

# HealthCare Financing and Health Profile in West African Countries

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## Abstract

*Considering the Bamako Initiative that was launched in 1987, which was targeted at cracking the problems in the financing of health care in sub-Saharan Africa, several other programmes targeted at improving healthcare delivery in Africa has also been initiated, base on this frontier, this paper hypothesized that financing healthcare delivery is essential to improving the quality of life, productivity and human development of a society. The aim of this study is to assess the effectiveness of government-based healthcare financing, with comparism with private-based health expenditure and health profile of all the West African Countries, with high opinion to significantly improving human welfare. We use extensive panel data at prefecture level from 16 West African countries over 32 years, from 1980 to 2012 to study this. We apply a comprehensive descriptive analysis of healthcare financing and health profile of West African Countries, also, the method of comparatibility of developing and developed countries is utilized. However, this paper outlines healthcare and health comparable indicators, such as: Public Expenditure on health as share of GDP; Private expenditure on health as a share of total expenditure on health; Military expenditure as a share of GDP, Health index, Human Development Index, Adult mortality rate-female, Adult mortality rate-male, Infant mortality rate, Life expectancy at birth and Maternal mortality ratio across West African countries, with comparability with selected Developed economies. The study shows the relationship between health care spending and health status of West African economies. Our data show great variation across countries in health expenditure as a share of GDP, which ranges from less than 1% to 4%. Our results suggest that private share of overall health spending is much higher in West African economies, especially Cote D' Ivoire, Guinea, Guinea-Bissau, Mali, Liberia, Mauritania and Nigeria, this reflects governments underinvestment in public health across majority of West African countries, which is reflected on their corresponding low-health profile at prefecture level, although, since establishment of MDGs, the size of government spending on healthcare, has slightly improved among these countries, our result also reveals a wide range between the developing and developed countries government's commitment in healthcare provision. This paper concluded that the dismal health profile of West African Countries is largely attributed to lack of government's underinvestment on healthcare infrastructure, hence, we recommend that government of West African country's should be more responsive to healthcare of it's inhabitants.*

**Keywords:** Health expenditure, West Africa, MDG  
**JEL Code:** H51, I10, O55

## **1. Introduction**

West Africa consist of the following independent but economically interrelated countries; Benin, Burkina Faso, Cape Verde, Cote D'Ivoire, Gambia, Ghana, Guinee, Guinee Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo and Mauritania. These countries are faced with the challenges of underdevelopment, especially in the area of lack of necessary health infrastructure, issues like high mortality rate (Maternal, infant, adult), poor access to state-run hospitals that are economical than private-owned health facilities, inadequacy of public-owned healthcare facilities and personnel, urban bias in the distribution of health facilities, inadequate drug-manufacturing plants, fake drug crunch, very low compliance of health insurance programme, political flux, insufficient health professionals, brain drain as health workers emigrate to other developed economies, corruption, Nepotism, dependency on African traditional medicine, poverty and insufficient budgetary allocation are contributing towards western Africa regional underdevelopment. Infact, health care is one of the biggest challenges in West Africa.

Thus, enhancing the productivity of Health spending in developing countries has been a controversial debate and a key public policy challenge over the years. Enormous and replete literature that emphasized the significant role of health in economic growth and development abounds. In developing countries also, the amount of budgetary allocation devoted to financing health care delivery can go a long way to improve the quality of life thereby achieving a high level of development. It is based on this belief that the Millennium Development Goals (MDGs) was set to achieve a significant reduction in maternal and infant mortality.

In financial literature, there are two modes of financing health care delivery; government based and market- based. The choice of the type depends on the economy, however, in most developed economies, health care delivery is provided by the government through the ministry of health in a relatively efficient way, while in some economy where individuals and the private sector

provide health care, the forces of demand and supply tend to determine the price and quality of delivery, even though, it is relatively expensive (unaffordable) in an economy that is characterized by high incidence of poverty, this is against government based health care provision that offer some sort of financial incentive (subsidy). Concretely, the endogenous growth theory gives governments a theoretical basis for actively provision of health care services and other growth enhancing strategies. For instance, Adinma and Adinma (2010) stated that the Nigerian health system is characterized by unceasing under funding, which has resulted in poor performance of the health sector evident from Nigerian's poor reproductive health indices. Hence, tackling critical budgetary issues like health care financing in West African countries has persisted to exhibit difficult challenges to policy makers and the health sector, considerably due to financial constraint. It is often argued that the degree of attention given to health care delivery in developed economies, are unusual in West Africa. Quite a few scholars have identified some of the problems that impinge effective government-based health care delivery to include corruption, political instability, illiteracy, poverty, poor health insurance practice, etc. Similarly, urban concentration provides the relatively equipped hospitals and health care centers, especially the private ones the opportunity of making greater profits through their high fees for health services. This trend over the years deprived inhabitants in rural areas the opportunities of benefitting from quality health care services, even the ones in urban locale are poorly equipped, some measures adopted to impose the government to increase allocation to health have not been successful. However, these measures have not significantly tackled the problem of underfunding in the healthcare sector as the incidence of underfunding has nonstop to exacerbate. This could be as a result of policy ineptitude, irregularity and somersault. Similarly, Mills and Gilson (1988) added that lack of information about health sector financing and expenditure in many countries has undermined appropriate decision-making. This paper intends to assess the effectiveness of

government-based healthcare financing, with comparison with private-based health expenditure and health profile of all the West African Countries, with high opinion to significantly improving human welfare.

## **2. Literature Review**

### ***HealthCare Expenditure in Developing Countries***

According to Fosu (2001), Government allocation for health has traditionally been low in Sub-Saharan Africa (SSA). He finds that debt service exerts a negative effect on health expenditure.

Gupta et al (1999) used cross-sectional data for 50 developing and transition countries to show that expenditure allocations within the two social sectors (education and health) improve both access to and attainment in schools and reduce mortality rates for infants and children.

