Measuring the Distributional Impact of Public Health Spending on Poverty in Nigeria

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Abstract: *Most African health systems are replicas of what was inherited from the colonial era and are therefore unevenly weighted toward privileged elites and Urban centers. Improved health status leads to increased productivity, educational performance, higher life expectancy, savings and investments, and decreased debts and expenditure on health care. Ultimately this would lead to greater equity, economic return, and social and political stability. The health impacts of climate change can occur through a number of direct and indirect causal pathways, and the severity is in part determined by the adaptive capacity of the population. Those groups particularly at risk include poorer countries and communities, those geographically vulnerable to extreme weather events, and those highly dependent on agriculture for their livelihood.*

The paper examines the impact of public health expenditure, and poverty among the general populace. The trend of the country human development index and public expenditure on health were analyzed using correlation coefficient and regression analysis and simple descriptive analysis. The findings reveal that the variations in the human development index could be traced to the budget estimates.

Keywords*:* Health, expenditure, disease, public, poverty.

Introduction

Much of the attention concerning the provision of health care to the poor are centered on the public sector. It is taken as understood that health care is a basic service, essential in the fight against poverty, (World Bank, 1990). The poor are the most vulnerable to further impoverishment if faced with high costs from illness or family death. Health inequality has been studied using a number of wellness measures: health status, health service spending/ financing, and health service use. The evidence available from multi-country surveys show large poor-rich differences in the range of health outcomes (Gwatkin 2000).

Public spending on curative health care in Africa does not seem to be reaching most of the poor. On average, government subsidies for curative health care are imperfectly targeted at poor households and primarily benefit the wealthy (Castro-Leal, et al. 2000). Even though poverty is closely tied to rural areas, the majority of government health care facilities in Africa are located in urban areas (Hjortsberg 2002). The constraints arising from distance to care combined with the uncertainty of receiving the necessary drugs or treatment from the public health care services, too often leaves the poor with two options: locally available private providers, or going without health care services altogether. The public sector's inability to provide essential health care services at minimum levels of accessibility and quality makes services offered by private providers attractive by comparison.

Even where public facilities exist, equivalent privately delivered services are many times perceived by the user to be of higher quality, irrespective of empirical evidence that often suggests the opposite (Brugha etal, 1998). In developing countries, private sector delivery of primary health care is usually poorly regulated and prices are usually scaled to the ability-to-pay of the client (Hongoro, 2000; Kumaranayake, et al. 2000; Soderlund, 2000). As a result, when the poor seek treatment from private providers they are likely to spend a greater proportion of their income on health than would be the case if care were sourced from government, leading to an increased financial burden on the individual and family.

The poor state of Nigerian health system is traceable to several factors: organization, stewardships, financing and provision of services. These have been compounded by other socioeconomic and political factors in the environment. The overall availability, accessibility, quality and utilization of health services decreased significantly or stagnated in the past decades.

Federal Ministry of Health (FMOH) indicates that in 1999, there were 18, 258 regis - tered PHC facilities, 3,275 secondary facilities and 29 tertiary facilities. The proportion of households residing within 10 kilometers of health center, clinic or hospital is 88% in the Southwest, 87% in the Southeast, 82% in the Central, 73% in the Northeast and 67% in the Northwest regions, FMOH (2000).

Literature Review

Evidence from National Health Accounts research, economic studies of health seeking behavior, and analysis of Demographic and Health Surveys (DHS) data suggests that an increase in government services, when and if it comes, will not be sufficient to increase diagnosis and entry into treatment to the rates set by the Millennium Development Goals

(Ngalande-Banda etal, 1995; Rosen, etal 1999; Leonard 2000). However, as has been docu - mented in both developed and developing countries, the difficulties in regulation and perverse financial incentives inherent in providing fee-for-service treatment often results in highly variable quality of care. Since decentralization in the health sector is often politically driven (Atkinson etal, 2004), the theoretical benefits tend to get more attention than the more concrete facts of actual experiences in other countries, which is mixed (Mubyazi, Kamugisha et al. 2004).

Developing countries across the globe face a myriad of problems ranging from poo governance, poor programme implementation to corruption just to mention a few. The resultant effect of this is manifested in rising poverty levels, food insecurity, deplorable state of infrastructural facilities and a general poor service delivery system. In most cases the end users of projects embarked upon by policy makers are not taken into cognizance especially at the planning and implementation stage and the outcome of this action is that projects executed are not based on the need of the people concerned but primarily on the basis of the administrator's political and personal inclinations.

