

Equity in Financing Health Care Services in Nigeria

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Abstract

Health care services in Nigeria are mainly financed through out-of-pocket payment. This study investigated the extent to which payments towards health care are related to ability to pay and if poor households make proportionally more out-of-pocket payment on health. In analyzing this, the study utilized data from the General household survey of the National Bureau of statistics of 2014. The study employed the Kakwani progressivity index in analyzing the objectives of the study. The findings from the study shows a regressive out-of-pocket payment which suggests that payments towards healthcare are not related to ability to pay. The result also shows that the poor households make proportionally more out-of-pocket payment.

Keywords: Out-of-Pocket payments, Ability to Pay, Kakwani Progressivity Index

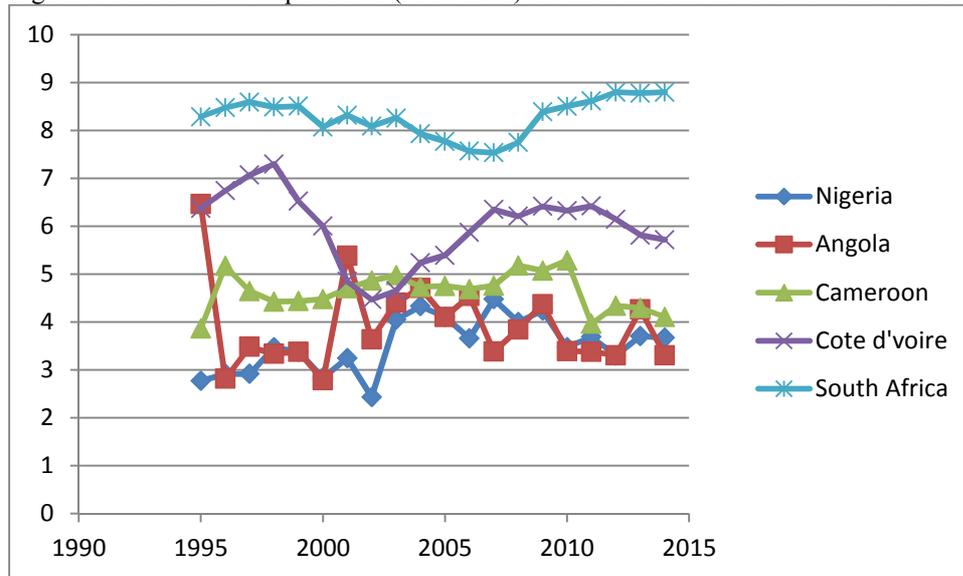
1. Introduction

Health is a paramount commodity for every household and economy. This is because improved health increases labour productivity while ill-health can result in household welfare loses through reduced labour productivity or increased expenditure on health (Nabyonga, Desmet, Karamagi, Kadama, Omaswa, and Walker (2006)). Developing countries continue to face a huge burden of disease as a result of poor nutrition practices; poor handling of water and waste; and inadequate preventive healthcare (World Bank, 2004). Being classified as a low income country by the world bank, Nigeria with an estimated population of over 170 million (NPC, 2006) and gross domestic product (GDP) of US\$550billion in 2014 (World bank, 2016) finances healthcare with about 3.6% of its GDP. The total health expenditure as a percentage of GDP for Nigeria from 1995 to 2014 averaged 3.53%. The world bank assessment of 2010 shows that the health system in Nigeria is functioning abnormally and grossly underfunded with a per capita expenditure of 9.44% (Akanni and Olaide, 2016). A greater percentage of Nigerian populace, say about 71% live in poverty and this greatly affect the distribution of health financing burden (Akanni and Olaide, 2016). In Nigeria, Policy documents on health such as the Abuja declaration of 2010 pays special attention to the pursuit of equity in health and health care which could be achieved through improved access to quality and better healthcare by the poor and vulnerable people. These policies are concentrated towards eliminating all barriers, including financial barrier, in health care utilization and ensuring access to health care. This notwithstanding, there is every possibility that varying proportion of household income is spent on health care.

