms of its effect on RGDP (Table 2). However, this is recounted due to the elevated magnitude of its coefficient, i.e. an increase of at least 48 percent in RGDP attributed to 1 percent increase in this variable.

In addition, the adjusted R-squared (R2) value for the model is evidently high, pegged at 100 percent (Table 2) and implies that overall health expenditure, gross capital formation and labor force accounted for about 100 percent variations in Real Gross Domestic Product (RGDP) over the years in the Nigerian economy. The outcome also demonstrates that the regression has a suitable fitness.

Moreover, in comparing half of each coefficient with its standard error, the model finds that the normal deviations are less than half of the coefficients values of the factors. For example, the

standard error of 0.005343 in health expenditure is less than half the variable coefficient of 0.253963. The variable could therefore be considered statistically important. Again, the capital formation standard error (0.106246) is less than half the variable coefficient (i.e. -0.158777). But for labour-power the standard error is 0.506737, while its coefficient value is 0.487371. However, given that the interest variable (GEH) is important, the general forecast could be regarded statistically important with the model.

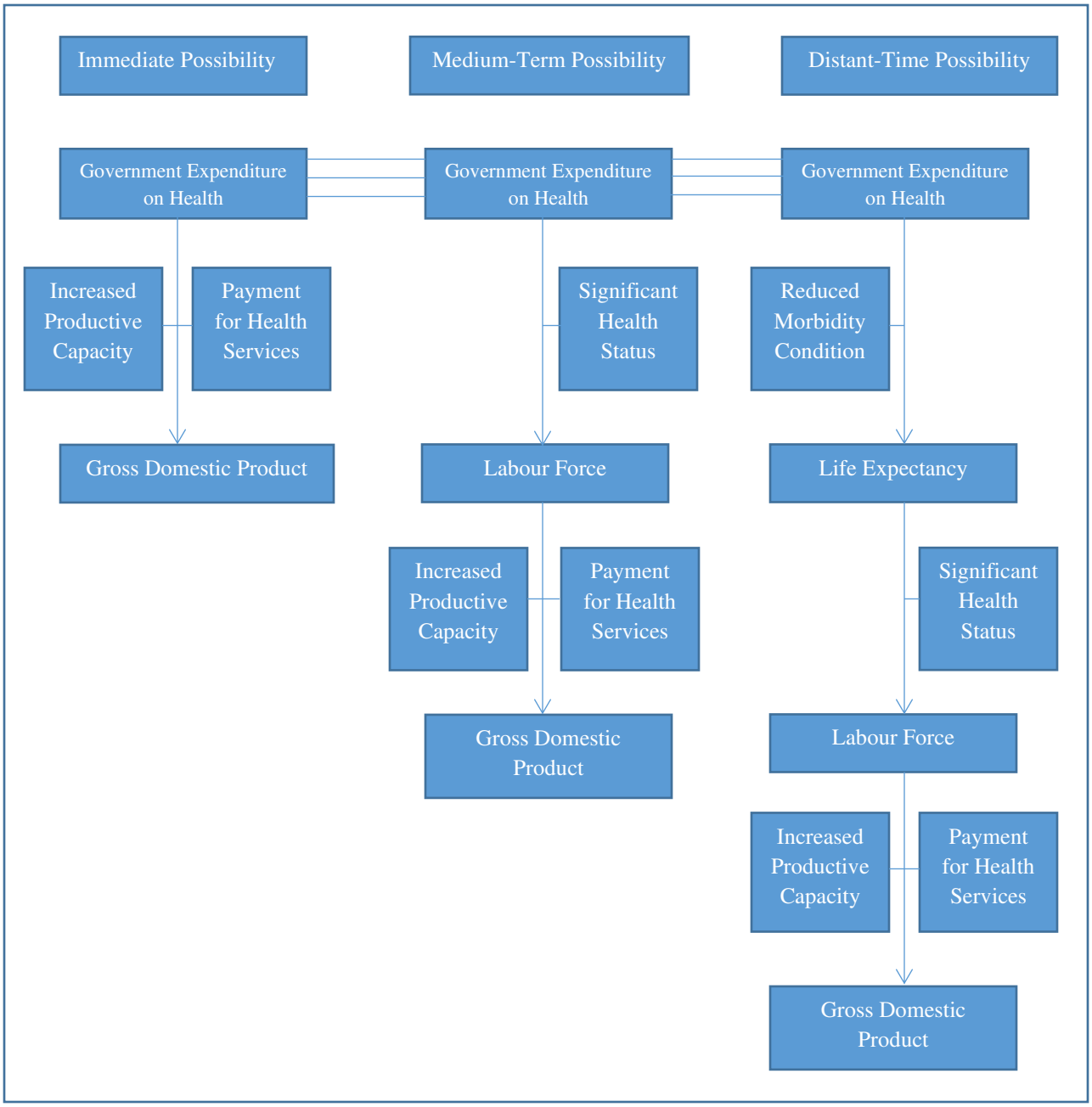
Besides, the F 1.32 statistic is significant at a rate of 5 percent and this demonstrates that the explanatory variables are important determinants of economic growth. Also, Durbin Watson's value is 1.4352 for the model, and this falls within the specific region, though with the implication that there is only a positive first-order serial autocorrelation among the model's explanatory variables.

In summary, since the various econometric tests applied in this research demonstrate a statistically important connection between dependent and autonomous factors from the model, we dismiss the null assumption that: there exist no significant relationship between government health care expenditure and economic growth in Nigeria.

5.3 Further Discussions

Such relationship(s) as highlighted in the preceding paragraph(s) (see section 5.2), and as expressed in economic literature thus reflect the tripartite possibilities that government expenditure on health could engender (Figure 6). More so, the foregoing is as supported in Saad and Kalakech (2009), Oluwatobi and Ogunrinola (2011), Novignon et al. (2012) and AFDB et al. (2017).