Poverty is more easily acknowledged than defined. Hence, a universally acceptable definition of the term has remained elusive. As a social phenomenon, it has been in existence in Nigeria since the country gained political independence in 1960, and even before. Yet, not many Nigerians have much awareness of the policies designed to eliminate or reduce it from society, let alone the particular knowledge embodied in such policies and its consequences for the reduction of poverty. One such consequence is the inability of the people to contribute to the policy process from the vantage point of their experience. The poor linkage between community and government further weakens the people's blurred poverty knowledge (CEDAR, 2002). One result is government's relative ineffectiveness in formulating enduring policies of poverty alleviation.

Climate change

There is now a very strong scientific consensus that global warming is occurring, (Trenberth, 2001), that it is largely at - tributable to human emissions of greenhouse gases, that the effects are now observable, and that further warming will occur (IPCC, 2007). A recent report by the Intergovernmental Panel on Climate Change (IPCC) estimates current global warming to be almost 0.8°C above pre-industrial levels and project a further rise of 1.1–6.4°C by 2100.2 The impacts of current global warming are now observable in physical systems such as the rise of sea levels, glacial retreat, alterations in rainfall patterns; and in biological systems such as earlier spring activities of numerous plant and animal species (Parmesan). The most recent IPCC report confirms that it is human emission of greenhouse gases that has been mostly responsible for global warming over the past 50 years, and that even if emissions are greatly curtailed, the existing backlog of emissions has committed us to some degree of warming over the coming century (IPCC, 2007). Areas of Australia particularly vulnerable to warming include Alpine regions, the Great Barrier Reef and the Murray Darling river systems (Hughes, 2003).

Climate change and Human Development

Human development is about people. It is about expanding people's real choices and the substantive freedoms—the capabilities—that enable them to live lives that they value. Choice and freedom in human development mean something more than the absence of constraints. Three people whose lives are blighted by poverty, ill-health or illiteracy are not in any meaningful sense free to live the lives that they value. Neither are people who are denied the civil and political rights they need to influence decisions that affect their lives.

Climate change will be one of the defining forces shaping prospects for human development during the 21st Century. Through its impact on ecology, rainfall, temperature and weather systems, global warming will directly affect all countries. Nobody will be immune to its consequences. However, some countries and people are more vulnerable than others. In the long term, the whole of humanity faces risks but more immediately, the risks and vulnerabilities are skewed towards the world's poorest people. Climate change will be superimposed upon a world marked by large human development deficits. While there are many uncertainties about the timing, nature and scale of future impacts, the forces unleashed by global warming can be expected to magnify existing disadvantages. Location and livelihood structures will emerge as powerful markers for disadvantage. Concentrated in fragile ecological areas, drought-prone arid lands, flood-prone coastal areas, and precarious urban slums, the poor are highly exposed to climate change risks—and they lack the resources to manage those risks.(UNDP, 2008)

