

**COMPARATIVE ANALYSIS OF NIGERIA AND
MALAYSIAN NATIONAL HEALTHCARE DELIVERY
SYSTEM: A PERSPECTIVE OF SAFETY AND HEALTH
MANAGEMENT**

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MALAYSIAN NATIONAL HEALTHCARE
DELIVERY SYSTEM: A PERSPECTIVE OF SAFETY
AND HEALTH MANAGEMENT**

By

YAHYA SALEH IBRAHIM

**Thesis submitted to Awang Had Salleh Graduate School of Arts
and Sciences, Universiti Utara Malaysia (UUM) in fulfillment of
the requirement for the Degree of Doctor of Philosophy**

2012

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Abstrak

Pembaharuan dalam penyampaian perkhidmatan penjagaan kesihatan dan keselamatan yang mensasarkan pekerja sektor awam untuk pertumbuhan, pembangunan, kewangan dan kelestariannya adalah satu perkembangan baharu. Fungsi pembaharuan merupakan satu sistem pengukuhan sosial di mana para pekerja menampung golongan miskin, penggangur, orang kurang upaya, kumpulan-kumpulan lemah dan masyarakat awam. Kajian perbandingan ini memberi tumpuan terhadap peranan pembaharuan untuk menambahbaik kecekapan penyampaian perkhidmatan penjagaan kesihatan dan keselamatan kepada para pekerja. Kerangka kerja konsep kajian ini disokong oleh lima teori pembaharuan penjagaan kesihatan dan keselamatan. Data telah dikumpul melalui satu soal selidik sebanyak 64-item, tidak termasuk maklumat demografi. Ujian ANOVA, ujian-*t*, regresi, chi kuasa-dua, dan kaedah loglinear telah digunakan untuk menguji hipotesis kajian. Responden kajian terdiri daripada kumpulan profesional dalam bidang kesihatan dan keselamatan, perubatan, sumber manusia dan penerima perkhidmatan daripada klinik awam dan swasta. Responden telah dipilih secara persampelan rawak. Data dianalisis menggunakan Pakej Statistik untuk Sains Sosial (SPSS). Dapatan kajian menunjukkan bahawa pembaharuan telah menambah baik penyampaian perkhidmatan penjagaan kesihatan dan keselamatan di Malaysia dan Nigeria. Kajian juga telah mengesahkan bahawa pembaharuan dalam penyampaian perkhidmatan penjagaan perkhidmatan di Malaysia mengatasi pembaharuan di Nigeria. Kajian juga mendapati bahawa wujud keperluan untuk menyusun keutamaan dalam mekanisme kawalan oleh kerajaan, perkhidmatan penjagaan kesihatan dan keselamatan kepada golongan miskin, penggangur, orang kurang upaya, dan kumpulan-kumpulan lemah dalam merangka pembaharuan dimasa akan datang di Malaysia dan Nigeria. Kajian mencadangkan supaya lebih banyak pendidikan dalam pembaharuan penjagaan kesihatan dan keselamatan diadakan di kedua-dua negara.

Kata kunci: Pembaharuan, Kesaksamaan, Akses, Kecekapan, Kemampuan

Abstract

Reform in healthcare and safety services delivery is a new development that targets the public/private sector employees for its growth, development, finance and sustenance. The reform function is an efficient social solidarity system where the employees subsidise for the poor, unemployed, incapacitated, vulnerable groups and the general public. This comparative study focuses on the role of reform to further improve the efficiency of the health and safety delivery to employees. The conceptual framework of this study was supported by five theories on healthcare and safety reform. This study used a 64-item questionnaire, excluding demographic information. The data were analysed using ANOVA, *t*-test, Regression, Chi-square test, and Log-Linear methods to test the research hypotheses. The respondents were professionals in the field of health and safety, medicine, human resource and beneficiaries of public and private clinics. They were selected using random sampling technique. Statistical package for social sciences (SPSS) was used to analyse the data. The study results suggest that reform improves healthcare and safety services delivery in Nigeria and Malaysia. The study also confirmed the superiority of the Malaysian reform over that of Nigeria. The study finds that there is a need to prioritise governmental control mechanisms, healthcare and safety services for the poor, unemployed, vulnerable and incapacitated employees in any future health and safety reform design for Nigeria and Malaysia. The study recommends that more health education in healthcare and safety reform be conducted in the two countries.

Keywords: Reform, Equity, Access, Efficiency, Affordability

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List of Abbreviations

EPA	Environmental Protection Agency
CUEPACS	Congress of Union of Employees in the Public and Civil Service.
LIAM	Life Insurance Association of Malaysia
NHS	National Health Scheme
NHIS	National Health Insurance Scheme
NHF	National Health Funds
EU	European Union
UK	United Kingdom
NGO	Non Governmental Organizations
HERFON	Health Reform Foundation of Nigeria
WHO	World Health Organization
NIOSH	National Institute of Occupational Safety and Health
CTD	Cummulative Trauma Disorder
OSHA	Occupational Safety and Health Association
USA	United States of America
APA	American Psychological Association

HIV	Human Immunodeficiency Virus is the virus that causes AIDS.
BNM	Bank Negara Malaysia
MMC	Malaysian Medical Council
MMA	Malaysian Medical Association
NMA	Nigerian Medical Association
EPF	Employee Providents Funds
NHA	National Health Accounts
SIKK	Skim Insurance Kebangsan
HMO	Health Maintenance Organization
OECD	Organization of European Community and Development
NHMS	National Health Morbidity Survey
HCP	Health Care Providers
HIAA	Health Insurance Association of America
NAIC	National Association of Insurance Commission
USGAO	United States General Accounting Office
CHC	Community Health Insurance
IHCP	Implementation Health Insurance Coverage Programme

SHI	Social Health Insurance
IOSH	Institute of Occupational Safety and Health
BCHPGW	Bangkok Charter for Health Promotion in a Globalised World
ILO	International Labour Organization
DD	Difference in Difference Model
DDD	Difference in Differences in Differences Model
GDP	Gross Domestic Products
CBN	Central Bank of Nigeria
NBS	National Bureau of Statistics
NACA	National Action Committee on Aids
T.H.E	Total Health Expenditure
LHP	Lifetime Health Plan
CME	Continuing Medical Education
MCPHE	Mass Customized or Personalized Health Information and Education
e-GL	Electronic Guarantee Letter
MSQ	Malaysian Society of Quality in Health
AIA	American International Insurance

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 Safety and Health in Perspective

Industrial revolution that led to improved and sophisticated equipment, which in a way also contributed towards the evolution of mass production of goods, chemicals, weapons, machineries, automobiles, aero planes, ships, and hosts of other products culminated into an increase in accidents and prevalence of diseases that are endemic to employees' survival (Goetsch, 2008). The occurrence of accident and prevalence of industrial related diseases such as dermatomes, radiation, cancer, due to exposure to temperature or radiation, ergonomics, toxic substances attack, carpal tunnel syndrome and tendinitis, cumulative trauma disorder (CTD), which usually results in back pain, neck pain, eye strain, simply define by OSHA as Economic Disorder (Rudi & Brian 2008). These are not the only diseases associated with work setting, others includes but not limited to leukemia as a results of contact with chemical benzene, xylene or ethyl; liverciroses as a results of contact with benzene; esophagus lymphoma due to the effects of chemical tetrachloroethyline chloroform, carbon tetrachloride causing paranasal sinus; larynx or voice box disorder as a results of the use of isopropyl alcohol, (this is occurring in the manufacturing process using acid). Other diseases cause by these chemicals includes, testicle or sperm producing hormones, larynx, oral cavity ailment as a results of the use of N, N'-Dimethyl formide (NIOSH, 2003). These effects could also be carried by animals if exposed to the same condition and possibly have negative effects on human (Stockdill, 1994).

The prevalence of such diseases and sicknesses are manifestation that symbolizes the desire of some of the companies to achieve peak performance or production levels day after day due to competition, puts intense pressure on the company and run down the line up to the bottom, which are the shop floor members. This means that, this pressure will create harried atmosphere that can increase the likelihood of accidents. The pressure created due to competition running down to the production line will amount to creating shortcuts that tend to increase the potentiality for health hazards. Health hazards associated with improper storage, and handling of equipments, as well as use of hazardous materials in the work place (Goetsch, 2008).

The specific health problems that have been tied to workplace have played significant roles in the development of modern safety and health movement. These health problems contributed to public awareness of dangerous and unhealthy working condition which in turn, lead to legislation, regulation, better work procedures, and better working condition (Goetsch, 2008).

1.1.1 Safety and Health Awareness

Safety and health awareness has long history. Some evidences went as far back as the period of pharaohs, the Hammurabi code of safety and health exists in circa 2000 BC., the Roman, safety and health attempt, the USA, 1892 records of safety and health, USA Mines and Bureau of 1907, Workers Compensation law 1911 and Occupational Safety and Health Administration (OSHA) law of 1970. The identification of diseases such as lung diseases among miners, mercury poisoning and lung cancer associated with asbestos particulates, contributed immensely in the development of safety and health regulation in the work place (Goetsch, 2008).

1.1.2 Safety and Health Defined and Their Application Area

According to Goetsch (2008) safety and health, though closely related but are not the same things. One view perceived safety as basically concerned with injury causing situation, while on the other hand health is concerned with disease causing conditions. In another perspective safety is seen as basically concerned with hazards to human which manifests in a serious sudden fatality. In contrast to definition of safety, health deals with adverse reactions to prolonged exposure to dangerous but less intense hazards (Goetsch, 2008).

Looking critically at both definitions one may be tempted to believe that both concepts are one and the same, especially when analyzing the resultant effect of stress; for example, stress can affect both psychological and physiological aspects of human healthiness. When stress affects both psychological and physiological human component it is regarded as health issue, but if stress is cause due to forgetfulness in the obedience of safety procedures it is then regarded as a safety issue. This is basically the preoccupation of the safety professional that are concern more with prevention than cure. The merger of the two professions to become one is necessitated in order to make safety professional to have knowledge of both at the same time to make them function effectively in the field. It is also so, because safety manager is the coordinator of the team of safety professionals in the field of practice (Goetsh, 2008). The safety manager is the head of safety professionals in any work setting. The team of professionals includes; industrial engineer and safety, environmental engineer and safety, chemical engineer and safety, industrial hygienists, health physicists, occupational Physician, occupational health nurse, and risk manager (Goetsch, 2008).

In an attempt to make the job of safety professional easy the field of safety and health and that of environmental health were integrated for ease of operation. This effort succeeded in making safety and health profession, to grow to its present status in world of work. A safety manager could be one of the already mentioned categories of safety professionals, while an environmental health professional could be a scientists or Engineer who specialized in environmental matters. To avert conflicts of function a memorandum of understanding between Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) was signed in case of England and USA in 1990, which led to the development of a plan for joint enforcement and information sharing. The plan has helped in eliminating bureaucratic overlaps and inefficiencies associated with the governmental agencies (Goetsh, 2008).

1.1.3 Safety and Health Program Activities

The term healthy workplace is often used in occupational health and safety field to refer to health and safety promotion activities. This programs targeted areas such as, healthy lifestyle, illness or injury free work setting or environment (Mathew, Shawn & Jennifer, 2007). Safety and health workplace activities or programmes could be targeted at primary activity (preventive), secondary (momental activities), and tertiary (remediation or after-the-fact activities) or levels of intervention activity or programme in the workplace (Tetrick & Quick, 2007).

Another typical example of the above scenario is that, any stress program that is targeting workplace is (primary level programme), while employee management of stress is purely (secondary level program), and a program that entail the medical expert participation in a stressful situation or stress related fatality or illness belong to

the (tertiary level of programm). The combinations of the primary, secondary and tertiary mentioned are the basic parts in developing comprehensive health and safety intervention in the workplace. Employee health insurance scheme is one of those social interventions in the workplace. Those involved in the development of employee health insurance scheme are the representatives of the workers or employees in the name of labor unions, in most of the countries that adopted the system, union participation is compulsory, therefore Nigeria and Malaysia not an exception (Kohler & Munz, 2007).

To this level the health and safety programme in the workplace is categorised into primary, secondary and tertiary activity or programme. This goes to show that, the ultimate responsibility of health and safety professional is exactly the actualization of health procedures that will ensure safe working conditions and physical and health condition of the employees in a workplace setting. Based on the preventive, remediative and after the fact health and safety activities, it is not surprising, therefore, in the recent time for companies to begin to focus more and more on developing workplace health and safety programmes. Most of the time the industrial safety and health programme targets the physical and mental health of the workers or employees in compliance with the Occupational Safety and Health Administration conditionality's. This is also necessary considering man hour waste or lost, economic lost, and financial burden due to compensation as a result of accident, injury or sickness. Realizing that, the cause of loses due accidents or injury were preventable, the companies instituted workplace health and safety programmes yearly. For example in US, according National Institute of Occupational Safety and Health (NIOSH) and American Psychological Association (APA) report, that, job stress

alone costs US companies about 300 billion dollars a year, in addition to losses from absenteeism, productivity loss, turnover, and health care costs (APA, 2007).

According to Mathew et al. (2007) while it is important to develop workplace practices that promotes positive health outcomes and remediate negative stress and health outcomes, the needs of the employees should guide the policy makers in the selection of health and safety program meant serve employees (Kohler & Munz, 2007). Recognition should be given to variation in what employee's value due to variation in their values, beliefs, expectations of work, backgrounds and family arrangements. Any safety and health programme that disregards the needs of the employees may not stand the test of time. This may translates into reduction in the positive benefits of the safety and health program to both the employee and the organization in general (Grawitch, Gottschalk, & Munz, 2007). Therefore, it is important to asses not only the actual practices of the safety and health profession, but also the extent to which employees value such programs and their level of satisfaction with the arrangement in relation to such programms and practices, (Mathew et al., 2007).

1.1.4 Employers Responsibility in Safety and Health

Employers have the responsibility of developing an acceptable safety and health programmes, as well as having the most duties to perform, to ensure the health and safety condition of the employees is free from work related fatalities (Stockdill, 1994). Employers have the general duty to take all practicable steps to ensure the safety of employees and others while at work. In particular, they are required to take all practicable steps to:

- Provide and maintain a safe working environment;
- Provide and maintain facilities for the safety and health of employees at work;.
- Ensure that machinery and equipments is safe for employees;
- Ensure that working arrangements are not hazardous to employees; and
- Provide procedures to deal with emergencies that may arise while employers are at work (Workcover, 2002).

Taking all applicable steps means doing what is reasonable and able to be done in the circumstances, taking into account the following as confirm by Stockdill (1994) and EURO star (2003).

- The severity of any injury or harm to health that may occur;
- The degree of risk or probability of that injury or harm occurring;
- How much is known about the hazard and the ways of eliminating, reducing or controlling it and the availability, effectiveness and cost of the possible safeguard.

Considering the relevance of these steps in ensuring employees safety and health in a workplace, US National Safety Council estimates that in 1998, the total cost of work related deaths and injuries in the US was 125.1 billion dollars, and that organizations lost 80,000 work days because of injuries (Karen, Willis, Gregory, 2000).

1.1.5 Safety and Health and Workplace Fatalities

A research by EU conducted on healthcare workers confirm that, an estimated one million needle stick injuries are suffered by healthcare workers in Europe each year. More than 20 dangerous blood borne pathogens were transmitted by contaminated needles, including Hepatitis B, Hepatitis C and HIV (European Union, 2004). Another record from Royal College of Nursing estimated that there are over 100,000 such

injuries each year in the UK alone. The recently issued UK National Audit Office Report on Health and Safety in the National Health Service confirm that, needle stick injuries remain the second most common cause of occupational injury in the UK health service (EU, 2004). In Germany study showed that one out of fifteen needle sticks involved blood from Hepatitis C positive source. Applying this data to the estimated 500,000 needle stick injuries per year that occur in Germany, would near 32,500 exposures to Hepatitis C., converting this to percentage would mean 1 out of 30 health workers, invariably it means over 1,000 workers are deadly converted to be positive with such virus every year in Germany alone as a results of needle stick injuries (EU, 2004). An estimated cost of accident in the United States is approximately 150 billion dollars. These costs included such the lost wages, medical expenses, insurance administration, fire related losses, motor vehicle property damage and indirect costs (Goetsch, 2008).

The focus of this study therefore, is to examine the healthcare scheme reform, as one of the programs or activities plan with the aim of ensuring the safety and health condition of employees and their families. That is to say National Health Scheme (NHS) as popularly called, is employee directed as the case in Nigeria and the available plan in Malaysia. The health Insurance Scheme is one of the pre-condition and incentive attracting people to work in an industry or public agency as dictated by the labor organizations and incorporated into the safety and health programs in most developed countries (Deborah, 2004).

The National Health Scheme Reform is new to both Nigeria and Malaysia. In Nigeria it came into effect in 2005 (Nigeria law, 1999). While in Malaysia authorities are still

developing the templates for implementation. The proposed date for its, take up was 2006, it started with the coming up of the Life Insurance Association of Malaysia (LIAM) program known as CUEPECS CARE (LIAM, 2000). The Employee Provident Fund was also created in 1994 as a prelude to having NHS (Abdallahi & Ng, 2009). What is very fundamental about the program of NHS is that it is employee focus, while those outside the public and private employment (informal sector) can join voluntarily by forming cooperative group. Since it is employee focus it falls under the auspices of safety and health program.

As part of its efforts to ensure safety and health of workers OSHA'S, regulation made it mandatory to employ occupational safety and health physician in an enterprise or company. The second alternative for the companies or enterprises is to contract it to a certified occupational safety and health physician to take charge of checking the medical fitness of the employees from time to time. This is not limited to only medical checkup, in addition, the treatment of those that had accident or hazards while at work and hospital treatments is the responsibility of the employer. The regulation emphasized that, compensation insurance is also compulsory in almost all countries as dictated by workman compensation Act, Nigeria and Malaysia inclusive (Goetsch, 2008). The costs associated with workers compensation necessitated the enlistment of health insurance scheme, so as to reduce the intensity of the burden on the companies and government agencies. Today the collapse of American companies is attributed to insurance, health insurance inclusive, therefore, this study intend to study it desirability in Nigeria and ,Malaysia, and their citizens safety and health condition (Joycelyn, 2009).

1.1.6 Healthcare Provision and NHS

Health care is provided and finance through variety of mechanisms. One of which is governmental or public provision, secondly is the mix of government and private provision. The third source of healthcare finance is the non-governmental organizations (NGO) and fourthly those physicians and pharmacies on solo practice for profit. Healthcare service varies substantially between countries. In many countries the large government owned and operated healthcare system was designed to provide inpatient, outpatient and pharmaceutical services to all citizens. Often NGO's-sponsored hospitals and clinics, private hospitals operated by not -for -profit corporation, private nursing homes, and a large number of private practitioners (primary physician in solo practice) also provide services and operated pharmacies are widely available (HERFON, 2006; World Bank, 2008).

In some countries the governments have sponsored legislations which would allow employers to choose among competing health plans including the National Health Insurance Fund on behalf of their employees as a way to facilitate the growth and development of such plans (HERFON, 2006). This is true of Malaysia as reported by the former Malaysian Minister of Health Datuk Dr Chua Soi Lek (2004), that after two years of study, the government has agreed to implement the proposed National Health Scheme (NHS) to reduce the healthcare burden on the government and help ease the long waiting time in public healthcare facilities. The Act that governs the insurance business in Malaysia is the Insurance Act 1996, enforced by Bank Negara Malaysia (BNM). It covers all aspects of businesses in insurance. All insurance operators including brokers and adjusters in Malaysia are regulated and licensed under this Act. This Act prohibits the conduct of insurance by organization other than

those registered with the Bank Negara. The Health Insurance is subsumed within the general insurance business and there are concerns that the legislation need to match the various types of health insurance products (Nik Rosnah Wan Abdullah & Ng, 2009). The Act governing the medical care provisions is the private Healthcare Facilities and Services Act, enforced by the Ministry of Health. The Act gives wide powers to the Director-General of Health and the Minister of Health with regards to control and regulates registration, monitoring and licensing of private healthcare facilities and services and healthcare professionals. The private healthcare facilities and services Act 1998, provides regulation on all procedural and surgery fees. It is stated under the Act that the minister may prescribed a fee schedule (s106 of the Act), and that failure to comply is an offence as set in Part v, s117 of the Act (Abdullahi & Ng, 2009).

The regulation in the medical and health profession is assisted by two core regulatory bodies, that is, the Malaysian Medical Council (MMC) and the Malaysian Medical Association (MMA). The Malaysian Medical Council is a self-regulatory body of the medical and health professionals, while the Malaysian Medical Association (MMA) defines doctor's fee schedule for health care services. The fees charged depends on procedures or surgery, the level of expertise and time, which MMC explained in its guideline (MMC, as cited in Abdallah & Ng, 2009). The legal back bone for the operation of the National Health Insurance in Nigeria came into effect on the 10th of May 1999 with the signing of decree No 35 known as the National Health Insurance Scheme Decree, Laws of the Federation of Nigeria. Part 1 of the decree section, states as follows; "there is hereby established a scheme to be known as the Nation Health Insurance Scheme (in this decree referred to as "the scheme) for the purpose of

providing health insurance which shall entitle insured persons and their dependent the benefit of prescribed good quality and cost effective health services as out in this decree". And part 1 sub-section 2 states that "the scheme (a) shall be a body corporate with perpetual succession and a common seal; and (b) may sue and be sued in its corporate name. There is hereby established for the management of the scheme, a Governing Council (in this Decree referred to as ("the council") which shall, subject to this decree, have general control of the scheme. The council shall consists of the following members: (a) The chairman who shall be appointed by the Head of state, commander in chief of the Armed Forces, on the recommendation of the Minister of Health; (b) one person to represent the Federal Ministry of Health ; (c) one person to represent the Federal Ministry of Finance ; (d) one person to represent the office of establishment and management services in the Office of the Secretary to the Government of the Federation; (e) one person to represent the Nigerian Employers Consultative Association; (f) one person to represent the Nigerian Labor Congress; (g) one person to represent the registered health maintenance organizations; (h) one person to represent the private health care providers; (i) two persons to represent public interest; and (j) the executive secretary who shall also be the secretary to the council". The chairman shall be appointed from the private sector be a person of relevant high education, knowledge and integrity. The other members of the council shall: (a) be persons of proven integrity; and (b) be appointed by the Head of State, Commander in-chief of the Armed Forces, on the recommendation of the Ministry (Nigerian Law, 1999).

As private healthcare providers are gearing up to face the challenges, healthcare management plans are developed. These plans can receive the premium paid to the

fund as partial support for their services. There is no perfect healthcare system; every country has made a compromise among quality, access and cost (World Health Organization, 2009; Devex, 2009). At the moment there are no clear data systems to use in determining the instrument to monitor the health of most population. Existing national data collection systems are largely concentrated on measuring mortality and monitoring the activities of health services. Therefore, work done so far has had to rely on proxy indicators of health, rather than those which would be recommended ideally (Collins & Allison, 1992).

The risk coverage especially healthcare is difficult to provide in most countries both developed and developing most difficult with the low income population. This is true of the situation in Nigeria and Malaysia. What distinguishes health systems worldwide is the level of government intervention in the market process, supply, competition and price. From the least market intervention to most, these healthcare systems are entrepreneurial, welfare oriented, comprehensive or socialist (HERFON, 2006). A research conducted to study the health insurance and insurance market in Malaysia, Indonesia, Singapore and Japan, revealed that, there is financial instability in the insurance market of especially life/health insurance. The study showed that the sectoral development of life/health insurance in Malaysia recorded 44.09 percent growth in 1994 as against 57.63 percent in 1999. This results should be a pointer to policy makers in the study of both general strength and weakness of life and health insurance in Malaysia. The fluctuation in the health insurance market from year to year, should be a benchmark for governmental intervention to ensure the safety of both the market and beneficiaries by way of institution of a regulatory or control measure (Renbao & Kie, 2004).

Today in the present circumstances Nigerian and Malaysian government have resolved to engage the services of National Health Insurance Scheme as the solution to the ailing and epileptic hospital services in their countries (Initiatives, 2000). Whether or not it will finally serve the purpose under which it was propose, time will definitely tell. Traditionally, health insurance has provided very limited coverage, generally limiting risk by excluding coverage for many services and conditions (AllAfrica.com, 2009). This fragmented delivery and financing system has been found inadequate to meet with the countries health care needs, especially access to effective care. Costs, particularly the cost of pharmaceuticals, have increased. Demand for services through government system has far outstripped the resources available and has caused patients to seek care at non-government facilities. But the fees for private medical services at non –governmental facilities often exceeds majority of the individual ability to pay (HERFON 2006; Aliran, 2005; Citizen Health Initiative, 2000; Abdullah & Ng, 2009).

From the highlighted trend and/or turn of events, the need for complementary healthcare to address these shortfalls or short comings within the Nigeria and Malaysian health sector cannot be overemphasized. Health insurance scheme is generally seen as a veritable tool to reverse this trend in both the developed and developing countries in the world. The decree that gave impetus to the evolution of Nigeria National Insurance Scheme came into being on the 10th May 1999, and the scheme took off in 2005 with the flagged off of the programmed at a rural community in North–Central Nigeria (NIHS Decree 35 of 1999; Nigeria first.org, 2003; Falegan, 2008).

The scheme if fully implemented would cater for everybody. The funding of the scheme is based on worker would contributes 5% out of his salary, while for government employees the government would contribute 10% totaling 15%. The informal sector participation in the health insurance scheme is voluntarily. A special scheme called urban self employed social insurance health programmed was introduced to cater for cohesive group of 500 members which must be occupation based, (taxi drivers, traders, welders and related groups, needs to bound together to qualify). The informal sector participants are expected to make a payment of between 120-150 Nigerian currency for the most common ailments like malaria, typhoid fever, and diarrhea. The sector participant requiring specialists or longer treatment would need to pay for the balance from what they are entitled from the common pool. According to the plan the local and the unemployed will pay more than 50% out of the 120% of the charges on the services, (AllAfrica.com, 1999; Nigeriafirst.org, 2003; Falegan, 2008).

The law or Act that provides the platform for the existence of health insurance in Malaysia evolved due to actions, policies and government declaration in 1980s permitting private sector to play a greater role in non-traditional areas, like health, and higher education (Aliran, 2005). Thus, during the 1980s and 1990s, Malaysia witnessed a sharp increase in the number of profit seeking private hospitals. Prior to this, most of the private hospitals were run by non-profit communities and religious organizations. The government justification, for its support for profit oriented private hospitals were that it would reduce the demand on government hospitals; the rich would go to the private hospitals and thus, the poor would have better and faster services at the government hospitals (Aliran, 2005).

