ISSN 0029 0092

THE NIGERIAN
JOURNAL OF

ECONOMIC AND SOCIAL STUDIES

Volume 55, No. 2 July 2013

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ARTICLES Pages

[PUBLISHED BY THE NIGERIAN ECONOMIC SOCIETY]

THE NIGERIAN JOURNAL OF ECONOMIC AND SOCIAL STUDIES

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Volume 55, No.2 July 2013

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[*PUBLISHED BY THE NIGERIAN ECONOMIC SOCIETY*]

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ISSN: 0029-0092

Edited in Nigeria by
BookBuilders • Editions Africa
2 Awosika Avenue, Bodija
U.I. P.O. Box 20222
Ibadan, Nigeria
mobile: 08099209106 • 0805 6629 266

Printed in Nigeria by:
Daily Graphics (Nig) Ltd.
Off Ife Road, G.P.O. Box 12668, Ibadan.
Tel: 0803-3108965, 08029941306, 0803-3449198
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HEALTH ECONOMICS RESEARCH: Prospects and Challenges in Nigeria[1]

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ABSTRACT

This paper traces the evolution and development of health economics as a research and academic discipline in Nigeria. The emergence of research in health economics as a discipline in Nigeria in the 1980s through the international funding agencies' activities predates its teaching. The funding was basically channelled to support capacity building in health policy research and training in the country. The subsequent critical mass of trained health economists produced went on to initiate the teaching of the discipline in Nigerian universities, from which Masters and Ph.D graduates have been produced. The course is mainly taught at the postgraduate level in the few Nigerian universities offering the discipline. Furthermore, the estimation of the two rounds of NHAs for the country has been facilitated by the domestic capacity in health economics, with domestic and foreign financial support. The paper identified two classes of health economics research in Nigeria: the research type, based on university or research institute, and the demand-driven research or consultancies. These are anchored by two main axes of university and/or research institute-based health economics research in Nigeria: Ibadan axis and Enugu axis. As a follow-up to the global and regional associations of health economists, the paper points to the emergence at national level of the Nigerian Health Economics Association which provides a platform for collaboration among health economists in the country. Despite the progress thus far, a number of challenges confront the research landscape of health economics in

[1]Paper presented at the Panel Session on Health Economics during the Annual Conference of 2012 Nigerian Economic Society (NES)

Nigeria, which include poor data availability, and reluctance to release data, as well as limited number of trained health economists. There is therefore the need for the political will to fully implement the health management information system project, enforce the Freedom of Information Act; and the provision of funds needed to support post-doctoral research in health economics.

JEL classification: I18

1. Health Economics and What it Entails

THE TERM 'Health Economics' started to surface in books and academic circles only in the 1940s, four decades after the terms 'Agricultural Economics' and 'International Economics' surfaced (Google's Books Ngram Viewer). The current state of health economics as a separate field of study started with the Arrows' (1963) parallel development in human capital theory. For example, although accumulation of health human capital is a key determinant of economic growth (Barro and Sala-i-Martin, 1995; Lopez-Casasnovas et al., 2005), little is known about health production technologies and the institutional contexts in which health improvements occur (Fuchs, 2004). Though the first two decades of health economics were slow, in the mid-1960s, use of the terms 'health economists' and 'Health Economics' increased sharply, and the growth has mostly continued since then (Wagstaff and Culyer, 2011). Health economics has progressed rapidly from the infant state in the 1960s to a distinct sub-discipline of economics today. The leading nations in evolution and developing health economics research are the USA and the UK.

Health economics draws its disciplinary inspiration from the fields of finance, insurance, industrial organization, econometrics, labour economics, public finance and development studies (Culyer and Newhouse, 2000). There is therefore no single definition of health economics and its area of research is difficult to circumscribe. Health economics is commonly viewed as an applied discipline of economics. It is an interdisciplinary field covering several specialized areas and skills, similar and overlapping to a great extent with health services research in general. According to Drummond et al. (2006), health economics as a sub-discipline in economics had its origin in the strong growth of health services and the explosion of health care costs that most Western economies experienced after

the end of World War II. Health economics is concerned with the formal analysis of costs, benefits, management, and consequences of health and health care. Maynard and Kanavos (2000) described health economics as a 'sub-discipline that has evolved out of its parent discipline (economics) in an uneven manner'. The four traditional areas of economics from which health economics draws its inspiration are: finance and insurance, industrial organization, labour, and public finance. The field has substantively contributed to mainstream economics in many areas, including human capital theory, the principal agent theory, econometric methods, the methodology of cost-effectiveness analysis, and the theory of supplier-induced demand (Newhouse, 1987; Culyer and Newhouse, 2000). Hence, health economics is the application of theoretical or empirical economic analysis of health or health care using standard or specifically-developed techniques from economics (Drummond et al., 2006). However, detailed knowledge of health technology and institutions is often required in the study of health economics.