Bassey et al (2010a) utilized the Granger causality test and Vector Error Correction Model (VECM) to investigate the causal direction and long-run relationship between government health expenditure, poverty and health status, in Nigeria. They established that there exists a strong causal uni-directional relationship running from life expectancy to poverty in Nigeria. they contend that health improvements/expenditure when concentrated among people living close to or below the poverty line, a *trickle-down* mechanism and redistribution of income will lead to poverty reduction and illnesses. According to them, increasing budgetary allocation to funding health sector alone without reducing poverty level, would not be sufficient enough to improve the health and social status of the population. They also found a long-run relationship between poverty and health status, but did not find a significant long-run relationship between health status and government health expenditure.

### *Is HealthCare Expenditure a Luxury or Essential Goods?*

Giovanis (2009) used Multiple regressions and vector error correction models to examine Health Expenditures in Greece for period from 1985-2006, he found that health expenditure is not a luxury good.

In a similar study on Nigeria, Bassey et al (2010b) examined healthcare expenditure in Nigeria, adopting several estimation techniques on data from 1980 to 2003, their result reveal that life expectancy and literacy rate were negatively correlated with health care expenditure both in the short and long-run, like Giovanis (2009), they concluded that health is a necessary good in Nigeria and did recommend increase funding for health and implementation of primary health care bill.

Jaunky and Khadaroo (2006) examined income elasticity of health care expenditure for 28 African countries in a panel dimension over the period 1991 - 2000. In their study, Public health expenditure is found to be luxury good while private health expenditure a necessity. This according to them, is because, in the context of Africa, where the public sector has to strive hard to provide basic health care to the poor majority but a rich minority can easily afford hi-tech private health care.

According to Getzen (2000), Health care is neither “a necessity” nor "a luxury" but "both" since the income elasticity varies with the level of analysis. Rossi and Pereyra et al (2001) found that health care is necessary except for medicament and dental care, in other words, it is not possible to reject the hypothesis that they are luxury goods, thus it is a necessary good for the richest, but is not possible to reject that it is a luxury good for the poorest.

In another study, Tosetti and Moscone (2007) investigate the long-run economic relationship between health care expenditure and income in the US at a State level, using a panel of 49 US States for the period 1980-2004, they closely examined the non-stationarity and cointegration between health spending and income, their results also suggest that health care is a necessity rather than a luxury. Rossi and Triunfo (2004) showed that during the period 1994-1995, the total expenditure in health care are a luxury good for people from Montevideo.

### ***Public and Private HealthCare Expenditures***

Atella and Marini (2006) showed that income elasticity is quite sensitive to the inclusion of technology variables and to health system heterogeneity, also complementary and substitution relationships play an important role in determining public and private health care expenditure and that public and private health care expenditures are both related with a cyclical indicator of the economic activity.

Lovecchio and Zanola (1998) show that with an undersupply of public health, public and private health care may behave as complements even if they are substitutes.

Gracia and Gil (2002) stated that universal public health coverage would increase the price elasticity of demand and thus would reduce the control of prices by the suppliers.

### ***HealthCare Expenditure and Productivity***

Hartwig (2006) studied Baumol's model of unbalanced growth in the context of healthcare expenditure, using data from a panel of 19 OECD countries. Consistent with Baumol's theory, He found that health care expenditure is driven by wage increases in excess of productivity growth.

Dormont et al. (2008) stated that Health spending triggers technological progress, which is a potential source of better outcomes in terms of longevity and quality of life, in turn, income growth induces an increase in health expenditure, as richer countries tend to spend a higher share of their income on health.

Jung and Tran (2007) analyze whether a consumer driven health care plan like the newly established Health Savings Accounts (HSAs) can reduce health care expenditures in the United States and increase the fraction of the population with health insurance. Their results from numerical simulations indicate that the success of HSAs depends critically on the productivity of health and the annual contribution limit to HSAs. Also, they find that taxpayers can face substantial costs when HSAs are introduced to insure more people and to curb aggregate health expenditures. Lamiraud, Booysen and Scheil-Adlung (2005) reveal that social health protection can help to reduce health-related impoverishment.

Tacke and Waldmann (2009) use infant mortality as a health status indicator and find a significant and positive link between infant mortality and income inequality using cross-national data for 98 countries; they also find that a one percentage point decrease in the income share of the richest quintile correlates with a decrease in infant mortality by nearly two percent.

Clements and Levy (1994) analyzed the determinants of private investment in the Caribbean region, using data for the 1977-1991 time period, their results reveal that public education outlays, as well as economic growth, have a significant effect on private capital formation, also public investment has a negative effect on private investment, while real interest rates and external debt burdens were found to have no statistically significant impact on private investment.

### **3. Methodology**

The study adopts extensive panel secondary Macro data at prefecture level for the period 1960 – 2012 across countries in West Africa. The data were obtained basically from various issues of the UNESCO Institute for Statistics (2012), WHO, World Bank (2012), IMF CD-ROM, Central Bank of Nigeria (CBN) Statistical Bulletin; and Annual Report and Statement of Accounts. The study adopts a comprehensive descriptive analysis of healthcare financing and health profile of West African Countries. Consequently, there are a number of health indicators which can provide information on the level of and changes in the West African regional healthcare pattern. The health indicators help explain quality of life of inhabitants of these economies and their country commitment towards human development. A number of health indicators can be figured, however this paper outlines healthcare and health comparable indicators, such as: Public Expenditure on health as % of GDP; Private expenditure on health as a percentage of total expenditure on health; Military expenditure as % of GDP, Health index, Human Development Index, Adult mortality rate-female, Adult mortality rate-male, Infant mortality rate, Life expectancy at birth and Maternal mortality ratio across West African countries, with comparability with selected Developed economies. Also, the method of comparatibility of developing and developed countries is utilized.