According to Abdallahi and Ng (2009), to consolidate the policy in 1994 a medical savings scheme was introduced through the employee's provident fund (EPF). In 2000, as stated in the Malaysian health plan, it was announced that this account may be drawn for a risk-rated medical insurance scheme offered by the Life Insurers Association of Malaysia (LIAM, 2000). Cuepacs care, a voluntary private health insurance scheme, a joint venture with two private insurance companies registered as providers. Both schemes are available to those aged 70 and below. Among the salient point of this healthcare scheme is that, there seem to be a trend of partnership with the private sector for private sources to finance healthcare in Malaysia. Although these health insurance schemes are risk-related schemes in line with commercial underwriting, their advantage includes increase in competition and provision of alternative healthcare products to citizens (Abdallahi & Ng, 2009). Up until 1980s, private health insurance in Malaysia plays very little role. In 1983, it was estimated that only about 1.5 percent of the population were covered by private health insurance. However, with government encouragement on privatization in 1980s, a substantial expansion in the medical and health insurance business was recorded. Available record showed that in 1995, the estimated insured population had risen to 15% from 1.5% (Abdallahi & Ng, 2009). In 2006, it raised to 18.8%. Demographic records showed that, Malaysian population aged 18 and above had private insurance coverage either for (1) medical and health, (ii) life insurance (LI) and/or (iii) other types of insurance related to health. The total premium (weighted for the total population aged 18 and above) was estimated at RM2.99 billion (Davis et al. 2006). The private healthcare providers received 1.21 billion as specific payment for the medical and health component of the private insurance from the citizens (Davis et al. 2006).

Nigerian citizen participation in life and health insurance is purely for the working class of the Federal Government sector of the economy, especially the newly introduced National Health Insurance Scheme (NHIS). The poor and vulnerable groups are either left in the epileptically public hospitals or quark private clinics and pharmaceutical stores. In an attempt to improve services the NHIS was put in place in 2005. The Executive Secretary of the NHIS stated that Costa Rica which has a population of about 4.5 million people was only able to cover all its citizens in twenty years. Nigeria which just started its program in 2005 has been able to cover about three (3) million people in three years (Muhammad, 2009). The available record on private clinic participation in Nigeria had showed that over 70% of medical expenses in the country are burn by the citizen through out of pocket spending (Labiran et al., 2008).

1.2 Background of Research Problem

The issue of private sector participation in health sector is an ongoing phenomenon. Study conducted to determine the best payment system for health services showed that, there are relative efficiency of payments through private insurance scheme and its impact on the efficiency of the public sector (Bloom, Craig, & Mitchel, 2000). The debates on the positive side of private healthcare providers was advanced by Drechler and Jutting (2005), that there are positive sides to private health insurance, their small sizes can reduce bureaucratic processes and hence can work more efficiently than social insurance scheme. There are also some prevailing views that private financing system are less able to hold down costs (MCAuley, 1993; Propper & Green, 1999; Ramesh & Wu, 2008). The argument is that although an expanding role of the private health insurance may reduce government spending on health, the aggregate health

costs could increase. This is because with higher levels of private health insurance there would be higher administrative charges or costs, fewer controls on over serving, and the reluctance of private funds to encourage costs containment methods in private hospitals.

As suggested by Bloom, Graig, and Mitchell (2000) the private sector is neither so easy to characterize nor easy to neglect. Its strength is its innovativeness, efficiency and learning from competition (Michael, 2011). Considering the influence of private healthcare providers in both developed and developing countries, it is argued that strategies to improve the health system and payments should take into account, the strengths of the private sector (World Bank, 2004). National health care for all is the new slogan all over the world today, both in developed and developing countries alike. One way to achieving healthcare for all therefore, is through the involvement of private sector in the provision of healthcare services and facilities. This led to the evolution of public-private-partnership in the name of meeting the societal demand for medical and healthcare services. The NHS reform is one of those arrangements. World Health Organization (2001) reports supports that given the respective strengths and weakness of the public sector and private sector, neither party can operate alone in the interest of the public. The report concluded that, in payment for health services a meeting point should be created for both public and private providers in order to compliment each other. It was also argued that, public and private health sector, in the provision of health care services can potentially gain from one another (Bloom, Craigg, & Mitchell, 2000; Agha, Karim, Balal, & Sossler, 2003).

Both government of Nigeria and Malaysia complained of increase in governmental spending on healthcare provision in their respective countries. Currently only one million people in Nigeria, or 0.8 percent of the population are covered by health insurance schemes. Many poor people have to pay out-of-pocket for medical care or do without. The National Health Insurance Scheme introduced in 2005, is ultimately intended to cover all Nigerians, but many low-income population are not expected to benefit for at least another ten years (World Bank, 2009). This research therefore, contribute towards having literature on the available statistics on comparative study on healthcare delivery in the two countries (Collins & Alison, 1992).

Former Malaysian Health Minister, Datuk Dr Chua Soi Lek, in his response to the healthcare condition in Malaysia, stated that due to the rising healthcare expenditure, the Malaysian government has recently announced that it will implement a new National Health Insurance Scheme (NHIS) (Asian HR-eNewsletter, 2005). There are a number of lessons to learn from American and Canadian health insurance practices. One of the good lesson that both Nigeria and Malaysia need to learned from the American and Canadian health insurance is the provision of tax subsidy for the purchasers in addition to the welfare contribution to the citizens. This practiced has the advantage of energizing healthcare service purchase for private insurance and open up chances for more access to healthcare for citizens (Mark, 2001). Another lesson could be from the Israel system of healthcare finance from all available sources, such as, medical insurance fees, employer contribution, social security payments, (parallel tax), governmental allocations and national insurance institute. Second funding option in Israel for some specific health items will go to the National

Health Accounts (NHA) as may be define by health insurance and safety programme selected by the country (Shmuel & Mordechi, 1995).

It can be concluded that, the reason for the coming up of NHS reform, is the inability of the public sector in charge of healthcare delivery to meet up with the healthcare services demand of the citizens. Reform in healthcare provision became necessary when demand outnumbered supply. This therefore made the policy makers to search for immediate solution by way reform. The reform usually source for the excess fund through partnership with private sector or increase tax, in order improve service and avert the negative effect of shortage in supply. In attempt to reform a health system a cautious step need to be taken avoid negative outcome. The development of reform structure should consider the terrain, situation; manpower, finance, facilities, mechanism of control and the method/model to use. An attempt to reform healthcare scheme provision in the developing nations should consider the poverty level, location/demographic features of country, means of transportation and other important variables prior to starting the reform. Neglecting these parameters may results to implementation problem in the long run (Johannes 2005; Muhammad, 2009).

There are different school of thought supporting and opposing the institutionalization of private sector in the provision of healthcare services. Those in opposition believed that private service will rather make the health care services inaccessible and not affordable to most citizens. It was also argued that, it increases the governmental overhead spending on administrative and supervisory function. Subramanian Pillay (2005), stated that, the introduction of policies supporting private sector coexisting with the public sector permitted the private sector to play a greater role in non-

traditional areas like, health and higher education during the 1980s and 1990s. This development led to Malaysia to witness a sharp increase in number of profit seeking private hospitals. By these developments the traditional practice where most private hospitals were run by non-profit communities and religious organizations was altered. The government justification for supporting the profit-oriented private hospitals was that it would reduce the demand on government hospitals. The rich would go to the private hospitals and, thus the poor would have better and faster services at the government hospitals. However, in the actual implementation intended outcome was never met. As such in his final analysis, Pillay (2005) concluded that, the reality of course was different; the waiting time and quality of service in government hospital actually deteriorated during this period. The development led to brain drain in the public clinics. The main reason for this massive brain drain of highly qualified and experienced medical personnel from the public sector to the private sector was due to better salaries in the private clinics. For example, by 1999, the public sector hospitals where most citizens are treated especially the in-patients had only about 20 percent of the specialists, while the remaining 80 percent of the specialists were in private sector (Pillay, 2005).

David (2008) argued that, the key issue with National Health Insurance Scheme is that, it is associated with American model of healthcare funding, which has a history of erecting health inequalities in America, and is currently becoming a political battle ground for change. The challenge in effectively implementing NHIS in Nigeria, unlike in USA lies on the following parameters. First, there is a huge variation in the socio-economic empowerment and orientation for insurance security. Second, the potency of the law in USA streamlines professionals to their specific lines of

specialization. Third, there is variation in the individual state and federal commitment to research and research income/funding. Fourth, there is little or no trust by Nigerians for leadership and big corporations like Insurance Companies. The word insurance is alien to many and an ideology that would require much effort to market. David (2008) concluded that, in an evolving economy like Nigeria, the USA funding model would not serve the interest of Nigeria. Thus there would be a need to consider a mix-system that is developed to accommodate the reoccurring predictable and unpredictable health challenges across every community. The population type, social orientation in view of attitudes, values and cultural/religious beliefs, literacy and natural knowledge, employment level and the earning and spending capacity of each family should be considered in designing any reform in healthcare provision.

Pillay (2005) in his final submission against privatization of health sector stated that, in reality NHS will not reduce government spending on healthcare provision. This is because the government will have to pay the premiums for the exempted groups. That alone will amount to RM4 to RM5 billion. In addition, the government will still have to continue spending on preventive health care programmes. Moreover, if not supervised properly, healthcare spending tends to spiral out of control, when a third party like the ‘Skim Insuran Kebangsaan’ (SIKK) system pays the bill. Neither the consumer nor the provider (hospitals and doctors) have any incentive to reduce costs. To have an equitable health care system in Malaysia and anywhere else according to Pillay (2005) there should be one common health care package which provides comprehensive coverage for all regardless of income level. The payments for the poor must be subsidized and equitable healthcare access must not be denied by imposing large co-payment. No private insurance must be allowed for the conditions covered in

the basic package. Payments for doctors should not be on a fee-for-service basis. This is to avoid over investigation and over treatment. Income differentials between the public-sector healthcare personnel and their counterparts in the private sector must be narrowed. Given the negative consequences of privatization in the healthcare sector in the past 15 years, no further privatization of any component of the health-care services should be allowed. Finally, whatever the new system that is introduced, there is a need for democratic control and accountability in the healthcare sector. One of the ways to ensure democratic control is to exercise direct elections at the local level to the board running the local hospitals.

The perspective of this research is to avoid whistle blowing at this moment. This is because only research results of this nature will reveal the resultant effects of a reform situation. The National Health Scheme reform is both new to Nigeria and Malaysia. The citizens also are getting prepared to study and comprehend the perception of the program. Any conclusion at this moment will amount to crying foul where there is none. A word of caution could serve a purpose to the policy makers pointing out the reasons for the failure of similar system elsewhere. This research resolved to study the new health care system as adopted in Nigeria and Malaysia and attempt to provide such literature that can help in further research in the area in the two countries. An attempt to study the progress of the reform is now, since the reform is new in the two countries. Therefore, this is the time to study or monitor the progress made so far on healthcare reform in the two countries. This is possible because healthcare provision is a product which can be measured using certain statistical parameters.

1.3 Problem Statement

The previous researches as have given much prominence to the diagnosis of private public partnership establishment in the individual countries or general discussion about social insurance or in insurance in general. The literature consulted were pervaded with discussion on the importance of National Health Insurance Scheme (NHIS) as seen and applied in various individual societies, but less attention was given to comparative analysis on the reliability of the different models as applied in those countries. There were also few literatures confirming the universalistic application of certain models in the developing countries especially those, with similar political, historical, economic and developmental relationship. Little attention was given to comparative study on the local cultural, economic and governmental peculiarities of the countries that adopted and succeeded in the implementation of the NHS program, before marketing the same system to developing nations like Nigeria and Malaysia. Researchers argued that, the mix-system would be a better alternative since it considers the attitude, values, and cultural/religious beliefs, literacy and natural knowledge, employment level and the earning and spending capacity of each family.

Few attentions were given to the study of similarity as well as the differences between solely public control healthcare delivery system and the recently adopted public-private-partnership in both Nigeria and Malaysia. As in literature search on recent NHS development studies in the two countries reveals scanty literature or data in the field of comparative analysis on its (NHS) effects in area of efficiency, accessibility, equity and affordability of healthcare provision in the two countries under study (David, 2008; Falegan, 2008; Johannes, 2005). According to Falegan (2008),

although the NHIS has not been fully implemented in both countries, some segments of the populace already felt left out. As at the present, the NHIS is lopsided in favor of the formal sector. A critical appraisal reveals that the scheme has not fully bridged the inequality in healthcare distribution.

However, literature search revealed that the health insurance scheme has been in America for over fifty years (Politz, 2004) yet literature on comparative analysis between the different state regulatory approaches found to be scanty. Such a study would certainly make the general public better informed over the advisability of limiting risk selection by insurers in health insurance markets. Unfortunately, the information made available is largely political and highly charged. Considering the American experience as one of the pioneer states in the implementation of national health insurance scheme and yet lack comprehensive comparative analysis research on the different models being adopted by different state, calls for an urgent need of research in the area of comparative studies in the insurance related to health (Politz, 2004). Thus, this study is timely and relevant.

According to Pierson (2001) the development of an analysis of the various dimensions and the applicability of such dimensions in a comparative study prove to be highly resource and time consuming venture. It is not only time consuming but as well seems to be expertise taxing and very few venture into it, aside government and corporate bodies (Pierson, 2001). An attempt by this research is to open up frontiers for future research.

The lack of recent studies that prove the existence of elaborates comparison of any healthcare and safety system which presents data on the strength and weakness of different reform situation in the developing countries call for this research. Lack of comprehensive literature on the movements or direction of reform change in all developed countries, talk less of developing countries goes to show the necessity of this study at this point in time (Pierson, 2001). The dimension of healthcare and safety service provision is yet to be integrated systematically as one of the principal dimension in comparative analysis of healthcare and safety system research (Freeman, 2006; Wendt & Thompson, 2004; Wendt & Kohl, 2009).

There is also the fear that, the private sector once allowed operating, controlling them is somewhat a problem. This assertion was further elaborated by Abdallahi & Ng, (2009), that, the private sector is often associated with their use of illegitimate and unethical practices to maximize profit (Bennett et al., 1994, 2004; Rosenthal, 2000). Therefore, this study will also focus on evaluation of mechanism of control available to safeguard the customers/beneficiaries from excess premium charges by healthcare providers in the two countries.

Despite the flow of latest information and innovation in the healthcare services delivery system, there is yet poor record on the study that confirms the positive contribution of public-private-partnership. The argument favoring private sector participation in the provision of healthcare services was centered on its ‘so called’ innovativeness, efficiency, and capabilities to learn from competitors. Yet, literature showed that, even though governmental spending on the healthcare provision may reduce with the introduction of NHS reform, its administrative spending will

skyrocket, and lesser control on over servicing, and the reluctance of private funds to encourage cost-containment method in private hospitals (Abdallahi & Ng, 2009). This study will also focus on the study of effectiveness or efficiency of NHS reform as an alternative system of healthcare delivery system in Nigeria and Malaysia.

As mentioned earlier, literature consulted indicates that most of the studies on the related topics have always compare local indices of one development to another or preferring microscopic analysis. The literature did prioritize any particular reference system and it widespread to some countries outside the boarder of a neighboring nation or state or even continent that has similarities in economy and demographic factors. Hence it is paramount that a study of cross nationals boundaries would be undertaken, especially comparing a country in Asia and Africa which have long historical or developmental similarities, issues and policies. These therefore explain the reason for choosing Malaysia and Nigeria as subsector of this study. Coincidentally the issue under research is new to both the citizen and the government of the two countries.

This study tries to fill the following research gap;

1. Contribution to the literature on the private sector participation in healthcare service sector in the two countries.
2. Study the evolution of new trend/development in the healthcare service sector of the two countries.
3. Come up with data set on the comparative analysis of the development and/or growth in health sector of the two countries.
4. Attempt to offer proper solutions to the identifiable obstacle and setbacks.

1.4 Specific Research Gap

One of the most important knowledge gap in this research is to know what this healthcare scheme reform meant to serve. That is to determine how effective reform function as an alternative healthcare delivery system on the one hand and asses the strength of the reform in meeting up with the psycho/emotional desire of being healthy by the employees. On the other hand it will also to determine how the policy makers will account for such powerful psycho/ emotional relationship to a health care arrangement that is so difficult to describe and about a performance of which information is so limited.

1.5 Conceptual Model of the Study

Previous studies expounded on the factors that supported reform of most system. Alan and Joel (2004) substantiate on the interests of the government to reform healthcare provision and delivery system. The intent is straight forward, which is to assure access to affordable health insurance by mitigating questionable selection and pricing practices by insurers and private healthcare providers. The postulation may sound a ‘myth’ rather than reality, but it is a rationalized perspective that actually navigated towards responding to particular phenomenon. To further elaborate on Alan and Joel (2004) position, Mathew and Abraham (2007) stated that, it is fashionable to believe that healthcare coverage, healthcare costs or affordability, healthcare itself and its equity should rather be driven by consumer choice and responsibility only. Yet, the business of health care provision and delivery system which include costs reduction (affordability), efficiency, accessibility, and equitability, should be a collective rather than individual decision. The collectivism should include government, health organizations, insurance, individuals and all stakeholders. Though, we may

sometimes wish to deny it, both general and specific issues of health and healthcare affordability, efficiency, equity and access are often our joint responsibility (Mathew & Abraham, 2007).

Increase in world population, industrialization of the 17th century, globalization, spread of diseases and technological advancement put the available facilities to a stressful condition (Yahya, 1999). The multiplicity of the highlighted variables to a greater extent confirms the insufficiency of the facilities and to some places unavailable, making healthcare delivery planning difficult if not impossible.

Simon (2004) argues that through the use of various instruments, such as group market or individual market reform a structure of control is provided by the government in the healthcare market. The essence of healthcare reform is to ensure access and affordability to healthcare and safety services to the sick. Kosali (2004) also added that in describing reform variations between realistic and unrealistic reform an expectation in reform outcome should be predicted. These may be partially due to variation in reform legislations or instrument of control between the implementing states or country and available reform plan.

Determination of the effects and impacts of reform is still lacking (Kosali, 2004). Studies available were conducted with a very scanty data and for a very short period of time, for example the research conducted by Chollet, Kirk, and Simon (2000) only consider data between 1995-1997 period, which may be too short to report reasonable effects and impacts of reform on access, affordability, efficiency, demographic variation and equity (Kosali, 2004).

The individual market reform as one of the popular reforms in insurance markets evolved with the desire to provide access at an affordable price to those without access. These include those workers with their families and also significant proportion of self employed individuals, retirees, and dependents (Deborah, 2004).

The structure of the reform legislation or regulation includes, some control instruments in both the individual and group market and individual market reforms (Kosali, 2004; Deborah, 2004). The instruments of control includes; guaranteed renewability, guaranteed issues, community rating, (which includes pure and modified community ratings), slowing enrollment, premium variance restrictions, limits on pre-existing condition, pool payments, redistributive effects (Katherine & John, 2004).

The whole purpose of reform regulation (in addition to making health care and safety services accessible, affordable, costs effective, efficient and equitable) is to demystify or remove biased selection, waiting period for patients, adverse selection of patients, premium increases and demographic features considerations (Susan & Fengyu, 2004; Steven, 2004). In the conceptual perspective described by Alan and Joel (2004), reform regulation success is dependent on the proper implementation of the various reforms instruments of control by the government and policy makers charged with the responsibility of ensuring reform success. Contributing to the debate on reform in healthcare service provision, Johannes and Jutting (2005) argue that, how the financing of healthcare is organized has an important impact on achieving the objectives of the health system or reform. Most world health system or reform share common convergence line of maintaining good health for population. Protection against risks of illness, and achieving consumer satisfaction within resource

constraints is also an integral part of the reform. Researchers have acknowledged that though, the objectives of most reform seem to be closely interlinked; trade-off is sometimes ensued between health status, financial protection and public satisfaction. In addition healthcare finance has a strong influence on the final outcome as well as on intermediate goals of the healthcare and safety system reform (Mechanic & Rochefort, 1996; Barbara, Leiyu, & James, 2005). Expanding the scope of these arguments Yasar, Ramesh and Laura (1997) broaden the scope by including environmental factors as the additional determinants of performance through efficiency and effectiveness. This research argues that efficiency of healthcare delivery system is related to the kind of reform and the structures established. Figure 1.0 pg. 31 is the conceptual model as propose for this research. The model identifies direct linkages between reform and efficient healthcare delivery system for safety of employees. In addition, reform is conceptualized as being influenced by (i) control mechanisms of the government (ii) affordability (iii) accessibility (iv) equity and (v) efficiency. Efficiency of health care and safety delivery system is both responsive to and constrained by reform and its structure. Health care and safety delivery system efficiency is hinged totally on the effectiveness of the factors associated with the structure of the reform. The research hypothesized that the reform factors or structures and characteristics, such as reform, affordability, accessibility, equity and control mechanisms and demographic characteristic have a striking influence on the structure of the healthcare delivery system, which in turn affects the efficiency of the health delivery system for safety of employees in particular. This research also hypothesized that, there is an intertwining relationship between reform and efficiency of health care delivery system.

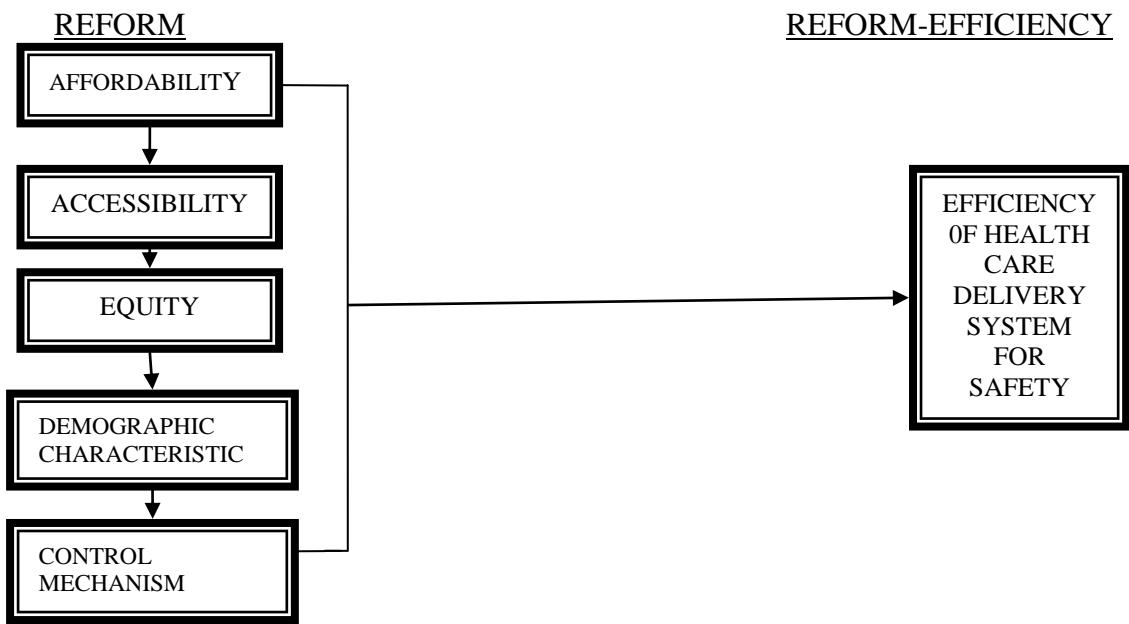


Figure 1.1: Conceptual Model of the Study

Figure 1.1 conceptual model evolved as a results of series of study of about five conceptual models of healthcare and safety delivery systems which includes the Health Commodity Hypothesis model; Process Study Hypothesis; Access Pathway Hypothesis; Community/Cooperative Model Based on Local Peculiarities (Demographic characteristics, Developing nations) and Convergence Hypothesis Model. Each of the variables in the model is captured in the individual models cited in this study. Basically the convergence hypotheses model is the major conceptual model of this study. The model discussed extensively the variables, while the other models compliments. The process model showed that, the process of healthcare reform determines its affordability to those who need it. The model show case the American health reform as not satisfying the process of a good reform, therefore not affordable to most citizens supported the selection of affordability variable in this study. Access pathway model basically supported access variable of this study. The socioeconomic status and development based on community supported the demographic characteristic and control mechanism variables of this study. The convergence

hypotheses model sum up all the variables and presented them as converging as one due to technology and globalization. Therefore convergence hypothesis model as would be presented serve as the major model of this study.

1.5.1 Commodity Hypothesis Model (Cost/affordability)

The health commodity hypothesis model as postulated by Catherine and John (2000), states that higher socio-economic status (SES) brings health and longevity in part, because it supplies the insurance that allow individual to buy more medical care and treatments, which improves health outcomes. Though the study failed to prove that socio-economic status ensure longevity of life and good health condition, findings from the literature confirms that, the socio-economic relationship with healthcare provision remain an enigma in the achievement of healthcare for all objectives. There is virtually no evidence of technological or professional advancement in medicine that confirm the socio-economic status of an individual to be a factor that will ensure his longevity and good health. Rather socio-economic factor do, in both developed and developing countries serve as a factor to consider as a constrained and/or contributor to a successful implementation of healthcare delivery system (Catherine & John, 2000). Another research argue that public provision of healthcare recorded worst health status compared to private as well as higher mortality rate. The study concluded that health care programs can only achieve good results if education and economic hardship is reduced (Yu-Luen & Mark, 2005). Researches concur with that of Yu-Luen and Mark (2005) that lack of health insurance coverage has a strong cumulative negative impact on adult health in U.S. The negative relationship between public health insurance and health is not causal but rather due to prior health and socioeconomic status of person (Amie, 2004).

1.5.2 Process Studies Model (Equity and Affordability)

This model evolved as a critic to the American health insurance model that most people see as a failure in its comparison with health insurance model of other developed countries. The model postulated that, uninsured Americans received less medical care than people with either private or public insurance, they have lower utilization rates for physicians visits and hospitals services. Some studies attempted at testing the validity of the postulation made by process studies model of health care delivery system. Their study confirms that both private and public provision of health care did not have any significant difference in health status with the unemployed. Significant evidence had shown that cost factor is a measure consideration on whether to purchase or not to purchase any healthcare insurance. Employers determine their decision to choose health insurance by costs consideration of the insurance before making the final choice. Quality of providers was scored 70 percent as second factor to consider, and 93 percent was scored in favour of small firms confirm assistance to employees during negotiation (Davis & Rowland, 1990; Davis, Gold, & Makuc, 1981; Hurd & McGarry, 1997; Secombe & Amey, 1995; Short, Monheit, & Beauregard, 1989; Spillman, 1992; Freeman, Aiken, Blendon, & Corey, 1990).