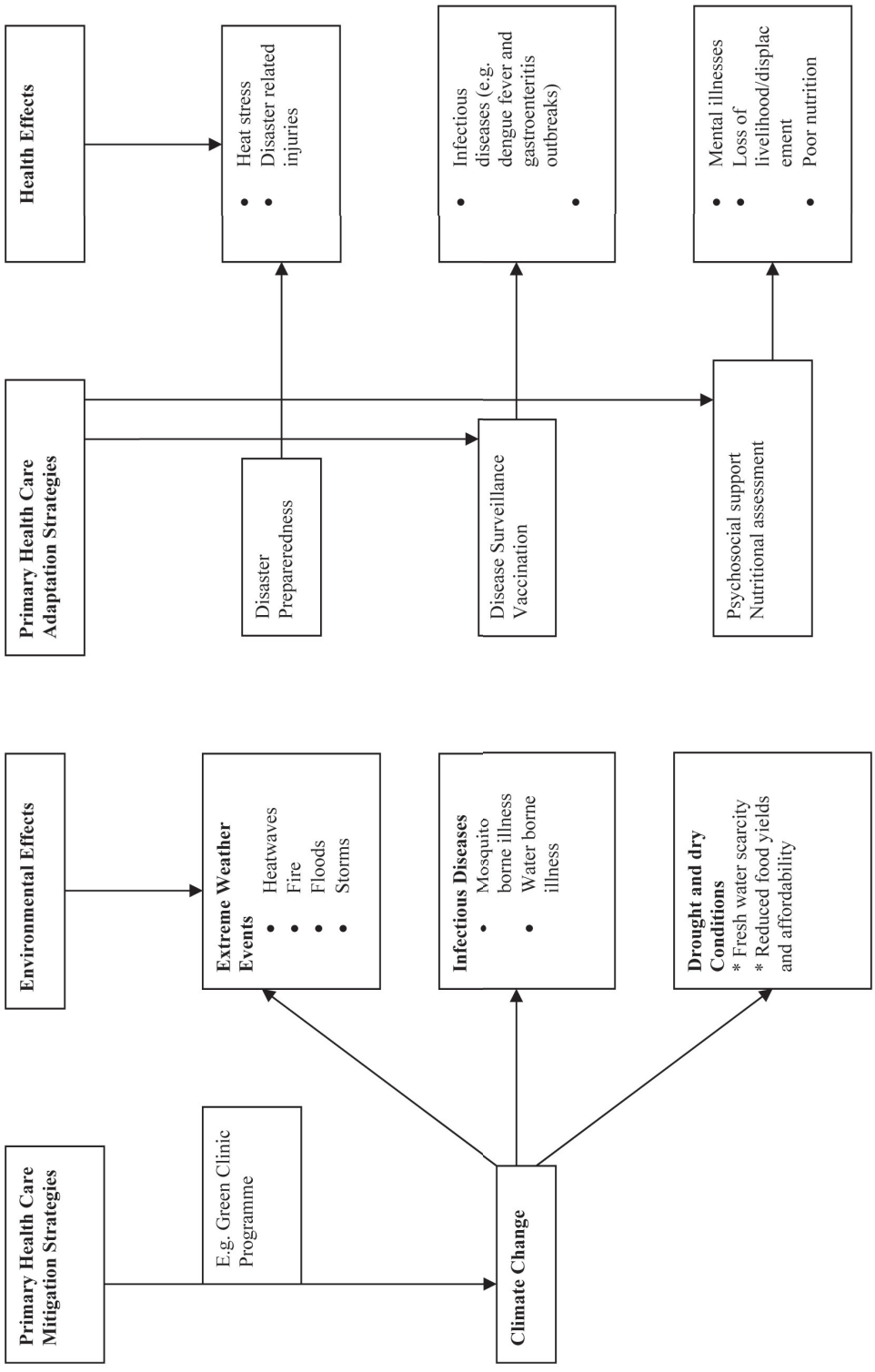
Climate change and health

The health impacts of climate change can occur through a number of direct and indirect causal pathways, and the severity is in part determined by the adaptive capacity of the population (Confalonieri, 2007). Those groups particularly at risk include poorer countries and communities, those geographically vulnerable to extreme weather events, and those highly dependent on agriculture for their livelihood. An overview of some of the pathways by which climate change can impact on health and potential primary health care adaptive strategies is shown in *Figure 1*.

Health Franchising and Service delivery

Health franchising is an application of commercial franchising systems to socially motivated health programs (Montagu, 2002; Smith, 2002). At it's most basic, this means that individual franchises operate for-profit outlets or clinics, but in accordance with clear and strictly defined clinical and quality guidelines set forth in a contractual relationship with the franchiser. As a method of organizing an unstructured private sector franchising is attractive because it incorporates into one system all of the interventions that have been shown to have some effect individually (training, oversight, performance-based incentives, accreditation and certification, vouchers or other external payment schemes, ongoing support relationships and monitoring).

Figure 1


Health Effects
Heat stress
Disaster related injuries
Infectious diseases (e.g. dengue fever and gastroenteritis outbreaks)
Mental illnesses
Loss of livelihood/displacement
Poor nutrition
Primary Health Care Adaptation Strategies
Disaster Preparedness
Disease Surveillance Vaccination
Psychosocial support Nutritional assessment
Environmental Effects
Extreme Weather Events
Heatwaves
Fire
Floods
Storms
Infectious Diseases
Mosquito borne illness
Water borne illness
Drought and dry Conditions
* Fresh water scarcity
* Reduced food yields and affordability
Primary Health Care Mitigation Strategies
E.g. Green Clinic Programme
Climate Change

Poverty and Human values

A concise and universally accepted definition of poverty is elusive largely because it affects many aspects of the human conditions, including physical, moral and psychological. Different criteria have, therefore, been used to conceptualize poverty. Most analyses follow the conventional view of poverty as a result of insufficient income for securing basic goods and services. Others view poverty, in part, as a function of education, health, life expectancy, child mortality etc. Blackwood and Lynch (1994), identify the poor, using the criteria of the levels of consumption and expenditure. Further, Sen (1983), relates poverty to entitlements which are taken to be the various bundles of goods and services over which one has command, taking into cognisance the means by which such goods are acquired, and the availability of the needed goods. Yet, other experts see poverty in very broad terms, such as being unable to meet "basic needs" – (physical; (food, health care, education, shelter etc. and non – physical; participation, identity, etc) requirements for a meaningful life (World Bank, 1996).