### **4. The Results and Discussion**

#### **The State of Health in West Africa**

Health indices in West African countries are by far the lowest in the world, though, with slight improvement during 2000-2012. Nonetheless, West Africa is beginning to catch up with the success of MDGs

**Table 4: Health Profile of West African Countries**

Category	Year	BEN	BFA	CPV	CIV	GMB	GHA	GIN	GNB	LIB	MLI	MRT	NER	NGA	SEN	SLE	TGO
Health index	1980	0.4	0.42	0.63	0.494	0.434	0.522	0.297	0.317	0.375	0.309	0.521	0.308	0.402	0.431	0.364	0.4
	1990	0.453	0.45	0.714	0.513	0.522	0.581	0.373	0.36	0.351	0.382	0.568	0.338	0.404	0.524	0.296	0.5
	2000	0.515	0.48	0.784	0.474	0.554	0.606	0.443	0.393	0.41	0.431	0.584	0.446	0.415	0.564	0.312	0.5
	2005	0.535	0.51	0.826	0.497	0.578	0.647	0.491	0.412	0.504	0.457	0.588	0.499	0.458	0.59	0.383	0.5
	2006	0.539	0.52	0.834	0.506	0.582	0.658	0.5	0.416	0.521	0.464	0.589	0.509	0.466	0.595	0.396	0.5
	2007	0.544	0.53	0.84	0.515	0.587	0.667	0.508	0.421	0.535	0.47	0.592	0.517	0.473	0.6	0.407	0.5
	2008	0.55	0.54	0.845	0.526	0.592	0.676	0.516	0.426	0.548	0.476	0.595	0.526	0.481	0.605	0.417	0.5
	2009	0.556	0.55	0.849	0.536	0.597	0.684	0.523	0.431	0.56	0.483	0.599	0.533	0.488	0.61	0.425	0.5
	2010	0.562	0.55	0.852	0.547	0.602	0.692	0.531	0.437	0.571	0.489	0.603	0.54	0.496	0.615	0.432	0.5
	2011	0.569	0.56	0.854	0.558	0.607	0.698	0.538	0.444	0.58	0.496	0.609	0.547	0.503	0.62	0.438	0.5
2012	0.576	0.57	0.856	0.569	0.612	0.703	0.545	0.45	0.589	0.502	0.614	0.553	0.51	0.625	0.444	0.5	
Adult mortality rate, female (per 1,000 people)	1990	174	274	144	291	312	248	264	360	321	257	275	297	355	210	392	28
	2000	255	307	163	447	279	293	315	366	308	275	267	265	413	207	395	29
	2009	246	262	111	456	246	253	337	369	337	218	262	224	365	218	363	27
Adult mortality rate, male (per 1,000 people)	1990	304	398	253	442	344	215	316	490	819	331	313	352	417	314	553	35
	2000	388	438	284	525	320	337	429	463	398	376	316	274	448	280	624	36
	2009	385	443	272	528	296	402	474	431	389	357	315	229	377	266	414	33
Infant mortality rate (per 1,000 live births)	1990	107	103	46	105	78	77	135	125	151	131	80	132	126	70	162	87
	2000	..	..	..	..	..	..	..	..	..	..	..	107	107	66	151	76
	2005	..	..	..	..	..	..	..	..	..	..	..	88	100	60	133	68
	2007	..	..	..	..	..	..	..	..	..	..	..	83	97	59	155	65
	2008	..	..	..	..	..	..	..	..	..	..	..	79	96	57	123	64
2010	73	93	29	86	57	50	81	92	74	99	75	73	88	50	114	66	
Life expectancy at birth (years)	1980	45.3	46.4	59.9	51.3	47.5	53.1	38.8	40.1	43.8	39.6	53	39.5	45.5	47.3	43.1	49
	1990	48.7	48.5	65.3	52.5	53.1	56.9	43.7	42.8	42.3	44.2	56	41.5	45.6	53.2	38.7	53
	2000	52.7	50.3	69.7	50.1	55.1	58.4	48.1	44.9	46	47.3	57.1	48.3	46.3	55.8	39.8	54
	2005	53.9	52.5	72.4	51.5	56.6	61	51.1	46.1	52	49	57.3	51.7	49	57.4	44.3	55
	2006	54.2	53	72.9	52.1	56.9	61.7	51.7	46.4	53	49.4	57.4	52.3	49.5	57.7	45.1	55
	2007	54.5	53.6	73.3	52.7	57.2	62.3	52.2	46.7	53.9	49.8	57.5	52.8	50	58	45.8	55
	2008	54.9	54.1	73.6	53.3	57.5	62.9	52.7	47	54.8	50.2	57.7	53.3	50.5	58.3	46.4	55
	2009	55.2	54.5	73.8	54	57.8	63.4	53.2	47.3	55.5	50.6	58	53.8	51	58.7	47	56
	2010	55.7	55	74	54.7	58.2	63.8	53.6	47.7	56.2	51	58.3	54.3	51.4	59	47.4	56
	2011	56.1	55.4	74.2	55.4	58.5	64.2	54.1	48.1	56.8	51.4	58.6	54.7	51.9	59.3	47.8	57
2012	56.5	55.9	74.3	56	58.8	64.6	54.5	48.6	57.3	51.9	58.9	55.1	52.3	59.6	48.1	57	
Maternal mortality ratio (deaths of women per 100,000 live births)	1990	770	700	200	710	700	580	1,200	1,100	1,200	1,100	760	1,200	1,100	670	1,300	62
	2000	530	450	170	590	520	550	970	970	1,300	740	630	870	970	500	1,300	44
	2005	430	370	110	510	430	440	800	890	1,100	620	560	720	820	430	1,000	37
	2010	350	300	79	400	360	350	610	790	770	540	510	590	630	370	890	30

Source: Author's Compilation of Data from United Nations Development Programme (UNDP) Database

Keys: N.A- not available, BEN-Benin, BFA- Burkina Faso, CPV-Cape Verde, CIV- Cote d' Ivories, GMB- The Gambia, GHA-Ghana, GIN-Guinea, GNB- Guinea Bissau, LIB-Liberia, MLI- Mali, MRT-Mauritania, NER-Niger, NGA-Nigeria, SEN- Senegal, SLE- Sierra Leon, TGO- Togo