Williams (1987), using a thematically linked framework, originally provided the main components of health economics by describing it as a number of specific areas of research with linkages between them (see figure 1). A comprehensive discussion of these main components of health economics is provided in Culyer and Newhouse (2000). The components include the meaning and scope of health economics; determinants of health; demand for health and health care; supply of health care; health care markets; the relationship between economic growth and health; health sector budgeting and planning; national health systems; equity in health outcomes and in health care; and international health, under which topic, diseases such as HIV/AIDS, and bird flu may be analysed (Mwabu, 2007).

The disciplinary 'engine room' of health economics is represented by boxes A, B, C and D, while the main empirical fields of application are indicated by boxes E, F, G and H, for which sake the engine room exists. However, boxes A-D, in their own right, contain material that is of substantial interest. Both empirical and methodological issues are also contained in them. There was a need for theories and methods which could be used to analyse the development in the health sector and to provide guidance for decisions on how to fund, organize and allocate health care resources in an efficient way (Arrows, 1963).The 'definition' of health economics, based on the types of research that health economists undertake, is research in any of the areas outlined in figure 1. It, however, needs

to adopt a theoretical and/or empirical perspective consistent with the parent discipline: economics (Drummond et al., 2006). For instance, an epidemiological survey of the determinants of health devoid of any economic theory of the production of health and/or the use of relevant econometric techniques for its analysis would not qualify under health economic research. Many authors (such as Mill 1998; Feldstein, 1999; and Jack, 1999) have used 'medical economics', which is the branch of economics concerned with the application of economic theory to phenomena and problems associated with health and health care, interchangeably with health economics. Emphasis should be placed on characterizing health economics as the topics its practitioners study (e.g. financial aspects of health services) rather than the discipline (viz. economics) characteristically applied to understanding and explaining phenomena in health and health care (Culyer, 1981; Williams, 1987).

Vigorous application of the body of knowledge encompassed by health economics has however been limited to developed economies. The only existing handbook of health economics was designed to cover material relevant to health service sectors of high-income countries (Culyer and Newhouse, 2000; Grossman, 2004). Drawing from North (1990) and Williamson (2000), health economics may be viewed as the adaptation of health economic principles and methods to institutional conditions, which are country- and time-specific, such as:

(a) formal rules such as regulatory and legal structures, property rights, insurance laws, and constitutions;

(b) informal rules such as customs, traditions and social values and beliefs; and

(c) social networks and civil society organizations.

Health economics research and published articles focussing on policy issues are well read by physicians and others directly involved in health. In the past four and a half decades, health economics has had an impact that is at least as great in its sphere of policy as that of any other branch of economics. Apart from multi disciplinary journals in which health economics research articles have been widely published, two international journals (*Journal of Health Economics* and *Health Economics*), which are among the global topmost ranked journals, are exclusively devoted to the subject matter of health economics. Other substantial health

economics-focussed journals include *Health Service Research*, *Economics of Health Behaviour*, and *PharmacoEconomics*.

Many countries, developed and developing, now have health economics professionals as well as specialists professional health economics associations, in addition to the existence of such associations at both global and regional levels. The International Health Economics Association (iHEA) is the global umbrella for health economists. At the regional level for Africa is the African Health Economics Association (AHEA). Further, in Nigeria is the Nigerian Health Economics Association (NiHEA). There are thriving universities globally, regionally and nationally where the pursuit of graduate studies in health economics is done deeply and with academic and professional rigour. Courses exist at the undergraduate level, though in Nigeria, health economics is mainly taught at the postgraduate level.

According to Culyer and Newhouse (2000), some major areas of research are essentially multi-disciplinary and have led to fully integrated teams of researchers with health economics as the core discipline. They opine that as has been the case with other health-related professions, the language of health economics has permeated the thinking of policymakers and health service managers at various levels. Health economics has flourished in providing practical answers to practical questions as well as developing its own distinct theoretical modes. Another characteristic trait of health economics research in the developed world is that it has close ties with the development of policy: it often forms a basis for different political decisions and policies regarding the management/administration of the health care system. This is facilitated by the existence of close cooperation between university research departments and the authorities in question. Based on figure 1, the components of health economics address the themes discussed in what follows.

