MILLENNIUM DEVELOPMENT GOALS, GOVERNMENT HEALTH SPENDING, INFANT AND MATERNAL MORTALITY RATES IN NIGERIA

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Abstract

Following the Millennium Declaration of 2000, Nigeria began the systematic implementation of several policies and programmes, through enhanced government spending, to help attain the different targets set for the MDGs by 2015, among which are to reduce child mortality and improve maternal health. As such, this study, using majorly descriptive statistics analysis, evaluates the effect of government spending in improving both the child and maternal mortality rates with a view of assessing the progress so far made and whether or not the 2015 MDG targets will be met. The study found that Nigeria have not performed well with respect to reducing child mortality and improving maternal health. In fact, the progress toward meeting the 2015 MDG target for mortality has either been slow or worsening. Consequently the study suggested among others that for Nigeria to advance significantly towards achieving the MDGs in 2015, there is need for government at all levels needs to maintain and intensify all the policies, programmes and interventions aimed at reducing the infant mortality rate in recent years as well as give priority to areas like the development of a monitoring framework to ensure effectiveness and efficiency in the use of resources, the provision of technical assistance for primary health care delivery and broadening the coverage of health insurance.

Keywords: Infant Mortality, Child Mortality, Maternal Mortality, Millennium Development Goals, Government Health spending.

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1.1: Introduction

Variations in childhood mortality is very important in influencing the life expectancy across and within countries and as shown by Cutler *et al*. (2005), 30% of deaths are amongst children in poor countries while they constitute less than 1% in rich countries, while Jones et al (2003) further supported this assertion when they indicated that about 10 million children under5 die each year in poor countries from preventable and/or curable illnesses which seldom kill children in rich countries. This is notwithstanding the huge health care spending by these poor countries in which the public sector is seem as a major provider of education and health. As a result of this increased public sector health care spending and the associated declining in mortality and health status of the people, Deaton (2006) opined that most of the relevant interventions, such as immunization or oral rehydration therapy, that are needed to prevent these children deaths are very low-cost but Bhalotra (2007) thus questioned the effectiveness of these spending by suggesting that the issue is not only that of increasing spending but also the effective delivery of publicly provided health services.

Realizing the importance of improved health and given the collapsing state of the Nigerian health sector and the federal government's bid to provide health for all by the year 2000, government in the 1990s undertook some measures to help bail out this sector while emphasizing also on primary health care delivery, with the up-grading and establishing of many primary health care centres. The Extended Programme on Immunization (EPI), Oral Rehydration Therapy (ORT), safe motherhood and family planning activities also formed integral parts of the primary health care programme. This scenario led to increased government health care spending but over time the effect of these spending seems not to be felt by the masses as reflected by their health status. In fact, available statistics indicate how insecure life has become for the average Nigerian over the years in the face of suffocating levels of poverty. This implies that public spending on health has really not been effective in raising the populace living standards and health status.

The adoption of the Millennium Development Goals (MDGs) by the United Nations Millennium Summit was thus seen as a new opportunity for the many developing countries, Nigeria inclusive, to increase their drive to help alleviate poverty and reverse the deterioration in human

developments. Following the Millennium Declaration of 2000, Nigeria began the systematic implementation of several policies and programmes, through enhanced government spending, to help attain the different targets set for the MDGs by 2015, among which are to reduce child mortality rate by 2/3 by 2015 and also improve maternal health by reducing it by ¾ the proportion of women dying in childbirth by 2015.

For instance, government recurrent health spending increased from 3.23 percent of the total government spending in year 2000 to 5.83 percent and 6.74 percent in 2002 and 2007 respectively while the government capital health spending increased from 2.09 percent of the total government spending in year 2000 to 6.71 percent in 2004 only to decline marginally to 5.99 percent of the total spending in 2007. Notwithstanding these government spending, available data from Global Health facts (2011) shows that nursing staff and midwives per 100,000 people fell consistently and between 2000 and 2010 stood at 16 while those for the physician for the same period was 4 per 100,000 and for the community health workers, it was 1 per 100,000 people. For the mortality rates, the infant and under-five mortality were 91.54 and 138 per 1,000 people in 2011 and 2009 respectively while the maternal mortality was 840 per 1000 people in 2008.