West Africa, is geographically defined to consist of the western portion of Western Sahara, Morocco, Algeria, and Tunisia, occupies an area in excess of 6,140,000 km<sup>2</sup>, or nearly one-fifth

of Africa. It consist of the following independent but economically interrelated countries; Benin, Burkina Faso, Cape Verde, Cote D'Ivoire, Gambia, Ghana, Guinee, Guinee Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo and Mauritania. These countries are faced with the challenges of underdevelopment, especially in the area of lack of necessary health infrastructure, issues like high mortality rate (Maternal, infact, adult), poor access to state-run hospitals that are economical than private-owned health facilities, inadequacy of public-owned healthcare facilities and personnel, inequitable/ urban bias in the distribution of health facilities, inadequate drug-manufacturing plants, fake drug crunch, very low compliance of health insurance programme, political flux, insufficient health professionals, brain drain as health workers emigrate to other developed economies, corruption, Nepotism, dependency on African traditional medicine, poverty and insufficient budgetary allocation are contributing towards western Africa regional underdevelopment. Infact, health care is one of the biggest challenges in West Africa. Life expectancy at birth in this region is estimated to be among the lowest in the world. However, Sierra Leone unfortunately has the lowest years of life expectancy at birth, followed by the Gambia, it is important to recognise, consistent health improvement in Sierra Leone since the 1990's till date (2012), as life expectancy revealed progression. Cape verde has the highest health profile in the region as exhibited by their life expectancy.

The Bamako Initiative that was launched in 1987 following the structural adjustment programme, which was targeted at cracking the problems in the financing of health care in sub-Saharan Africa, may have accounted for improvement in health indices as proxy by coutry-specific health index. Ghana is relatively remarkable with a relatively high health index that stood at 0.703, compared with Sierra Leone that is 0.444 in 2012. This framework has indeed helped to increase drugs accessibility especially in communities, and has increased health care

delivery at the primary level. From the table, it is clear that Cape Verde's inhabitants is among the healthiest in West Africa, as evident by significant improvement in its health and human development indicators. Cote D' Ivories has a high adult mortality rate, with a low health index, though, with slight improvement in recent times. Local statistic reveals that poverty is rife in Cote D'ivoire, with an estimated ratio of 12 physicians per 100,000 people. Gambia just like Cote D'ivoire and other West African Country is characterized by one-third of the population that live below the international poverty line of \$1.25 per day, with an estimated ratio of 11 physicians per 100,000 persons. One of the health problems in the West African region is female genital mutilation, although, campaign against female genital mutilation is on-going, yet not widespread. The United Nations has programmes and the Millenium Development Goals have yielded improvement in health performance indicators of the Gambia. For Ghana, it is estimaed that 15 physicians and 93 nurses per 100,000 persons. Public expenditure on health as a percentage of GDP in Ghana is 5.2%, this commitment has led to a very significant improvement in healthcare delivery system in Ghana, especially with regards to primary healthcare. From our above table 4, Ghana has the highest health index that stood at 0.703, with an estimated life expectancy of 64.6, which is the highest in the region. Guinea has also adjusted it's health care policy following the Bamako Initiative, recently, they employed fiscal policy instruments of taxation and other state-of-the art financing instruments to develop health care financing, following these financing alternatives, health index has improved in the Guinea. Adult male, Infant and maternal mortality has reduced, coupled with slight improvement in life expectancy at birth. Estimates of less than 5 physicians per 100,000 persons in Guinea-Bissau, it has the least health index after Sierra Leone, though, with surprising improvement in life expectancy. In 2008, Statistics of Liberia estimated only 1 doctor and 27 nurses per 100,000 people. Public expenditure on health as a percentage of GDP in Liberia is 10.6%, though, Liberia is recovering

from the destruction of health care facilities after the civil war which ended in 2003. Dearth of health facilities is rife in Mali, with high prevalence of female genital mutilation, coupled with epidemic ailment and extreme poverty. Mali's health performance is one of the least in the West African region. 2006 statistics, shows that Niger is estimated to have 3 physicians and 22 nurses per 100,000 persons, there is also dearth of health facilities and general infrastructure in Niger, although, mortality rate has reduced, while life expectancy is improving. Unfortunately, Nigeria, though the richest and most populated in country in West Africa, has a low health profile, compared to other country's in the region. Increased in mortality rate, until the Millenium Development Goals (MDGs) was established in the year 2000, since then, mortality rate (adult, infant and maternal) has reduced, with improvement in life expectancy and health index.