What influences health (other than health care)? (Box A)

This involves and has been extended to the family and the labour market, as well as the relationship between income and health, both on theoretical and empirical basis. Other areas of concern include ethical attitudes regarding health, wealth and gender, which tend to provide a somewhat new perspective on health. Research in this area, no matter the standard is of limited policy relevance. It need to be

noted that not all research needs to have policy relevance as the dominant criterion.

What is health? What is its value? (Box B)

Research studies here focus on quality of life (QoL), with special perspective drawn from the theoretical and empirical exposition to the quality-adjusted life year (QALY) and disability-adjusted life-year (DALY). It covers theoretical studies in the field of contingent valuation and the estimation of the willingness-to-pay for health and health care.

Demand and supply of health care (Box C and D)

This involves issues bordering on production of health, cost and technology of health care. Other research interest includes demand for health capital supply and demand for health insurance, consumer choice and demand.

Micro-evaluation at the treatment level (Box E)

Germane to this branch of health economics are efficiency and effectiveness issues, which are basically addressed using concept of cost minimization, cost-benefit, cost-effectiveness, and cost-utility analyses. Based on its applied nature, economic evaluation lends itself to applications in health care decision-making, with focus on policy relevant research.

Market equilibrium (Box F)

This includes both theoretical and empirical investigation of equilibrium or disequilibrium price or quality levels, or non-price rationing. It gives consideration to both the demand and the supply side, either independently or together. This demands studies with high quality and policy relevance.

Evaluation at the whole system level (Box G)

This involves issues of equity, international comparisons of health expenditure and health care systems. Questions on what is the efficiency and performance of the health care system are addressed, including regional differences in productivity, cost, outcome, availability and use of health care services. Other research concerns focus on evaluation of socioeconomic inequalities in mortality indicators, life expectancy, and more importantly on QALYs. This are generally of great policy relevance.

Planning, budgeting, regulation and monitoring mechanisms (Box H)

This involves analyses on how public policies should be planned in relation to consumption of unhealthy food, the impact of aging on hospital and local taxes, analysis of life-saving regulations and their income effects, and optimizing the financing of sickness absence and health care.

2. Health Economics Research: What prospects for Nigeria?

Health economics as a discipline in Nigeria can be considered to still be at the infant stage. In terms of the availability of specialists in the field, and the extent of research conducted, published, and/or applied to solving societal problems, health economics has limited prominence and relevance. Generally, health economics research can be viewed from a number of perspectives, such as that of production of health care, its consumption, and that of impact on the health status of individuals and the population. Indeed, the prospects for health economics research can be derived from what the study of health economics entails as described in the first section of this paper. However, health economics research in Nigeria must as a matter of urgency focus more on its utility and relevance to policy. The types of prospective health economics research areas in Nigeria are outlined below.

2.1 Research on health and health care determinants

This area of research will address issues relating to determinants of health as a capital good and of health care as a consumer good. It will involve studies analysing household health production and health care delivery in the labour market; their respective distinctiveness and complementarities. Issues of beliefs, particularly religion and attitudes, age and gender; location and geography; environment and culture, governance and politics; income and employment, and how these determinants can be manipulated to ensure the delivery of health care to improve the health status of the populace. Included in this area of health economics research is the study of the determinants of health care demand and health care supply.

2.2 Research on health value and health value measurement

This class of research, which is necessary in all economies, attempts to measure the amount of health produced and available in every economy and its quality using such metrics as average life expectancy, which is not quality adjusted, disability adjusted life year (DALY) or the general quality adjusted life year (QALY). These reduce health produce in all societies to the same numeraire and make comparisons between countries and societies possible.

2.3 Health demand and supply studies

Health production and its costs, the methods or technology of health production are important issues affecting health care demand and the efficiency of its production. Approaches for paying for health care, including health insurance, and how they affect health care demand and supply, and their effects on cost of health care, all impact on the health status of the people.

2.4 Expenditure and health costing studies

The issue of the cost of health care delivery, sources of health expenditure, the entities spending expenditure and receiving health expenditure payments, and how much is spent is of critical importance to health policy formulation and implementation. They also have important equity implications. Health expenditure studies include the National Health Accounts and its allied studies, expenditure tracking and incidence analysis studies, and health sector public expenditure analysis, among others.