The above trend shows that despite all these spending, the health status indicators of the country, especially child and maternal mortality rates are very poor and appear not to be improving and this brings to question the effectiveness of government health spending in helping to achieve the MDGs? Thus, this paper attempts to delve into this issue by examining the government health spending vis-a-vis her meeting the mortality targets of the Millennium Development Goals in Nigeria. The remaining of this paper is structured as follows: section two has a brief overview of the MDGs while section three contains some stylized facts on Nigeria. Section four contains the methodology and analysis while section 5 concludes the study.

2.1: A Brief Overview of the Millennium Development Goals (MDGs)

The Millennium Development Goals (MDGs) is perharps effectively the world's most pressing development challenges as it offers the international society, both rich and poor the golden

opportunity to have a common position and integrated vision on the best ways to address and solve the multidimensional problems facing humanity and to promote sustainable development.

The Declaration's eight MDGs cover with the following issues:

- To eradicate extreme poverty and hunger. The target is to halve the proportion of people living on less than $1 daily and those suffering from hunger by 2015, and ensure that there is an increase the amount of food for those who suffer from hunger.
- To achieve Universal Primary (Basic) Education. The target is to achieve universal basic completion by 2015.
- To promote gender equality and women empowerment. The target is to totally overcome gender disparities in both primary and secondary education enrolment by 2005 and achieve equity at all levels by 2015.
- To reduce child mortality. The target is to reduce child mortality rate by 2/3 by 2015.
- To improve maternal health. The basic target is to reduce by ¾ the proportion of women dying in childbirth by 2015.
- To combat HIV/AIDS, malaria and other diseases. The grand target is to stop and commence to reverse the incidence of HIV/AIDS malaria and other diseases by 2015.
- To ensure environmental sustainability. The target is to reduce by half the proportion of people without access to clean drinking water and basic sanitation, and lastly,
- To develop a global partnership for development. This goal recognizes the importance of the collaboration between the have and have-nots to eradicate poverty and extreme hunger.

An appraisal of these targets and indicators in Nigeria shows that most if not all of these goals have some elements of poverty related issues, thereby helping to redress the frequently misconceived idea that poverty is mainly an income agenda. Also, by ratifying and agreeing to achieve these MDGs, world leaders recognised and emphasized their shared responsibilities to eradicate poverty globally. An implication of this is that governments of developing and less developed countries reaffirmed their commitments to strengthen governance, institutions and policies.

3.1: Some Stylized Facts on Nigeria[1]

3.1.2: Trends in Selected Macroeconomic and Socioeconomic Indicators in Nigeria

The United Nations News, (2009) reported that Nigeria have experienced progress in her growth rate, including rapid increases in non-oil growth, as it rose from 2.5% in the 1990s to 6% during 2004-2007, this notwithstanding, there was no positive impact on Nigerians from this growth given that more than half of Nigerians (54.4% or 76 million people) live in poverty. This represents twice the rate in 1980. Presently, poverty is still noticeable in Nigeria and its eradication is an intimidating task for the government. And as can been seen from table 3.1, the incident of poverty is still high and this can significantly affect efforts geared towards achieving the MDGs target by 2015. The incidence of poverty rose from 42.4% in 1992 to 65.6% in 1996, and then it declined to 54.4 per cent in 2004. This can be linked to the some government welfare programmes as well as structural transformation in some sectors of the economy, like the telecommunication sector which absorbed many unemployed youths across all states of the federation.