1.5.3 Access Pathway Model (Access)

Neal, Moira and Paul (1999) postulated that, access over time is beyond the near having access to physician and maintaining relationship with a single provider. Access means an incorporation of effectiveness and appropriateness as well as considering both individual and system level determination (Neal et al., 1999). The Access Pathway Model divides access into two phases that is enrollment and utilization. This model illustrates that access outcomes is a products of multiple

factors and process that facilitate or hinder enrollment and utilization. Access could be determined using time course, with a set of open intervention points and associated procedures, and interaction, which help in identifying critical factors and processes that affect access (Neal et al., 1999).

Enrollment simply refers to the number of eligible residents that have access to the health insurance products at a reporting time period. Enrollment is a dimension of access which may be hindered by site/location, forms of insurance, language, immigration status, and so on (Neal et al., 1999).

1.5.4 The Community/Cooperative Control Mechanism Model (Developing Countries)

The theoretical debates hinged on the fact that, the discussion should be targeting the development of good and workable health system in the developing nations. The institutional restructuring most recognized the following factors, strong economy, applied education, adequate nutrition, poverty reduction, equity and effective government, a functional public health system that provides sanitation, clean water and infection control, and a comprehensive primary health care delivery system (Thomas, Aman, & Aviva, 2006). This was also validated by the research conducted by Johannes (2005), in five developing countries.

1.5.5 Convergence Hypothesis Model

The convergence hypothesis proponents believed that for any healthcare and safety delivery system to be credited as performing and meeting the aspiration of the citizens

and/or beneficiary, it has to satisfy certain conditions. These conditions should converge in one healthcare system which works towards converging globally. The conditions cited by convergence hypothesis are in six major areas of health care delivery system. Each of the convergence factor addressed one or more variables of this study. It includes, cost control refer to as affordability in this study and effort to improve efficiency and effectiveness of health services, promotion of health and improvement of health -related behaviors (life style) refer to as demography in this study. These convergence factor covers variable, affordability, efficiency, control and demography of this study. The second factors are basically concerned with, inequalities in health outcomes as well as access to medical care. These factors cover variable equity and access of this study. The third convergence factors stressed the effects of technology and specialization, interests in patient satisfaction, participation, choice and voice in the organization of health care services and finally with ageing population (demography), and prevalence of chronic diseases. These convergence factors cover efficiency of delivery, control and demographic variable of the study. Today Nations are now giving attention to the linkage between health and social services in order to reduce fragmentation. The nation can only successfully achieve an affordable, efficient, equitable, accessible, controllable and demographically all inclusive healthcare delivery if the convergence hypothesis is fully entrenched into the healthcare services delivery systems of the country (Mechanic & Rocheforte, 1996). Research in Europe compared healthcare system in Britain and Norway using convergence hypotheses further enlarges the applicability of the hypotheses in health and safety research Olaug (2003). Applying convergence hypotheses to study international healthcare and safety convergence to determine whether it has benefits or burden on market driven standardization in healthcare and safety delivery proved

effective (Nathan, 2009). The 17 OECD nations also supported the applicability of health system convergence on the 17 OECD countries (Mechanic & Rochefort, 1996). Therefore the convergence model is the most significant model to this study. The other models complimented the convergence by supporting or shading more light on the other salient factors discussed in convergence hypotheses in this study.

1.6 Research Question

1. Is there any difference between Nigeria NHS model and that of Malaysia?
2. Is there any significant difference between the previous public provision of healthcare service and that of the privately control providers?
3. Is there significant difference between public–private partnership in healthcare provision and efficiency in the healthcare service delivery in both Nigeria and Malaysia?
4. Is there any difference between demographic characteristics, (educational achievement, age, gender, location, employment sector and type of clinic attended) and healthcare delivery system in Nigeria and Malaysia?
5. Does public-private partnership (Reform) ensure the existence of the concept of equity, access and affordability in health care services delivery for safety of the employees?
6. Is there any significant difference between spread of innovation and private-public partnership in health care delivery and safety of the employees?
7. Is there any significant difference between government regulatory mechanism on healthcare providers and effective healthcare delivery and safety of the employees in Nigeria and Malaysia?

8. Is there any relationship between reform better treatment, equity and safety, affordability, clinic attendance, better access, competition, value for money, genuine drugs, less waiting time and efficiency during emergency or accidents

1.7 Objectives of the Study

1. To make comparative analysis of the NHS model of Nigeria and Malaysia.
2. To determine the difference between public control healthcare services and privately control healthcare services in healthcare delivery and safety of employees under reform
3. To compare level of efficiency between the public and private healthcare delivery for safety of employees under reform.
4. To determine the difference between healthcare delivery for safety and demographic characteristics of employees under reform.
5. To determine the effects of governmental control mechanisms, access and equity of healthcare to employees under reform.
6. To determine the difference between private-public healthcare provision and innovation in the healthcare delivery in Nigeria and Malaysia.
7. To determine the difference between reform and affordability of healthcare provision to employees safety and health under reform.
8. To determine the difference between reform and better treatment, equity and safety, affordability, clinic attendance, better access, competition, value for money, genuine drugs, less waiting time and efficiency during emergency or accidents

1.8 Research Hypotheses

The following research hypothesis would be subjected to test in line with the objectives of the study;

Hypothesis 1: There is no significant difference between Nigerian and Malaysian Healthcare and Safety Delivery under Reform.

Hypothesis 2a: There is no difference between Healthcare and Safety Delivery under Reform and Gender in Nigeria and Malaysia

Hypothesis 2b: There is no difference between Healthcare Delivery and Safety under Reform based on the Location differences (Rural and Urban) in Nigeria and Malaysia.

Hypothesis 2c: There is no difference in the healthcare Delivery and Safety under Reform based in the Ethnic Group differences in Nigeria and Malaysia

Hypothesis 2d: There is no differences in the Healthcare Delivery and Safety under Reform based on the Educational Attainment of Employees in Nigeria and Malaysia

Hypothesis 2e: There is no differences in the Healthcare Delivery and Safety under Reform of the Employees of different Sector (occupation) in Nigeria and Malaysia

Hypothesis 2f: There is no Difference between Healthcare and Safety Delivery under Reform and Type of Clinic Attended by Employees in Nigeria and Malaysia

Hypothesis 3: Efficiency and Reform.

Hypothesis 3a: There is no significant difference between reform and better treatment, equity and safety, affordability, clinic attendance, better access,

competition, and value for money, genuine drugs, less waiting time and efficiency during emergency or accidents.

Hypothesis 3b: There is no significant differences between better treatment (efficiency) under reform as from 2006 in private clinic more than in public clinics in Nigeria and Malaysia as well as before and after reform.

Hypotheses 3c: There is no significant difference between Reform efficiency as from 2006 and equity, safety and healthcare services delivery to the employees in Nigerian and Malaysian working places as well as before and after reform.

Hypothesis 4: There is no significant difference between reform in healthcare and safety sector and ensuring equity in efficient healthcare and safety services delivery in Nigerian and Malaysian working place as well as before and after reform.

Hypothesis 5: Accessibility dimension:

Hypothesis 5a: There is no significant difference between reform and employees number of accessibility (number of clinical attendance) to efficient healthcare delivery in Nigerian and Malaysian working places as well as access before and after the reform.

Hypotheses 5b: There is no significant difference between reform and better access to efficient healthcare and safety services than without the reform in Nigeria and Malaysian health sector as well as before and after reform.

Hypothesis 6: There is no significant difference between the public (government) healthcare and safety outfits and healthcare outfits for safety/health of employees as well as whether the scheme depends on the outfit.

Hypotheses 7: There is no significant difference between gender and efficient healthcare delivery for safety as well as whether healthcare delivery of employees depends on gender type of the employees in Nigerian and Malaysian working place.

Hypothesis 8: There is no significant difference between government control mechanism and reduction in employee's affordability, accessibility, equity, equity and demographic variation in healthcare and safety services delivery under reform as well as whether delivery depends on government control mechanism.

Hypotheses 9: There is no significant difference between public-private-partnership and spread of innovation in both public and private healthcare and safety delivery to employee in Nigeria and Malaysia as well as whether innovation depends on public-private-partnership in the two countries.

Hypothesis 10: There is no significant difference between healthcare affordability and efficiency to both government and private employee's in Nigeria and Malaysia as well as healthcare and safety affordability and efficiency did not depend on both government and private employee in Nigeria and Malaysia.

Hypothesis 11: there is no significant difference between Nigerian and Malaysian reform performance in terms of equity, access, affordability, demographic differentiation, control and efficiency.

1.9 Significance of the Study

A comparative study is associated with problems ranging from lack of adequate data to difficulty in reaching a consensus on certain tools to use and units of comparisons.

The only remedy to the above is to concentrate on the analysis to the available data and also dwell on quantitative analysis since it is about the most widely used and acceptable method of comparative analysis. Despite the above fears, the research would be significant as follows:

This research will provide an avenue to bring together researchers from different backgrounds to collaborate on a cross-national manner, and with this valuable personal contact can be established, enabling them to capitalize on their experience and knowledge and of different intellectual traditions to compare and evaluate a variety of conceptual approaches (Linda, 2005; Patrick, 2004; Nigel, 1993).

Comparison can lead to fresh, exciting insights and a deeper understanding of issues that are of central concern in different countries. They can lead to the identification of gaps in knowledge and may point to possible directions that could be followed and about which the research may not previously have been aware. They may also help to sharpen the focus of analysis of the subject under study by suggesting new perspectives (Graig, Anne, & Patricia, 2000; Linda, 2005).

Cross-national studies provide a frontier of knowledge and a way of confronting findings and solutions to age-old problems. This will also further help in an attempt to identify and illuminate similarities and differences, not only in the observed characteristics of particular institution system or practices, but also in the search for possible explanations in terms of national likeness and unlikeness (Gene, Ya-Lin, & Xun, 2005). Cross-national comparatives are sometimes forced to attempt to adapt or even assimilate a different cultural perspective and also to be fasts in learning, and to

learn to understand the thought process of another culture and to see it from the native's viewpoints, while also reconsidering their own country from the perspective of an experienced and as well a skillful, external observer (Mechanic & David, 1996; Linda, 2009). With all the aforementioned, study in this direction (i.e. comparative studies) is desirable.

1.10 Scope of the Study

This study tries to examine the new trend in healthcare management and provision in Malaysia and Nigeria. The public private partnership in the provision of healthcare services is new in these countries. The progress and failure recorded in other countries such as England, United State of America, Canada, China, Holland (Dutch), France, Costa Rica, would be consulted in the literature in order to present a valid argument. The Malaysia and Nigeria introduction of National Health Scheme Reform is worth researching since the reform is new in the two countries. The accepted expenses on medical healthcare per individual in Africa and Asia, ranges between 32-34 USD, while both Malaysia and Nigeria are per below this classification. According to the Report on the Second National Health Morbidity Survey 1999 (NHMS2) in Malaysia per capita out of pocket health expenditure was estimated to be RM180, which is 4.80% of per capita annual income (Abdallahi & Ng, 2009).

Expense, on healthcare in Nigeria is suppose to be 32-34 USD, as propose by the World Bank, the actual per capita income for individual citizen is 3 USD, which is below the World Bank standard by all definition. Therefore the study would be restricted to comparative analysis of Nigeria and Malaysian National Health Scheme. With special reference to the effects of private and public provision of healthcare and

safety (mixed) delivery system and its resultant effects on access, equity, affordability, demographic differentiation, tool of control and efficiency of delivery of healthcare services delivery for safety of employees in Nigeria and Malaysia. Specifically the research is restricted to institution of higher learning, public and private clinics employees, medical, paramedical, human resource specialists, psychologists and safety and health experts in both Nigeria and Malaysia.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The phenomenon under study is not an isolated issue. Reform in healthcare and safety has been subjected to great number of debate and researches for and against its existence. It is based on the above background that relevant literatures need to be reviewed. The review will provide platform for future investigation. Through these investigations the positive as well negative aspect will be discern and improve upon. The emphasis will also be given to the model that has direct relevance to health insurance reform and implementation. The model type and their possible setback implemented in the study area and elsewhere in the world will be reviewed.

2.2 Conceptual Framework

2.2.1 Background of Conceptual Underpinnings and Empirical Literature

Since the 1980's and 1990's, a number of papers evaluating the effectiveness of state health insurance reforms appeared in technical health services research and policy journals, economics journals, book chapters or as unpublished reports. To date, however there is no consolidated effort to critically examine the degree of research on reform as well to evaluate the methodological weaknesses and challenges on empirical research. Literature available did not draw conclusion regarding the effectiveness with certainty of a specific reform provisions in healthcare and safety system. Perhaps, most importantly, there has been a very slow effort or desire to assess more globally whether reform will be a viable and effective policy instrument. There

is poor data on whether modification to reform or alternative policy option that is yet to be determined will improve reforms outcomes. Such an effort will desire not only an assessment of the quantitative empirical findings but also the perspective of individuals who have had firsthand experience in implementing reform. It will also entail providing information to potential market entrants or directly monitoring the effects of reform on the healthcare system (Alan & Joel, 2004).

The fact that health insurance is very important to the politics, policies and democracy of the world make reform to be eminent. In America for example in 1992, Harrison Wofford used the issue of healthcare to upset Richard Thornburgh in a race to fill John Heinz seat in the US senate. Bill Clinton promised of a better healthcare reform helped him defeats George Bush. Obama's promised of change and that of healthcare reform helped him to defeat Bush junior. This is what prompted policy makers of every political stripe to presents plans for improving access to healthcare, using reform control mechanism and enhancing its quality (Russel, 1994). Reform in healthcare has political inclination, economic potentiality, cultural underpinning, social relativity and emotional attachment to the government and citizen. Some models prove to have wider applicability. Convergence hypotheses as one of the models suggest greater application in medical technology, pharmacy and medical certification. Convergence hypotheses provided a platform for diverse medical professionals to converge and practice in an economical globalized world of today (Mechanic & Rochefort, 1996).

The fundamental area in studying reforms in health insurance industry is through the use of performance assessment by using quantitative data as confirmed by Alan &

Joel (2004). The emphasis should be focused on primarily economic analysis and econometrics studies that have examine reform through empirical analysis using national or state-specific data. An attention need to be paid also to studying the institutional features and foundations of reform activity, so as not to compromise the intent and effectiveness of reform (Alan & Joel, 2004).

Kosali (2004); Chollet (2004) and Thomas, Amand and Aviva (2004), argue that, the typical assumption about health insurance reform is the desire of the insured to have access and restriction in variation in premium or affordability. Contrary to most assumption of the reform promoters small health insurance markets are characterize with high premium charges. This single factor makes access and affordability to healthcare impossible to low income employees (Chollet, 2004). Methodologically, previous studies confirm that limited research indicates that demand for individual coverage is also price-inelastic. This condition resulted in making reform to yield to large premium reductions to elicit sizeable enrollment response from new enrollee.

2.2.2 Types of Health Insurance Market

The essence of the health insurance market reform is to adjust the available market apparatus or decision factors that did not allow the citizens access to health insurance at an affordable price. This is done legislation or an indirect control by way of certification, registration or supervision. Therefore, insurance market reform is geared towards stabilizing market and ensuring access at an affordable price to the sick. Basically the practice is through restricting or controlling profit merging to bare minimum or transferring the burden to government. There are basically two types of

health insurance market the reform is geared towards reforming. One of which is the individual-market and small-group market, this two co-exist in one market.

2.2.3 Individual-Market Health Insurance

This market refers to a market where consumers register with private insurance company on their own volition. This market membership is characterized by people who work in industries with less than fifty workers in the case of New York and less than thirty in the case of Pennsylvania and Connecticut in the USA (Chollet, 2004). At least it accommodates in principle the population without access to either an employer plan or public program. This includes not only workers and their families but also significant proportion of self employed individuals, retirees, and dependents (Chollet, 2004).

The characteristic of individual insurance market includes high charges on individual with high or low risk. It also encourages serious adverse selection and denial of insurances services. Sick customers are subjected to serious psychological touchup by the insurance providers through the process of exclusion and non-renewability of their insurance registration. Previous study provided an evidence of the existence of cross subsidization of insurance from low-risks to high-risks in the individual medicare market (Yuluen & Mark, 2005; Chollet, 2004). In same line of argument Chollet (2004) stressed that prices in the individual health insurance market are prohibitively high. The administrative cost of individual coverage as a percentage of premium is much higher than in the group market, sometimes accounting for nearly half of the premium. Unless the state laws became hard on the insurers, the providers may deny or aggressively limit coverage. They may differentiate premiums, by many orders of

magnitude for differences in age, gender, occupation, location, and past or present health status at the time of issue.

The individual-market reform evolved to stabilize premium and put an end to adverse selection or limits the degree of adverse selection, exclusion, non-renewability and banding of sick person through fictitious classification and redlining. Thus the reform is making an effort to ensure accessibility and affordability of healthcare insurance for the sick. The membership of individual could also includes those not enjoying the employer coverage and as well did not enroll in public plan and those non indigene resident in countries other than their own, but were excluded from enjoying commonwealth healthcare, in the case of USA where this plan exist before (Chollet, 2004). In her observation of the individual market Chollet states that to reflect the problem of access and high price in the individual market, persons without group or public coverage are much more likely to be uninsured. In government attempt to stabilize the market a lot of expenses were shouldered, for example the American government tax share finance on health in 1965-1999 nearly doubled, jumping after the introduction of Medicare and Medicaid in 1966. The exuberant growth of for-profit medicine was sustained by the generosity offered to health insurance market by the tax dollars from the government (Himmelstein, 2002). Majority of members of this market are those citizens who were unable to be covered by the employer or public health insurance arrangement. The market as presented earlier is characterize by high premium charges, adverse selection, and elimination due to poor income or are eliminated due to high risk consideration. Some were excluded because of locational consideration, age, gender and number of dependence or family membership. The above mentioned factor necessitated the government intervention to

stabilize the market as well as to safeguard the vulnerable group from exclusion or elimination from the market and access.

2.2.4 Small Group Market

Small-group market is the second category of health insurance market that the government reform evolved to intervened and also ensure access and affordable healthcare services for the group. This group comprises of a company that has small number of employees, to some regulation company with one to ten workers should be covered, while to some regulation workers of up to one to fifty, to someone to one hundred workers. Therefore, the enforcement depends on the status of the regulation in operation in the state or country. According to Buchmueller and Agnes (2004) in the early 1990s, nearly every state in the United States enacted new regulations governing the sale of health insurance to small-employer groups.

Enacting the regulation may not necessarily be the solution, what is very paramount to the issue of regulation is the mechanism of enforcement, the weaker the mechanism, the more vulnerable the group the regulation intend to protect will be in the market by insurers and underwriters (agents and brokers who are affiliates). As argued by Buchmueller and Agnes (2004), that the strength of the reform varies, from laws that stipulated standard and imposed constraints on negative practices to those that totally re-draw the direction of insurance practices through enacting new laws to regulate the whole system or part. The New York law for example enacted in 1993, prohibits insurers from denying coverage to any group or individuals and that the premium should be community-rated, where, on one policy, all subscribers should pay same price with no discrimination based on age, gender, location or the health status of the

subscriber. The regulation in New Jersey requires that health insurance should be sold on guarantee-issue and community-rated basis in the individual market only. The practice in the small-group market allows the premium to vary based on status of health, age, gender and the location of work. This action was highly criticized by insurers (Buchmueller & Agnes, 2004). They argue that, community-rating encourages adverse selection, which reduces coverage and in addition it push the burden of extra payment to the low-risk subscribers. And that if low-risk subscribers in response to this, decided to drop subscription, the insurers will have to increase premium in order to recover the risk from deterioration (Kosali, 2004). In both small-group and individual market insurance, insurers persistently use pre-existing condition exclusions to deter high-risk subscribers opportunity to have access. A literature presented that only 40 percent of firms with 10 employees offer health insurance compared to 97 percent of firms with 50 employees (AHRQ, 2000). This low number of percentage has been associated, in part to the high administrative cost of health insurance for small firms, the demand for health insurance among workers in these firms, and the unwillingness of insurers to take on small firms risks (Kanikan, 2004). Another very serious problem is that, very long waiting period may be assign for a sickest person which makes him lost his renewability within the period. This is an adverse method use by the insurers to exclude those with serious health condition (Robert & Kosali, 2002). In another research Joseph (2007) confirmed that the American healthcare market is a total departure of the market where prices are determine by the market forces. Joseph (2007) elaborates further that, the market functions as institutions in which participants that are self-seeking and not perfectly rational, exercise power over other participants in the market. The market is highly characterized by market power over price (Joseph, 2007).

Some regulations were put in place in the individual health insurance market and group health insurance market to improve access and reduce exclusion. These mechanism or regulations includes guaranteed issue, guaranteed-renewal, portability option, community-rating, and restriction on waiting period. All the mechanism mentioned have their strength as well as weaknesses. The health insurance operators are also quick at evolving new escape routes in order to maintain high return. The operators in these type of markets uses guaranteed-renewal alone to close books of business or refuse to sale specific health insurance policy they have sold in the past to patient with adverse health condition. This practice gave them room to offer the insurance to healthiest enrollees in the same pool a new product at a substantially lower rate. By this singular action the insurers scare or even drive away sickest subscribers from having access (Nichols, 2004).

2.2.5 Initiating Health Insurance Reform

Health insurance reform could be triggered by various interest groups. With little prospects of a federally sponsored system-wide reform in the USA, policy makers, and researchers have developed a keen interest in incremental efforts by states to reform their health insurance markets. Since 1980's, over forty states have adopted some form of small-group market reform, while twenty-five states implemented reform of their individual health insurance markets (Alan & Joel, 2004). The impetus to such reform reflects a number of factors; most prominent has been the perception of insurance failure in the small-group and individual markets. This failure has been fuel by a number of questionable and exclusionary insurer practices regarding the issuance, renewal and pricing of policies (Nicholas, 2004).

Among the practices typically cited are the aggressive use of medical underwriting and pre-existing condition exclusion. The second is durational rating practices where low premium are initially offered, then increased dramatically at the first sign of unfavorable claims experience. The insurers also engaged in tier rating whereby insurers reclassify groups with unexpected medical costs to a higher rating group. The practices of redlining of particular industries and occupation and more subtle efforts to “cherry pick” or “cream skin” or choose the best health risks (Hall 1992, 1994; Alan & Joel, 2004).

According to Hall (1992) interest in reform has also been stimulated by the insurance industry itself. As early as 1988, the Health Insurance Association, as is the case and practice in America, i.e. Health Insurance Association of America. (HIAA), LIAM in Malaysia, recognized the need for fundamental reform in the small group market. The reform is to address the aggressive selection practices of commercial insurers and produced model legislation (Aliran, 2009). The National Association of Insurance Commission (NAIC), representing state insurance regulators had also produced a model reform. The model addressed the issue of rating and renewability provision (endorsed by the Blue Cross Association) which transform into a model legislation for guaranteed issue and reinsurance (Hall, 1992). Such models have serve as valuable templates for states designing their own reform provision (Alan & Joel, 2004). So also the proposition made by LIAM serves as the starting point of an organized local private insurance practice in Malaysia.

As noted by Hall (1992) and expatiated by Alan and Joel (2004), small group reform focused on a significant political constituency of health insurance policies. The

constituency neglected or sets aside at least a quarter of all uninsured persons and those that were experiencing erosion or problem in their own rate of coverage as well as in its value or charges. Furthermore, for as long as the reform incorporated reinsurance provisions, no major stakeholder in the small-group or individual insurance markets were likely to be seriously harmed by reform (Hall, 1992). According to Stream (1999) States that found reform to be sufficiently attractive to implement were those in adequate fiscal health. These states have the capacity to administer reform, as well as having higher proportions of their population's uninsured. The research had revealed that the neighboring states of the reforming states also adopted small market reform in America. Mark (1963) in dispute with the position of Arrow (1963), argued that, in some instances health insurance reform may also lead to a loss in efficiency through a moral hazard such as welfare loss. Adding to this argument further, HIPAA does not guarantee the issue and renewal of coverage to small firms.

However, some health insurance associations and outfits state that, insurers functions do not includes addressing the affordability of coverage. These therefore mean that enrollees may be required to pay as much as 102 percent of their former group's premium after reform. This amount may be well in excess of their out of pocket premium costs as at the time of employment when employed (Neal et al., 1999). In this regard reform departs from Arrows admonition that to achieve reform full social benefit health insurance requires a "maximum possible discrimination of risks" where by individuals with a greater incidence of illness pay higher premiums. Reform seeks to achieve its access goals directly through actuarially fair premiums and accompanying health or income related premium subsidies.

2.2.6 The Concept of Universal Health Care for All Perspective

The new trend in the provision of health in the world today targeted universal health care for all. The problem remained with search for the most effective means of providing universal health care for all. These campaigns seem to be the latest all over the world. The campaign became necessary because developed countries like America are battling with the two extreme interest or goals. That is the interests of private insurer investors not to make loss and that of the citizen's right to affordable health care. The Canadian campaign for universal health yielded positive results with most citizens having affordable healthcare (Raynolds et al., 1993). The American debates for and/or against universal health seem to be an obstacle to better access to healthcare (Woolhandler & Himmeisten, 2002). The problem of choice among the competing world healthcare provision models of the developed countries seem to be one of the basic obstacle to providing an accessible and affordable healthcare to the citizens in the developing countries (Jutting, 2005).

Universal health care for all can simply be seen as a healthcare coverage for all eligible residents of a political region and often cover medical, dental, and mental healthcare. These programs vary in their structure and funding mechanisms (Russell, 1994). Typically, most costs are met via a single-payer healthcare system or national health insurance scheme, or else by compulsory regulated pluralist insurance (public, private or mutual) meeting certain regulated standards (Kala, 1997; Gail & Michael, 1999). Universal healthcare is implemented in all but one of the wealthy, industrial countries, with the one exception being the United States of America. It is also provided in many developing countries and is the trend worldwide (Woolhandler, 2009).

Universal health care as said earlier is a broad based concept that has been implemented in several ways. The common denomination for all such programs is some form of government action aimed at extending access to health care as widely as possible and setting minimum standard (Eugene & Linda, 1995). Most states implement universal health care through legislation, regulation and taxation. Legislation and regulation direct what care must be provided, to whom, and on what basis (Eugene & Linda, 1995). Usually some costs are borne by the patient at the time of consumption, but the bulk of the costs come from a combination of compulsory insurance and tax revenues. Some programs are paid for entirely out of tax revenues. In some cases, government involvement also includes directly managing the health care system, but many countries used mixed public- private system to deliver universal health care (Woolhandler, 2009).