2.5 Health management and process studies

Research in this class involves issues relating to health planning, budgeting and health policy formulation and regulation of health services production and consumption so that agencies involved in health care delivery produce and supply wholesome health care goods and services for the consumption of the populace. The studies involve identification of the type of management and regulatory mechanisms available for the control and regulation of production of health goods and services in the health system and the extent to which the rules are enforced;

the gaps in the regulatory environment and what needs to be done to improve the situation.

2.6 Evaluation studies

This involves the evaluation of expenditure on health interventions to determine how efficient or effective they have been. It can be used to select one intervention over the other for further replication or it can be used to evaluate how equitable health interventions are. It can also be used to evaluate the relative efficiency of the health system within the country, between countries, and among different regions of the world.

To what extent have the foregoing types of health economics research been implemented in Nigeria? This question is examined in the next section.

3. Health Economics Research and Teaching in Nigeria[2]

The emergence of health economics research in Nigeria predates its teaching and dates back to the late 1980s through the activities of international funding agencies which started funding multi-disciplinary health policy research involving the disciplines of economics, sociology, geography and health and medical sciences. In particular, the International Health Policy Programme (IHPP), an initiative of the Pew Charitable Trusts, the World Bank and the World Health Organization (WHO), was perhaps one of the first major international agencies to fund such health economics study through a grant to the Health Policy Development Study health policy research through networking within countries and between nations; regionally and globally. Within member countries, research teams consisting of academic researchers and policy makers in ministries of health were raised. Each team defined policy research questions for addressing research issues of policy interest to government in health and health care delivery. Research teams were raised in three regions of the world: Africa, Asia and Latin America. In Africa, research teams were raised in Botswana, Burundi; Ghana, Kenya, Lesotho, Nigeria, Tanzania and Uganda. Five of the teams; Ghana, Kenya, Nigeria, Tanzania and Uganda, received three grants each lasting for three years, with

[2]The part of the section on the history of funding health economics research in Nigeria borrows substantially from Soyibo (forthcoming).

possible extension for a maximum of one year. Over a period of about twelve years, members of the network were exposed to several capacity-building experiences in conducting rigorous policy-relevant research, receiving peer review of members of the network and other experts in conferences, workshops and seminars in different parts of the world, where the results of their research studies were presented and discussed. What is more, the research studies facilitated access of academic researchers of the different countries to their country's policy makers which otherwise might not have been easy.

Policy makers in Africa and TTW (the Third World) easily seek refuge in the Official Secrets Act in their various countries, a colonial relic, which still remains in the books, particularly in Africa, decades after independence. In Nigeria, an attempt to replace it through the Freedom of Information Bill was stalled for a long time in the National Assembly until 2011. In Africa, the results of this intervention have been published in *Improving Health Policy in Africa* (Nairobi: University of Nairobi Press, 2004). In Nigeria, the grant to the University of Ibadan, given in 1989 by the Carnegie Corporation through the IHPP, was for a research programme which focused on resource allocation issues in Nigeria's health care delivery. In 1992, another grant was awarded for Capacity Building and in Health Policy Research and Training. It was during this period that a Health Economics course in the M.Sc. programme of the Department of Economics was begun. A third grant for Health Economics Training and Improving the Database for National Health Accounts Estimation in Nigeria was also awarded to the Health Policy Training and Research Programme (HPTRP), Department of Economics in 1997. Also in 1997, WHO awarded a grant for the the study of fiscal decentralization and its effects on the improvement of health expenditure and services at the local level in Nigeria. In 2000, the United Kingdom Department for International Development, through the Benue State Health Fund, sponsored the estimation of Household Health Expenditure in Benue State, Nigeria. This led to the estimation of household health expenditure using the NHA framework for the first time in Nigeria. The World Health Organization also awarded a small grant to the HPTRP in 2002 to complete the estimation of the NHA of Nigeria, when the fund from the Carnegie third phase grant could not complete the estimation. This led to the estimation of the NHA of Nigeria 1998 to 2002. Indeed, the Federal Ministry of Health, Abuja followed through in 2004

by sponsoring the estimation of the estimation of the NHA of Nigeria from 2003 to 2005.