Table 3.1 further shows that real GDP growth was positive from year 2000 through 2007, reaching an annual average growth rate of 5.7% while that of the non-oil sector also improved. Government recurrent health care spending also increased from ₦11612.6 million in year 2000 to ₦50563.2 million in 2002 but declined marginally the following year and since then has continuously increased reaching ₦71228.99 in 2007. For the capital health spending, it has also fluctuated between ₦6509.2 million and ₦51171.61 million between year 2000 and 2007. As a percentage of the total recurrent spending, government spent less than 7.00% of the total on recurrent health spending though this fluctuated during this period but it showed a continuous marginal increase from 2003 to 2007 (see table 3.1). But for the percentage of the total capital spending spend on health care, it increased from 2.09 percent in 2000 to 4.59 percent in 2001 only to decline marginally to 3.92 percent in 2002. It rose significantly again in 2004 to 6.71 percent and later reduced to 5.99 percent by 2007.

[1] This section benefits substantially from Federal Government of Nigeria (2010).

Also, according to the UN's Human Development Report (2006), the incidence of poverty in Nigeria is increasing, and conditions were described as deplorable despite government supposed efforts at meeting the MDGs. This can be said to have an impact on the mortality rates as shown in Table 3.1. The table shows that the life expectancy stagnated at 54.4 years from 2001 to 2007 while there were marginal improvements on the adult literacy rate which increased from 57.0 percent in year 2000, 2001, 2002, 2003 and 2005 to 64.5 in 2007. The under-five mortality still presents a major challenge for Nigeria, it increased from 183.8 in 2000 to 201 in 2003 and later declined to 138 in 2007 while the Infant mortality was about 81 per 1,000 live births in 2000, but rose to 100 in 2003 and later reduced to 86 in 2007. This might be attributed to some fresh measures put in place like the massive immunization awareness programme which can be said to be the reason why the percentage of one year olds fully immunized against measles increased from 31.4 percent in 2003 to 60 percent in 2007. There were also increases in the proportion of births attended by skilled health personnel from 36.3 percent to 43.5 percent in 2003 and 2007 respectively.

Table 3.1: Macroeconomic and Socioeconomic Indicators in Nigeria, 1990 – 2007

	1990	2000	2001	2002	2003	2004	2005	2006	2007
Economic Indicators									
GDP Growth Rate (%)	8.2	5.4	4.6	3.5	9.6	6.6	5.8	5.3	5.7
Oil Sector Growth (%)	5.6	11.1	5.2	-5.2	23.9	3.3	-1.7	-3.7	-5.9
Non Oil Sector Growth (%)	8.6	4.4	2.9	4.5	5.2	7.8	8.4	9.5	9.2
Budget Deficit/GDP	-2.9	-2.3	-4.3	-5.5	-2.8	-2.6	-0.2	0.3	0.7
Total Recurrent Spending (₦million)	27208.4	353126.5	57932.9.1	86733 6.5	98426 8.0	90865 5.5	109305 4.0	134304 5.2	105656 3.9
Government Health Spending (Recurrent) ₦million	401.1	11612.6	24523.5	50563.2	33254.5	33377.4	50032.8	67550.2	71228.99
% of Total Recurrent Spending	1.47	3.23	4.23	5.83	3.38	3.67	4.58	5.03	6.74
Total Capital Spending (₦million)	9055.6	311608.3	43809 0.5	32137 6.1	24166 5.6	39357 9.0	706884.2	556964.8	853830.9

Government Health Spending (Capital) ₦million	257.0	6509.2	20128.0	12608.0	6431.0	26410.0	21652.6	38039.8	51171.61
% of Total Recurrent Spending	2.84	2.09	4.59	3.92	2.66	6.71	3.06	6.83	5.99
Social Indicators									
Population (Million)	88.5	108.0	118.8	122.4	125.6	129.2	133.8	140.0	140.0
Population Growth Rate (%)	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.2
Life Expectancy (years)	NA	NA	54.0	54.0	54.0	54.0	54.0	54.0	54.0
Adult Literacy Rate (%)	NA	57.0	57.0	57.0	57.0	62.0	57.0	64.2	64.5
Incidence of Poverty (%)	42.7a	65.6	65.6	65.6	65.6	54.4	54.4	54.4	54.4
Under5 Mortality Rate (per 1,000 Births)	191	183.8	183.8	183.8	201	201	201	201	138
Infant Mortality Rate (per 1,000 Births)	91	81.4	81.4	81.4	100	100	100	100	86
% of one year olds Fully immunized against Measles	46	32.9	41.1	61.8	31.4	50	60	60	60
Maternal Mortality Rate (per 100,000 Live Births)	1000	704	704	704	800	800	800	800	800
Proportion of Births Attended by Skilled Health personnel (%)	45	42	42	37.3	36.3	36.3	43.5	43.5	43.5