**Table 5: Evaluation of Public Spending on Health Care Delivery and Defense Accross West African Countries**

Category	Year	BEN	BFA	CPV	CIV	GMB	GHA	GIN	GNB	LIB	MLI	MRT	NER	NGA	SEN	SLE	TGO
Expenditure on health, public (% of GDP) (%)	2000	1.9	2	3.4	1.3	1.9	3	0.7	1	1.3	2.1	3.1	1.8	1.5	1.6	1.1	1.4
	2005	2.4	4	3.5	0.9	3.5	3.1	0.7	1.7	1.6	2.8	2.2	3	1.9	3	2.2	1.4
	2006	2.4	3.6	3.8	0.9	3.3	2.5	0.7	0.9	1.9	2.8	2.2	3.2	1.9	3.3	1.3	2.2
	2007	2.3	3.8	3.5	1.3	2.5	3.7	0.4	0.9	2.8	2.8	2.5	2.7	2.4	3.2	0.9	2.1
	2008	2.2	3.5	3.2	1.4	2.5	3.2	0.8	0.9	3.9	2.6	2.2	2.7	2.4	3.2	1.3	2.4
	2009	2.3	3.3	2.9	1.1	3.3	2.8	0.4	0.9	4.2	2.6	2.2	2.7	2.1	3.1	1.5	3.2
	2010	2	3.4	3.1	1.1	2.9	3.1	0.6	0.9	3.9	2.3	2.3	2.6	1.9	3.1	1.5	3.4
	2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Military expenditure (% of GDP)	1990	1.7	2.2	..	1.3	1.2	0.3	..	..	3.7	2	3.8	..	0.9	2	1.4	3.1
	2000	0.6	1.2	1.3	..	1	0.7	1.5	4.4	..	2.2	3.5	1.2	0.8	1.3	3.7	..
	2005	1	1.1	0.7	1.4	0.5	0.4	..	2.1	1.5	2.2	3.7	1	0.6	1.4	1.6	1.5
	2006	1	1.2	0.6	1.5	0.4	0.4	..	..	0.6	2.2	3	..	0.5	1.6	1.7	..
	2007	..	1.3	0.6	1.5	0.6	0.5	..	..	0.5	2.2	..	..	0.6	1.7	1.5	..
	2008	1	1.4	0.5	1.5	..	0.4	..	..	0.5	2	3.4	1	0.8	1.6	1.1	1.7
	2009	..	1.3	0.5	1.7	..	0.4	..	..	0.8	1.9	3.8	..	0.9	1.6	1.3	..
	2010	..	1.3	0.5	1.6	..	0.4	..	..	0.9	1.9	..	0.9	1	1.6	1.2	1.7
Human Development Index (HDI) value	1980	0.253	..	..	0.348	0.279	0.391	..	..	0.298	0.176	0.34	0.179	..	0.322	0.255	0.357
	1985	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	1990	0.314	..	..	0.36	0.323	0.427	..	..	..	0.204	0.357	0.198	..	0.368	0.247	0.382
	2000	0.38	..	0.532	0.392	0.36	0.461	..	..	0.304	0.27	0.418	0.234	..	0.405	0.244	0.426
	2005	0.414	0.3	..	0.405	0.375	0.491	0.331	0.348	0.301	0.312	0.441	0.269	0.434	0.441	0.315	0.436
	2006	0.416	0.31	..	0.408	0.378	0.493	0.336	0.352	0.314	0.318	0.45	0.274	0.444	0.445	0.323	0.443
	2007	0.42	0.31	..	0.412	0.383	0.506	0.342	0.355	0.334	0.328	0.454	0.278	0.448	0.454	0.331	0.442
	2008	0.425	0.32	..	0.417	0.426	0.52	0.345	0.356	0.346	0.332	0.454	0.287	0.453	0.461	0.336	0.445
	2009	0.429	0.33	..	0.422	0.432	0.534	0.347	0.358	0.359	0.337	0.461	0.289	0.457	0.462	0.342	0.448
	2010	0.432	0.33	0.581	0.427	0.437	0.54	0.349	0.361	0.367	0.344	0.464	0.298	0.462	0.47	0.346	0.452
	2011	0.434	0.34	0.584	0.426	0.44	0.553	0.352	0.364	0.381	0.347	0.464	0.297	0.467	0.471	0.348	0.455
	2012	0.436	0.34	0.586	0.432	0.439	0.558	0.355	0.364	0.388	0.344	0.467	0.304	0.471	0.47	0.359	0.459

Source: Author's Compilation of Data from United Nations Development Programme (UNDP) Database

Keys: N.A- not available, BEN-Benin, BFA- Burkina Faso, CPV-Cape Verde, CIV- Cote d' Ivories, GMB- The Gambia, GHA- Ghana, GIN-Guinea, GNB- Guinea Bissau, LIB-Liberia, MLI- Mali, MRT-Mauritania, NER-Niger, NGA-Nigeria, SEN-Senegal, SLE- Sierra Leon, TGO- Togo

Expenditure on health and defence varies across West African economies. Public-based expenditure on health as a share of GDP offer an indication of the size of the health sector across West African Countries. Also, the dissimilarity in country-specific proportion of health-to-GDP features the extent of public-based health care delivery and social welfare in West Africa economies. Since the year 2000, following the establishment of MDGs, the size of government spending on healthcare, has increase among these countries, but fluctuated at some periods, especially in 2007, probably, as a result of the Global financial meltdown, this further provide indication, that healthcare financing, is a function of the level of economic improvement of a country. This variation mirrors declining GDP, and then, government efforts to ensure that the healthcare system is maintained.

During 2000-2006, the leading increases in health expenditures as a share of GDP occurred in Cape Verde, this commitment is also reflected in their health performance, as proxy by health index (shown in preceding table). In 2007, it was Burkina-Faso, and then Liberia led from 2008 till 2010, this was centered on the post-civil crises health facility reconstruction policy.

Since 2005, Mauritania maintained the highest in its Military expenditure share of GDP, which stood at 3.8 percent in 2009, as compared with Ghana that has the least share of Military expenditure to GDP in the region, since 2005 till date. This fluctuation in Ghana, might be as a result of currency devaluation, also, the Ghanaian economy has channeled a comparable higher fraction of its budgetary allocation to the elimination of poverty, improving education services and provision of quality healthcare delivery, as an alternative of laying it on arm forces, this effort has earned Ghana remarkable improvement in quality of life, and level of human development. The table further reveals that military spending as a share of GDP is higher in CIV, GIN, GNB, MRT, SEN and TGO contrary to health expenditure as a share of GDP, the

consequence of this pattern is also reflected on the dismal level of Human Development of these economies. For instance, in 2005, CIV allocated 1.4 percentage of GDP to military as against 0.9 percent on healthcare, the CIV economy, maintained a higher percentage of its GDP to military as against healthcare, GIN allocated more proportion of its GDP to military only in 2000. MRT consistently maintained a higher percentage of its GDP to military as against healthcare, same also occurred in SEN in year 2000, 2006 and 2007. Togo increased its budgetary allocation to military against health only in the year 2005. The other remaining ten (10) west African countries maintained a higher proportion of their GDP to health, as against military.

The argument on military spending are diverse with divergent opinion, some scholars have stated that the West Africa economies are characterized by high military spending which has contributed to their underdevelopment, at the expense of other sectors, contrary to this, Boulding (1963) stated that basic prerequisite of economic development is peace, which has some spillover benefits, for instance, the military also provide healthcare services to the civilian economy in Africa. Military spending is also supported by the marxist theory and Keynesian views. Eventhough, Nnamdi (2007) argued that over spending on the defence sector leads to underfunding other sectors in the economy, on this note, the Neo-Classical economists recognise the state as a class neutral, rational actor which balances the opportunity costs and security benefits of military spending in order to maximize a well-defined national interest, similarly, Hewitt (1991) noted that military spending has opportunity cost, he further mentioned that Less Developed Countries (LDCs) have allocated a higher proportion of GDP to the military, which has contributed to their low economic growth by diverting funds from social programmes, economic development projects and the productive sector. However, it is important to recognize

the principles that guide public expenditure as identified in public finance literature to include; principle of maximum benefit; economy; sanction; elasticity; growth and stability promotion.