2.2.7 Reform in Health Insurance Scheme and Universal Health Care Goal

The decision by any government to reform a system could be looked upon from two perspectives. First, the desire of reform is to re-invigorate the existing system to work efficiently and provide qualitative services to the beneficiaries more than before. Second, is to address the interests of the political ruling class or elitists and the business class for political gain. While the first one is geared towards solving universalistic interests, the second is highly individualistic. The two intermingle to shape the administrative decision to reform or not to reform in most of the developed and developing nations of the world. This is true, taking cue from the position of David (2009) in his discussion about health insurance reform in America. The position of David (2009) was also supported by Reid (2009); Cherlin (2009) in his statement, that :

“the president has been clear that while the single-payer system may work in some countries it makes the most sense for us to build on what work in the system we have and fix what’s broken. But he would at the same time agree that there’s too much waste in the system where families, businesses and government pay too much for too little, that’s why he is committed not just to expanding coverage but to reforming the health system to provide high-quality care at a lower cost to more Americans”(pg1-5).

Any health reform should involve paying primary-care doctors better so they don't have to rush through appointments to make ends meet. The reform should also consider the possibility of reforming the training process of most student doctors to reform education. This change in the training procedure will expose the potential medical doctors to know how to record patient history and physical examination. The resultants effects of not including reform goals in the training will include poor servicing. Patient in the long run will only be getting imaging studies and laboratory work instead of actual treatments. This will also results in not talking to patients before determining patient's level of sickness (Scheiner, 2009).

To tackle any health insurance reform problem, effort must be geared towards an integrated reform system. This is where the stakeholders in the health sector, government, finance, insurance and citizens joined hand in the design and implementation of a standard, all encompassing health reform program. An effort must simultaneously address, integrate, and solve the three major components of health care reform. This component includes financing, organizing the delivery system, and educating patients and communities, in order to facilitate behavioral and lifestyle changes (Joycelyn, 2009). The China healthcare reform laid the foundation of a collective healthcare system with four fundamental goals. The first level or goal was public medicine concern with serving workers and retirees. The second level or goal called collective medicine concerned with the employees of states and retirees of

states and collective enterprises with nominal fee charged. The third level was called cooperative medicine schemes collects funds from individual peasant's households. The fourth level includes fund from brigades (village), communal counties welfare funds and subsidies from various levels of government (Victor & Sammy, 1997).

Any new healthcare system reform must contain a provision for a public healthcare policy. The public healthcare policy refers to a single-payer system, where the government controls the funds. People who prefer private insurance can always purchase it instead of purchasing a public health care policy. In this public healthcare policy, we must provide every person with access to basic healthcare, including physical and cultural access through transportation and language sensitivity. We also must provide avenue for an endearing education to promote health maintenance, prevention measures, in order to thwart disease. The reform should also provide basic dental health care emergency services and necessary medicines as public option (Joycelyn, 2009).

While most developing nations look towards the health reform in America the study conducted by Jocelyn (2009) examines the Medicare system in U.S. and health reform system in particular. The study concluded that a public health care policy would likely be similar to purchasing Medicare. The results from Medicare had shown about 98 percent of every dollar paid in payroll taxes are spent on actually providing healthcare. In contrasts to a Medicare provision the private insurance companies' presents a figure close to 80 percent only spent on healthcare. The rest of the amount goes to administrative expenses and profits. There are many additions the insurance companies and healthcare providers themselves may not account for. The reform must

deal with the present fragmented complex system in which all the practitioners in the health insurance business have to negotiate, amend, or cajole payment from many different insurers. This gave both business and individuals to capitalize under the weakness of the American very expensive health care system to defraud the citizens. This system must be overhaul in order to ensure efficiency. The present system need total reorientation not just adjustment for it to function. Various systems were used before now such as health maintenance organizations (HMOs), public private organizations (PPOs), indemnity with an assortment of public health systems to catch some of our people who fall between the cracks, but all has failed. The attempt to reform has cost America precious lives, health and money of the citizens along the way, the option is an overhaul of the healthcare system to save lives, money and US business (Richard, 2009; Jojelyn, 2009).

Jojelyn (2009) and Silver (2009) responded to the debate on universal healthcare reform that universal coverage is essential to any true reform. The fear remained that the current plans being debated in the American congress fall woefully short of that goal. Expanding the argument and/or discussion on healthcare and safety reform, Jojelyn (2009) states that the present congressional budget office estimates that current plans in the senate come with a price tag of 1 trillion dollars over the next 10 years while still leaving 36 million without any coverage. American has already spent enough to insure every one right now. The amount spent so far is 21 times what the average industrials country spends. To pump additional monies into a system that over the last 50 years has proven itself wasteful, expensive, and complicated and which produces poorer health outcomes than other countries is as absurd as it is reckless. The only way we will ever control these costs is to utilize the purchasing

power of the federal government to negotiate with suppliers, pharmaceutical companies, doctors, and hospitals on behalf of all tax payers and demand quality, efficiency, and effectiveness for our health care dollars.

Silver (2009) submitted that America currently lose more than 30 percent of each dollar spent for private insurance companies overhead, profits and bonuses. The expenses stood at 600 billion dollars annually which should have been spent on providing healthcare to the citizen. The current plans aiming at cutting Medicare and Medicaid and taxing the health benefits of workers to pay for more private plans walk toward same result. Those solutions can only exacerbate the current problems and inequities in our system. We can work with the current system but that should not be private insurance. The Medicare as a programmed that already provides care for more than 44 million seniors with higher satisfaction ratings than employer sponsored private insurance plans should be sustained. Medicare enrollees have more choice of doctors and hospitals than those in network with limited private plans. With only 3 percent overhead the savings of a Medicare for all programs would be more than enough to cover all of the uninsured without additional benefit cuts or spending (Silver, 2009). According to Nicholas (2004) (cited in USGAO 1992; Nicholas & Blumberg, 1998), insurance market reform laws and regulations were passed in response to small business communities. Virtually universal plea for relief from repeated double-digit premium increases and insurers refusals to renew disruptions in the small-group market insurance, constitute one of the basic foundation for reform. Market regulatory power had rested with the states for some time, but the premium inflation of the late 1980s and early 1990s pushed many local systems to crisis point,

and, along with the recession of 1990 -1992, arguably contributed to the environment in which national discussion of health system reform were possible (Nicholas, 2004).

2.2.8 State Enforcement Mechanisms in Health Insurance Reform

The one way a successful reform will be implemented is with a formation of a simple, reliable, efficient and goal oriented mechanism of control. The states are charged with responsibility of providing such mechanisms. The control mechanism once put in place both government and a citizen stands to benefit. In Québec a case was taken to court by a citizen against the government that is Chaoulli vs. Quebec in Canada, on whether or not a citizen has the right to opt for private insurance, outside the universal health provision of the government (Analee & Tina, 2005). Choulli relied on the constitutional provision on the fundamental right of citizen to quality service and promptness to delivery of such service. The Court agreed and acknowledged the Quebec Charter of Human Rights and Freedoms. At the same time the Court acknowledge the importance and validity of the Canada Health Act. At least four of the seven Judges explicitly recognized the right of government to enact Laws and policies which favor the public over the private system and preserve the integrity of the public system. The court also concludes that unless the public system fails to deliver reasonable service as to quality or timeliness as the Court found in this case (Anne et al., 2004). Therefore, the Quebec judgment demand that reform process should recognize the citizen's right to quality service. In this case, the first consideration is that, each licensed insurer has to actuarially sign a statement that indicates the companies practice and prices in compliance with the state law. This is the link to the actuary or healthcare risk professional ethics and good standing within the profession and the company's reputation (Grollier, 2004).

The second healthcare reform enforcement mechanism is the examination audit. The audits are done by insurance department examiners through visitation of the insurer headquarters and examine all offers and in-force contracts. This is fairly rare and is increasingly triggered only by complaints. There is some doubt about the effectiveness of complaints triggers for the basic question is who would complain. No firm receiving a very low premium offer would complain, nor would those receiving a high one easily know that another firm got an ‘illegally’ low offer on the same policy form. The possibility could be that the agents and brokers might complain on behalf of certain customers. The complained by agents may not be enough to stigmatized the insurer without the customer. To a higher degree the agent may not complain at all instead new insurer would be given to the customer. Thus, some insurance providers may expect the probability of being traced violating the regulation, to this effect it is likely also that providers may likely rate bands to be very low. By this act they may not be charged of altering the pricing behavior posts perform.

Some state laws permit out-of-state carriers of insurance related to health to issue policies through state associates. This practice provides insurers with an escape prohibition on re-underwriting (Grollier, 2004). All these plus the “looser than intended and rate bands” described by (Hall 2000/2001) may have contributed to making measurement of the effects of reform to be very difficult to discern (Kala, 1997). More and more laws recently have been passed that specify a minimum time of visits to hospital. These are also defined by certain medical processes and the nature of provider networks that managed the healthcare firms established. The research conducted by Gail and Michael (1999) also revealed that the nature of network of healthcare providers and state regulations determine the minimum clinic visits.

2.3 The Available Regulation Mechanism of Health Insurance Practices

Limits on Pre-existing Condition Exclusions:

Most policies impose waiting and look-back periods to prevent people from buying insurance once they discover a health problem or severity of sickness. There are different types of waiting period. The policy that encourages less waiting period would always attract people with severe condition. Therefore the standardization of lengths of waiting time for all policies will encourage efficiency to avoid making pre-existing condition clause to be longer (Kanaki, 2004). At the same time making the waiting period to be too short may increase the risk of allowing those with high risks to take advantage of the voluntary purchase system against those with lower risk health condition. This arrangement has provided a kind of balancing up between lower premiums and access for the severely sick (Nicholas, 2004).

2.3.1 Guaranteed Renewal

Guaranteed renewal rules or regulation prevent health insurance providers from rejecting to sell health insurance to the same person after they have discovered that he had severe sickness (Kanaki, 2004). This is the other side of using pre-existing condition exclusion to deter people from buying only after the discovery of the insured's severity of sickness. Again in the absence of regulation, health insurance providers could offer lower charges without making reference to pre-existing condition provision. The regulations that stop look back condition could make it difficult for health insurance outfits to offer guaranteed renewal on voluntary basis. This could also make sustenance of low premiums impossible if other insurers did not also include it in their policy offers. The impact of the regulation could invariably lead to forcing all health insurance to provide guarantee renewal, forcing them to limit

their pre-existing condition, waiting time and look-back periods. It may probably increase small to costs of health coverage, but it offers quite a bit of peace of mind to those whose fate is tragic due to sickness (Nicholas, 2004).

There is a negative relationship between guaranteed renewal guaranteed issues in the following possibly problematic ways. With guaranteed renewal laws alone some health insurance providers have been reported to refused to register new entrants on their pasts policies and decided to offer the healthiest in that pool. These practices excludes the severely sick to have access to new product at substantially lower rates. It also encourage rising of technical claim of the risk pool which translates into chasing the sickest enrollees away under pretence that they cannot afford the premium (Patel & Pauly, 2002).

2.3.2 Guaranteed Issue

Guaranteed issue means that insurers cannot refuse to sell healthcare insurance product to interested applicant regardless of health status. Without the availability of restrictions on premium variance health insurance providers can always increase price of any product beyond the reach of most applicants. The insurers were using this tactic to protect their existing (underwritten) risk pools. Guaranteed issue laws are specifically meant to be applied to one or a few products in the market. The guarantee issue is analogous to guaranteed renewal. Without guaranteed issue the good risks can be segmented into non-guaranteed issue products reserving the guaranteed issue product for bad risks only. This will in the long run discourage pooling (Kanaki, 2004). The American health insurance and accountability act of 1996 have guaranteed all products in the small group markets. This is one of the closed way to effective

segmentation strategies as well as one of the guaranteed issue that actually encourages pooling. This practice increases premiums for those who were able to purchase low-cost policies without guaranteed issue. In essence all products of guaranteed issue are simply other products for community rating. Wherein all those who purchased such policy form and risk class would be charged the same amount (Nicholas, 2004).

In a sense guaranteed issue provided the platform under which health insurance provider's weeds out those they do not want to sell to. At the same time determine the price they want to offer the same product to different types of people. Guaranteed issue provides the basis on how many different explicitly priced categories of people risks classes insurer want to maintain. One important but unanswered question is the extent to which insurers implicitly pool and cross-subsidized different risk classes within their insured base across products line. Some empirical work indicates that the amount of implicit pooling even within the non-group market where guaranteed issue is fairly rare is quite substantial (Pouly & Herring, 1999). The amount of implicit risks pooling within employer sponsored health insurance where guaranteed issue is virtually universal is well known to be considerable (Monheit & Selden, 1995/1996). Therefore very healthy applicants could find a better deal as long as they remain healthy in more fully underwritten markets (Nicholas, 2004).

2.3.3 Premium Variance Restrictions

According to Nicholas (2004) limiting the variance in premium is one technique use to forcefully push risk on private agents. Those who voluntarily purchase insurance and health insurance will buy same policy form at different prices. Pure community rating seem to be the simplest approach which permits non existence of variance but it

is at the same time fairly rare. Much more common are modified community rating that carry along specific dimensions. For example, health status, age, gender or locations are used to set different prices. In addition to the above, many states constrain premium variation through the use of rate bands, which auspiciously limits the ratio of highest and lowest premiums for a given form. The ratio could range from 3:1 (plus or minus 50 percent) or 4:1 (plus or minus 60 percent) notwithstanding risks factors that may be allowed to justify the change or premiums offered. Again, any binding constraint on premium variation forces the beneficiary through an intermediary of health care provider to transfer expected expenses from the healthy to the sick. This actually discourages some healthy applicants to decline health insurance coverage. At the same time this process provides access to lower-cost products than would otherwise be available to higher risk. This is classic balancing in health insurance market reforms (Nicholas, 2004).

2.3.4 Slowing Enrolment Growth

Compliance by both insurance companies and health providers can be controlled through the use of slowing enrollment growth. This is possible where both government and private companies' provision of health care delivery products are under heavy tax payer's subsidy. Illegal or unwarranted acts are noticed from both enrollees and the participating health insurance outfits under heavenly tax paid insurance system. This is done through establishment of ceiling by identifying a number of enrolments that will be stagnated. The stagnation would be for a certain period of time for specific category of insurance products such as for old age, dental, pregnant woman care (Lazar, 2009). The whole essence of reform legislation and control mechanisms is to ensure that the basic goals of reform are achieved. The mechanisms are meant to

tackle certain irregularities associated with the insurer's practices that tend to negate the three objectives of reform. The three basic goals includes, making insurance premium more stable, insurance market stability and sustainability in the long run and make health insurance more affordable for the sick person (Nicholas, 2004).

2.3.5 Community Rating

This is another method use by the state to ensure coverage for all. Community rating entails selling the same product to the subscribers at the same price without variation due to age, gender, location of work, existing health status or look back period. This instrument was extensively used in the New York, and Pennsylvania states in the US to ensure equity and access in health care provision (Kanaki, 2004). A critical look at the national health insurance scheme or system practices even in the most developed and advanced system of governance and democracy like the USA proved ineffective. This is so considering the heavy investment and time spent organizing the system yet with poor results. The option should be that consideration must be given to peculiarities in different countries (David, 2008). This is also attested by the shady practices recorded by the insurers against the insured in the USA, during the last 50 years of insurance practice in America (Hilzenrath, 2009). Health Insurers have forced consumers to pay billions of dollars as medical bills that the insurers themselves should have paid. Insurers have put profit first before health of the applicants. Insurers have systematically underpaid enrollees for so-called out-of-network care. This is a scheme where insurer's use to defraud consumers by manipulating reimbursement rates (Cuomo, 2009).

According to David (2009) many Americans pay higher premiums for the freedom to go outside an insurer's network of doctors and hospitals. When they do (Americans) health insurance providers typically pay a percentage of what they (insurers) call the "usual and customary" rates for the services. How insurers determined the usual and customary rates had long been opaque to consumers and difficult if not impossible to challenge. To further elaborate on the problem of public-private partnership in the provision of health insurance to the citizens, the American system has a lot of lesson for upcoming systems, like that of Nigeria and Malaysia. Potter (2009) confessed his dilemma as an insurance public relation executive. The American insurer's perpetuated injustice against enrollees in the process of health insurance provision.

Potter (2009) stated that, I'm the former insurance industry insider now speaking out about how big-for-profit insurers have hijacked our health care system and turned it into a giant ATM for Wall Street investor. This is how the industry is using US massive wealth and influence to determine what is (and is not) included in the health care legislation members of the congress are now writing. So I was in a unique position to see not only how Wall Street analysts and investors influence decision but also how insurance companies' executive carried out behind-the-scenes 'Public Relation. 'The lobbying campaigns that use to kill or weaken any health care reform efforts that threatened insurers' profitability" (p1-5.)

With the revelations from (Potter, 2009; David, 2009; Kay, 2009), in the American system, Nigeria and Malaysia would have acquired enough experience to venture into healthcare reform. David (2008) suggested that the option that best suit Nigeria should focus on, local peculiarities, income and family spending. This option should be the major decision tool to use whenever a decision to venture or not to venture presents itself to the two countries. Whichever way venturing into health insurance issue must be subjected to empirical scrutiny before the final decision is arrived at. Thus, part of the effort of this research is to provide meaningful literature that will open gates to further research on the issue under discussion. Potter (2009) further

elaborated on the health insurance practice as seen and practice by the so-called advanced health insurance industries.

“that I also have seen how the industries practices especially those of the for-profit insurers that are under constant pressure from wall street to meet their profit expectations-have contributed to the tragedy of nearly 50 million people to being uninsured. This has as well led to the growth in the number of Americans who because of insurer now are required to pay thousands of dollars out of their own pockets. An estimated 25 million of retirees now fall into that category”. (p 1-24).

Worst still according to Portter (2009), in the past few years,

“A steady movement away from the concept of insurance and toward “individual responsibility” a trick used a lot by insurers and their ideological allies. This is playing out as a continuous shifting of the financial burden of health care costs away from insurers and employers and unto the backs of individuals. As a result more and more sick people are not going to the doctor or picking up their prescriptions because of costs. If they are unfortunate enough to become seriously ill or injured, many people enrolled in these plans find themselves on the hook for such high medical bills. These alone push many into losing their homes to foreclosures or being forced into bankruptcy”. (pg 1-24).

Potter (2009) concluded by saying,

“Whenever you here a politician or a pundit use the term ‘government-run health care’ and warn that the creation of a public health insurance option that would compete with private insurers (or heaven forbid single-payer system like one in Canada) will “lead us down the path to socialism that the original source of the sound bite most likely was the wall street custodians (p 1-5).

2.4 Argument Against Public Provision of Health Insurance Care

The recent debate on the negative consequences the American government and people are facing today, due to the total surrender of their health insurance to the private sector should be an eye opener to most countries that want to venture into health insurance deregulation. There is nothing wrong with control regulation; the welfare like healthcare provision should replace profiteering tendencies. Sylverson, Charkin and Atrash (1991), argued that, policy debates about universal insurance typically do not even query whether or not insurance would improve health of the population.

Some studies have reported positive effects of private insurance but not public insurance (Catherine & John, 2000).

Health insurance policy in the developing countries that is fully for profit without much government intervention through subsidy may amount to making more citizens not to have healthcare. Any health policy without taking into cognizance the poverty level of the citizens may increase the number of citizens with healthcare access and affordability difficulty. This is true considering the total expenditure of Nigeria government to health in 2008 which is 4.6 as percentage of GDP. The expenditure of the federal government in same year excluding the states and local government stood at 1.5 percent of the GDP. Assessing the newly created National Health Insurance scheme revealed a total of 4.5 million people coverage out of the 152 million Nigerians (Dogo, 2009). At the same time the total public expenditure on health in Malaysia is 1.4 percent of GNP and 1.34 percent of GDP in 1996. Recent record had shown Malaysia spends 2.4 percent of GDP on health. Available records revealed that private insurance account for almost 40 percent of total health expenditure in the form of direct medical expenses incurred by individuals as well as payments made by employers (Abdallahi & Ng, 2009).

According to Paul (2009) the great danger is that the public plan could end up with a high cost population in a system that fails to compensate adequately for those risks. Private insurers make money today in large part avoiding people with high medical costs. The private insurers relied on healthcare reform system with public option or plan to dump the severely sick enrollees. The risks enrollees in essence refer to those beneficiaries that develop serious illness that require constant attention. The insurers

tactfully avoided insuring such beneficiaries, instead concentrated on young able bodied beneficiaries that have lower risks or vulnerability. Professionally, this is referred to as adverse selection or exclusion of certain category of sick people by health insurance providers from the benefitting lists.

Entry into the public plan for the eligible employed would be a two-stage process. First, employers would choose between paying into exchange and buying insurance directly. The exchange is where there is the pool of insurance contribution to cater for all sicknesses that are serious. This is where complimentary contribution will subdue the excesses in case the illness will be above the contributor's payment to the pool. Unless the exchange is such a good deal that nearly all employers take it, firms with a young healthy workforce would tend to buy insurance on their own. This is so, because the young have fewer tendencies to be sick, that is risk factor consideration by the employer. At the same time those with higher-cost employees would go into the exchanges pool. As a result the pool would suffer adverse selection by getting stuck with high-risk population of enrollees (Paul, 2009).

Second, within the health insurance exchange the government-run plan which would compete against the private insurers, yet it would likely abstain from the marketing strategies used by private plans to avoid high-risk enrollees. Thus, double jeopardy of adverse selection could then more than nullify the advantage the public plan derives from its lower overhead. As a result of this less money will be going for salaries, profits, and marketing of the public owned healthcare insurance scheme (Woolhandler, 2009).

To further show case the position of this school of thought who oppose to the public provision of health care Woolhandler (2009), states that, there is a delicate political problem associated with public provision of healthcare. The unconstrained nature of the public plan could derive private insurers out of business and as well over-constrained the public plan. This could go into a death spiral itself as it becomes a dumping ground for high-risk enrollees. The resultants impact could be rates rise that is governmental expenditure rise due to high-risk patient dumping by the private insurers. The system could as well lose its appeal to the public at large that is inability to serve effectively. The advantage could be that it will create fair system of public-private competition. Given the public plan just enough power to offsets its likely higher risks wouldn't be easy even if it were up to neutral experts which it isn't (Scheiner, 2009).

The antagonists of the public provision of healthcare confirm their unrestraint desire to cripple the public plan by all available means. The available literature shows that, they do that through a lot of ways to defeat reform not just by blocking it entirely but by setting it up for failure through participation in its debate, sponsoring bills, disorganizing the market and a number of other means. As an antagonist once presented in the literature that, "those who think a public plan is a good idea no matter how badly designed are not thinking ahead (Woolhandler, 2009, p 88-89).

Scheiner (2009) also holds on to this school of thought. In his own submission in opposition to public plan, Scheiner's position remained that, public plan reform doesn't go far enough. There could be support for it only by those who cannot afford to pay for HMO. The fear will be that, it will be watered down or not happen at all.

The submission that the insured have been scared into believing that they will lose the coverage they already have if a public plan is established is enough to make it fail. This plan does not consider those uninsured citizens, to confirm that the public plan may not be the best. As a healthcare provision practitioner, it known to us that, those who lost their jobs still come with their drug samples and are been attends to by their network.

While the argument against the existence of public sector provision of healthcare is on the high in the developed countries, the condition of their healthcare system is still better than that of the developing world. A comparative analysis of the two may not serve any scientific consequences. It may probably show the degree of developmental gap that exists between the two extremes. To some degree the comparison may discourage search for solution to the problems associated with the developing countries health care delivery system. It may otherwise also serve as a key factor in determining the starting point of knowing which option is best for which country considering the resources availability and time. Therefore, the developing countries should devote more time to evolving an independent or a hybrid that will be cost effective, efficient and easily comprehensible.

2.5 Argument in Support of Public Provision of Health Insurance Care

Health insurance expenses are the fastest-growing cost component for employers. Unless something changes dramatically health insurance costs will overtake profits (Joycelyn, 2009). The public healthcares provisions refer to single-payer system where the source of paying the practitioners should be single handedly the job of the government. The financing will be from the pool of both the employer and the

government to cater for every citizen with no restriction on age, geographical location or type of sickness. This system also provided liberty to the patients to see and attend to the hospital or clinic of consumer choice. This is the single-payer principle, where restriction, overcharging of premium will cease to exist, where access, affordability and equity would be ensured (Joycelyn, 2009).

Uninsured Americans receive less medical care than people with either private or public insurance. They have lower utilization rates for physician's visits and hospital services. This is the present condition of the American health system and the only option to reverse this trend is single-payer healthcare system that is healthcare for all (Davis & Rowland 1990; Hurd & Mac-Garry, 1997). In America as at 2004 payrolls levies for health insurance accounted for only 62 percent of the general tax regimes receipts. At the same time supplemental levies were estimated to be at 7.5 of income, 6.2 for retirees, of which 5.25 percent went to health care. Yet, deficit in health care continue to rise, in 2004 it was projected to be 11 billion Euros, 29 billion in 2010, and 66 billion in 2020 (Paul, 2005).

Richard (2009) using the literature presented quite a number of submission from the professionals especially in American market. The American health insurance market is so volatile. The only solution to reversing the volatility of the insurance market is by establishing. While others vehemently opposed such conclusions, and conclude that, it will never solve the problem rather it is another expenses without commensurate result (Richard, 2009).

The system that encourages for-profit health care has morphed into an uncontrolled hierarchy of greed that has escaped from the normal restraints of personal ethics, compassion, empathy and basic unqualified concern for one another without reservation (Richard, 2009). Research findings have proved that the growth of healthcare expenditure surpassed the growth of the economy. Consequently payrolls in the US were unable to provide the monies required to pay for the healthcare consumed (Paul, 2005). The feeling should be that social justice should leap to the forefront of our decisions when an individual has a health problem. Accordingly it is obvious that universal health care has the support and it is not surprising that polls for physicians, nurses, and the general population concerned remained tacitly behind it (Richard, 2009).

Richard and Jocelyn (2009) Americans postulates that, the decade of waiting for inadequate healthcare and its shameful financial effects on the middle class is gone, the only option is single payer. The previous system recorded drain on state treasuries, its primary etiology in bankruptcy and its continuous release of wealth to special interests not the citizens. All the mentioned problems are on their heal with the renewed discussion on healthcare insurance. The literature shows that, the American system of healthcare has already brought the nation to its knees by mammoth fraud, greed and incompetence from the insurers and their allies. The private health insurance practice have tended and also forced the system to depend on employers to carry much of the burden of health insurance over the years. The options remain single-payer and no more.