Note: a stands for 1992 data, b stands for 1996 data and c is 2004 data.

Sources:

(i) Central Bank of Nigeria (CBN) Annual Reports and Statements of Accounts (Various years);

(ii) CBN Statistical Bulletin, Volume 17, December 2006; Volume 18, December 2007.

(iii) National Bureau of Statistics: National Poverty Assessment 2007. (As cited in Federal Government of Nigeria and UNDP, 2008).

(iv) National Bureau of Statistics, 2007

(v) Federal Office of Statistics (FOS) Nigeria Demographic and Health Survey report, 1990, 1999, 2003, 2008

(vi) Federal Ministry of Health 2007.

Table 3.1 implies that the economy has experienced growth over time, nevertheless this has not translated into considerable and momentous welfare improvement for the Nigerian people and this has been traced to the low quality of growth, skewed income distribution and mismanagement of resources, (Federal Government of Nigeria and UNDP, 2008).

Given that the trend in the child and maternal mortality rates in Nigeria has not been encouraging as such the government adopted some strategies to help improve these rate as well as enable Nigeria meet the MDG targets. Among these are the control of diarrhea and acute respiratory infections, Roll Back Malaria, National Programme on Immunization, Nutrition, and HIV and AIDS were used. And, from 1996 to 2006, the Integrated Management of Childhood Illness (IMCI) Strategy was introduced. Intensive capacity building for health workers and community resource persons (CORPs) was also introduced. Further interventions include the Integrated Child Survival and Development Strategic Framework and Plan of Action (2005-2009) to guide implementation of child survival interventions by government at all levels, the development of a National Policy on Integrated Disease Surveillance. But, despite all government efforts, the trend in the data shows that these mortality rate have not shown any significant improvement as can be seen in the next section (section 4).

4.1. Method

The methodology used is in two steps. First, we try to establish using econometric analysis a link between government spending and mortality in Nigeria and secondly we try to relate the mortality rates to the MDG targets to see how Nigeria has feared in achieving these targets. For the first part of the analysis, a model by Gupta, Verhoeven and Tiongson (2001) was adapted. Based on this, the following regression equation was estimated:

$$Y_j = \alpha_i + \beta_i X_j + \varepsilon_i$$

where Y_j is the mean indicator for jth subgroup; X_j is a vector of explanatory variables for group j. The baseline model uses following explanatory variables: the initial primary school enrolment ratio; public spending on health per capita; and mean consumption per person of subgroup j. Other variables like private spending on health care were added to test the robustness of the result. The log-linear (log-log or double log) specification was used, where all the variables are logarithmic. The functional forms help provide parameter estimates that are implied elasticities and the absolute change in health status associated with a percent change in spending respectively. Thus, these functional forms were used to investigate the statistical relationship between health status and public spending on health care.

4.1.2: The Data

The study used secondary data sourced from the following sources: Central Bank of Nigeria's Annual Report and Statement of Account (various years); Central Bank of Nigeria: Perspectives of Economic Policy Reforms in Nigeria: A Study Report (1993): African Development Bank's Report, (Various years); World Bank's World Indicators (Various years); Federal Office of Statistic's Nigeria Demographic and Health Survey (1990 and 2008); and www.unfpa.org/profile/Nigeria.cfm.