Health economics research in Nigeria can be classified into two types based on where they are conducted and/or how they are funded. In this connection, the research types are university or research institute-based and demand-driven research or consultancies. In this paper, a selected sample of convenience of health economics research are discussed along these two classes of research. This is with a view to providing some insight into the types of health economics research that have been conducted in Nigeria. This discussion does not claim to be exhaustive, neither is it representative; it just aims to provide an insight into the existing state of health economics research in Nigeria.

3.1 University and/or research institute-based health economics research

There are two main axes of university and/or research institute-based health economics research in Nigeria: Ibadan axis, consisting of the University of Ibadan Department of Economics and the Nigerian Institute of Social and Economic Research (NISER) Social Services Department; and the Enugu Axis epitomized by the College of Medicine University of Nigeria Health Policy Unit, Enugu. This paper discusses some contributions to health economics research in the Ibadan axis.[3] The results of the university-based health economics research are usually in the public domain while only a few consultancy reports are placed in the public domain. As mentioned earlier a sample of convenience of both genres of research are discussed in this paper.

Health economics research in the Ibadan axis are of two main types:

a. Grant-funded research conducted by staff, and
b. Thesis research conducted by doctoral students and project research conducted by Master's students.

[3] Another paper at the 2012 Nigerian Economic Society (NES) Annual Conference discussed health economics research from the Enugu axis.

a. *Grant-funded Research*

In Ibadan, grant-funded health economics research addresses diverse themes such as health care demand studies, health care financing an expenditure issues particularly National Health Accounts (NHA), Sub-National Health Accounts (SNHA), satellite Health Accounts like Reproductive Health Accounts, Markets for Health Care and the like. The sample of convenience of some of these studies follows.

Mbanefoh, Soyibo and Anyawu (2004), one of the publications from the project, Resource Allocation Issues in Nigerian Health Care Delivery, funded by the Carnegie Corporation of New York through the IHPP, analysed the characteristics of health care demand in Nigeria using time and money prices. It also analysed how health care demand varied by location and providers, and identified and evaluated the determinants of health care demand in the country. Due to the absence of nationally representative data like the national living standard measurement survey at the time the study was conducted, the study had to conduct a household survey using randomly selected households from six states, namely; Anambra (old), Cross River (old), Ogun, Plateau (old) Borno (old) and Sokoto (old) from the then four administrative health zones (Southeastern, Southwestern, Northeastern and Northwestern). The research was conducted in 1990. Both descriptive and conditional logit analysis were used for data analysis. The study identified illnesses which could be treated at the primary health care (PHC) level. Ailments such as fever, headache, cough, abdominal pain, rash, and diarrhoea predominated, and this agreed with earlier studies like Mbanefoh and Soyibo (1991). The study also found that various health services distinguished by age (adult or child) and gender (male or female) base case were affected by such factors as income, time prices, money prices at the degrees.

Similarly Soyibo, Mbanefoh and Anyanwu (2004a) is the publication of the result of a research on institutional level analysis of public sector health care financing issues in four states of Nigeria — Anambra (old), Ogun, Plateau (old) and Sokoto (old) — selected from the four administrative health zones of Nigeria. It is one of the papers published from the grant given to the HPTRP on the study of the effects of fiscal decentralization on health expenditure and service delivery at the local level. The research sought to analyse the funding of public sector institutions directly responsible for health care delivery at all the tiers of government in Nigeria: local, state, federal. These institutions were federal and

selected state ministries of health, special agencies of health, both at federal and state levels, and selected health facilities at all levels of care. Data were collected from the different health institutions by survey methodology using a number of instruments. The results showed a predominance of recurrent expenditure, particularly personnel, with very little left for capital expenditure and supplies. There was a recurring problem of lack of data availability and data inconsistency in all the institutions and an unwillingness to release and a tendency to perceive data collection by researchers as an audit exercise. Many institutions of government depended solely on government with very little effort at generating internal revenue. This is true of the State Hospital Management Boards and the health care facilities at all levels of health care delivery. This is in agreement with the earlier findings of Mbanefoh, Soyibo and Anyanwu (1997).