Because the government spends so little, the burden of paying for healthcare falls disproportionately on households. In Nigeria, 69% of health expenditure in the country was made by households up-front, without insurance, in 2013 (World health Organization(WHO), 2015). This is far above the limit of 20% recommended, this implies that the poorest are thus often not included from the care or driven into poverty by unsustainable payments. In 2013, the government expenditure on health as a percentage of GDP was 1% (WHO, 2015). This is as against the Abuja declaration of 2010, that every nation/ economy should spend at least 10% of its GDP in financing health care. Nigeria is the least ranked in the world on government revenue as a percentage of GDP (International Monetary fund(IMF), 2015). One of the reasons for this low performance is that Nigeria total government revenue was only 9.7% of GDP in the year 2014 (IMF, 2015). It has been appraised that if taxes in Nigeria were increased to full capacity, the government to spend additional US\$9 on individual's health, (Africa Health Budget Network, 2015) thus increasing the expenditure per person from US\$31 to US\$40.

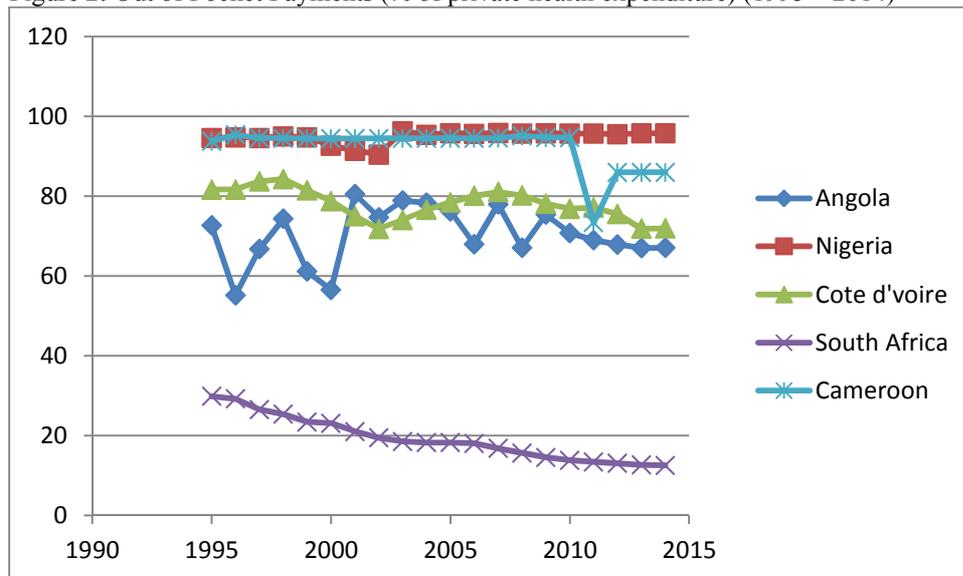
Being classified as a low income country by the World Bank, Nigeria is among the countries of the Sub-Saharan Africa which spend smaller percentage of its GDP on health when compared with other countries. As can be seen in the figure below, total health expenditure as percentage of GDP, (1995 – 2014) for Nigeria averaged 3.53%; Angola, 3.91%; Cameroon, 4.64%; Cote d'voire, 5.99%; and South Africa 8.27%. For the same period, out-of-pocket payments as percentage of Private health expenditure for Nigeria averaged 94.8%; Angola 70.3%; Cameroon 92.2%, Cote d'voire, 78%; and South Africa 19.2%. Also, public health expenditure as percentage of GDP from 1995 – 2014 for Nigeria averaged 28.5%; Angola 59.6%; Cameroon 23.4%; Cote d'voire 27.2%; and South Africa 44%.