4.1.3: Results/Findings[2]

The regression equation was estimated using the OLS. The baseline model is reported in table 4.1 where child mortality is a function of public spending on health per capita, initial primary enrolment and quintile income per capita. Column 3, 4, 7 and 8 add private health spending per capita to the baseline model. The result suggests that public spending on health is a consistent, significant determinant of the child mortality rate among the poor.

Table 4.1: Public Spending on Health per Capita and Child Mortality. Evidence from Quintile Data

	Poor (Q1)				Non-Poor (Q5)			
	(1) Log-Linear	(2) Lin-Log	(3) Log-Linear	(4) Log-Log	(5) Log-Linear	(6) Lin-Log	(7) Log-Linear	(8) Lin-Log
Constant	8.04*** (16.91)	601.16***	9.22***	603.28***	12.05***	641.01***	11.10***	519.99***

[2] The second part of this analysis (section) benefits substantially from Federal Government of Nigeria and UNDP, (2008).

		(8.08)	(17.01)	(9.30)	(20.01)	(10.67)	(22.06)	(10.69)
Public Health Spending per Capita	-0.28*** (-4.09)	-36.99*** (-4.01)	-0.27*** (-3.55)	-32.69*** (-3.11)	-0.002 (-0.002)	-4.97 (-0.67)	-0.019 (-0.18)	-5.41 (-0.69)
Initial Primary Enrolment Ratio	-0.19*** (-2.70)	-36.78** (-2.29)	-0.22*** (-2.97)	-35.81** (-2.04)	-0.39*** (-3.91)	-39.01*** (-4.01)	-0.41*** (-5.42)	-40.34*** (-4.32)
Quintile Income per Capita	-0.12* (-1.87)	-31.20** (-2.91)	-0.13 (-1.01)	-24.48* (-1.88)	-0.69*** (-5.61)	-38.17*** (-4.19)	-0.50*** (-0.73)	-24.87** (-2.29)
Private Health Spending per Capita			-0.06 (-0.54)	-14.03 (-1.08)			-0.19*** (-2.61)	-14.54 (-2.22)
Adjusted R-squared	0.594	0.618	0.598	0.701	0.782	0.691	0.803	0.754
F-statistics	25.34***	22.01***	15.36***	19.18***	46.21***	34.02***	40.18***	27.15***

Heteroskedastic-consistent t-statistics in parenthesis

(*), (**), (***) denotes significance at 10, 5 and 1 percent levels, respectively.

Given the above regression result that showed that public spending on health is a consistent, significant determinant of the child mortality rate, we now try to relate the mortality rates to the MDG targets to see how Nigeria has feared in achieving these targets. Table 4.2 presents Nigeria's performance in achieving selected MDGs so far. The selected MDGs were those of child and maternal mortality. As stated earlier, the UN's Human Development Report (2006) submitted that the incidence of poverty in Nigeria is increasing, and conditions were described as deplorable despite government supposed efforts at meeting the MDGs, this also had an impact on Nigeria's effort at meeting the child and maternal mortality targets of the MDGs by 2015. The table shows that Nigeria has not performed any better in trying to meet the MDGs as relates to

poverty. The population under poverty is still high and stood at 67 million in 2007 while the percentage of underweight under-5 children was also low.

Table 4.2: Nigeria's Performance in Achieving Selected MDGs so Far

Goal	1990	2000	2007	Target 2015	Progress Towards Target
1. Eradicate Extreme Poverty and Hunger					
Absolute PPI (US$/day)%				21.4	Slow
Relative (%)	42.7	66.0	54.4	21.4	Slow
-Population (million)	91.5	91.5	140.0		Slow
-Population under Poverty (Million)	39.07	39.07	67.11		Slow
Percentage of Population below Minimum level of dietary energy consumption	13	13		5.2	Good
Percentage of underweight under-5 children.	35.7	31	25	18	Slow
4. Reduce Child Mortality					
Infant mortality rate (per 1000 live births)	91	81.38	110	30.3	Worsening
Under-5 mortality rate (per 1000 live births)	191	183.75	201	63.7	Worsening
Percentage of one-year-olds fully immunized against measles	46	32.8	60	100	Good
5. Improve Maternal Health					
Maternal mortality ratio		704[a]	800[c]	100	Worsening
Births attended to by skilled health personnel	45	42[a]	36.3[c]	100	Worsening (data problem)