**Table 6: Private Spending on Health Care Across West African Countries**

Category	Year	BEN	BFA	CPV	CIV	GAM	GHA	GIN	GNB	LIB	MLI	MRT	NER	NGA	SEN	SLE	TGO
<i>Private expenditure on health as a percentage of total expenditure on health</i>	2011	46.7	49.7	24.9	73.4	46	43.9	72.7	73.2	68.4	54.6	59.7	44.9	63.3	41.7	82	47.8
	2010	48.8	44.6	24.2	75.5	43.9	41.8	67.5	66.9	81	56.5	56.3	50.8	68.5	43.1	85	54.1
	2009	46.6	50.6	23.6	75.9	44.1	43.5	72.7	71.1	75.8	54	61.8	49.7	68.6	44.2	87	54.4
	2008	49	40.9	23.3	76.3	50.2	42	78.4	79.8	67	53.5	66.1	48.2	62.7	46.1	88	62.7
	2007	49.2	39.7	22.8	77.7	49.1	37.6	81.4	77	73	51.7	63.9	50.3	66.3	44.4	88	66.8
	2006	49.8	43.1	22.5	80.8	41.5	42.8	83	81.1	81.6	51.7	57.9	47.5	67.1	43.2	82	64.9
	2005	50.3	40.5	24.9	80.2	43.9	33.6	82.3	79.9	80.7	52	52.3	50	70.8	44.7	79	71.1
	2004	52.3	46.3	25.1	74.6	42.2	38.1	83.1	83.6	72.5	50.8	45.3	52.8	67.3	62.5	78	71.4
	2003	52.2	53.6	25	74.2	49.7	48.7	84.2	77	65.4	55.9	45.8	53.9	77.6	61.3	59	74.2
	2002	55.8	56.1	24.7	70	62.5	50.3	79.7	77.9	79.9	59.8	48.5	50.7	74.4	61.5	76	81.7
	2001	50.7	62.6	24.6	75.8	58.1	43	79.6	90.4	74.3	55.1	48.2	54	68.6	62.8	75	76.1
	2000	55.8	60.4	26.7	73.7	65.8	51.3	81.3	89.5	75.5	67.1	48	55.5	66.5	63.2	77	71.5
	1999	54	58.8	26.3	76.9	64.8	49.7	81.6	74.7	73.9	69.9	46	56.2	70.9	63	83	68.6
	1998	55.8	60.1	25	79.6	66.2	44.4	83.2	68.7	75.4	65.5	45.3	56.1	73.9	64.7	86	63.4
	1997	57.9	59	18.4	76.5	70.4	45.4	79.7	66.5	..	63.9	45.8	56	76.5	65.1	83	70.4
	1996	55.7	61.6	18.3	76.3	73.4	42.7	81.1	69.7	..	60.4	45.9	62.4	79.9	63.7	86	67.3
1995	55	61.3	19.6	77.4	68	42.5	79.5	75.3	..	47.7	45.3	60	75.3	67.5	85	65.4	

Source: Author's Compilation of Data from World Health Organization (WHO) Database

Keys: N.A- not available, BEN-Benin, BFA- Burkina Faso, CPV-Cape Verde, CIV- Cote d' Ivories, GMB- The Gambia, GHA- Ghana, GIN-Guinea, GNB- Guinea Bissau, LIB-Liberia, MLI- Mali, MRT-Mauritania, NER-Niger, NGA-Nigeria, SEN-Senegal, SLE- Sierra Leon, TGO- Togo

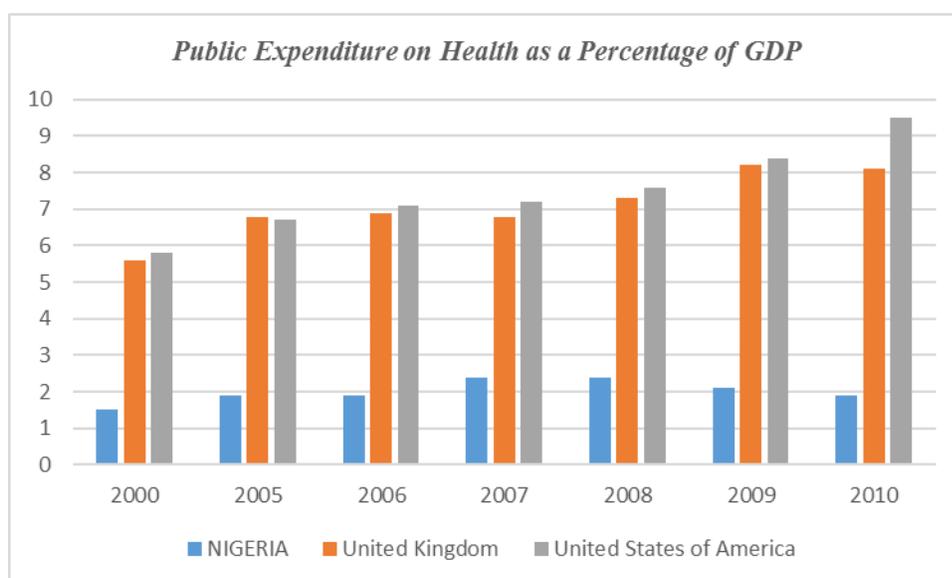
The focus of the above table describes the share of private expenditure on health as a percentage of total expenditure on health in the corresponding west African economies. The usual interpretation is that the share of private health expenses as a percentage of total expenditure on health, reflects governments underinvestment in public health across majority of West African countries. For instance, According to Novignon (2012), health care expenditure has been low over the years in developing regions of the world. A majority of countries in these regions, especially sub-Saharan Africa (SSA), rely on donor grants and loans to finance health care. Such expenditures are not only unsustainable but also inadequate considering the enormous health care burden in the region.