Soyibo, Mbanefoh and Anyanwu (2004b), the result of a research sponsored by WHO, analysed the effect of fiscal decentralization on level health expenditure and services. This was more of an evaluation of fiscal decentralization as an item of general health reform aimed at promoting grassroots development. The study sought to assess the impact of changes in resource channelling to local governments for primary health care (PHC) in terms of equity, efficiency, and utilization of service across local governments in the country. First, the study identified five assessment measures of block allocations in relation to PHC. These were (i) PHC spending, (ii) PHC expenditure categories, (iii) service provision; service utilization; (v) planning and management capacity. Based on each of these assessment measures, the study identified appropriate variables, constructed indicators, and sources of data for constructing the indicators. The study showed that fiscal decentralization improved local government areas' (LGAs) access to more funds for carrying out PHC projects. In general, budgets responded positively to increases in block allocations to LGAs or to increases in health budgets. However, the rate of PHC budget increases tended to be less than the rate of increase in block allocation from the federation account. In addition, as expected, most LGAs devoted their health budget to PHC activities.

Soyibo (2005) is a book that reported the results of a study, *The State of Post-Conflict Health Care Delivery In West Africa*, funded by a grant from the Research and Writing Initiative of the Programme on Global Security and Sustainability of the John D. and Catherine T. MacArthur Foundation. Broadly, the study aimed at studying issues relating to building sustainable national and

regional human, material and institutional capacities for confronting, in a proactive manner, problems induced by conflicts and affecting adversely the health systems of the nations and health status of the peoples of West Africa. The study involved an analysis of the existing national and regional capacities for post-conflict health care of the three countries that experienced armed conflict in West Africa in the 1980s and/or the 1990s and case studies of two other non-conflict countries as well as ECOWAS and regional health institutions. The sample for the study included Liberia, Sierra Leone and Guinea-Bissau, as conflict countries; Nigeria and Côte d'Ivoire[4]as non-conflict countries, representing anglophone and francophone, respectively.

A survey of the state of the human, material and institutional capacities of the health systems of the conflict countries was conducted to assess the impact of the crises on the health care delivery system. This was done at two levels: governmental/administrative, involving mainly the central government and its institutions/agencies; and at the facility level. The latter was done using a random sample of health care facilities, as much as possible, throughout each of the conflict countries under study and covering primary, secondary and tertiary levels of health care delivery as well as both the public and private sectors. Government policy documents, guidelines and legal materials detailing the process and operation of health policy in each of these countries were collected as much as possible and analysed to assess the state of readiness of the countries for health care delivery under conflict. In particular, the analysis paid attention to the existence or otherwise of the relevant institutional and legal frameworks for the management of conflicts and emergencies, and in relation to post-conflict health care delivery. Data were collected on the relevant human and financial capacities and other assets that can be used for emergency and health care under conflict, if and whenever the need arises. The performance of these institutions and their effectiveness in health care delivery under conflict were also analysed and gaps identified where they exist, and suggestions for solving the ensuing problems

[4]As at the time of the design of the of the study, there was no conflict in Côte d'Ivoire. Of course, Nigeria is known to have violent conflicts internally as in the case of the Niger Delta, as well as religious inter- and intra-ethnic conflicts of various causes but mainly land-related or belonging to the genre of the so-called 'settler-indigene syndrome' and election-related political conflicts, among others; resulting in a number of internally displaced persons. These conflicts are becoming significant in recent times.

made. A semi-structured interview of top policy-makers was conducted to obtain their views on the effects of the conflict on the health system and how well equipped it is to deliver effectively post-conflict health care, particularly the ability of the system in coordinating the roles of the aid agencies and ensuring the three rehabilitation dilemmas identified by Macrae (1997) are contained.

Non-governmental organizations involved in relief, rehabilitation, and reconstruction were identified and surveyed to assess their role and contributions to post-conflict health particularly in the rehabilitation of the health system and in ensuring that the programmes they participate in are sustainable. In this connection, the study analysed the extent to which such programmes address issues of structural and infrastructural constraints of the system, whether they invest in human resource development or address issues relating to policy planning and management of the system.

The study found that conflict had negative effects on the human capital of the health system and that the supply of health personnel tended to improve with the cessation of hostilities. Conflict also had negative effects on both service delivery and management process at the facility level. Finally, the study found that the West African subregion appeared not to be adequately prepared to proactively address problems posed by health care delivery under conflict.

It is perhaps, with studies on National Health Accounts that the Ibadan axis of health economics teaching and research is most well-known. Apart from the two episodes of the NHA of Nigeria; 1998 to 2002 and 2003 to 2005, it has also worked in the area of Reproductive Health Accounts in Africa. Soyibo and Odumosu (2010) provided the conceptual and methodological framework for the construction of Reproductive Health Accounts in Africa.[5] Besides, the Ibadan axis of health economics research, has estimated the National Transfer Accounts (NTA) of Nigeria for 2004 and 2009. NTA is a framework for estimating production, consumption, sharing and saving resources by and/or among different age groups in any economy. It is a new methodology at the intersection of Population Economics, Health Economics and Economics of Education.