Sources: Adapted and Compiled from Federal Government of Nigeria and UNDP, 2008

In all, Nigeria scored a low mark in her efforts to eradicate extreme poverty and hunger. This implies that the current effort to wipe out poverty and hunger in the country is unsatisfactory. There are still wide deviations between actual achievement and 2015 targets. This translates to the fact that the various strategies drawn up and the efforts made have been inadequate to reduce poverty and hunger in the land. In terms of reducing child mortality, Nigeria's situation was worse as the infant mortality rate (per 1000 live births) and under-5 mortality rate (per 1000 live

births) increased to a respective 110 and 201 in 2007 as against the 30.3 and 63.7 respectively which was the target in 2015. Thus, rather than fall, infant mortality rate increased from 81.38 per 1000 live births in the year 2000 to 86 per 1000 live births in 2007 while it was expected to fall to 30.23 per 1000 live births by 2015 in line with the MDG target. The situation was also worsened in the case of improving maternal health. The maternal mortality ratio was extremely high at 800 as against the 2015 target of 100 while the births attended to by skilled health personnel did not perform any better. As indicated in Table 4.3, the gap between actual infant mortality rate and the target increased from 14.66 per 1000 live births in 2001 to 36.28 per 1000 live births in 2007.

Table 4.3: Deviations of Actual Achievement of MDG Goal 4 from Targets

Goal	2000	2001	2002	2003	2004	2005	2006	2007	2015
Infant Mortality Rate (per 1000 live births)									
Actual	81.38	80.09	78.80	100.00	100.00	110.00	110.00	86	91.28*
Target	66.72	64.29	61.86	59.44	57.01	54.58	52.15	49.72	30.3
Deviation (%)	14.66	15.80	16.94	40.56	45.99	55.42	57.85	36.28	
Under-5 Mortality Rate (per 1000 live births)									
Actual	183.75	189.50	195.25	201.00	197.00	201.00	201.00	138	85.71*
Target	140.08	134.99	129.90	124.80	119.71	114.62	109.53	104.44	63.7
Deviation (%)	43.67	54.51	65.35	76.20	77.29	86.38	91.47	33.56	
Percentage of one-year-olds fully immunized against measles									
Actual	32.80	41.10	61.80	31.40	50.00	60.00	60.00	60.00	91.0*
Target	67.60	69.76	71.92	74.08	76.24	78.40	80.56	82.72	100
Deviation	-34.8	-28.66	-10.12	-42.68	-26.24	-18.4	-20.56	-9	

* Possible level of achievement by the year 2015 if current trend continues.

Sources: Adapted and Compiled from Federal Government of Nigeria and UNDP, 2008

As seen in table 4.3, the infant mortality situation between 1990 and 2007 has been increasing rather than decreasing and within this period it has been increasing by an average of 0.66 per

1000 live births annually. FGN and UNDP (2008) noted that if this trend continues, the 2015 figure will be 91.28 per 1000 live births, implying that the MDG target will not be achieved. To achieve the target, infant mortality rate should be dropping by about 7 per 1000 live births annually between 2007 and 2015. The Under-5 mortality dropped from 183.75 per 1000 live births in 2000 to 138 per 1000 live births in 2007. Table 4.3 further indicates that deviation from the actual rate achieved and set target fell from -34.8 in 2000 to -22.72 in 2007 implying that the gap is shrinking, but FGN and UNDP (2008) noted that though the value of deviation is still high, thus indicating that more efforts are required to achieve the target by the year 2015. For the percentage of one-year-olds fully immunized against measles, between 2000 and 2007, this number increased annually by about 3.9 percent. And FGN and UNDP (2008) noted that if this trend continues, by the year 2015, the percentage of one-year-old children fully immunized will be 91 percent, which is still below the MDG target for 2015 by 9 percent. Thus, to achieve the 100 per cent target by 2015, the percentage should be increasing by at least 5 per cent as from 2008.