Figure 1: Total Health Expenditure (% of GDP) for selected Sub-Saharan African countries (1995 – 2014)



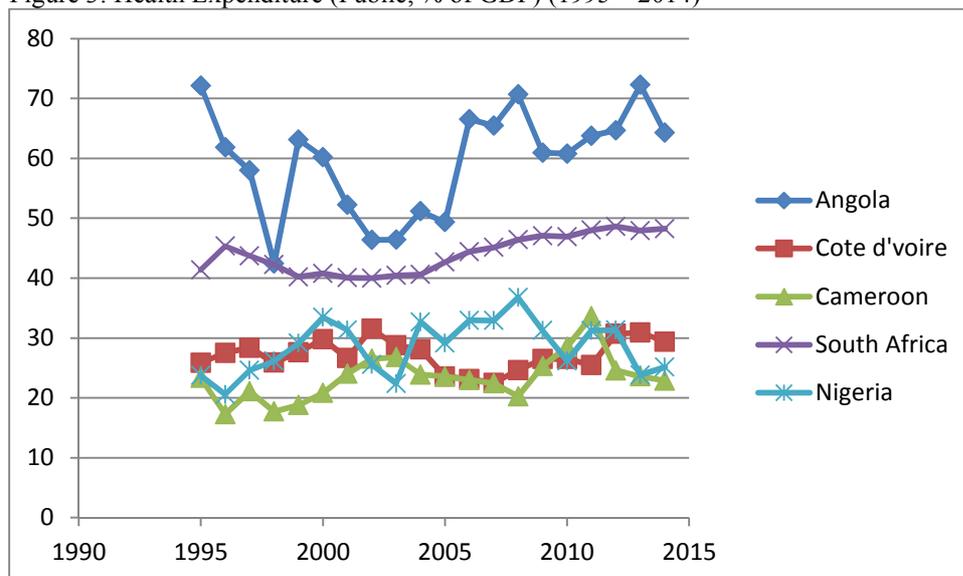
Author's computation using data from World Bank, World Development Indicator (2016)

Figure 2: Out of Pocket Payments (% of private health expenditure) (1995 – 2014)



Author's computation using data from World Bank, World Development Indicator (2016)

Figure 3: Health Expenditure (Public, % of GDP) (1995 – 2014)



Author’s computation using data from World Bank, World Development Indicator (2016)

In determining health expenditure patterns, it is necessary to differentiate the sources of the expenditures on health; whether they are financed through public sources, that is, social insurance funds or government bodies, or through private sources such as private insurance or out-of-pockets payment (Gottret & Schieber, 2006). This is visualized in table 1 below.

Table 1: Health Expenditure by financing Agents (2014)

Country	Total exp. On health (% GDP)	Public exp. On health (%GDP)	Out-of-Pockets payment (% Private expenditure on Health)
Angola	3.31	64.3	67.0
Cameroon	4.10	22.9	86.0
Cote D’voire	5.72	29.4	72.0
Nigeria	3.67	25.2	95.7
South Africa	8.80	48.2	12.5

Author’s compilation using data from World Bank, World Development Indicator (2016)

The public share of total expenditure on health, which is financed mainly through taxes and contributions, changes according to the country’s income level. High income countries have a public share of 65%, whereas in upper middle income countries this share decreases to 56%. The percentage decreased to 42% for lower middle income countries. The percentage further decreases to 29% for lower income countries (Gottret and Schieber, 2006). Although Nigeria is a lower income country, the public share of total health expenditure is 25.2% which is lower than the average public share of total health expenditure of 29%.

The private share of spending consists mainly of insurance, household out-of-pocket payments and corporations. The amount of the out-of-pocket payments (OOP) in a country is directly related to the income level, whereas private insurance depends on the structure of the health care system of the country. In Nigeria, out-of-pockets payments comprise 95.7% of private expenditures from the households. Even though it seems to be a high proportion in total private expenditure, out-of-pocket payments constitute a greater part of the total health expenditure compared to countries like South Africa, Cote d’voire, Cameroon and Angola.