Richard (2009) on final note from the literature on the matter relating to single-payer concludes that, the economic crises of the American states which affected other part of the world, was partly due to the inability of the American government to control the excesses of the insurance companies. The collapse and the economic crisis of Enron, banks, brokerages, insurance companies, a protracted automobile industry collapse, and stunning ponzi schemes in America was the resultant effects of insurers activity. Single-payer is a great way to start, a great way to express the confidence and show the tough system is internally and outside it. All what the system is trying to do is to ensure fair and inexpensive accounting of expenditure of health care funds. This is a single-payer, not socialized medical.

Woolhandler (2009) concludes that private insurance have done the system no good and deserve no sympathy. In his statement elaborating on the change that will evolve if single-payer is accepted states that, in contrast, a single-payer reform would radically simplify the payment system and redirects the vast savings to care. Most countries in response to the health insurance crises in America resolved to embark on reform to ensure access to their various residents. France is not an exception in 2004, in an attempt to save its ailing health insurance system, adopted a legislation design to decrease health expenses, increase revenues to funds and improve quality of care (Paul, 2005). France had for all practical purposes a single-payer health insurance system with control of funds centralized. These funds handled claim efficiently, conveniently, and cheaply. The general funds administrative overhead was about 5 percent as compared to 1.3 percent in Canada, 3.6 percent in the US Medicare only, excluding Medicaid and private insurance (Paul, 2005).

Opponents to single-payer mischaracterized the proposal as the government “taking over” the delivery of health care. In reality this is to the contrary, single-payer is a concept where by health care services would pay by a single source. In the contests of the American reform it is an improved Medicare for all. Long time observation had shown that Medicare is much less costly to managed compared to insurance and HMOs. Overhead costs alone for managing Medicare stood at 3.1 percent of total healthcare costs compared to the 26.5 percent associated with investor-owned insurers. This result was revealed by a study published in the journal of the (American Board of family practice, as cited in Fein, 2009). The study further stated that that opposing Medicare system believed that it would be too costly, instead single-payer would save the nation 400 billion dollars in overhead costs alone. It will as well provide for the 45 million underinsured accesses to care, and filling in the gaps in care encountered by underinsured people. Therefore, maintaining the status quo will be much more costly than doing nothing. This is attested by a recent study published by the American journal of medicine as cited in (Fein & Frost, 2009). Researchers from Harvard and Ohio University found that over 60 percent of all US bankruptcies in 2007 were driven by medical incidents. The rate reflects a 50 percent increase since 2001 (Fein & Frost, 2009).

Reform in the real sense of it may not necessarily be the final solution to the present uncertainty associated with health and safety of most citizens. To a greater degree an attempt at finding solution to health delivery problems may at the same time serve as severe obstacles that may hinder achieving a successful health care delivery in the developing countries. Reason being that over dependence on the model from developed countries may hinder the evolution of local and better brand or model. This

intellectual dwarfism succeeded in making our intellectuals to be surrogates to western ideas in place of exploiting the talents around them. This singular phenomenon is the real meaning of counter productivity in the context of this research. Our total reliance on a model that is not indigenous symbolizes intellectual enslavement. A community base healthcare insurance system that is culturally based may serve as an alternative under consideration as suggested by (Jutting, 2005), A better alternative to state or market-based social security or insurance system are systems based on reciprocity and solidarity at household or community level (Jutting, 2005). More so a critical look at the reform in some of the develop countries present negative than positive result. This may prompt researching minds to either use the data available to make conclusions or suggest further research in order to present a fair assessment. Barbara (2004) in her assessment of the effects of health insurance reform on small-group market concluded that, as a consequence, a small but growing literature has arisen to analyze these reforms. Overall, most studies find relatively modest effects of reform on insurance coverage. While reform has not resulted in adverse selection death spirals, as feared by critics, it has also not led to substantial improvements in insurance coverage and access as was intended (Barbara, 2004).

2.6 What the Reform Intend to Achieve

The essence of health insurance reform is to ensure access to healthcare services to the entire sick resident in an area, state, or country. It is also to ensure affordability of such services by the citizens and the government should have fewer burdens. The reform at the same time is focus on reducing cost of healthcare provision and ensures equity among citizens. Health is an aspect of safety, the function the state naturally owes responsibility to its citizens. An attempt to reform by the government may be an

effort towards fulfilling the states function to the citizens. There are considerable numbers of literature assessing the success of health insurance reform in ensuring, access, equity, affordability, efficiency and cost effectiveness. There are as well arguments both for and against the state intervention in health insurance market. This section will provide the different perspective of researchers on the subject under study.

2.7 A Perspective on Accessibility and Affordability in Healthcare Reform

Reform improves accessibility and affordability by relaxing constraint on access to coverage imposed by pre-existing health condition. This is done basically by limiting the length of waiting and look-back periods. It is also done by addressing disparities in the cost of coverage between high and low risks groups in the insurance markets (Alan & Joel 2004). Another finding by Susan and Fengyu (2004) reveals that substantial percentage of rural women access maternity services in rural China, roughly 60 percent use prenatal care and approximately 40 percent deliver with professionally trained assistance (Marrie-Pascale, Pierre-Gerlie, Horward, & Elizabeth, 2007).

The goal of most health insurance reform is to improve care services and assure accessibility. But most reforms according to Jocelyn (2009) did not leave behind health insurance that is equitable, coherent, comprehensive and cost-effective, nor is there choice for consumers. Quality of reform would only be attested, if healthcare provision improve and access assured to every patient as well as a medical record, where care would be patient-centered coordinated and cost-effective (Joycelyn, 2009). Some researchers like Barbara, Leiyu and James, asserted that, the contribution of

primary care in the reform and the general health systems and health includes provision of greater access to needed services, better quality of care, greater focus on prevention rather than cure, early management of health problems, the reduction in unnecessary and potentially specialist care, and finally, the concentration on the management of the person rather than disease (Barbara, Leiyu, & James, 2005).

The goal of most reform as pervaded in the literature remained that of making healthcare delivery services, accessible, affordable and equity should be sustained (McCanne, 2009). The intent of state health insurance market reform has been relatively straight forward. To assure access to affordable health insurance by mitigating questionable selection and pricing practices by insures (Alan & Joel, 2004).

Richard and Hall (2000) conducted an empirical research with eighteen insurance agents solicited for small business of three employers with one of whom had a chronic condition. The study showed that agents were highly compliant with regulation, even when it comes to a very small group with medical problems. This study presents evidence that health insurance was accessible to those with chronic medical condition, as against the uproar by the opponent of health insurance deregulation.

Chollet (2004) in her argument in relation to accessibility and affordability stated that, it is unclear whether state reforms to increase access or affordability may increase market concentration. This may be as results of marginal carrier's migration and larger insurer pursuance of greater market share. In general, constraints on underwriting and pricing encourage insurers to gain market share to withstand shock

that they are forbidden to screen out. Barbara, Leiyu and James (2005) argued that the challenges awaiting any healthcare delivery system be it primary care or general care, remain that of recognizing and managing the co-morbidity. Co-morbidity refers to dual illness on one person at a time, mostly associated with old residents or citizens. It is as well by extension referring to prevention of adverse effects of medical intervention. Intervention such as drugs reactions, maintaining high care quality characteristics and improving equity in health services and in general, the health of the population (Barbara, Leiyu, & James, 2005). Chollet (2004) compiled a report to the congress describing severe condition of health insurance market in seven states of the United States of America. Studying the same health system the US General Accounting Office in 1997 reported denial to access rates by large carriers that ranged as high as 33 percent. In another survey to test the viability of the reform policy in the United States, a survey of ten states individual insurance markets in 1998 was conducted, based on a stratified sample of insurers in each state. Chollet (1998) observed typical rate increase for health status that ranged from 75 percent to 200 percent in most states where individual coverage is not a guaranteed issue. Insurers themselves constrained rate differences by denying coverage to individuals with the most costly health problems or by issuing exclusion riders. In trying to suggest a solution to the issue of denial to access Barbara et al. (2005) proposed that, for an all encompassing delivery of healthcare services, the community health centers (CHC) should be expanded. There should also be an improvement on the strategy of reimbursing the CHC physicians and more rational basis for referral and improvement on the coordination between primary care and specialists practices. If all these would be affected the reform will make CHC more challenging and will tailored physicians to the area of needs. Providing financial incentive of practicing in an undeserved areas

reduce the amount of paper work through electronic medical records. Finally this will offer more funds for research in primary care delivery system (Barbara et al., 2005).

Critical look at the results of most of the researchers reveal an inconsistent presentation of stable data with certainty on whether the reform succeeded in making health insurance accessible and affordable to the sick. There is therefore much to be desired in the analysis of the success or failure of health insurance reform in most of the developed countries that practice it. Much is desired on the performance evaluation of the operation of most of the mechanism of control in the system, to know which of the mechanism work best in which market. This is because in some states in the US that practice guaranteed renewal, guaranteed issue and community rating, in most of the researches, the three are intermingling within the same market. This what make individual assessment of the mechanism difficult and results uncertain. Considering coverage among sample of adult with chronic conditions in two communities in Indiana, Stroup (2000) concluded that, chronically ill individuals, when they were said to be insured, were systematically underinsured. This study attributed the significantly lower level of coverage reported by individual with chronic conditions through permanent exclusion riders used by the insurers.

Deborah (2004) conducted a study evaluating the impact of individual insurance market reforms with respect to measures of supply in the individual market between 1995 and 1997. Unlike earlier work, this study constructed continuous variables for restriction, on pre-existing condition exclusion and rating restrictions, and differentiated all product guaranteed issue from some other products. The study found that guaranteed issue products increased market concentration in the states that applied this control mechanism. The study also showed that restrictions on health

rating both increased market concentration and reduced commercial insurer's market share. However ongoing research by Deborah (2004) has failed to find any relationship between access regulation of any kind and insurers propensity to withdraw from markets. It as well did not prove the claim of the antagonists that the lower risks will withdraw from the insurance, which will invariably make the insurers increase the premium in order to meet up with service to their beneficiaries.

Chollet, Kirk, and Simon (2000), estimated the effect of various access regulations on the provability of individual coverage among persons aged 18-64 during 1995-1997. The study was based on the condition that the respondent were those who were neither having employer nor public coverage. Again the study uses continuous variables to measure rate regulation and constraints on pre-existing exclusions. The conclusion of the study was that guaranteed issue of all products reduced the probability of individual coverage by nearly eleven percentage points, even though guaranteed issue of some products did not. The other side of the study showed that neither rates bands on health and age, nor other forms of regulation, including pre-existing condition exclusions, had a significant effect on coverage. Examining New Jersey Reform Swartz and Garnick (2004), assessed whether implementation of individual health insurance coverage program (IHCP), has a reform effort that included guaranteed issue and pure community rating. To see whether the effect led to adverse selection in the individual insurance market situation a research was conducted. The study found that there was no early evidence of change. Work by Monheit and Joel (2004) has found that new enrollees to the individual health insurance coverage program appear to be significantly older than earlier enrollees

more access to old age. Even though a closer look suggested that the IHCP may be retaining adverse health risks, but it is unclear whether this is as a result of reform.

Finally, Deborah (2004) concluded that, the literature was inconsistent with respect to the impact of access to reforms coverage. While early studies indicated that guaranteed issue reduces individual coverage presumably because insurers raise premiums to accommodate the entry of bad risk. More recent studies found evidence that either guaranteed issue or renewal affects the probability of coverage or biases in enrolment in individual health insurance market as a whole. Another argument believed that, although insurance improved access to and use of health services, better health depends on the kinds of services received. Access to regular source of care is a critical characteristic of a good healthcare delivery system (Starfield, 1998).

Rate regulations establishing specific comprehensive rates bands may affect coverage. Specifically, community rating prohibiting use of health status as a rate factor may increase coverage among individuals with health problems without discouraging coverage among the population as a whole. However, comprehensive rates band in the limited pure community rating may drive average premiums higher and discourage coverage among adults who otherwise were uninsured (Deborah, 2004).

The convergence theorists argued that, in the health care delivery system today, convergence hypothesis remain valid as the only option for an efficient, accessible, affordable, and cost effective health care delivery system. The hypothesis, unlike the misconception assemble by its opponents, recognized the importance of the existence of local cultures, values, social systems, and politics or policies of the converging

nations. It also acknowledges the importance of competition among health occupations in defining and controlling division of labor. The theory mentioned the factors that make convergence theory relevant in our search for a reliable health care that will guarantee access. These factors include medical knowledge and technology, such as genetics, medical imaging, microsurgery, transplantation and in technical ability to sustain life. Other factors includes, the impact of national economy on health services development, changing demography, such as ageing, education, changing pattern of disease, mass communication, and rising public expectations. Serving as converging factors includes politics and state health care systems development or convergence factors (Mechanic & Rocheport, 1996).

Buchmueler (2004) cited an example with New York law, which was enacted in 1993, prohibiting insurers from denying coverage to any small group or individual and requires that premiums be community-rated. That is for a given policy all subscribers must be charged the same price, regardless of age, sex or any other predictor or expected medical expenditure. While it was community rated in New York, in New Jersey it was the combination of both guaranteed issue, community rated basis in the individual market. At the same time in the Group Market it was band rated, meaning that the premium varies by age, gender and business location of the enrollees.

In an empirical research conducted in order to confirm the effects of reform on improve coverage or access, results signifies divergent position with no single factor attributable to the contradicting results. That is to say, there was no degree of certainty that reform successfully improved accessibility for both categories of the insured. In the New York there was a result showing an improvement of access for the high-risks

and a negative increase payment to the lower-risks. This evidence presents a system of cross subsidization for the higher risk by the lower risks. To this level an internal system compensate for the increase of the high-risks enrollment (Deborah 2004). The resultant effects of a near real policy effects of pre-and a post-intervention period is an issue that is not extensively studied in the small-group reform literature. Generally, studies vary within the time periods analyzed; it is almost possible to predict the extent to which this study affects the results because of wide differences across studies and in research design (Alan & Joel, 2004).

Most studies integrate reform results from both large with that of small industries in order to assess the impacts of reform regulation. A study of this nature hardly give a reliable conclusion, reason being that, the bigger firms are usually unaffected with the health insurance reform regulation. And from the literature some studies integrated employees of small and large firms in this way (Sloan, 2004). Other studies recognized that since larger firms should not have been impacted by the regulation, they were categorized as alternative control group for testing out causal effects (Monheit & Schone, 2004). In another study in trying to determine best method of assessing reform effects, confirmed that multiple control groups may have better estimates of a treatment effect. In the long run this will provide a means of testing the practicability and face validity of research results. In general, there has not been single acceptable estimate of reform effects. Though some studies preferred using one method to contrast reform effects in small industries from large ones, other studies may not take that as rule of thumb (Simon, 2004).

Simon (2004) stated that, to conclude using a prediction of a pre-reform and post-reform data comparison or from reform of small-group coverage in small firm and small-group coverage in bigger firm may not give best results. Some studies used simple comparison and concluded that, small group reform laws led to a reduction in insurance coverage. To just agree that if the reforms had not been put in place coverage would have stabilized for small firms in reform states is to say the least that the reform rather than solving problem generated new one. Several other studies showed continues fall in health insurance enrollment among large firms in reforming states. In contrasts bigger firms in the non-reform states had also presented the same result. This may simply epitomize negative result; while possibly this result may not be compelling. The main reason may be that the negative reform effect was driven by the unique trend or lack thereof for small firms in the non-reform states.

Previous studies had showed that reform ensured and improve access to older members but not comprehensive access. This is because, even in the states where legislation was enacted, age and gender are the basic tools use in determining premiums. For example it is least expected for a young enrollee within the age of 25 years to anticipates premium increase, due to his lower risks expectancy (Sloan & Conover, 2004). In a similar study conducted in Connecticut, New York and New Jersey the results remained the same (Zuckerman & Rajan, 2004).

Buchmueller (2004) argued that New York reform using community rating law in 1993 had large and immediate impacts on premiums in the individual and small group markets. An analysis presented by the US states department of insurance showed that, 40 percent of individuals saw their premium fall by comparable amount. As would be

expected, prices increased the most for younger consumers and decreased the most for older consumers. This Means that more access for older and high risks due to cross subsidy by the younger enrollees. Price changes appear to have been less dramatic in the small-group market because of the pooling of older and younger workers within firms.

This study provides a clean test for the hypothesis that community rating reduces coverage by driving lower-risks young consumers from the market. This is usually done through increase in premium. These behaviors indirectly deprived young enrollees of access due to the said high or premium increase. The death spiral hypothesis predicts that younger consumers should be more likely than older ones to drop insurance coverage, causing the age distribution of the insured population to shift to the right that is more to the older enrollees. This scenario occurred in both small-group insured individuals, as well as small-group insured in both large firms and small firms in New York and Pennsylvania (DiNardo & Buchmueller, 2004).

Monheith and Schone (2004) on the other way round took a similar though a more encompassing approach to testing for differential effects of reform on access to healthcare, by using consumer risks status. The data sets used include information on health status and medical care utilization. This was done by creating a proxy based expected medical expenditure. This approach was considered to be more relevant concept of risk than age and sex, even though this measure was strongly influenced by those variables as well. This research presents a number of different regression specifications, which presented a varying result on how treatment and control groups are defined. The results indicates a no statistically significant effects of small-group

reform for either low-risk or high-risk groups. In some cases the statistically insignificant differences between the two suggest that coverage among low-risks fell relative to high-risks. The result is consistent with the death spiral hypothesis. However, in many cases the difference goes in the other direction, a result which is probably best explained by chance.

2.8 Conclusion from Conceptual and Empirical Literature

The essence of conducting research on health insurance reform in Nigeria and Malaysia appeared more relevant with most of the available literature assessing only the American health insurance reform. The plan on ground in the two countries to succeed in enrolling a good healthcare delivery system for all in the nearest future, make this research the most relevant today. The literature also confirm the problem statement position that most of the research concentrated in treating local or microscopic health insurance issue at home without opening up to look outside other boarder. Worst still, there is hardly any comparative studies between the states that enact regulation to determine which one succeeds most and which is worst up within the US states. The only comparative study throughout the literature remained that of determining whether the reform regulation has effects on access or affordability not real success versus failure analysis. A macroscopic comparative analysis with an outside system has an advantage of providing an immediate solution to an enigmatic problem or may confirm the superiority of the system of either of the two countries. Such research will also help the policy makers to make excellent conclusions on whether to fortify the existing system or discard it. The research of this kind can also highlight some areas that need overhaul in order to get results. Therefore, comparative

research is preferable in a complex web like this where different society's developmental indices will be compared.

With all the results of the findings in the literature, there is no proper conclusion on whether the regulation totally deters some category of consumers from getting access to a product of their choice, but a movement was generated due to high increase of premium on the young and lower risk consumers in some states. The lopsidedness of the policy and the liberty giving to insurers to charge premium base on age, gender and location of employment show the weakness of some of the health insurance regulation. These weaknesses serve as an obstacle to achieving maximum access for prospective consumers. The future researches should also devote more time in taking stock of most of the weaknesses of health insurance regulation in ensuring access and affordability status of health insurance to the citizens.

2.9 Equity and Efficiency in Health Insurance Sector Reform

The essence of state reform is to ensure both efficiency and equity in the provision of private as well as public health care services to the sick members of the society. From an efficiency point of view and/or perspective, reform has sought to create a market environment in which insurers would compete on the basis of health plans, cost, and equity, through improved risk management rather than through favorable risk selection (Hall, 1992). From an equity point of view, according to Stone (2004) reform has sought to encourage a retreat from the co-modification of health care and health insurance only. Recent attempt advanced into promoting an alternative vision in which the distribution of coverage is consistent with principles of social solidarity and mutual aid rather than actuarial fairness (Oliver & Fiedler, 2004). The only

innovation which will help in making the adaptation of reform to succeed in order to meet up with the goals of equitable access and affordable drugs is an evaluative reform. In addition the reform should focus on meeting the challenge of cost containment and efficient delivery of services. The accompanying policy of reform with evaluation and adjustments during implementation guaranteed target achievement (Marie-Pascale et al., 2007).

The concept of equity and efficiency and indeed access has been subjected to long and all inclusive argument and to a greater degree confusing and eclectically defined. The questions especially about equity always refer to equity of what? Compared to what? For whom? Under what condition?. These are some of the questions that have occupied a range of academic minds, from philosophers to economists and public policy analysts. Most of the time confusion arises in the conceptual definition of equity and fairness in the context of health care discussion and analysis (Johansson, 2004). The philosophers such as Rowls (2004) expound that equity occurs when all individuals are assumed to be behind a veil of ignorance that is unable to know their own life conditions or those of their peers. In essence this is suggesting that a state of social contracts model will one day evolve. Under this condition everyone will be guaranteed fair equality of opportunities for all in the pursuit of life's essentials components, including health care (Churchill, 2004).

The position of economists slightly departs from that of Churchill's as well as Rowls, equally. Culyer (2004) especially refer to health status equality to mean service quality received outcome equality and equality of funds expended. While other economists simply see equality in health care services delivery as horizontal equity,

that is equal treatment of equals and vertical equity as unequal treatments of unequal's (McGuire, Henderson, & Mooney, 2004). While public policy analysts like Deborah (2004) established that equity has relationship with the environment where it exists and its pre-existing culture and as well as social dimension of human behavior in such an environment.

From the above divergent positions, definitions and perspectives, one has no option than to accept the eclectic nature of equity and access in the context of measurement and analysis of the concept in healthcare insurance provision discussion and conclusions. Therefore the operationalization and utilization of the concept defend on the existing culture, operational environment and as well as the social settings and the dimensions analysis. These also defend on the economic classification, which is either horizontal or vertical economic categorization. This is what will advance an analysis that may guarantee the operationalization of equity under what and which Model of healthcare delivery system. The model type is a factor to consider in determining what equity means. In social insurance model (SHI), solidarity concept explicates the concept of equity. In the American model, government subsidy through tax-redistributive measure is basically the definition of equity. To the private health insurance provider's efficiency and timeliness of service is conceptualized to be the equity of service to the sick. To the supporters of single-payer system model, non-distinction between the upper and the lower classification of the sick person in treatment and concentration of the whole sick-fund to a single-payer usually the government is their definition of equity in healthcare delivery system. Therefore, an attempt in our research will be made to pave way for further research and debate on what equity stand to mean in health insurance system or scheme.

Thus, equity may refer to equity of funding, out-of-pocket payments, equity of access and equity of expenditure relative clinical performance. It may be equity of resource levels and utilization rates, to relative longevity and reduction in child or infant mortality rates. It does not really matter; the definition is relative to situation, model, time or environment where such definition will be applied.

The dividing line between efficiency and equity may be thin, because what destabilizes efficiency may also destabilize equity, and the relationship may not necessarily be vis-versa. Thus, efficiency may not be as eclectic as equity, but it is multivariate in nature. It may refer to technical efficiency that provide laboratory test and result within the shortest time possible, this in essence will allow easier diagnostic procedure and final determination of sickness or otherwise. It may as well refer to efficiency in terms of reduction of waiting period, efficiency in terms of cost/expenditure of health care to both government and individual or corporate bodies. Efficiency may be in relation to resources utilization levels and rates. Efficiency could be in reduction of administrative/bureaucratic bottle necks and costs or it may be relative to clinical performance and referral system (OECD, 2004).

2.10 Control Mechanism and Regulation of Health and Safety Reform

Regulation is one of the major variables in healthcare and safety reform. The basic tenets of regulation and control mechanisms are not only applied to the regulation and control issue by the states and/or government. The regulation also encompasses self regulation mostly associated with non-governmental organizations, organizers of the health reform and market demand and supply or mechanisms (Majone, 1997; Moran, 2002). Control mechanism in healthcare reform could also be initiated by the

communities, societies and private healthcare service providers. The regulation may have emerged alongside the government and other registered interested organization with the aim of regulatory duties, (Rothgang et al., 2005; Powell, 2007). In any case the dividing line is always drawn by the states and the resultant effects are subject to state control. This is typically exemplified by the self regulation in social health insurance and safety schemes where stakeholders feature as arms length bodies. Despite the competition, the states or government has a higher influence in social insurance and safety than in the private healthcare and safety schemes. This is true because in private healthcare and safety the market forces determine basically the healthcare and safety responsibilities and prices. White (2007) argued that the USA system typically exemplified the free market healthcare system but this is not the same in OECD countries. While to some level some control measures were geared towards establishing control of states over the production of healthcare the control is always constrained by private interests. Safety and health provision is basically controlled by the states and healthcare professionals and as well between states control and beneficiaries or potential beneficiaries (Freeman, 2000; Freeman & Moran, 2000; Rothgang et al., 2005).

Control could also be between the financing agencies and the potential or substantive beneficiaries. In this type of control it is the target receiver of the services and the means of funding that are basically of dare interests to the controlling agency. In the case of mutuality of relationship between financing agencies and healthcare and safety services providers, the regulation control mechanisms target remuneration system. This type of control ultimately focuses also on the possibilities of the provider's access to market for healthcare and safety products. And finally another

preoccupation of the regulation and control mechanism in healthcare and safety is the establishment of control on the relationship between the healthcare and safety services providers and the beneficiaries. Finally control could be on how does access to healthcare and safety services works and who is responsible for the definition of the myriad of healthcare and safety services.

The issue of control of healthcare services provision by the states was seriously criticized for being too rigid. The critique claimed that there concentration of power to one office especially the ministry of health which renders efficiency to the background. Michael (2011) stated that the Affordable Care Act in America has not empowered states as much as being practiced. The excesses created by the ministry of health are symptomatic of the desire of the government to have an overzealous control over the healthcare provision. This act in many cases usurps the states authority and limits private sector autonomy, innovation and profitability. Power concentration in the hand of the centre seems not to be the answer to any national healthcare crises.

Innovation as one of the advantage of private sector participation in the provision of health care services is highly affected by the concentration of power in one place. For any healthcare reform to evolve a new trend in the development of competition and transfer of innovation provision of more flexible and small autonomy to the private providers is the answer (Michael, 2011). Relaxing control laws will encourage the evolution of new models of healthcare services provision and will expand coverage to more enrollees. This will also reverse the dangerous course of extra spending in the future healthcare provision. The flexibility should also include the area of provision of

control on how to design health insurance exchanges. The insurance exchanges have the potentiality of increasing competition, expansion of access and general accountability to both insurance and providers. The flexibility should also includes liberty to individual states to design their health insurance system based on their local peculiarities with subsidy provided based on such peculiarities and not based on market forces. This can best be handled by public-private mix, which provides best coverage and various healthcare and safety options to beneficiaries (Michael, 2011).