In Sierra Leon, 82 percent of total health expenditure in 2011 was private (88 percent in 2007 and 2008). This share was even higher than in most West African countries, where

it was 24.9 percent as in Cape Verde, on average. These figures show that the government of West African countries (especially CIV, GIN, GNB, MLI, LIB, MRT and NGA) spends little on health compared with other countries. Curiously, Sierra Leone revealed the highest Private expenditure on health as a share of total expenditure on health, except in 2001 and 2006 when Guinea led the chart by 1%, and then in 2005, it was also highest in Guinea, Liberia, Guinea-Bissau and Cote D'Ivories. Guinea-Bissau and Guinea continued to record high percentage of total health spending in 2004 that was private, followed by Nigeria. Taking aback, Guinea Bissau recorded the highest share of total health expenditure that is private, which stood as high as 90.4 percent in the year 2001. This result is obvious that the government of Guinea devotes very little of it's resources to enhancing health care delivery, table 5 supports that they devote not more than 1% of their GDP to health, this is not surprising to see that such countries have very low health profile. No doubt, Health economics literature has shown that private share of overall health spending is much higher in poorer countries than in rich ones.

## Stylized facts on Comparability across Developing and Developed countries

Figure 1: Comparability of Public Expenditure on Health across Developed and Developing Countries (2000-2010)



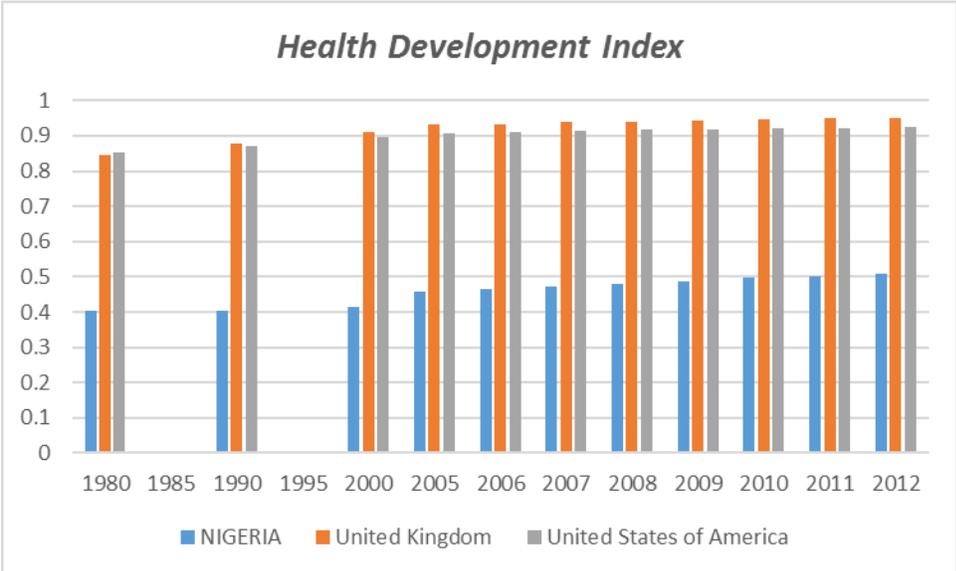
Source: Author's Compilation of Data from United Nations Development Programme (UNDP) Database

Figure 1: Comparability of Public Expenditure on Health across Developed and Developing Countries (2000-2010)

Figure 1 above presents the public health spending patterns of two developed economies and a developing country (in this case, Nigeria) for the period 2000 to 2010. The figure indicates that the range of public health spending as a percentage of GDP, between the developed and developing country is very wide. It could be seen that the structure of public health spending between the United States of America (U.S.A.) and United Kingdom (U.K.) seems to be similar, but relatively speaking, the United States commits a larger proportion of its income to healthcare delivery. For instance, in 2010, they expended 9.5% of their national income on public health, compared to the U.K. that spent 8.1%; in same year, Nigeria's proportion of health spending was 1.9% which is infinitesimal, despite its considerable economic performance, and an abundance of natural resources (oil and gas) and minerals, yet, nearly 60% of the populations continue to live with less than \$1 per day, some analyst has traced this dismal performance to protracted

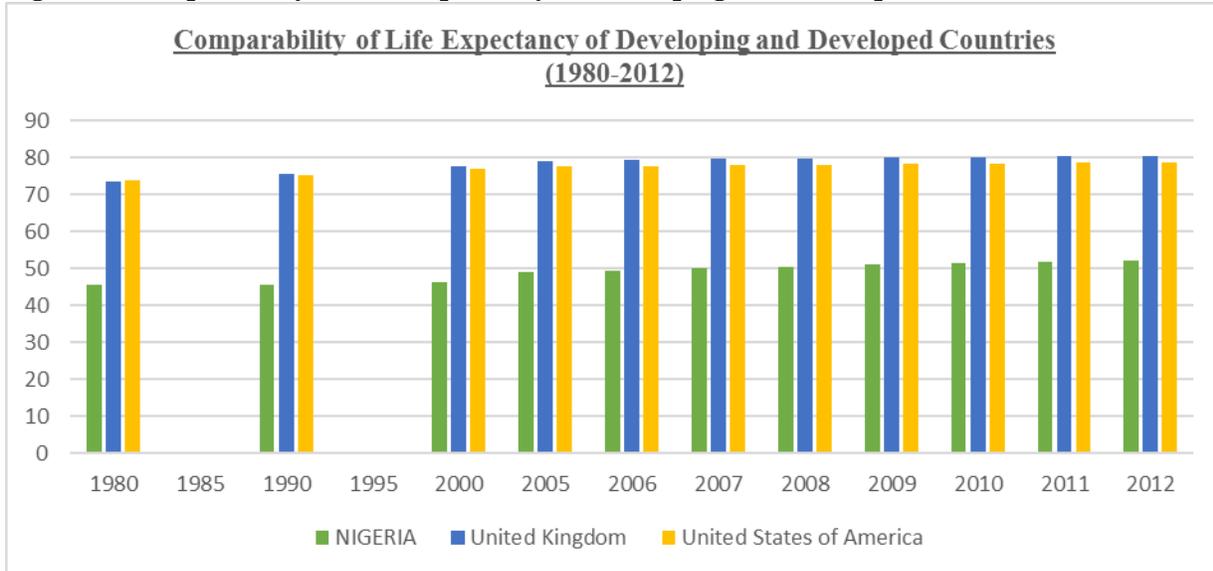
military rule that deepened downgrading of health care delivery and then poverty escalation. This shows that Nigeria is still a laggard compared to the developed counterpart, despite its profusion of natural resources that accounts for over 95 percent of its national income. Correspondingly, Bouoiyour and Naimbayel (2012) estimated that out of 80% of oil revenues earned by the federal government, only 1% benefit the population. In order to justify our choice of Nigeria as a comparable proxy for developing country is based on the fact that Nigeria is Africa’s most populated country and with an estimated 162 million inhabitants, consequently, according to UNICEF (2006), one in every five Africans is a Nigerian. Therefore, the figure below further reveals these comparable health development index;