[5] Another paper in the same Health Economics Panel Discussion group, where this paper was presented is devoted to health financing and health expenditure issues in Nigeria.

b. *Thesis Research in Health Economics*

In the Ibadan axis, there have been at least seven PhD theses written in health economics but tens of Master's project research reports have been written in the discipline. This paper will review briefly four of the PhD theses.

Ayonrinde (2004) *User Charges, Quality of Care and Utilization of Modern Health Facilities in Oyo State, Nigeria* assessed the effect of user charges of health care and also assessed the relationship between quality of care and utilization of modern health facilities. It found that user charges negatively affected demand, particularly for the poor and improvement in quality of care positively affected demand.

Lawanson (2004), on the other hand, constructed a multi-product model of hospital costs in Oyo State of Nigeria. The thesis sought to analyse the structure and characteristics of health costs, and evaluated the structure differential of the costs between tertiary and secondary hospitals in the state. It investigated the existence of economies of scale and scope in the operations of the hospitals studied.

Amaghionyeodiwe (2005) examined possible tradeoff between user charges, the demand for public sector health services in Nigeria and willingness to pay for health services. The study used a multi-stage sampling technique to collect data using the six geo-political zones of Nigeria to select six states — Imo, Oyo, Borno, Rivers, Benue and Kano. The study found that user charges are regressive because they reduced the use of health facilities by the low income group. Simulation shows that households are willing to pay about 5% of their monthly income for improvement in services and drug availability. The study also found that demand for health care was more income elastic for lower income earners who are more price sensitive than higher income earners.

Ozegbe (2007) estimated the determinants of HIV/AIDS health services and the impact on human capital development in Africa. It also evaluated the impact of HIV/AIDS on the prevalence of orphanhood and the implications for human capital. The study used eight sub-Saharan African countries selected along regional lines: Cameroon Chad, Ghana, Nigeria, Tanzania, Uganda, Zambia and Zimbabwe.

3.2 Demand-Driven Health Economics Research

The Ibadan axis of research in health economics has also conducted a number of consultancies in the areas of health financing, health expenditure, health management, supervision and regulation. These were funded by the World Bank, International Labour Organization, Harvard School of Public Health/British Council, Global School Business Management Network, Benue State Health Fund, the Department for International Development of the United Kingdom, the Federal Ministry of Health and Partnership for Transforming Health Systems (PATHS). Among the issues studied in these consultancies were:

- Repositioning the National Health Insurance Scheme
- Capacity Building for Budget Preparation and Support Budget Preparation in a number of states
- Support for Estimating Health Accounts in some states
- Building Capacity for NHA estimation in the country
- Capacity Building for Writing Policy Briefs in Health Accounts
- Study of Poverty and Tobacco
- Developing Strategic Plans for Tertiary Health Care Institutions in Nigeria
- Assessment of Hunger in Nigeria
- Developing a Strategic Plan for a top Health NHO
- Meeting Employment Opportunity Challenges in Nigeria's Health Sector
- Health Sector Leadership and Management Study
- Population and Economic Growth Component of the Nigeria Next Generation Project.

4. Health Economics Research Challenges and Recommendations

Overall, the prospects for health economics research are quite good but a number of challenges exist. Among these are:

- Poor data availability including the stoppage of publications of annual budget documents by many levels of government, most importantly, the federal government

- Unwillingness to release data particularly by public sector agencies
- Pervasive corruption leading to the perception of data collection as an audit process
- Limited number of trained health economists

Among the recommendations are the need to have the political will to fully implement the heath management information system (HMIS) project which has been in the works for a long time but which has been stalled, perhaps because of pervasive corruption in Nigeria in general and the health system in particular. The need to enforce the Freedom of Information Act; so that it is not stalled as the corruption control laws appeared to be stalled or haphazardly implemented. Capacity building in health economics coupled with assurance in career progression needs to be undertaken. In this connection encouragement should be given for the development of master's programmes in health economics in the country. However, institutions developing programmes should be encouraged to collaborate with one another in the interest of delivering high quality courses. Finally, more funds need to be given for post-doctoral research in health economics.

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