Table 4.4: Status and Trends in Maternal Mortality and Associated Indicators

Goal	2000 a	2001 a	2002 a	2003	2004b	2005	2006c	2007c	Progress Towards Target
Indicators									
Maternal mortality ratio (per 100,000)	704	704	704	800	800	800	800	800	Worsening
Proportion of Births attended to by skilled health personnel (%)	42	42	37.3	36.3	36.3	43.5	43.5	43.5	Improving slowly
Contraceptive prevalence rate				8.2	8.2	12	12	12	Improving slowly
Antenatal care coverage									
At least 1 visit				61	61	59	59	59	Worsening
At least 4 visits				47	47	-	-	-	Lack of data

Adolescent birth rate				25	25	-	-	-	Lack of data
Unmet need for family planning				17	17	-	-	-	Lack of data

Notes: a and b are 1999 and 2003 data, while c is for 2005.

Sources: Adapted and Compiled from Federal Government of Nigeria and UNDP, 2008

Table 4.4 indicates that the maternal mortality rate from year 2000 to 2007 has at least, has remained constant, except for the rise from 704 to 800 recorded between 2002 and 2003. One of the reasons attributed to this include poor attitudes towards antenatal care, postnatal care and low quality of health delivery are some the factors that have tended to increase maternal morbidity and mortality. Also, approximately two-thirds of all Nigerian women deliver outside of health facilities and without medically skilled attendants present (NDHS, 1999, 2003). For instance, the proportion of births attended by skilled health personnel was 42 percent in year 2000 and this increased marginally to 43.5 in 2005 through 2007. Thus, while the trend in maternal mortality showed a worsening scenario, that of the proportion of Births attended to by skilled health personnel showed a marginal improvement in Nigeria's bid to achieve the MDG targets by 2015. Some other components of sexual and reproductive health have been identified to have direct impact on maternal mortality and table 4.4 indicates that the trends in these indicators show an absence of progress.

Table 4.5 shows that the baseline estimate for the end of 2007 suggests a maternal mortality rate of 872 per 100,000 live births and if this trend continues then the maternal mortality rate would be 1,064 per 100,000 live births at the end of 2015 implying a 504.55 percent deviation from the MDG target of 176 maternal mortality rate per 100,000 live births. On the contrary, if the MDG target is to be achieved by 2015, then maternal mortality rate have to be reduced by 78 per 100,000 live births annually between 2007 and 2015. This is an area that policy makers should look into. It has been argued that the poor state of health infrastructure in Nigeria contributes directly to the observed poor maternal health results.

Table 4.5: Deviation of Actual Achievements on MDG 5 from Target

Year	Actual Maternal Mortality Rate	Target Maternal Mortality Rate	Deviations (%)
2000	704	704	
2004	800	638	-25.39
2005	824	572	-44.06
2006	848	506	-67.59
2007	872*	440	-98.18
2015*	1064*	176	-504.55

Note: * Baseline estimate

Sources: Adapted and Compiled from Federal Government of Nigeria and UNDP, 2008

One important issue in the attainment of the MDG target by 2015 is the availability of fund. The figures in table 3.1 shows that there has been increased government spending but the question here is whether or not these spending are adequate in funding the MDG projects. In line with, and as reported in FGN and UNDP (2008) the Office of the Senior Special Assistant to the President on MDGs, Abuja did an MDG costing exercise to determine the cost associated with the various projects required for the attainment of the MDG targets on a timely basis. The most recent estimate for the major sectors is shown in Table 4.6.