2.11 Health and Safety in a Healthcare Sector Reform

It has been established that self reported health condition seem to be one of the most valid and reliable measurements of the general state of physical wellbeing (Davies & Ware, 1981; Idler & Benyamin, 1997; Mossey & Shapro, 1982; Catherine & John, 2000). The self reported result always addressed issues that have direct relationship with human state of being. This could be in relation to acute or chronic, fatalistic and non-fatalistic diseases and muscular skeletal issues that are mostly associated with, back pain, head pain, headache, eye strain, neck strain. This is in tandem with the World Health Organization definition of health as a state of being health not only of absence of disease but general wellbeing (Catherine & John, 2000).

The self reported health and safety condition in most cases has direct correlation with more scientific measures such as physician's assessments through clinical examination. This examination could be on chronic and acute disease examination, physical disability and health and safety behaviors (Davies & Ware, 1981; Idler & Benyamin, 1997; Liang, 1986, as cited in Catherine and John (2000). Conclusively according to Mossey and Shapiro (1982) study conducted to compare laboratory

examination with self reported examination. The later revealed a better result. Self reported healthiness examination and the feeling of being safe had a mean of 4.17 in 1995 and mean of 4.05 in 1998, which make it a better predictor of wellness and mortality than medical assessment.

Fundamentally this research will determine the residual effects of long work in a company and the ability of reform to address safety and health issues under reform. To conduct the analysis the following questions were asked. How much difficulty do you have (1) Seeing even with glasses (2) hearing even with aids? The study revealed an average physical wellbeing with mean results 1.77 in 1995 and 1.72 mean self reported physical healthiness in 1998. The second question is how much difficulty do you have (1) Climbing stairs (2) kneeling or stooping (3) lifting or carrying objects less than 10 pounds (4) preparing meals, clearing house or doing other households work (5) shopping or getting round town? The self reported results revealed a mean of 1.77 in 1995 and 1.72 respectively in 1998.

The third question was on chronic condition like have you ever been diagnosed or told by a physician that you have? (1) Heart disease (2) high blood pressure (3) lung disease like emphysema or lung cancer (4) breast cancer (5) any other type of cancer (6) diabetes (7) arthritis or rheumatism (8) osteoporosis brittle bones (9) allergies or asthma (10) ulcer, ulcerative colitis, or other digestive problems? The self reported healthy condition results showed an average mean score of 1.26 chronic conditions in 1995 and 1.41 respectively in 1998.

Mechanic & Rocheport (1996) cited six major areas of health care delivery system in their propose convergence that include cost control and effort to improve efficiency and effectiveness of health services. Convergence model is also concern with the promotion of health and improvement of health-related behaviors (life style) and concern about inequalities in health outcomes as well as access to medical care. Effects or impacts of technology and specialization, interests in patient satisfaction, participation, choice and voice in the organization of health care services. And finally concern for the ageing population, prevalence of chronic diseases and nations attention to the linkage between health and social services in order to reduce fragmentation. The nation can only successfully achieve all these if the convergence hypothesis is fully entrenched into the healthcare services delivery systems of the world.

2.12 Reform in Health and Safety: Factory Perspective

In 2008 Konica Minolta Company in China, Japan and Malaysia evolved a policy which gave rise to an occupational safety and health management system at each of its production bases. It is concern with data collection of work place injury as from 2007 in 2008. It then conducted a risk assessment for equipment, fatalities and operations. The aim is to implement prevention measures based on the assessment conducted. It was able to conducts training in order to reduce tertiary injuries such as lower back injuries, neck pain and falls. This data base reform led to risk prevention, near accident reporting called 'hiyari-hatto'. This development also evolved concept such as (5s) that is, sort, strengthen, shine, sustain and standardize, which resulted in high safety awareness among employees. The awareness resulted in percentage reduction of accident from 0.70 percent in 2007 to 0.28 percent in 2008. The company also

considered an internal reform on healthcare plan that will help in preventing overwork, mental healthcare and lifestyle related diseases prevention in addition to other related health and safety measures in the industry.

In line with this, health examinations are conducted for all employees who exceeded a certain number of overtime hours per month. The program also monitor all employees work load, any employee identified with excess fatigue will be instructed to reduce his work hours. The employees were also trained on self care through self care lectures conducted by the occupational health and safety physician. This training constituted part of the internal health and safety promotion activities during National Occupational Safety and Health week. It also includes e-diagnoses for stress. The future internal health and safety activities plan by the industry will concentrates on the tertiary prevention check among employees who have returned to work after a mental absence. On lifestyle, the reform organized a medical health insurance through the National Health Insurance and Employee Health Insurance policies. This is done through the provision of specific health guidance to improve lifestyle habits such as dieting, organized walk rallies in the field and some selected cafeteria.

2.13 Reform on Compensation after Injury and IOSH

Implementation of reliable compensation after industrial or occupational injury relied heavily on the enabling occupational laws. One very big obstacle to the full implementation of the enabling law was the widespread abuses of the law by both the employers and employees in most countries. In order to address this weakness an amendment through compensation act reform was initiated in most countries. The reform or amendments help in strengthening it applicability through a proportional

safety and health practices in the industries by protecting both employers and employees.

An analysis conducted by John and David (2010) on the activity of National Institute of Occupational Safety and Health (NIOSH), identified the impact of a newly amended law to improve access to the uninsured or underinsured American. The Act called patient protection affordability care act encouraged the practices of occupational safety and health in most industries in the United States. The act basically covered the areas of accident and injury prevention, employee wellness, sponsorship of employee technical and research based wellness programs, National Healthcare Workforce Commission, which will bring together healthcare professionals, paramedics, employer third party payers and labour unions. The commission will be assign the responsibility of making recommendation to the government department of labour, department of health and human services in the area of safety and health improvement and protection of employees in the work place. It will encourage the educational training of more work forces in the field of occupational safety and health profession in order to meet up with the increase in demand of their services. An improved insurance benefits in the area of occupational safety and health access to the employees that hard accident or injury in the course of performing their job will be instituted. This will be done through implant diagnoses by the occupational safety and health physician employed by the industry or organization (John & David, 2010).

2.14 International Labour Organizations and Workplace Safety and Health

Laws

Non-industrial organizations, convention of 1946 coming into force in 1950 at Montreal. This convention comprise of article 1-18 which impliedly talked on the employment of children and young persons. This convention basically highlighted the proposal with regards to medical examination for fitness for employment in non-industrial occupation of children and young persons. Having decided on these proposals it then shall take form of an international convention. In general it apply to (1) children and young person employed for wages or working directly or indirectly for gain in non-industrial occupations. (2) Non-industrial refers to all occupations other than those recognized by the competent authority as industrial, agricultural, and maritime occupations. (3) Exempted by National law division created by competent authority as defined by law. Article-2 children and young person below eighteen years of age shall not be employed in non-industrial industries unless medical examination is conducted.

Certain jobs required certification of fitness from the authorized medical staff. Those jobs that required certification includes; (1) jobs or group of jobs or occupation involving similar risks which have been classified as a group by the authority concern. (2) National laws or authority to determine the fitness through (a) vocational guidance and physical and vocational rehabilitation of children and young person's found by medical examination to have physical handicaps or limitation. (b) The measures shall be determined by competent authority (c) National laws or regulation may determine young person's fitness for employment that is not clearly stated by law. (d) Permits or

provide a special certificates requiring special condition of employment. This law also provided certain exemption to some countries that has certain peculiarities (ILO 2007).

ILO (1993) Industrial Accidents Geneva Convention of 1921, the International Labour Organization in cooperation with other relevant International, Intergovernmental and Non-governmental Organizations shall arrange for an international exchange of information on: (a) good safety practices in major hazards installations including safety management and process safety. (b) major accidents and prohibited technologies (c) medical organizations and techniques for dealing with the aftermaths of major accidents (d) competent authority implementation (e) recognized the fact that major accidents could have serious consequences in terms of its impact on human life and environment (f) there should be compensation system available to workers after accidents and the course should be remediated (ILO, 1993).

ILO (2006) health protection and medical care for seafarers, this convention has direct relationship with seafarer's convention of 1946. This convention was specifically talking about to have training on medical health and examination and accommodation of ship crews. This same convention was revised in 1949. Having been revised it was then known as supplementary provision crew accommodation convention of 1970. The convention also includes ship medicines chest recommendation of 1958 and prevention of accidents (seafarer's) convention and recommendation of 1970. The extension of this law also includes standard certification and watch keeping for seafarers of 1978. This is basically in response to the recommendation for training in medical health aid in case of accidents or illness that is likely to occur on board ship.

The act or convention serve as a link to having cooperation between different government, international labour organizations, international maritime authorities and world health organization in the field of health protection and medical care for seafarers.

According to ILO (1993) this convention incorporated all vessels, ships, both privately and publically owned on maritime navigation or fishing. Each ship shall carry medicine chest equipment, properly maintained, inspected regularly and not exceeding 12 months. The medicine chests shall be labeled with generic names. This shall exclude cargo classified as dangerous. In a situation where the prescribed medicine is not available the ship owner shall take all necessary steps to obtain it as soon as possible.

2.15 Demographic Characteristics and Health Care Delivery Efficiency, Access And Cost

Study by Lena (2004) compare two different insurance societies in order to determine their cost effectiveness and efficiency in Sweden. The study compiled data from 1892 to 1910, for two regions Stockholm City and Ostergotland County. The data consists of annual information from a total of 493 registered societies, 3,849 observations, divided between 222 mutual insurance societies, 1,770 observations and 271 pure insurance societies, 2,079 observations. The study also describe the societal characteristics as membership size, insurance benefits, insurance premiums, moral hazards controls, such as waiting time, qualifying time, minimum sick days, financial status, age, and number of policy categories (Lena, 2004).

In order to analyze the differences between the different insurance categories, logit analyses was performed with respect to given independent variables, by using the mean values of the explanatory variables, per society over time. This was due to the fact that the independent variable (type of financing system) was constant over time by definition. The results show that higher mean levels of the following variables are significantly and consistently were associated with a positive likelihood of the society being a pure insurance society. The variables with such results includes, coverage per sick day, coverage per annual total fees, initial fees, waiting time, qualifying time, average assets. In addition variables society age, number of policy categories, mean levels of the explanatory variables-members, coverage per member, and average sick cases- were significantly and consistently associated with a lower probability of being a pure insurance society. The study concluded that, due to more careful screening and selection of members and built-in controls for moral hazard problems, mutuals are able to provide more generous insurance solutions to members. These results consider the factor of controlling for differences in initial fees and registered sick days. It also confirms that pure insurance societies attract more heterogeneous enrollees. This provides the tendency to lacking the motivation to minimize moral hazard problems. Pure insurance societies has the advantage of reducing cost and improving service efficiency and accessibility, as indicated by higher mean levels of moral hazard controls (Lena, 2004).

Mechanic and Rochefort (1996) the problem of demographic characteristics and its influence in health care delivery can only be adequately addressed by taken seriously management steps. One of the managerial problems includes the dominance of professionals such as medical doctors in health care delivery system. The tradition of

authority where doctors control everything and over concentration of care to hospitals is one big problem that needs to be address. Therefore, there is the need to distinguish cultural authority of individual practitioners. The nurses and other professionals working in the medical line are more in number than the medical doctors. Moreover, medicine itself is more politically fragmented, with competition among specialists, type of medical functions and organizational alignment than the needed efficiency (Mathew & Christopher, 2005). This led to challenging the legitimacy of the dominance of medical doctors over other medical workers. The whole essence of reform variation and challenges facing medicine through regulation, budgeting control, privatization and so on is ultimately aiming at rationing the delivery of health care to all and for all. The rationing take three prominent methods by, ability to purchase services, by geographic availability of facilities and personnel, and by decision at every level of care to give either more or less services (Mechanic & Rocheford, 1996).

In another research relating to the influence of demographic characteristics, it was empirically confirm that 66 percent of men and 50 percent of women employed fulltime as wage and salary workers have employer sponsored coverage with retirement health insurance (RHI) offers. Also about one in six men and one in five women has employer sponsored coverage that does not continue after retirement. Only seven percent of men receive insurance through their spouse's employment, compared with 17 percent of women. Only a few percent of full time workers purchase non-group coverage as their sole source of health insurance, while 7 percent of employed men are uninsured (Richard, Amy, & Kevin, 2003).

Reform in the Dutch healthcare policy initiated change to private health insurance provision in 2006. The policy instituted, control of drugs spending or costs, this change made the drugs accessible to Dutch residents. A national system in combination with direct and indirect price controls serves as the main vehicle to achieve this policy. Costs were measured from the view point of the society which implies a measurement of health related costs as well as costs generated outside the healthcare system. Costs-effectiveness is measured in terms of costs per quality of services rendered in a year (Joshua, 2007). In addition costs-effectiveness is also measured in relation to what the budget can do and severity of disease (Joshua, 2007). Lisa and Penelope (2001) used a three levels gender composition in her study to determine the effects of demographic factor in the provision of healthcare and safety benefits. This includes 25 percent women, 50 percent women and 75 percent women dominated industry. Gender-mix and men dominated, women dominated industries tend to have lower predicted levels of health benefits than do men dominated and gender mixed industries (Lisa & Penelope, 2001). The final results of this research reaffirmed the influence of demographic characteristics, such as education, race, and gender to have contributed towards increase or decrease in the healthcare insurance benefits in an industry in the US (Lisa & Penelope, 2001).

Considering the issue of socioeconomic status as one of the demographic dimension Catherine & John (2000) conducted a study. The study considers the following dimension (a) education and (b) economic resources (household income). The research uses question such as during the past twelve months how often did it happen that you (1) did not have enough money to buy food, clothes, or other things your household need?. The second question was (2) have you had trouble paying bills? The

questionnaire was based on four scales self reported categories of (1) never (2) not very often (3) fairly often (4) and very often. The result showed the influence of socioeconomic status on healthcare utilization and ability to pay healthcare bill.

Another aspect of the study includes coding of the categories, employment status was coded (1) and unemployed was coded (0) marital status coded (1) and divorced was (0). The second category recoded separated and single (0) and widowed (1). While sex was coded as the dummy variable (1) for females and (0) for males, race white coded (1) non whites coded (0) age remain age with years. The study confirmed that those with average education have 13.48 mean with an average household income of 44,003 dollars. An average economic hardship recorded mean score of 1, 32. The respondent includes 51 percent employed, 63 percent married, 58 percent females, 89 percent, whites and the average age was 53 (Catherine & John, 2000).

In order to respond to the question on whether or not medical insurance and safety partially explains socioeconomic variations in health and safety, relationship between health, safety and socioeconomic status was tested. The tested was done without adjustment or with adjustment for insurance. If the results of adjustment significantly reduce the relationship between health, safety and socioeconomic status, then it should serve as a mediating factor or give explanation on the relationship. For health and safety insurance to mediate SES and health and safety, then the comparison of those uninsured having access to insurance produces better health outcomes (Catherine & John, 2000). The results show neither health nor safety insurance mediate the relationship between SES and health and safety outcomes. Therefore, an attempt was made to look at three issues that have to do with access to care. The

access issues includes utilization of physician services, number of medication prescribed to the person and difficulty in paying bills. An adjustment for SES, demographic characteristics, hazard for iteration, and baseline health and safety was added to see if persons with or without insurance use medical services at different rates due to differentiation in baseline health and safety status (Catherine & John, 2000).

The results confirmed that education has the potentiality of improving healthy and safe condition more than an investment in health and safety itself. This was exemplified with USA expenditure on both education and health and safety which stood at 6% GDP in 1965. By 1995 the investment on health and safety rose to 14% while that of education remained at 6% during the same period and disparity on health and safety rose (Pincus, 1998, as cited in Catherine & John, 2000). Mirowsky and Ross, (1999) states that, medical insurance provided protection for the households budgets from exorbitant medical bills, therefore, reducing overall economic hardship. Such protection variables tend to improve health and safety conditions of enrollees. A research was conducted by Yu-Luen and Mark (2005) to determine employer premium charges using some demographic characteristics, such as married, unmarried, widowed, divorced with no dependents, family size. The study wanted to determine whether family members other than the breadwinner were important determining factor in the ability to obtain health and safety insurance. Using descriptive statistics, the research control for four variables that are visualized to cause discrepancy in premium paid and anticipated benefits. The variables that were controlled include demographic characteristics, insurance provision, job characteristics and health related characteristics (Yu-Luen & Mark, 2005).

The demographic factors includes, age, gender, family size, race, income, and occupation. The study revealed that average female incur greater expenditure on health and safety than male members in that society (Worrall, 1987; Sindelar, 1982; Jensen, Fieldman, & David, 1984; Monheit, Nicholas, & Selden, 1995/1996) in Pamela et al. (2000). The research revealed that older members have more indemnity benefits than the younger members (Luft, Trauner, & Maerki, 1985, as cited in Yu-Luen & Mark, 2005). Another study conducted to determine hospital utilization revealed that, larger families make use of more healthcare and safety services than non-married members yet being charged same premium. It is assumed that people with spouse and children tend to value good health and safe condition more than those without. The family factor led to their having more indemnity benefits compared to those singles. Statistical evidence had shown that race seem to be associated with anticipated medical benefits (Browne & Doerpington, 1993, as cited in Pamela et al., 2000). The study showed discrepancy in premium charges between males and females. Available statistic from the results had shown that 19 percent premium charge was less for females when compared to that of their male's counterparts. The exact premium charge for male's enrollees was 32.2 percent in contrast with 13.2 percent for females. That was 19 percent less at the same time female have more hospital attendance than male (Tan Phoi Tsze, 2010).

A study conducted by Richard, Army and Kelvin, (2003) revealed that, propensity to retire relied on the price of health and safety insurance. The lower the percentage charges on healthcare and safety insurance, the higher the propensity for employees to retire earlier. The study revealed that, insurance cost reliably reduced retirement rates for full time wage and salary workers ages 51 to 61 years old. Simulation proves that

5000 dollar rise in healthcare and safety insurance price reduced the probability of early retirement by 0.17 percent for men and 0.24 percent for women. The researchers concluded that increasing the Medicare programme to aged 62-64 tends to increase retirement rates for workers with employer sponsored healthcare and safety insurance coverage. These same results could be found in group without retirement benefits but if subsidy was place on the health and safety insurance coverage for this category of employees. The workers demonstration against increase in service age in France in 2010 was supportive of this research finding (Richard, Army et al., 2003; BBC Service, 2010).

Discussion on the influence of demographic factors in having better healthcare and safety services has been subjected to a number of debates. The socio economic status has a lot do to with ability to purchase health insurance and safety services in most societies. The study conducted by Amelie (2004) supported the SES hypothesis. The SES hypothesizes that healthcare and safety insurance defined who is to be insured and who is not based on ability to pay premium charges. It was also confirmed that, socioeconomic status such as, employment and the quality of employment affects the likelihood to acquire coverage (Kalleberg, Reskin, & Huds, 2004, as cited in Amelie, 2004). The study further showed that, education has positive effects on adults healthcare and safety benefits with more significant level than, the effects of gender, race, ethnicity, parental health, safety condition and early health. On the contrary financial resources in early adulthood tend to have a positive association with health, safety and appear to partly mediate the effects of education and other factors, such as long service (Amelie, 2004).

The provision of low premium health and safety insurance to poor, incapacitated and vulnerable group was one of the biggest challenges to all healthcare and safety reform today. The Indian options of community health insurance seem to be the answer to these challenges. The introduction of MICROINSURANCE, which entails the involvement of the community help in the reduction of fraud and moral hazards. The health maintenance organization (HMO's) provides the community with technical knowhow or training the community members on how to process enrolment and claims. The communities were also trained on the technique of the management of the enrolments and claims. In addition the communities were also trained on how to manage the scheme. The training drastically reduces the cost of management. Close assessment of the micro insurance system process, revealed a reduction in price of treatment, increase number of hospitals and improve facilities availability and quality. The total cost for treatment was less than 100 rupees (about 8 dollars) per year to cover family of four in the scheme. About 65 percent of the payment is retained by in the self help fund created by the community and 35 percent to HMO (Rajeev, 2006).

2.16 Cost: Administrative and Cost in General in Health Care Reform and Provision

In trying to asses cost as a factor that hinder or accelerate the reform and provision of health care to the resident researchers have conducted series of studies. Literature availed us with striking results on the cost of insurance administration and the negative reciprocal cost benefit relationship to the detriment of insured person. Previous research reveals that, the expenses incurred in the process of administering insurance did not adequately concur with model of an ideal insurance with no loading and as well with premium equal to benefits. It is roughly estimated that 12 percent of

the U.S health insurance revenue goes for administrative expenses (Division of National Cost Estimates 1992, as cited in Diamond (1992).

In another study, the percentage is more devastating, which relates administrative expenses to benefits costs for different size employee groups. Thus, for a group of 1-4 the ratio of administrative expenses is 40 percent, while for group of 10,000, or more the ratio is 5.5 percent. This is due to returns to scale in transactions, advertisement, commissions, and adverse selection (Diamond, 1992). In furtherance to the study, Diamond (1992) propose that, if comparison will be made between the Compulsory groups insurance the U.S system should be compared with that of the Dutch. Diamond concludes that the sick will have ample choice and reduce demographic discrimination and cost. He also concludes that, the sick will pay only but 10-15 percent directly to the insurer cutting the middle level spending. A community rating system will make it easy for the government to pay the balance through the central fund based on expected medical costs. While the Diamond (1992) proposal suggested dividing the U.S population into larger groups to replace employer groupings, individual insurance purchase and uninsured, acute care portion of Medicaid will remain. The governmental subsidy for the poor, coinsurance and deductibles will remain, while the replacement of Medicare with a better system remained unresolved by the proposal. The proposal will allow flexibility and reduce administrative costs, while limiting choice as well. The Dutch system of reform on the other hand provides more choice and higher administrative charges (Diamond, 1992). Diamond (1992) concluded that, any health insurance that increase access will tend to increase cost. The stabilized system of access, first stabilize administrative expenses to a ratio and

access cost will reduce by a percentage compared to a GNP that should be the starting point.

Michael (2001) argued that, the American total national healthcare costs have climbed to 1.1 trillion dollars annually, but the US continues to have the highest infant mortality among industrialized nations. The country also fares poorly on other comparative measures such as life expectancy and childhood immunization rates. The US children health insurance program (SCHIP) offers the state and US territories block grants totaling approximately 40 billion dollars over the ten-years period from 1997-2007. The grant was to provide health assistance to children not already covered by Medicaid or private Insurance (Leiyu & Virginia, 2000). Literature provides strong evidence that the quality of primary care is associated with health and cost outcomes (Blumenthal, Mort, & Edwards, 1995).

2.17 Alternative Models Social Health Insurance Model (Adopted mostly in Western Europe)

Bearing in mind that the underpinning theory of all health insurance reform, has the basic goal of trying to achieve, cost reduction, improve access and make health care affordable to the sick, ensure equity, fairness as well as efficiency in healthcare service provision to the citizens. Thus, no matter the model, be it for-profit or not-for-profit model the goal remain the same; that is to succeed in making health care services affordable, accessible and with maximum efficiency, expenditure/cost reduction and reduction of waiting period in the hospitals and clinics.

The social health insurance model is the predominant health insurance system in Western European countries. It was also incorporated as the only model, which is adopted in Israel in 1995 (Richard, Reinhard, & Hans, 2004). Prior to the coming up of the tax-funded system or model, countries such as Denmark, Italy, Portugal, Greece, and Spain were using the social health insurance model as the only system of healthcare service delivery system. But in 1973, 1978, 1979, 1983, and 1986 respectively they opt out to embrace the tax-funded system. Up until today countries like Finland, Sweden, and United Kingdom, as well as in Greece and Portugal a unit of social health insurance model still remained as an integral part of their health system (Richard, Reinhard, & Hans, 2004). Despite the popularity of the social health insurance model in the aforementioned countries little attention was given to its operation, successes, or failure in academics and researches, in comparison with the tax-funded model. In fact, there was neither comparative analysis made on the success nor its failure was made with any other model, such as tax-funded or single payer model. This is true from the literature in both English and even those comparative studies available in other languages, such as German, Dutch, or French. The comparative analysis either tend to be narrow minded, limited to neighboring boarder countries or narrow technical aspects rather than broader conceptual construct and comparative analysis (Richard et al., 2004).

2.18 Structure of Social Health Insurance

The structure of social health insurance is built in such a manner to meet up with the challenges of social solidarity and societal coherency and feeling of togetherness. The first structure of the social health insurance is that, it is seemingly private in both the funding and delivery of health services. Secondly as seemingly private, social health

insurance systems appear to be self-regulating. This is true because the whole processes are being managed by the participants themselves. Those involved in the management process includes sickness funds; physicians and to the patients or beneficiaries. Thirdly, and most importantly, consequence upon its private nature and self-regulating as well, social health insurance are perceived to be stable in organizational and especially in financial terms and coordinated funding of the system. This stability often appears to be the most highly prized of all outcomes associated with social health insurance systems (Richard et al., 2004).

In addition to all the mentioned benefits of social health insurance is the less discussed benefits provided by the structural formation of the system which it is then seen as part of the fabric of the society (Normand & Busse, 2004; Zollner, 2004) cited in Richard et al. (2009). It then serves as support to a social consensus that is deeply entrenched in ensuring societal balance as an entity. Both funders (sick funds) and providers (hospitals and physicians) are in the private sector. This system shelves the state aside, which push to the state the responsibility of serving as guardian and administrator of the social health insurance stewardship (Saltman, Berlin & Larsson, 2004, as cited in Richard et al., 2009).

Therefore, the social health insurance as defined by their structure is devoid of the artificial bureaucratic structures of the government, rather a living entity, in addition to the rules of operation as dictated by the structure. In their own contribution to the discussion of the functioning and the structure of social health insurance (Normand & Busse, 2004) as cited in Richard et al. (2009) states that for any social health insurance system to operate successfully, major requirement are commitments of

energy and time by all the parties involved, often on a voluntary basis. The system also required a high level of trust among many actors, leading to a conclusion that, ‘certain non-written rules’ are essential. This is true in Germany, ‘traditions and unwritten rules’ play a critical part in managing its social health insurance system (Normand & Busse, 2004).

Another, apparent structure of the social health insurance is that, it is different from standard commercial insurance, instead social health insurance systems are constructed first and foremost as part of a social income policy to be redistributive in nature (Glaser, 2004, as cited in Richard et al., 2004). They are therefore consciously structured to ensure the achievement of a number of societal objectives through a number of financial cross-subsidies, not just from healthy to ill but also from well off-to less well-off, from young to old and from individuals to families. It is this redistributive focus that distinguishes social health insurance from what is normally understood as insurance, the later being an actuarially directional device by which each individual seeks to protect his or her own interests (Glaser, 2004 & Stone, 2004). In social insurance there is the perceived solidarity to cater for whole population through individual contribution toward the best interests of the population generally through its structure of financial redistribution. The social health insurance system is significantly built on the assumption that it is not economic primacy that really matter, but the sociological and psychological attachment through group solidarity. The economic consideration is rather considered as secondary factor (De Roo, 2004). Indeed taking an exclusively economic and/or financial view of social insurance system is typically viewed inappropriate and reductionists in approach.