Public shares of the total expenditure on health provides a tool used in assessing how active a government is in the financing of basic health care services for the public, protecting the poor and facilitating risk pooling. Private expenditure, on the other hand, specifically out-of-pocket payments, is also important as they are the key measure of the potential inequities in health care financing. Arising from the above, and considering the sources of health care financing, it might be argued that in Nigeria, health care is mainly financed through private out-of-pockets payments. Thus, the need to analyze if payments towards health care are related to ability to pay and if poor households make proportionally more out-of-pockets payment.

The review of empirical literature on equity in healthcare financing shows mixed results, while some studies (such as, Ozlem, 2010; Wagstaff and Van Doorslaer, 1992; Olaniyan, Oburota and Obafemi, 2013) found out-of-pocket payment to be regressive, others (such as, Yu, Whynes and Sach, 2008; Yardim, Cilingiroglu and Yardim, 2009) found out-of-pocket payment to be progressive. Most of the literatures reviewed are studies done

in other countries. Some Nigeria studies that tried to investigate healthcare financing ended up investigating the extent of inequality in financing healthcare among Nigerian populace (such as, Akanni and Olaide, 2016); out-of-pocket spending for Nigeria and separately for the six geopolitical zones of the country (such as, Olaniyan, Oburota and Obafemi, 2013); the relationship that exists between health care financing, health facility utilization and health outcome in Nigeria (such as, Riman and Akpan, 2012); the determinants of out-of-pocket healthcare expenditure in the south-south geopolitical zone of Nigeria (such as, Apere and Karimo, 2014); the out-of-pocket healthcare spending of Nigeria households (such as, Uzochukwu and Uju, 2012). The study improves on existing literature by employing a general household survey data of 2014 from the national bureau of statistics which is the most recent household survey data to investigate equity in financing health care services in Nigeria with two specific objectives which are to determine the extent to which payment towards health care are related to ability to pay and also to determine if the poor households make proportionally more out-of-pockets payments on health.

2. Methodology

The study finds its base from the egalitarian theory. Egalitarian definition of the equity of health care provision implies distribution according to the need and financing according to the ability to pay. The theory of justice has provided the basic and fundamental underpinnings for the concepts of equity and resource allocation for health. According to this moral viewpoint, inequalities of birth, historical circumstances and natural endowment are undeserved. Rawls (1971) argues that the vital economic goods and services should be distributed equally. This is simply to benefit all persons unless an unequal distribution would work to benefit all, including the worst off. This is consistent with the concept of equity, which means fair shares and fair opportunities in the distribution of and access to services and resources. That is distribution according to the need in equity of health care provision and financing according to ability to pay (ATP).

The objectives of the study would be captured using the Kakwani progressivity index. The assessment on equity in financing healthcare services draws on established techniques from the public finance literature. The starting point of the assessment is the notion that health care financed according to ability to pay (ATP) is considered equitable. In order to analyze if the health payment undermines or contributes to the equitable financing goal, one has to assess how closely health payment is linked to ability to pay in practice. Financing of health care can be progressive, regressive or proportional. Progressivity measures the deviation from proportionality in the relationship between health payment and ability to pay (World bank, 2005). It reveals the extent of inequality in paying for health care services between households of unequal ATP. A health payment is progressive if it accounts for an increasing proportion of ability to pay (ATP) as ATP increases or rises and regressive if it accounts for a decreasing proportion of ATP as ATP rises. A progressive system implies that the individuals or households with greater ATP are paying more proportionally in financing health care while a regressive system suggests that the individuals or households with greater ATP are paying less proportionally in financing health care. Health care financing systems are proportional if individuals or households with different ATP are spending the same proportion of ATP in financing health care. The Kakwani's progressivity index (Kakwani, 1977), widely used in public finance, is a tool frequently used for assessment of equitable financing.