Poverty can be structural (chronic) or transient. The former is defined as persistent or permanent socio-economic deprivations and is linked to a host of factors such as limited productive resources, lack of skills for gainful employment, endemic socio-political and cultural factors and gender. The latter, on the other hand, is defined as transitory/temporary and is linked to natural and man- made disasters. Transient poverty is more reversible but can become structural if it persists. It is generally agreed that in conceptualizing poverty, low income or low consumption is its symptom. This has been used for the construction of poverty lines.

Limitation of Study

This study focused on the impact of Government spending on health and its effect on poverty. Poverty was measured using literacy level, life expectancy rate and average standard of living, compressed into the human development index. This data was provided periodically every 5 years up to the year 2005. This data was measured with the budget estimate in the same manner for objective analysis based on the available data from our secondary source.

Statement of Problem

The severity of the impacts of climate change is determined by the adaptive capacity of the population. The level of poverty is related to the level of risk. This paper seek to determine the relationship between public health expenditure and poverty among the general populace, using the human development index.

Methodology

Data were gathered from secondary sources such as the Central Bank of Nigeria annual reports and UNDP reports for Nigeria. The data used covered a period of 1980 to 2005 with a periodical interval of 5 years.

The method of analysis was based on correlation coefficient between budget estimate on Health and Human Development Index of Nigeria. The budget estimate was also regressed on the Human Development Index of Nigeria. The standard errors of the estimate were obtained to ascertain the statistical significance of the estimates. Descriptive statistics were also used to show the relationship between budget estimate and Human Development Index.

Model Specification

$B = a + bI + \mu$

Where

B = Budget estimate

I = Human Development Index of Nigeria

μ = error term

Analysis

Federal Government Budget Estimates on Health and Human Development Index

Table 1

Years	Recurrent Expenditure (000)	Capital Expenditure (000)	Total Expenditure (000)	Human Development Index
1985	167.7	56.2	223.9	0.378
1990	401.1	257.0	658.1	0.391
1995	3,335.7	1,725.2	5,060.9	0.411
2000	11,612.6	6,569.2	18,181.8	0.432
2005	33,254.5	6,431.0	45,704.5	0.470

Sources: Central Bank of Nigeria Annual Reports (2006) and UNDP (2007)