Figure 6: Triple Pathways of Health Spending Implications



Source: Authors

First, the immediate case could result whereby health care institutions are made available to render requisite health care services and they in turn make available to the working-age population or labour force unconditional treatment for their deteriorating health due to work engagements, and their affiliated work organizations empowering them to access health care.

Secondly on assumption of the effectiveness of health care institutions, the efficacy of government expenditure on health to engender a sustainable labour force would be in terms of health care institutions being ready to offer the working-age population opportunities to preserve or maintain their health status, and whereby same health care institutions provide them unconditional health care services and their affiliated work organizations evidently empower them to access health care such (i.e. government expenditure on health) ultimately could help foster economic growth.

Third, with government expenditure on health focused on primary health care (PHC) – i.e. particularly providing communal or targeted health services such would in no small measure promote health care accessibility that is efficacious to counteract basic ailments of the working-age populace and so reduce their susceptibility to these ailments (or foster health care accessibility which is capable to reduce their morbidity condition and improve their life expectancy). Furthermore as earlier mentioned, on assumption of the effectiveness of health care facilities, whereby existing health care facilities are made ready to offer the working-age populace opportunities to preserve or maintain their health status and same health care facilities providing them unconditional health care services with their affiliated work organizations evidently empowering them to access health care, the recounted government expenditure on health to engender a sustainable labour force could ultimately help foster economic growth.

Exclusion thereof is recognized of the sect of the country's (working-age) population or labour force not engaged in paid-employment, and so their demand for health care services obviously can be at best ensured on basis of social service provision, borne or made feasible by the government or non-governmental organizations.

6.0 Conclusion, Recommendations and Suggestions for further research

This paper examined the trend in government spending on primary health care as well as its relationship to Nigeria's economic growth over the period 1980 and 2015, using the Ordinary Least Square technique. The research discovered that for the period under review, consecutive public administrations in Nigeria put greater emphasis on recurrent spending on health (see Figure 5). The results also demonstrate a beneficial connection between spending on health care and economic growth in line with our a priori expectations (see Table 2). The same connection applies to labor power and economic growth, but is nonetheless inconclusive, while there is also proof of

an inverse connection between gross fixed capital formation and economic growth though not statistically significant (see Table 2).

The study also disclosed that government spending on health comparatively has a higher effect on Nigeria's real output (Table 2). Therefore, it would not be out of place to suggest that public expenditure has a crucial connection to any nation's growth and development, as well as the efficient and effective use of resources allocated to the health sector will help improve citizens ' lives, population health, life expectancy, effectiveness, and labor force productivity.

A succinct suggestion from the research is therefore the need for policymakers and other stakeholders in the health sector administration of the country to devote more attention to the industry and release / increase its annual budget allocation as appropriate. Nevertheless, the key to excellent outcomes lies not in the usual increase of specific budget allocations, but in the implementation of a scheme of government finances that connects specific spending and income choices to the extent necessary and ensures that the assigned fund is used as transparently as possible.

The ill-formulation and poor implementation of primary health care policy programmes as well as the non-commitment on the part of the federal government to health sector development initiatives amidst others established from this study duly relates to the emphasis made by previous studies such as Bakare et al.(2011), Abdulraheem et al. (2012), Ude et al. (2014), Okoli et al. (2016) and Ang et al (2017) that, in context to the Nigerian environment and other developing nations the practice and or delivery of primary health care services is still faced with major challenges and constraints of shortage of funds which as a result hamper its development, but active government support could yield substantial improvement. However, more emphasis need be placed on the capital expenditures on health as this will facilitate rapid development of the sector.

Findings also indicate that government spending on primary health care is essential to enhancing citizens ' socio-economic well-being and the general public. In a manner, Nigeria's budgetary allocation to the health sector in recent times (see figures 4 and 5) may have partially hampered sustainable investment in human capital growth in the country. Meanwhile, in an effort to address some of the human limitations identified in the delivery of health care services (see Section 3.2), health workers could be trained and retrained to be more efficient, and more workers (labor) could

be recruited into the health sector in order to bring about development not only in the sector but in the economy as a whole.

AFDB (2013) affirmed that reinforcing health care systems and ensuring equity in access to health services are particularly significant priorities for African countries ' governments in the future. Moreover, AFDB et al (2017) argue that bad health hazards have a possibly huge effect on harming productivity and hence development, which invariably indicates a powerful preventive case to invest in efficient health systems. That, the poor are suffering from the burden of ill health disproportionately. Therefore, investing in health is both pro-poor and allowing the development of a productive workforce.

Other recommendations also vital in addressing the identified constraints include: (1) The tiers of government need help to facilitate an enabling environment for local and international agencies to ensure that comprehensive primary health care is practiced as against the selective primary health care which is not inclusive, (2) Community-oriented health care programmes and policies should be fostered in all local government areas, and (3) The federal government could further empower and motivate health workers to carry out health education and training in rural communities, for proper understanding of the real benefit of primary health care and also ensure proper implementation. In effect therefore, there is the call for top-down approach between government / policy makers and community stakeholders in strides for effort to ensure the development of the health sector, particularly in terms of achieving effective and efficient delivery / provision of primary health care services and for such effort to be in part a panacea to attain inclusive growth.

Finally, as this study make a case within the domain of (policy) implementation and health sector outcomes, further research could be to evaluate at the grass-root level the extent of accessibility and utilization of existing primary health care centres / facilities / services in current time to ascertain if still existent certain spatial, structural and or human constraints that undermine health sector outcomes and inevitably we attaining inclusive development. Such in a manner would be to build on efforts made in Abdulraheem et al (2012).

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