Kakwani progressivity index, $\eta k = C - G$ ----- (1)

Where C is the concentration index for payments and G is the Gini coefficient for income (or consumption, expenditure) (Kakwani, 1977). C equals 1 if the entire financial burden is concentrated in the hands of the poorest person, and 1 if the financial burden is concentrated in the hands of the richest person. G equals 0 where there is perfect income equality (every individual has the same income), and 1 where there is perfect income inequality (one individual has all the income whilst every other individual has zero income). ηk is positive in a progressive system and ηk is negative in a regressive system. The value of ηk ranges from -2 (= -1-G) in the most regressive system to +1 (= 1-G) in the most progressive system. Kakwani's progressivity index at 0 means that the system is proportional and health payments account for the same proportion of income, irrespective of the individuals' income (Wagstaff and Van Doorslaer, 2000).

The Kakwani index will be computed directly in a single step from convenient regression in the following form (World Bank, 2005):

$$2\delta_R^2 [h/\eta - y/\mu] = \alpha + \beta R + \mu \text{ ----- (2)}$$

Where σ_R^2 is the sample variance of the fractional rank variable, h is the health payment variable, η is the health payment variable's mean, y is the ATP variable, μ is the ATP variable's mean, and R is the household fractional rank in the ATP distribution. The Ordinary Least Squares estimate of β is the Kakwani index.

2.1. Data and Sources

The study employed secondary data analyses of the 2014 General Household Survey (GHS) of the National Bureau of Statistics (NBS), which is a nationally representative survey of 5,000 households which are also representative of the geopolitical zones (at both the urban and rural level). GHS sample is comprised of 60

Primary Sampling Units (PSUs) or Enumeration Areas (EAs) chosen from each of the 36 states plus FCT (37 states) in Nigeria, resulting in a total of 2,220 enumeration areas (EAs) nationally. Each enumeration area (EA) contributes 10 households to the GHS sample, resulting in a sample size of 22,200 households. Household expenditure on consumption would be used as a proxy for income while expenditure on health would be used as a proxy for out-of-pocket payments.