Figure 1

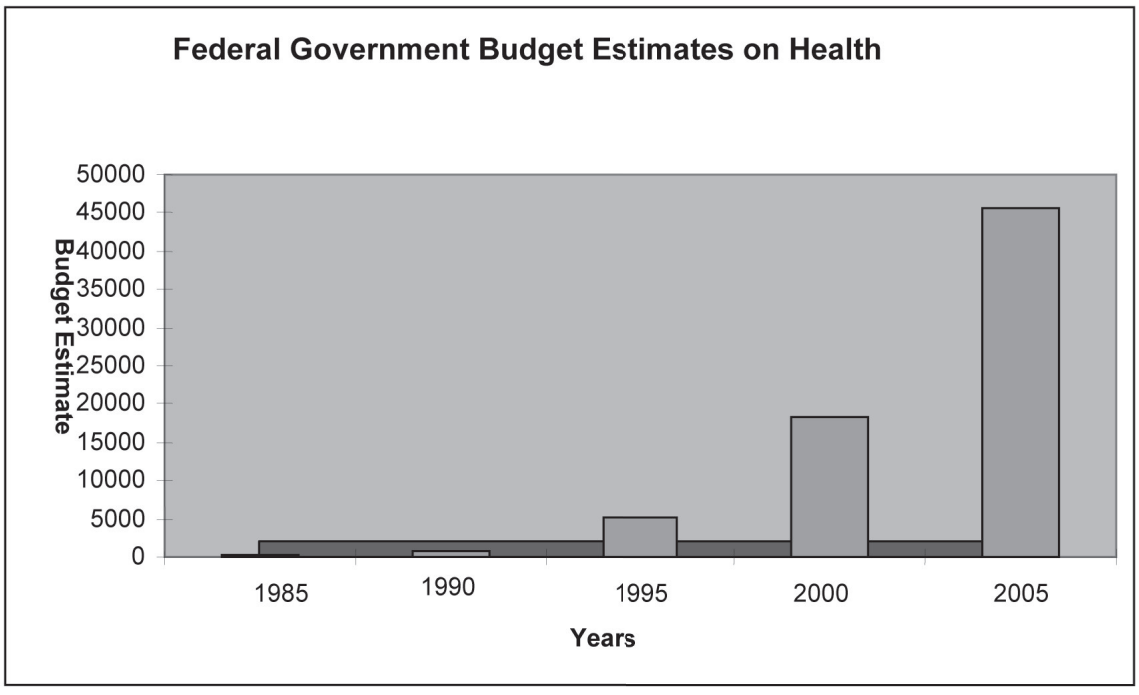
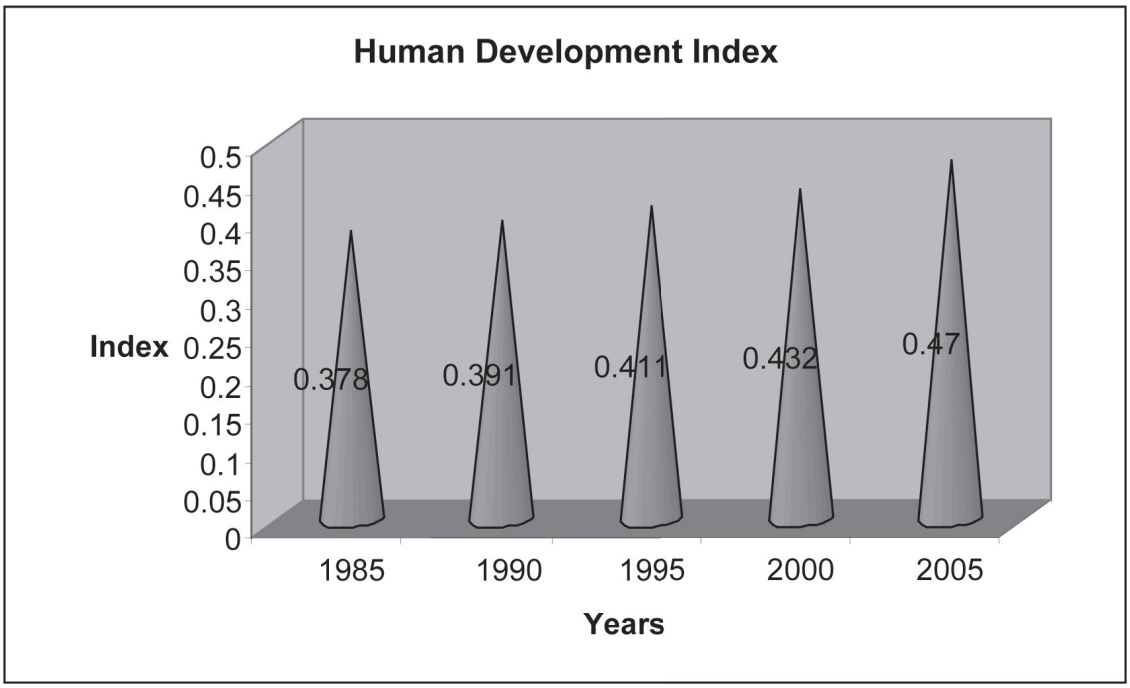


Figure 2



Findings and Discussions

Correlation Coefficient	0.93
Â	1580.12
Ъ	4040.5
S â	648.94
S ъ	627.06

Using the spearman's correlation coefficient, the value 0.93 indicates that there exist a positive linear correlation between the budget estimate on Health and the Human Development Index of Nigeria. This was also established by the regression equation obtained from the model specification and the charts. The standard errors of the estimate was discovered to be less than half (1/2) the value of the estimates in the regression equation. This implies that the estimates are statistically significant at 5% level.

The implication of this is that the change or slight increase noticed in the Human Development Index of Nigeria could be traced to the budget estimate covered by this study.

Conclusion and Recommendation

Public health systems vary in differ - ent parts of the world, depending upon the prevalent health problems. In the developing world like Nigeria, where sanitation problems and limited medical resources persist, infectious diseases are the most significant threat to public health. The health impacts of climate change can occur through a number of direct and indirect causal pathways, and the severity is in part determined by the adaptive capacity of the population. Going by the findings and discussion above, the

implication of this is that the change or slight increase noticed in the Human Development Index of Nigeria could be traced to the budget estimate covered by this study.

In order, to correct this trend, we recommend increase in the current level of per capita expenditure, which will require substantial effects in resources mobilization using the opportunities created by increase donor interests in Nigeria. Funding from domestic sources all government levels as well as private sector will need to be harnessed for rational utilization and sustainability. World Health Organization (WHO) together with other partners will continue to support advocate for resource mobilization at all levels of government and from the private sector to ensure that additional resources are allocated to the health sector.

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