Table 4.6: MDG Costing in Nigeria: Total Yearly Costs

Sector	2007 ($'bn)	2011 ($'bn)	2015 ($'bn)	2006 – 2015 ($'bn)	Average Annual Per Capita Cost ($'bn)
Health	4.55	8.00	14.27	26.83	21.30
Education*	2.82	7.24	9.10	70.58	47.70
Agriculture	3.51	5.72	8.79	53.25	32.00
Energy	1.21	4.13	7.24	38.60	23.60
Water and Sanitation	1.71	2.26	3.03	20.82	13.00
Roads	5.16	6.48	7.42	50.50	33.70
Environment	0.52	0.41	0.34	3.82	2.60
Housing	2.9	4.41	6.43	40.65	4.52
Total	22.38	38.65	56.62	305.05	178.42

Note: *Primary and Non-Formal Education

Source: Office of the Senior Special Assistant to the President on MDGs, Abuja (As cited in Federal Government of Nigeria and UNDP, 2008).

From the table, the total cost is expected to increase from US$22.38 billion in 2007 to $38.65 billion in 2011 and US$56.62 billion in 2015. This shows that by 2015 the total cost will be more than double the cost in 2007. As a result of this trend in funding and as pointed out by UNDP (2008), government should, make adequate arrangement to determine the source of the funds required and to make proper expenditure programming for effective implementation of the identified projects. This tends to be lacking presently in government spending pattern.

5.0: Conclusion

Given the above result and the government efforts on achieving the MDGs targets by 2015, the available data indicates that progress on achieving the MDG targets for infant mortality rate and under-5 mortality rate has been slow. Among the reasons for this trend are: weak implementation framework, rising fertility rate, and constrained access to some communities, especially in the riverine areas. There are also constraints associated with increasing poverty incidence and cultural barriers. Poverty reduces affordability level of parents to adopt modern health- seeking behaviour while the latter prevents acceptance of programmes like NPI. Other factors include the weakness of the country's primary health care system and limited referral system. There is a high level of ignorance among parents on adopting conventional health seeking behaviour, a factor that is associated with low literacy level and high incidence of poverty. There is also the problem of unfavourable religious and cultural beliefs that adversely affect willful release of children for immunization and adoption of safe health-seeking practices.

Given that the high rates of mortality can be traced to the escalating nature of poverty in the country, it is thus suggested that the government poverty alleviation programme should be restructured if not re-designed and should be centered on the 'basic needs' approach. This approach emphasizes the importance of separating generalized increases in income from the more significant attainment of the requirement for a permanent reduction of poverty through the provision of health services, education, housing, sanitation water supply and adequate nutrition. The rationale of this approach was that the direct provision of such goods and services is likely to relieve absolute poverty more immediately than alternative strategies, since growth strategies usually fail to benefit the intended target and the productivity and income of the poor depend in

the first place on the direct provision of health and education facilities. Also, efforts to reduce poverty may therefore not likely to succeed in the long run unless there is greater investment in the human capital of the poor. Improvement in education, health, and nutrition directly address the worst consequences of being poor. Government at all levels needs to maintain and intensify all the policies, programmes and interventions aimed at reducing the infant mortality rate in recent years. Interventions should include those targeted at reducing morbidity and prevalence of major child killer conditions like malaria, measles, cholera, HIV/AIDS and malnutrition. Priority should be given to areas like the development of a monitoring framework to ensure effectiveness and efficiency in the use of resources, the provision of technical assistance for primary health care delivery and broadening the coverage of health insurance.

Also, government priority should not only be on funding but also on proper monitoring of expenditure to ensure accountability and project evaluation. There is need to monitor health care delivery especially for infants at the local government level, being the closest tier of government to the grassroots. As such, increasing access to primary health care services especially in rural areas should be encouraged and these PHC services be made functional and effective.

In all, for Nigeria to advance significantly towards achieving the MDGs, this study agrees with the submissions of Igbuzor (2006) as advocated by Odion (2009) that there is need to formulate and implement policies that will promote transparency and accountability, overcome institutional constraints, promote pro-poor growth, bring about structural change, enhance distributive equity, engender social and cultural re-orientation, engineer political transformation, promote human development, generate employment and transform power relations. It thus becomes obvious that economic growth would have to be combined with some other socio-economic strategies designed to reach the poor and the most vulnerable groups in the society more effectively.

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