3. Data Analyses and Empirical Results

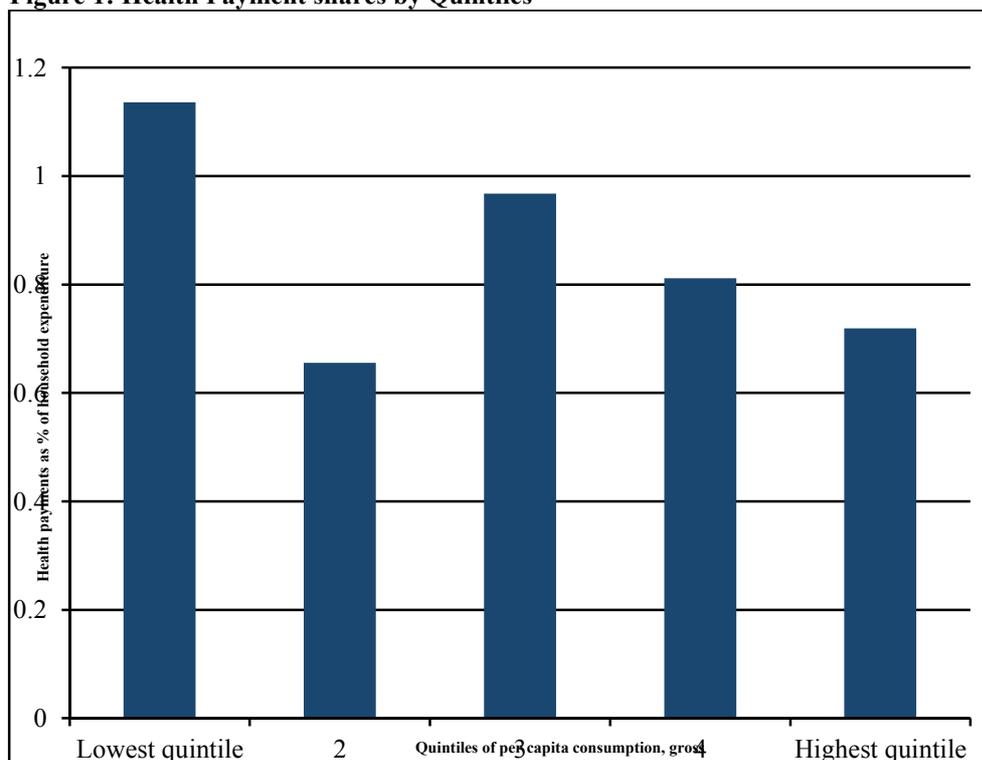
3.1. Presentation of Results

Table 1: Shares of Total Financing

	Per capita consumption, gross	Pp, reg deflated total monetary value of health	Total payments	Per capita consumption, net of payments
Quintiles of per capita consumption, gross				
Lowest quintile	7.7	10.3	10.3	7.7
2	12.2	10.1	10.1	12.3
3	16.1	19.6	19.6	16.1
4	22.4	22.7	22.7	22.4
Highest quintile	41.5	37.3	37.3	41.5
Total	100	100	100	100
Gini coefficient	0.3353			0.3359
Concentration Index		0.2772	0.2772	
Kakwani Index		-0.0581	-0.0581	

From table 1 above, the kakwani index is -0.0581. This suggests regressivity of health care payments. Thus we conclude that payments towards health care are not related to ability to pay. This suggests that poor households spend a greater proportion of their income on health care services whereas the rich populace spend a lesser percentage of their income on health care payments. With regards to this, it could be said that the poor households bear a greater burden of ill health which could result from malnutrition and other form of diseases. One could also say that the contribution towards health by the poor is more than their share of ability to pay, which is proxied by expenditure on non food. It could also be seen from the figure 1 (Health payment shares by quintiles) that the poorest 20% in the lowest quintile spend a greater percentage of their income when compared to the rich populace in the highest quintile.

Figure 1: Health Payment shares by Quintiles



4. CONCLUSION AND RECOMMENDATION

Studies that are concerned with equity in health care financing shows mixed results. While some found out-of-pocket payment to be regressive, others found it to be progressive. The result of this study shows that out-of-pocket payment is regressive. This is evidenced from the negative kakwani progressivity index and the Lorenz curve. The kakwani index which is -0.0581 shows clearly that out-of-pocket payments in Nigeria is regressive. This suggests that payments on health are not according to ability to pay. It could also be said that the poor bears more ill-health which could be as a result of various factors ranging from inadequate access to good drinking water, malnutrition and poor feeding habits.

The policy of the federal ministry of health on health financing policy in 2006 seeks to promote equity and access to quality and affordable health care (FMOH, 2006). From the result obtained from the study, it is clearly seen that the implementation of this policy was not efficiently and properly done. The poor makes proportionally more out-of-pocket payment, indicating that there are lapses in the implementation. It is possible that if national health insurance scheme (NHIS) and other prepayment (especially health insurance) is easily available and accessible to all (the rich and the poor populace), the poor would not have been spending a major part their income in paying for health care services. The NHIS has been made available for the civil servants in Nigeria to benefit in while little or no effort has been made concerning providing an easily accessible health insurance scheme for the poor masses to benefit from. It is worthy of note to know that the majority of the poor are those who dwell in the rural area with trading and farming as their major occupation. Thus, the following recommendations:

- a. The government should provide an insurance policy that can cover the poor populace. This could be inform of community health insurance, and also ensure the effectiveness of the programme.
- b. The Nigerian health insurance scheme can be expanded to cover not only the public servants and their households but also the society at large.
- c. The Abuja declaration of 2010, that every nation/ economy should spend atleast 10% of its GDP in financing health care should be adequately and effectively implemented.

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