2.18.1 Positive side of Social Health Insurance Model

Those who are of the opinion that the social health insurance model is the best out of all the available models advanced their argument based on widely discussed advantages. The western Europe in particular tend to be contented with the social health insurance as a lesser evil or consider it not an evil at all since it has served them decades without much societal uprising. Whether or not the argument for those supporting social health insurance system sound convincing or not, defends on the assessment of the system based on the available data for or against it as practiced in western European countries today.

2.18.2 Risk-Independent and Transparent Contributions

The raising of funds is tied to the income of members, typically in the form of a percentage of the member's wages, some time up to a designated ceiling. This contribution has two equally important characteristics. First, the contribution or premiums are not linked to health status of members. If a member has spouse and/or children, they are automatically covered for the same income related premium and under the same risk-independent conditions. Second, contributions or premiums are collected separately from state general revenues. Health sector funding is transparent and thus insulated from the political battles inherent in public budgeting (Richard, Reinhard & Hans, 2004).

2.18.3 Sickness Funds as Payers/Purchasers of Health Insurance Premium

Premiums are either collected directly by sickness funds as practiced in Austria, France, Germany and Switzerland. The premium are distributed from central state run funds as practiced in Israel, Luxembourg, and the Netherlands to a number of

sickness funds. While Belgium employs both methods. These funds are private not-for-profit organization, steered by a board at least partly elected by the membership except in France and Switzerland and usually with statutory recognition and responsibilities but Israel is an exception. The rules under which this sickness funds operate typically are either directly established by national legislation or tightly controlled through a state regulatory process. The sickness fund uses the revenues from member's premium, such as health tax in the case of Israel, to fund collective contracts with the health provider that is private-not-for-profit, private-for-profit, and publicly-operated-system, for health services provision to members (Richard, 2004).

2.18.4 Solidarity in Population Coverage, Funding, and Benefits Package

In the social health insurance the whole population is covered by the statutory sickness funds system. With small exception for the highest income individuals who are allowed to leave the statutory system to seek for commercial health insurance on their own all other are compulsorily members. A small exception exists also for illegal immigrants, for people with objections by principles and for civil servants. Funding for all members is equalized within national state-run pools or within regional government in the case of Austria or foundation based in Switzerland pools. Funding was through mandatory risk-adjustment mechanisms in Belgium, Germany, Israel, and the Netherlands. Funding was through subsidies provided by government in Belgium and France (Richard, Reinhard, & Hans, 2004).

2.18.5 Pluralism in Actors/Organizational Structure

Social insurance system incorporates a broad range of organizational structures, both within as well as between social health insurance nations, the number, and widespread

nature of sickness funds may vary based on professional, geographic, religious/political, and/or non-partisan criteria. Nearly all hospitals, regardless of ownership and nearly all physicians regardless of how they are organized whether solo practiced, group practiced have contracts with the sickness funds and are part of the social health insurance system. Professional Medical Associations, Municipal, Regional and National Governments, and also suppliers, such as pharmaceutical companies are all seen as part of the social health insurance system framework (Richard, Reinhard, & Hans, 2004).

2.18.6 Corporate Model of Negotiation

Negotiation typically occurs at regional and/or national level among peak organizations representing each health sub-sector involved (Richard, Reinhard, & Hans, 2004). This corporatist's framework enables the self regulation and contract processes to proceed more smoothly with substantially more uniformity of outcome and substantially lower transaction costs. A corporatist's approach among a group of social partners (sick funds, health professionals, provider's groupings) is also consistent with policy-making arrangements in other parts of the social sector in the seven western European countries(less so in Israel (Pamela, Judith, Jenne, & John, 2000).

2.18.7 Participation in Shared Governance Arrangements

As befits pluralists configuration described just above, social health insurance systems typically incorporated participation in governance decisions by a wide range of different actors. The most visible manifestation is the traditional process of self regulation by which sickness funds and providers negotiate directly with each other

over payments schedules, quality of care, patients volumes and other professional groups frequently have some decision-making responsibilities as well (Richard, 2004).

2.18.8 Individual Choice of Providers and (partly) Sickness Funds

Members of sickness funds can usually seek care from nearly all physicians and hospitals. In six out of the cited countries practicing social health insurance model, a referral to see specialists is not required. This was practically was not happening in Israel and the Netherlands. Increasingly members in those countries can also choose to change their sickness fund. But it was not the in Austria, France and Luxembourg (Richard, 2004).

These seven characteristics such as risk independence, sickness funds, solidarity, pluralism, negotiation, shared governance, and choice of providers are the core structure of social insurance. These core structures spelt out the operation and functions of the social health insurance system model as practiced in the exemplified countries. Thus, social health insurance core structures includes; risk-independent contributions, sickness funds as payers, solidarity, pluralism, corporations, participation and choice stands as the core arrangement of the model (Glaser, 2004, & Normand & Busse, 2004).

The challenge awaiting social health insurance is the future change in the world economy which has direct effects on regional as well as national economies. One very vital question remain that, can the system sustained the solidarity factor inherent in the model? With the world economy beheading almost all theories and professional

speculations an alternative funding system need to be sort for. The wage employment as the core contributor to the social system also tend to be disintegrating, the rich and those with higher income for long remained individualistic. What then is the future of the social health insurance system if the financial base is destabilized?

Though, some theorists provide a preposition that will take charge in case of economic recession, such as dialogic democratization (Giddens, 2004) and reflective solidarity (Hinrichs, 2004) seek to focus on ‘social interchange’ and relational characteristics of social solidarity, reinvigorating it to play a central organizing role in future as well as past institutional arrangements (Houtepen & Ter Meulen, 2004).

The challenges in most health insurance models remain consistent and the questions remain relevant at all time. The conceptual definitional plotting or operationalization as the only solution to economic meltdown and dwindling future remain an imperfect suitor. The present trends of regionalization and globalization in the world economy, which outweigh most speculative economic solutions demand for better analysis. Rather than conceptualizing, an alternative system of health care system an instrument to sort the existing model first should be instituted. Then the results obtained from the sorting should serve as the new solution for our enculturation at our individual counties. In a broader way encapsulate the most successful model as the new world option with possible amendments to suit the local peculiarities of the adapting nation. This was the postulation of the convergence theory (Mechanic & Rochefort, 1996).

2.19 Health Insurance System; American Model

The American model of health insurance is purely a public-private partnership for-profit system that emphasis on the private side than the public welfare. Although this

system suffered a lot of criticisms but it was well supported by the professionals in the field of insurance, medicine, nurses and the ordinary citizens. The American system allow the democratic flexibility for the states, local and federal to determine to some degree the system of control and plotting of policy instruments to use in protecting the interests of the citizens (Alan & Joel, 2004). The critic of the system highlighted seven problem areas such as healthcare as a national priority for government action, the state of the U.S healthcare spending and costs, the state of the U.S health care system, satisfaction with their own healthcare, the uninsured and national health insurance, the financial validity and future shape of Medicare, its prescription drug program and Medicaid program, and the problem of quality healthcare in the United States (Robert & Kosali, 2002). The structure also provided for instruments such as; guaranteed renewal, guaranteed issue, premium variance, limits on pre-existing condition exclusions, slowing enrolment, community rating,. These instruments are serving as the control mechanisms of the system.

2.19.1 Guaranteed Renewal

The guaranteed renewal rules prevents an insurer from refusing to sell to the same person who was previously registered with them but has developed a serious sickness or has now belong to high-risks category member. This is the second side of the pre-existing condition exclusion where an eligible member may be denied re-registration when the insurer realizes that the enrollee presently is severely sick. The guaranteed renewal can only work perfectly if the pre-existing condition exclusion and as well as the guaranteed issue law is also on ground. This is to avert the practiced by some insurers to close their books and registered only those confirm to have low-risk

record, which is done through collaboration with the underwriters or insurance agents (Len, 2004).

2.19.2 Guaranteed Issue

The guaranteed issue law is mainly to ensure each and every applicant is given the same opportunity and right to register for health insurance without any considering of his existing health condition as at the time he is registering. The guaranteed issue is similar to community rating where each and every member, that is those with low-risk and those with high-risk pay the same premium. This is a stylish redistributive premium method where the high-risk are at an advantage while those with low-risk are higher disadvantaged wise.

2.19.3 Premium Variance Restrictions

The premium variance restriction is applied to the insurer's agent in order to dictate to them the premium that will be charged on every product available. This is done to restrict premium variation based on age, gender, job location, health and so on. This is done through banding, that is by assigning ratio of highest and lowest of premium that will be charged on health insurance product. It is also done through pure community-rating where each product is charged the same price as well as modified community-rating where certain dimensions such as age, gender, job location were used to establish premium differentiations.

2.19.4 Slowing Enrolment Growth

Compliance by both insurance companies and health providers can be control through the use of slowing enrolment growth of certain category of sickness and insurance

product available in all the insurance outfits. This is possible where both the public and private companies in charge of provision of health care services delivery products are under heavy tax-payers subsidy. Despite being subsidized by the government, if illegal or unwarranted acts by both enrollees and the participating health insurance are noticed, the slowing enrolment system will be slowed down to stop the illegality. This is done through ceiling, by identifying a number of enrollments that will be stagnated for a certain period of time for a category of insurance products, for example old age, dental, pregnant woman care (Lazar, 2009). That is to say that the insurance out fits will be ask to take this number and should not drop or add up any new enrollee until certain period of time.

2.19.5 Community Rating

This is another method use by the state to ensure coverage for all. Community-rating entails selling the same products to the subscribers at the same price without variation due to age, gender, location of work, existing health status, or look-back period (Kanaki, 2004). This instrument was extensively used in the New York and Pennsylvania to ensure equity and access to health care provision. The community rating is of two types, pure community rating and modified community rating. The pure community rating is where each and every interested enrollee irrespective of his health, gender, and age or job location are charged with the same premium. While modified community rating is where the enrollee is rated based on their age, gender, job location and health status.

The American health insurance model is a subject of political campaign and subject of political debate (Michael, 2001). There are quite a number of those in support as well

as those in opposition, those who supported the present model asserted that, health care is not a right, as it is defined by the bill of rights, or constitution. As such, it is not the responsibility of government to provide healthcare (Mechanic & Rochefort, 1996). In furtherance to their argument they believe that universal health care, would rather result in increased waiting time as seen in countries like United Kingdom and Canada. Recently British health service refused a life saving breast cancer medicine to women who could have survived with it because it cost the government too much money (Neal et al., 1999).

To advance their position, those opposing the universal health care for all argue that unequal access and health disparities still exists in universal health care systems. For instance, people could still pay doctors a personal fee to be treated immediately instead of having to wait for so long. Also, health care quality would drop drastically due to lack of competition (Woolhandler, 2009). On this same position, the Catholic Church in America was sitting on the fence, but vehemently opposed the inclusion of abortion issue on the healthcare and with their vantage position supported Clinton reform on health (Michael, 1996).

Stephen and Peter (2003) showed that, the coefficient on waiting time in the present United Kingdom system is significant and negative in all cases and varies from 0.08 in London to 0.30 in metropolitan areas. The coefficient on need is remarkably consistent at about 0.80 and general practice-access has a negative effect on demand in all areas, except London. Increase in accessibility to private beds exerts a downward pressure on demand in three of the areas with a borderline effect (Stephen & Peter, 2003).

Those in support again argued that, health care is a basic human right or entitlement, therefore ensuring the health of all citizens benefits a nation economically. According to Woolhandler (2009) about 59 percent of the U.S. health care system is already publicly financed with federal and states taxes, property taxes and tax subsidies. Therefore, a universal health care system would merely replace private/employer spending with taxes. Total spending would go down for individuals and employers (Woolhandler & David, 2002). Several studies have shown that majority of taxpayers and citizens across the political divide would prefer universal health care system over the current US system (Woolhnadler, 2009). Critic believed that the United States healthcare system is the most complicated in the world, and so making the right decisions is difficult even by the most able minds (Yuniv & Thomas, 2006).

The US model comprises of Medicaid, Medicare system and Private for-profit system. This system is fully subsidized by the government through the tax payer's money. The American health insurance system today is the highest in terms of government spending and without meeting the universal coverage for all citizens. This statements was reinvigorated by Woolhandler and David (2002) that the current tax-financed share of health spending is far higher than most people think; 59.8 percent. This figure which is about fifteen percent points higher than the official Centre for Medicare and Medicaid services (CMS) estimates of 45.3 percent (548 billion US dollars in 1999). This includes an accounting framework based on who wrote the last check in the sequence from individual households to providers, a government program, or private payer? Therefore the CMS classifies health benefits for soldiers as government health expenditure, since government actually writes the cheques to pay military hospitals

and doctors. While the FBI agents are classified as private health care's expenditure because a private insurer pays the claims (Woolhandler & David, 2002).

There are two types of payments of health claims by the government either through direct or indirect manner. The direct manner is through Medicaid payment, while the indirect is through the Federal Employees Health Benefits Program (FEHBP). All these are taxed-financed. To cover for an extra-payment for a citizens or group of citizen, government increased tax in order to meet up with redistributive burden of such group. This was what the Americans refer to as coercive redistribution.

2.20 Canadian Health Insurance Model

The Canadian system of healthcare is traced back to 1958, first with hospital insurance, then, ten years later adopted health insurance scheme. Though payment is through cost-sharing between Federal, Regions, and individual beneficiaries, the government evolved a system that ensures uniform system for all residents. An agreement was reached between the federal and regional government on the unification based on the following conditions in which the federal government contribution would have to be met. It has to be universal, that is available to all residents on uniform terms and conditions. It must be a comprehensive healthcare, which will include certain services, such as, dental, all medical services, and all services for in-patient and out-patient. Portable from province to province, that is service follow resident moving across Canada. Accessibility must be ensured, that is by eliminating barrier of direct and indirect billing or user fees. Health care should be offered on non-profit basis by a public administered agency. Finally, the province

should be left to design and organize its health system according to its own will and needs (Raynolds et al., 1993).

To be specific, Quebec healthcare system will be discussed in order to represent one successful model among all other complex system in the world. Even though not the entire province operates exactly the same system or method, but at least the Quebec system is the most popular and to a degree successful health insurance model today. One of the characteristics of the Quebec healthcare system is that, it is a hybrid of or elaboration of wide scale plan, which reflects a curious mix of American style federalism and pragmatism, and French style of centralism and government regulation. The Quebec health care reform is coherent and consistent from 1970's, with tracers of three elements as central core to the reform. One of which is decentralization, citizen's participation and outcome-centered management (Raynolds et al., 1993).

The next step that followed in evolving the Quebec healthcare system includes the sub-division of the province into 12 regions with regional councils, created and charged with limited responsibility. Thereafter, the modest beginning of decentralization was followed by election of ordinary citizens as governing board members. This membership is not only of council but of the establishments, which is hospitals, clinics, and local community centers. Finally the restructuring of public health and local community centre's took place. The system went further to make council membership through real political election and has the power of direct taxation. It was individual patient focus rather than professional and institutional, that is redirecting the system towards outcome objectives. The reform focus on this area of

health care, social adaptation such as child abuse, violence and delinquency, public health, physical health such as low weight, birth, cardiovascular disease, cancer, mental health, suicide, depressions and social integration such handicapped persons, the elderly (Raynolds et al., 1993).

2.21 Findings from the Literature

Raynolds, et al. (1993) was able to establish a clear measurable objectives, which serve as basis for making choice and decisions concerning resources allocation and evaluating the effectiveness and efficiency of healthcare delivery services within a setting. It also help to move focus from curative to preventive care and health promotion, which make it possible to choose the most costs effective policy in order to achieve a given health objective. Finally it has help in divulging intervention through other sectors apart from Ministry of Health and Social Services, to communities, individuals, and beneficiaries. This is the convergence ground between healthcare and safety reform, occupational safety and health practices in the working place. The conclusion from this study supported the conceptual frame and variables of this study. The conclusion gave priority of governmental control as tool in ensuring healthcare and safety services to the citizen. This study will also test the ability of state instrument of control in healthcare provision. The models also show case the weakness and strength of both Canadian and American model, which help in validating the results of this study.

2.22 Challenges for Future Investigation on the Canadian (Quebec) Health Care

Technically, grouping health care intervention on one objective may be a problem. Professionals and organizations may pose a threat to the evaluation intent of the system. In short the organization objectives and the population perspective are not easily reconcilable in the health care sector. Close budget may reduce inappropriate utilization of services to both service providers and operators. It will also help in stabilizing providers in a populated area which neutralizes the problem of lower income. Decision will be close to where action is. It helps in forcing establishments to meet up with needs of clienteles (Raynolds et al., 1993). In essence the Canadian model facilitates the coming up of the state and citizens as well as the providers of healthcare and safety services together to revolve and resolve the problem of access, affordability, equity and control in provision of services.

In the research conducted in China to the medical demand /utilization, an econometric method using difference-indifference method was used. The research intends to determine whether the reform in the delivery has impacted on the health care demand /utilization. The independent variables includes all health related factors, socioeconomic, demographic and health insurance status. While the dependent variable was the welfare effects of public health insurance reform in China (Jihong & Minglai, 2008). Some other demographic variables were taken as control variables in the study. In order to obtained results a popular logistic function in the medical service utilization equation was used (LOGIT model).

The study intends to determine the impacts of public health insurance status on medical service utilization and expenditure and how this impacts changes over time in response to health care services and safety reform in China in 1998. To achieve the objectives of the study a simple difference-in-difference econometrics model was used. This method produced a straight forward framework for scientific analysis of this study (Jihong & Minglai, 2008).

Barbara (2004) commenting on the empirical difficulty in the determination of methodological tool to use in measuring reform effects in a small group market situation concluded that, most studies find relatively mild effects or impacts of reform on insurance coverage. The study also revealed that, there was no evidence to believe that reform has not succeeded in creating adverse selection as speculated by its critic nor did reform created any substantial increase in either access or insurance coverage. The study divided the methodological tools used in assessing health insurance into two. First is the research methodology which concentrated on mostly on the determination of reform effects through time series mostly assigning control or treatment to aggregate time trends. Studies conducted by (Buchmueller & Jensen (1997; Zuckerman & Rajan, 1999; Sloan & Cancover, 1998; Jensen & Morrisey, 1999) obtained a results that showed no significant effects statistically of reform on insurance coverage.

The second generation research in health care reform adopted methodology that was geared towards correcting the problem associated with the use of time series by randomly assigning treatment to control. Under this approach reform policy was used as the control variable or treatment. Invariably this study adopted quasi-experimental

approach instead of strictly experimental approach adopted by the first generation researchers (Barbara, 2004; Meyer, 1995; Hammermesh, 2000). These approaches refer to as difference-in-differences and differences-in-differences-in-differences model (DD and DDD). The approach considers the outcome for four distribution groups, for example individuals in the state with reform policy, before and after and the individuals in the states that did not adopt a reform policy on health over the same two different periods of time. That is pre-reform and post-reform periods. The states that adopted a segmented reform could also measure the performance or health care and safety services utilization using the unaffected group as control or treatments item done by subtracting the difference between DD estimates through the impacts of the unaffected group; this will give the DDD estimates. The DDD estimates can control for trends variation across that group under reform and those who are not. These kinds of situation are commonly found in small market group's reform of affected and unaffected members of the group under reform situation (Barbara, 2004). From table 2.1 the year 2002 recorded the highest road accidents with 22,395 persons injured and the least injured incidence was in 2003 with 8,161 persons injured. The record also showed that the year 2002 recorded the highest accidents reports; the same year recorded the highest severe road accidents history in the country with 7,206 and with least severe accident recorded in 2007. The record of serious accidents was in 2002 and the least was recorded in year 2007. The record also showed that minor road accident incidence took place in the year 2002 with 6,778 and with the least minor accidents in the year 2003 with 4373 persons on record. The road accidents that recorded the highest lost of lives was in 2007 with 9,390 lives lost and the least incidence of live loss on road accident was in 2004 with 3,161 persons involved.

Those injured by road accidents was in 2002 with 22,970 and the least was in 2003 with 16,171 persons injured.

Table 2.1 also showed the total number of reported fire Outbreaks in Nigeria by type 2004-2007. The results on the Table showed that in 2003, there were 400 rescue or distress calls were made to the concerned agencies. The fire outbreak in which 5 lives were lost had 12 lives saved. Estimated value of goods lost was about N23, 539,000. In 2005, the number of domestic private fire decreased to 166 this may be due to the fortification of road safety activities in most of the states. There were 169 calls to relevant institution asking for help this singular effort also assisted the emergency rescue effort of the volunteers and fire officers in case of any reported outbreak. Through these efforts about 11 lives were saved, 10 were lost and goods estimated at N147, 703,000 were equally lost. There was no factory/industrial fire in 2005. Yet, there were others that attracted 63 calls asking for help. However, no losses of both lives and property were recorded. In 2006, domestic private fire occurred 152 times and 211 rescue calls were made to police and fire safety offices. This effort also recorded twenty seven lives saved while 104 lives were lost. Estimated value of goods lost was N225, 600,000. Although, there was no factor/industrial fire, yet there were other forms of fire that recorded 40 calls and claimed one live. The closer estimates of property loss were close to N99, 485,000. The available incidence and phone calls made in 2007 requesting help and or relief were 141 calls made in connection with domestic's private fire outbreak. The total numbers of lives saved were almost 10 at the same incidence 9 lives were lost with about N100, 000,000 worth of properties lost. The same year the number of factory/industrial fire recorded was 12 for which 8 calls were made. There was no clear record as to the number of those who lost their

lives but 4 lives were saved with a loss of personal properties estimated at N8, 000,000. The records in 2008 showed that the domestic private fire outbreak recorded 242 rescue calls. This same year recorded the highest rescue with 641 lives saved but recorded unsuccessful rescue leading to the death of 76 lives. The value of property loss was N717, 000,000. In the same year, there were 40 factory/industrial fires with 16 calls. No live was saved at all and 24 lives were lost. Only 10 lives were saved while 171 lives were lost. The fire consumed about N311, 000,000 (National Bureau of Statistics 2009; Police Headquarters Annex Lagos, 2009).

Table 2.1: Nigeria Total Number of Persons Reported Killed, Injured, Minor or Fatal on Road

Accidents and Related Fatalities.

Fatality	2002	2003	2004	2005	2006	2007
Injured	22,395	7697	8161	8980	9131	9114
Reported Accidents Cases	22,395	16,171	20,925	16,888	19,200	17,412
Accidents Cases	22,395	17,206	19,611	18,659	18,663	17,789
Severe Accidents	7,206	5401	6,362	6,132	5,806	5,789
Serious Accidents	8,411	7,432	8,509	7,849	8,052	7223
Minor Accidents	6,778	4,373	4,740	4,678	4,804	4,785
Killed by Accidents	9,240	7,697	3,161	8,980	9,131	9,390
Injured by Accidents	22,970	16,171	20,925	16,888	19,200	17,803
Fire Outbreak Lives Saved	=	12	11	27	10	641
Lives Lost by Fire	=	5	10	104	1	76
Property lost to Fire (Naira value Nigeria currency)	=	23,539	14,770	22,560	10,000	71,700
Factory/Industrial Fire Lives Saved	=	=	=	=	8	16

Source: Nigeria Police Force Hqtrs Annex,Lagos and National Bureau of Statistics Abuja-Nigeria.

From Table 2.2 the available data showed the rates of case fatality of various accidents from 1977-2000 which across all the different sectors of economic activity in Malaysia. The statistics revealed that the Case fatality rates are highest in the construction, transportation and mining and quarrying sector of the country. The item analysis showed that work-related fatality rate for 2000 is 11.3 per 100,000 workers (Malaysian Trade Union Congress 2006).

Table 2.2: Malaysian Distribution of Accidents and Fatality Frequency by Sectors

Industry	Indicator	1977	1980	1985	1990	2000
Agric,Factory& fishing	Cases fatality	18.7	0.9	1.9	3.4	9.6
Mining & Quarrying	=	11.9	10.9	13.4	4.5	17.5
Manufacturing & processing	=	1.0	1.1	1.8	1.5	6.8
Electrical, Gas, Water and Sanitary Services	=	5.5	6.8	56.6	2.3	14.8
Construction	=	6.4	4.8	6.8	12.8	32.6
Commerce	=	2.8	2.7	7.3	2.7	9.7
Transport	=	11.2	25.7	27.2	9.6	20.5
Financial	=	7.9	7.9	10.0	15.4	16.0
Insurance Services						
Civil Service	=	-	-	-	12.7	11.7
Accidents	=	47,912	51,340	61,724	121,104	95,006
Fatalities	=	1.65	2.7	3.8	3.1	10.5

Source: Rampal, Aw, Jefferelli (2002). Occupational health in Malaysia. In LaDou J (Ed). Occupational Medicine in Industrializing Countries. (pp 409-425). Philadelphia:Hanley & Belfus, Inc.

Table 2.3 display the number and types of occupational diseases reported to Malaysian SOCSO in the years 1999, 2002 and 2003. The numbers of work-related diseases included in this report are small compared to occupational accidents; this was partly due to either underreporting or due to failure to recognize the work-relatedness of medical diagnoses, non-reporting of diagnosed occupational diseases to the appropriate agencies or failure to capture occupational morbidities occurring in most of known industries. The literature revealed that case of underreporting is most prominent among workers in small and medium-sized enterprises and the informal sector of the economy (Hashim, Amin, & Khalid, 2005).

Table 2.3: Occupational Diseases Reported to SOCSO, 1999, 2002, 2003.

Factor	1999	2002	2003
Cancer	61	65	86
Noise Induced Hearing Loss	8	59	1
Respiratory Disease	14	12	8
Skin Disease	14	10	5
Musculoskeletal	1	8	0

Source: Hashim, Amin & Khalid. Malaysia Country Report, WHO/ILO Meeting on Strengthening Occupational Health and Safety, Kuala Lumpur, Malaysia, November 2005.

The estimation of a probability of an accident occurring in an industry is one of the tools used to ensure that fatality is reduced through the development of preventive or proactive plan for action in most industrialized countries. In Malaysia it was observed that low report or Under-recognition of occupational diseases is reported by data collected by the Information and Documentation System (IDS) Unit of the Ministry of Health, on the total probable occupational diseases among hospital admissions for the years 1999-2003 (Table 2.4). The results from the data indicated that, an average of about 103 cases of accidents use to occur with the probability 5 occupational disease occurring for every 10,000 hospital admissions. To sum it all this is about 1% of all the hospital admissions recorded in those years (Kampal, Aw, & Jefferelli, 2002).