**Figure 2: Comparability of Health Development Index across Developed and Developing Countries (1980-2012)**



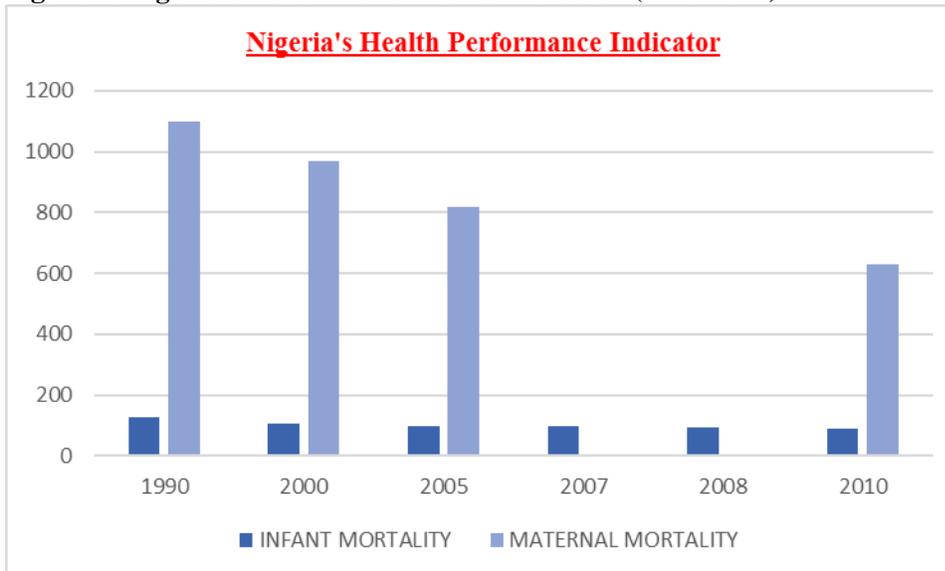
Source: Author’s Compilation of Data from United Nations Development Programme (UNDP) Database

**Figure 3: Comparability of Life Expectancy of Developing and Developed Countries (1980-2012)**



Source: Author's Compilation of Data from United Nations Development Programme (UNDP) Database

**Figure 4: Nigeria's Health Performance Indicator (1990-2010)**



Source: Author's Compilation of Data from United Nations Development Programme (UNDP) Database

Health Index (HI) is designed to measure country's effectiveness or capacity to deliver healthcare. Figure 2 above presents the health index of two developed economies and a developing country- Nigeria for an extensive period of 1980 to 2012. This period is characterized

by several developmental policies and programmes aimed at tackling epidemic health crises, up till the recent Millenium Development Goals, with core targets that hinges on health. The figure illustrates the dawdling trend in Nigeria's health index, which stood at 0.402 in 1980, and then rose to 0.415 in 2000. It maintained a remarkable increasing movement following the agreement of the United Nations Millennium Declaration that led to establishment of the Millennium Development Goals (MDGs) aimed to be achieved in 2015. Up till recent times in 2012 to be precise, it rose to 0.51, this improvement though below expectation can be attributed to the effectiveness of several of these domestic and international policies and programmes, that is aimed at improving quality of life. It suffice to note that prior to adoption of MDG's in Nigeria, the country was characterized by relatively higher infant and maternal mortality rate. For instance, as at 1990, infant and maternal mortality rate stood at 126 and 1,100 respectively, but, since the MDG's, it has decreased remarkably to 88 and 630 in 2010, meanwhile, life expectancy at birth (years) ha also increased from 46.3 in 2000 to 52.3 in 2012; likewise, these international declaration also have a positive impact on the developed countries, for instance, since the year 2000, life expectancy in the U.S.A. has maintained a continuous increase from 76.8 in 2000 to 78.7 in 2012, likewise, their U.K. counterpart, has improved from 77.7 in 2000 to 80.3 recently (2012). See above figures for statistical description.

## **5. Conclusion and Policy Implications**

Health care performance in West Africa countries has not been good. Conventionally, the share of Gross Domestic Product spent on health is used in assessing the size of the health sector within the economy. In the same way, the fraction of government's expenditures on health is also used in appraising government commitment to healthcare delivery. These valuations are used to see the sights of how a country's health sector has developed over time or to relate the health sector of different prefecture at a given time. Assessing the importance of healthcare spending to

the economy remains an important assignment, especially given the establishment of the Millennium Development Goals (MDG's) in 2000. It is terrifying to note that the dismal health profile of West African Countries can be largely attributed to lack of government's commitment (underinvestment) on healthcare delivery, statistically speaking, health indices in West African countries are by far the lowest in the world, though, with slight improvement during 2000-2012. However, West Africa is beginning to catch up with the success of MDGs, thus, we have concluded that government of West African country's should be more responsive to healthcare of it's inhabitants. We also find evidence that some West African countries allocate more resources to defense, relative to health care delivery. However, we suggest that, even as government of West African countries should improve their commitment to providing adequate and necessary healthcare services and improved facilities, provision of incentives to the private sector is imperative in strengthening the part of private sector in the healthcare system. Also, there is need to implement strong monitoring framework that will ensure prudent utilization of government budgetary allocations on the health sector. Policy makers should tackle the challenges of the healthcare sector and other developmental challenges that is highlighted in this paper, at the same time, there is need to increase the proportion of qualified health workers, especially doctors and nurses in this region. In addition, the principles that guide public expenditure should be followed accordingly.

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