Table 2.4: Probable Cases of Occupational Diseases among MOH Hospital Admissions, 1999-2003

Factor	1999	2000	2001	2002	2003	Total Admission	Rate of Admission Per 10,000
Total Probable Occupational Respiratory Diseases	11,087	11,078	10,060	8,294	7,769	48,288	68
Total Probable Occupational Cancer	4,100	3,884	3,881	3,848	3,781	19,494	28
Total Probable Pesticide Poisoning	796	914	913	901	950	4,474	6
Total Occupational Skin Diseases	161	169	163	162	151	806	1
Total Admission Malaysia Ministry of Health Hospitals	13,251,99	14,94248	14,762,73	13,697,20	70860,53	-	-

Source: Rampal, Aw & Jefferelli (2002). *Occupational health in Malaysia*. In LaDou J (Ed). *Occupational Medicine in Industrializing Countries*. (pp 409-425). Philadelphia:Hanley & Belfus, Inc.

2.23 Historical Perspective of Health Care and Health Care Delivery System in Nigeria

The northern protectorate, southern protectorate and the colony of Lagos were amalgamated in 1914 to form what is presently known as Nigeria by the British colonial masters who discovered Nigeria around 1900 or more ago. The protectorates and the colony of Lagos were transformed into regions in preparation for self governance through advancement in constitutional review that started in 1922 with the Clifford constitution, Richard constitution of 1946, Littleton constitution of 1952, Macpherson constitution of 1956, and the independent constitution of 1957. In 1957 the south eastern and south western region were given self government for obvious reasons the northern region became self governing in 1959 and Nigeria became independent in 1960 1st October and a republic in 1963.

The Nigerian medical care system as at present is just the reincarnation of the carcasses left behind by the colonial masters. The structure remained urban concentrated, with patches of dispensaries to serve the colonial estates in the interior. The Christian missionaries especially the Seventh day Adventists, ECWA churches and the Catholics also have their clinics and dispensaries for missionary purposes all over the country. Health provision in Nigeria is a concurrent responsibility of the three tiers of government, (that is, Federal, State, and Local Government). However, because Nigeria operates a mixed economy, private providers have a visible role to play in health care delivery. The federal government role is mostly limited to coordinating the affairs of the university teaching hospitals and the various general hospitals. While the states government manages the various general hospitals and the

local government focus on dispensaries. The hospitals under both federal, states and local government are regulated by the federal government through both National Agency for Food, Drugs Administration Control (INAFDAC) Ministry of Health and NHIS. All the above functions are spelt out clearly in the concurrent section, residual and/or exclusive section of the Nigerian constitution (Nigerian Constitution, 1999).

According to the report of the Central Bank of Nigeria, the total expenditure on healthcare as percentage of GDP is 4.6, while the percentage of federal government expenditure on healthcare is about 1.5 percent (Nigeria Expenditure Statements, 2007).

Historically, health care delivery system in Nigeria is generally provided by the government. It has been the tool and as well an instrument used by the politicians to seek for an elective positions, with the promise of improving on the existing or general overhaul of the existing health care delivery system. Health care in Nigeria is influenced by different local and regional factors that impacts on the quality or quantity present in one location. Due to the aforementioned, the health care system in Nigeria has shown spatial variation in terms of availability and quality of facilities in relation to needs. However, this is largely as a result of the level of state and local government involvement and investment in healthcare programs. The Nigerian Ministry of Health usually spends about 70 percent of its budget in urban areas with only 30 percent of the population resides.

The population of Nigeria was reported by the 2006 census projection to be 140,003,542, at a growth rate of 2.83 percent. The current projection by the same percentage in 2009 is 152,229,398, and 45 percent of the population are under 15

years, therefore, the focus of the health delivery system should be on the reduction of infant mortality and improve children related healthcare delivery. The male/female ratio was 10/5 percent. The growth rate and the male sex ratio has been consistent from 2003 – 2006. This is true looking at the ratio of male/female in 2003 was 67,436,486 males while females was 61,013,964 and in 2006, male to female was 71,709,859, is to 68,293,083 (NPC, 2009). Note that the above is a projection based on the 2.83 percentage increase or growth of the population.

The total fertility rate by the 2003, Nigeria Demographic and Health Survey (NDHS) is 5.7 percent, neo-natal mortality rate is 48 per 1000 live births, the infant mortality rate is 100 per 1000, live births, and under -5 mortality rate is 201 per 1000 live births (NDHS 2007). The Nigerian economic policies suffered a lot of crises due to dependency on oil, but trends seem favorable as from 1999. Consequently, there has been an improvement in the performance of the domestic economy. Nigeria's GDP was estimated at 2.7 percent in 1999, 2.8 percent in 2000, and 3.8 percent in 2001 (CBN 2007). The GDP in 2004 stood at 3 percent, 2005 at 7.1 percent, 2006 at 6.9 percent, and 2007 at 5.3 percent (National Bureau of Statistics Annual Report NBS 2008).

The proportion budget spent on health by Nigerian government was 4.3 percent as at 2007 (WHO 2007; CBN 2007). The proportion of population living below poverty line was 56.8 percent in 2005, 58 percent in 2006, 60 percent in 2007, and unemployment rate stood at 5.8 percent also at 2007 (NBS 2006). The life expectancy ratio in Nigeria was 44 years as at 2007, while crude mortality rate was 14.7 percent, mertanal mortality ratio was 800/100,000 live births as at 2007, under-5 years

mortality rate 201/1000 live births, HIV/AIDS prevalence rate 3.9 percent, percentage safe water access 72 percent urban and 49 percent rural (NBS; NACA & NPC, 2007).

2.23.1 Health Service Provision in Nigeria

The health service provision in Nigeria is of three classifications as defined by the constitution of the country. They are basically Primary level healthcare provision; Secondary healthcare provision; and Tertiary healthcare provision.

2.23.2 Primary Level of Health Care

At this level the services are mainly entry point of the community into healthcare delivery system. The facilities include health centers, clinics, dispensaries, and health posts. They are basically, curative, preventive, promotive, and pre-referral care to the residents. Staffs include, nurses, community health officers, community health extension workers, and environmental health officers (Labiran, Margaret, Bayo, & Eyitayo, 2008).

2.23.3 Secondary Level of Health Care

At this level the facilities are basically situated within the general hospitals, whose responsibility is general medical and laboratory care, as well as specialized health services such as surgery, pediatrics, obstetrics and gynecology health care level. Those in charge of the work in most general hospitals include medical officers, nurses, midwives, laboratory and pharmacists, and community health officers (Labiran et al., 2008).

2.23.4 Tertiary Level of Healthcare

This is the level where most of the professional medical care officers reside in the Nigeria health care provision and practice. They are basically responsible for the treatment of specialized kind of illnesses. These are supposed to be the highest echelon of health care delivery facility of Nigeria health sector. As said earlier this level consists of highly professionals and specialized services level, whose emphasis was on specific disease conditions or patients. They are basically specialist's hospitals, teaching hospitals, and federal medical centers. Their functions are to manage referral from primary and secondary health care level of delivery. This is so because; they have special expertise and fully fledged technological capacity that enables them to serve as resource centers for knowledge generation and diffusion. Each state in Nigeria has at least one tertiary health facility (Labiran et al., 2008).

According to Labiran et al. (2008), the government of Nigeria under an arrangement called VAMED projects, is equipping the 14 federal teaching hospitals in the country. As at 2008, 8 out of the 14 were fully equipped with modern state of the earth equipment. The initial problem of shortage of staff to manage the radiography and radiotherapy equipment was over, with training some staff abroad. The other six teaching hospitals were equipped in 2009 financial year.

Amazingly health care financing in Nigeria is basically from out-of-pocket. This is true as confirm by the National Health Accounts Study in 1998, which shows that, the total health expenditure is supposed to be 157.1 billion or 5.45 percent of GDP. The results showed that out of the health care expenditure the governmental health care expenditure commitments were 23.5 billion or 0.8 percent of GDP or 15 percent of

the total health expenditure. The distribution of the expenses by the tier of government was as follows federal government 10%, states 4% and local government 1% and donor total health expenditure was 20.5 billion, which is 13% of total health expenditure. While the total private health expenditure was 113.0 billion, this represents 72 percent of the Total Health Expenditure (THE). The household share of the T.H.E. was 108 billion or 69.21 percent (Oladapo, 2009).

According to an estimate in 2001 private health care facilities provided the maximum healthcare services and goods worth 81.37 billion that was 29.19 percent of the total health care expenditure. At the same time government facilities provided goods worth 39.78 billion (14.27 percent of total healthcare expenditure). Healthcare expenditure through provision of goods and services by the chemists and pharmacists facilities worth 37.52 billion (13.46 percent of the total health expenditure), missions and NGOs facilities contributed 26.26 billion (9.42 percent of T.H.E.). Traditional healthcare providers represented 11.25 billion (4.03 percent of T.H.E.). While, 82.55 billion (29.6 percent of the T.H.E.) are accounted by other sources (such as self-treatment, homecare, administration of health research or education and training) (Labiran, 2008).

Basically in Nigeria the funded health care includes curative, preventive and rehabilitative services. Others include occupational health and capital formation education and training, health personnel and research and development in health. An estimates shows that, curative was the highest in terms of budgetary allocation and expenditure in practical term in 2001. For example curative in 2001, has accounted for 175.5 billion or 64. 49 percent total health expenditure. While on the other hand,

preventive accounted for 2.2 billion which was 0.9 percent of total health expenditure and finally capital formation with 0.31 percent, while about 29.93 percent accounted for other health expenditures in the country (Labiran et al., 2008). The health information system is currently being used in the federal establishments and the states were directed to connect in order to have effective medical records and other related records that have to do with an improved medical care system delivery in the country. This is a journey towards having an integrated health care information system for the country in the near future.

2.23.5 Nigerian Workforce in the Health Sector

Nigeria has one of the largest stocks of human resources for health in Africa comparable only to Egypt and South –Africa. In 2005, there were about 39,210 doctors and 124,629 nurses registered in the country, which translate into about 39 doctors, and 124 nurses to 100,000 populations; as compared to the Sub-Saharan African average of 15 doctors to and 72 nurses per 100,000 populations (WHO 2006). In addition to medical doctors, Nigeria is having dentists and doctors expatriates closed to 2,968 and 215 respectively. This suggests that there are considerable numbers of expatriates providing medical care support in the country (Labiran, 2008). Nigeria also have 13,199 pharmacists as at 2007, 1,517 dentists technologists therapists also as at 2007, 5483 pharmacists technicians, 12,703 laboratory scientists, 2,936 laboratory technicians, 7,044 laboratory assistants, 1,473 physiotherapists, 29 occupational therapists as at 2007, 840 radiographers, 1,415 optometrists (NPMRB 2007). This was only at the federal level minus those in the services of the states and local government level. Nigeria has 339 health training institutions all over the country. These institutions have the total enrolment of students of 53,201 between the

periods of 2002-2005 (NUC, 2007). Table 2.5 showed the total number of lecturers in medicine and pharmacy by level in Nigeria;

Table 2.5: Nigerian Workforce in Health Sector as at 2002

Medicine		Number		Pharmacy		Number	
Professors,	Associate	315	from	2002-	Professors,	Associate	45
Professors/Readers		2005		Professors/Readers		2005	
Senior Lecturers/	Senior	451	from	2002-	Senior Lecturers/	Senior	83
Research Fellows		2005		Research Fellows		2005	
Associate Lecturers/	Junior	151	from	2002-	Associate Lecturers/	Junior	68
Lecturers		2005		Lecturers		2005	
Tutors/Instructors/Others		86	from	2002-	Tutors/Instructors/Others	30	from
		2005				2005	
Total		1003		Total		226	

Source: Nigerian National University Commission 2006

2.23.6 Medical Staff Exodus (brain – drain) to Europe, America and Other Countries

The total number of the Nigerian doctors who migrates outside according to records and their destination are as follows; United Kingdom 1,529, Ireland Republic 851, USA 2,392, Denmark 16, Israel 4, South-Africa 538, West-Indies 384, Canada 176, UAE 5, Singapore 10, Australia 86, Germany 12, Netherlands 11, Malaysia 4, Ghana 8, Russia 4, Ukraine 7, Guyana 6, and many more (MDCN, 2008). Data from the American Medical Association revealed that in 2003, 2,855 Nigerian doctors were registered with the American Medical Association out of which 44 percent were specialists in internal medicine. This singular problem metamorphosed into poor medical services, inadequate number of specialists to population, poor and slow

training of young medical practitioners to meet up with the challenges of an increasing population and complexity of human diseases.

2.23.7 Evolution of National Health Insurance in Nigeria (NHIS)

The former president of Nigeria Labor Congress now the governor of Edo state in Nigeria Mr. Adams Oshiomole , stated that the first concept of NHIS in Nigeria was mooted in 1962 (Okumepluma & Chukwuwike, as cited in David Eboh 2008; Falegan 2008). Falegan (2008), states that forty three years later, the immediate pasts president of Nigeria Mr. Obasanjo sets aside the sum of 26 billion Nigerian currencies in the 2005 budget which serve as the impetus for the take up of the scheme. The initial expense for the take up of the National Health Insurance Scheme was at that time shouldered by the government on behalf of her employees. This was so until the scheme was evaluated up to the end of 2006. This grace period was to build confidence on citizens.

The National Health Insurance Scheme Decree statutorily allows each insured person to decide with which health centre he wishes to register. A monthly capitation is paid to the health center from the pooled funds. Health Maintenances Organizations (HMOs) are empowered to coordinate the activities of the health centers as they dispense healthcare to the insured, while the overall regulations of the scheme rests with the National Health Insurance Scheme Council. The council was established by the same Decree (Falegan, 2008; Dogo, 2009). The present status of the National Health Insurance Scheme was only able to cover one million people out of 150 population of the country. These numbers seem not enough considering number of

people of the country which is equivalent to only 0.8 percent of population (Carthy, Ludi, Obodiah, & Houton, 2009).

2.24 Historical Perspective of Healthcare and Healthcare Delivery System in Malaysia

The independent territories of Malaya became independent in 1957 and a Federation in 1963, from the British colonial Mastership. The medical health structure, healthcare delivery system, financing and administration were inherited from the colonial regimes the period in history. The system up to the present moment resembles the United Kingdom structure except for patches of amendments or adjustment to meet up with local challenges (Jacob, 2008).

The position above was fortified by Subramaniam Pillay (2005) that, during the colonial era, the health care system was mainly urban based catering to the needs of the colonial government service. There was also a separate system of hospitals in the plantations which provided very basic services to ensure estate workers were healthy enough to work daily. This position was confirmed by the World Bank report of 2004 that the National Health Morbidity Survey (NHMS) confirmed that 92 percent of urbanites were living within 3 kilometers of a health facility as compared with 69 percent for the rural population. The study also showed that only 67 percent of the rural population in the state of Sabah and Sarawak 50 percent were within 5 kilometer to nearest facility (WHO, 2006). A brief history of Malaysian health care system showed that, after independence in 1957, the new Malayan government decided to focus on providing education, health, and basic utilities like water and electricity, especially, to the rural population. In the case of health care, the emphasis was on

preventive health and primary care. The improvement in healthcare was achieved through a network of general hospitals, district hospitals, psychiatrics, health centers, midwife and mobile clinics, which enabled Malaysia to provide comprehensive, accessible and affordable health care to vast majority of the population, including remote rural communities. The system puts 90 percent of the population within one hour or five kilometer of a health care centre (MMA, 1999). Health indicators such as life expectancy, infant mortality rate and maternal mortality rate improved tremendously in the first 25 years after independence. This achievement won praise from several quarters. For example, the World Health Organization cited the Malaysian healthcare system as a model for other developing countries to follow. An IMF health economists also stated that the Malaysian model of health delivery constitute an effective instrument for redistributing income in developing countries (Subramaniam, 2005). Despite this achievement, Subramaniam (2005) added that, the system had its own shortcomings. All the same by the early 1980s, Malaysia had one of the health care systems among developing countries. This position remained consistent looking at the World Health Organization rating of 2004 placing the overall system performance score of Malaysia as 49 out of 191 countries (WHO, 2004). In the 1960s, the healthcare systems of Nigeria and Malaysia were having similar developmental structures all originating from England. The British had bequeathed a relatively well functioning administrative structure and civil service, which extended into the public health services. After the departure of colonialists, the basic institution of sanitation and preventive health as well as a network of public hospitals were already in place (Jacob, 2007). The post-colonial government saw health care services as an essential part of national development. The current health care system since

independence, stems from the colonial legacy of national outlook in appearance, which almost a prototype of the British health care system.

2.24.1 State of Malaysian System of Health Care Delivery

Health care in Malaysia is divided into private and public sectors. Malaysian society places importance on the expansion and development of health care, putting 49 percent of the government social sector development budget into public health care, an increase of more than 47 percent over the previous figure (WHO, 2004). This has meant an overall increase of more than RM 2billion. With a rising and aging population, considering the present Malaysian population and demographic characteristics of 32.4 percent less than 15 years old, 63.3 percent within the age of 15-64 years old and 4.3 percent, 65 years older. The projection of the country's population is 28.96 million in 2010, based on a projection growth rate of an average of 1.6 per year. This symptomatised that, in the near future healthcare development should tilt towards meeting up with the challenges of old age population with 63.3 percent old generation in addition to the existing 4.3 percent older generation may be a sound health burden to the government. According to Jacob (2007) about 80 percent of the health care services were provided using a universal governmental subsidy to the public. In addition to the subsidized health care, the government also prioritized health care promotion rehabilitation and health care that is purely curative in nature. This is centrally performed at the primary, secondary, and tertiary levels of the healthcare delivery system. On the other hand according to Jacob (2007), the privately owned hospitals and clinics, mainly concentrated on the curative and rehabilitative services to the public. This is strictly being finance on for-profit-basis, basically on fee-for-service basis. Today there are three types of public hospitals in Malaysia, the

general hospitals, the districts hospitals, and special medical institutions. The capacity of the Malaysian public sector stands at 38,000 beds, 123 public hospitals, in addition to six specialists' medical institutions, psychiatric hospitals and the national health institutes (Jacob, 2007). Malaysia, in its desire to be the health tourism nation in 2020, have the following plan of upgradement of the existing facilities and the provision of new ones, training and retraining of personnel, and the provision of high class multimedia health care service with investment in ICT intensive programs, research and implementation.

2.24.2 Existing Facilities in Malaysian Hospitals

The facilities provided by Ministry of Health (MOH) Malaysia in 2005 including, rural facilities are reported in Table 2.6

Table 2.6: Facilities Provided by Malaysian Ministry of Health as at 2005

Type of Clinic/Hospitals	Number of Clinics	Ratio of Clinics to Population
Community Clinics	1900 in 2005	1:5085
Health Clinics	495	1:19,520
Mobile Dispensaries Units	200	1:48,312
Mobile Dental Clinics,	30	=
Health Clinics : Maternal & Child	462	1:35,638
Child Health Clinics		
Patient Care Services	128	1:204,140
Total Beds	35210	1:742
Dental Units in Government Clinics	3,340	1:7,823

Source: Malaysian National plan 2000-2010.

As at 2005 the total number and ratio of medical care professionals in Malaysia as reported in table 2.7 are as follows:

Table 2. 7: Lists of Medical Professionals in Malaysia as at 2005

Medical Health Professionals in Malaysia	Number in both Private Clinics	Ratio To Population in Malaysia
Medical Doctors	18,842 as at 2005	1:1,387
Dentists	2,689	1:9,716
Pharmacists	4,021	1:6,512
Nurses	43,977	1:594
Medical Assistants	6,200	1:4,214
Dental Surgery Assistants	2,375	1:11,085
Dental Technicians	691	1:37,811
Dental Nurses	2,104	1:12,418
Occupational Safety Therapists	398	=
Physiotherapists	1,185	=
Radiographers & Medical	3,373	=
Laboratory Technologists		

. Source: Malaysian National Plan, 2000-2010

The ninth Malaysian plan, had the following targets from 2006-2010 as an action plans, which included;

2.24.3 Targets

- (i) Palliative care services in six regional hospitals with palliative medicine and pain specialists.
- (ii) All medical schools to include palliative care education at undergraduate and post graduate levels.
- (iii) Palliative care education to be integrated into nurse training programs.
- (iv) The development of clinical practice guidelines for cancer pain management.
- (v) Network building with palliative care providers in each region.

2.24.4 Actions Plans 2010

- (i) The establishment of specialized palliative medicine services in six regional Centres; Hospital Penang, Hospital Selayang, Hospital Johor Baru, Hospital Kota Baru, Hospital Kuching, Hospital Queen Elizabeth Kota Kinabalu.
- (ii) The setting up of a specialist's consultative palliative medicine service in the National Cancer Institute.
- (i) The identification of eight individuals to be trained as specialists in palliative medicine.
- (iv) Identifying and training support staff in palliative care (nurses, physiotherapists, social workers, clinical psychologists).
- (v) To network with and lobby all accredited medical schools to provide undergraduate and postgraduate palliative care curricular.
- (vi) To develop a post-basic palliative care nursing course.
- (vii) To conduct basic Continuing Medical Education (CME) programs in palliative medicine for doctors and nurses throughout the country (Ninth Malaysia Plan, in Natila, 2008).

As at now three doctors are undergoing training in palliative medicine, two of which will return making a total of at least three specialist's units operation by 2010. Reports indicated that steps are being taken to actualize the posts-basic palliative care nursing course, with the initiation of discussion on palliative care curriculum and the development of clinical practice guidelines in 2008. The intention was also geared towards fortifying relationship with the NGOs by the ministry of health Malaysia as stated by the national Adviser on health Richards Lim (Natila, 2008).

2.24.5 Hospital Information System in Malaysia

The recent development in the technology increased the degree of awareness in both public and private sector, which led to advancement in the rise in demand for better health care. This development also metamorphoses into the installation of facilities that demand advanced technology systems in the hospitals in Malaysia (Natila, 2008). As results both public and private hospitals are adopting the hospital information system (HIS). The Malaysian ministry of health adopted the multimedia option in the hospitals in order to meet up with the challenges of healthcare provision in the country, with Telehealth as one of the eight Multimedia Super Corridor (MSC) flagship applications. Telehealth uses internet-based technology in providing health service that is both up to date and affordable (Natila, 2008).

The component of telehealth includes, Lifetime Health Plan (LHP), Continuing Medical Education (CME), Mass Customized or Personalized Health Information and Education (MCPHE) and teleconsultation. This is done through the use of ICT; the example of this is electronic guarantee letter (e-GL) for civil employers. This service makes it easier for them as they would no longer need to go to their workplace first to get guarantee letters before getting hospital treatment or being admitted. This service is now available at 135 hospitals nationwide. Another milestone in health IT according to Natila (2008) is MOH's Myhealth portal. This portal contains credible localized health content, with more than 500 accredited health articles for everyone. Portal users can get updated information on health alerts affecting the country and the world beside a directory of health services with updated details of hospitals and clinics. In addition to interactive services (Natila, 2008). There are also MyCPD portal, which includes a virtual library, this is to ensure that, healthcare providers

continually maintain and provide high standards of performance and competence by recording and storing information relating to training and development of registered professionals (Natila, 2008).

Teleconsultation extends specialists care to patients in rural areas, by reducing waiting time and unnecessary patients transfer, as at presents 38 hospitals interlinked within the network, providing specialist's health care to the general community in highly specialized areas of cardiology and dermatology. It was reported that, 2,500 cases have been exchanged since 2007 (Natila, 2008). This is in addition to e-reporting or electronic reporting system, and facilitate the collection, collation and analysis of all health and health related information from all stakeholders. A National Health Information System Centre will be established to be responsible for analysis and coordination of all health-related information in the country. All the above plans were logically chronicle in the ninth Malaysian Plan, 2001-2010 (National Malaysian Plan 2001-2010). The total expenditure allocated to ICT by categorization such as computerization of governmental agencies, bridging the digital divide, schools, communication infrastructures services, telecentres, ICT, training/services, ICT funding, MSC multimedia applications, e-government, smart schools, telehealth, multi-purpose card, MSC development, amounted to 2,389.4 US million dollars, in 8th Malaysian Plan 2000-2005 and 9th Malaysian Plan, 2006-2010, 3,905.7 US million dollars (Malaysian Economic Units in Natila, 2008).

2.24.6 Development of Health Insurance in Malaysia

The journey towards a health insurance system started in the early 1980's, which permitted the private sector to play a greater role in non-traditional areas like health

and higher education (Subramaniam, 2009). Therefore, in the 1980's and 1990's, Malaysia witnessed a sharp increase in the number of profit-seeking private hospitals. Prior to this, most of the private hospitals were run by non-profit communities and religious organizations (Subramaniam, 2009). In 1994, according to Abdallahi and Ng (2009), a medical saving scheme was introduced through the Employees Provident Funds (EPF). In 2000 it was announced that this provident funds accounts will be used to for a risk-rated medical insurance scheme, to be offered by the Life Insurance Association of Malaysia (LIAM). With the availability of EPF funds the CUEPACS meaning (Congress of unions of employees in the public and civil services) was launched, a voluntary private insurance scheme, and a joint venture with two other private insurance companies. Their services are only available to those below the age of 70 (Abdallahi & Ng, 2009). In 2002 an announcement was made informing the general public the existence of the newly created National Health Financing Funds. The desire of these funds was to provide subsidy to the patients to seek for medical services from the private hospitals (Abdallahi & Ng, 2009). This is a journey from public health care system to private healthcare system in Malaysia.

The second National Health Morbidity Survey (NHMS) as cited in Abdallahi and Ng, (2009)which was conducted between mid-1995 to Mid-1996, showed that, per capita out-of-pocket health expenditure was estimated to RM180, which is 4.80 percent of the annual income of the individual. The report also show that as from 1989-1996, the out-of-pocket expenditure increased by 40 percent, an estimate of RM.3.82 billion in 1996, a total that is almost equivalent to the public sector expenditure of 3.99 billion in the same year (Public Health Institute, as cited in Abdallahi & Ng, 2009). Making comparative analysis of the indices show that in 1996 GNP out-of-pocket health

expenditure constituted 1.35 percent of (or 1.28 percent of GDP) considering the 1.41 percent public expenditure in terms of GNP survey (or 1.34 percent of GDP). The survey also confirmed that, from the out-of-pocket expenditure, 71.67 percent was on private health care facilities for ambulatory and curative care and 14.3 percent for in-patient care. Thus, the report confined its scope of analysis to out-of-pocket expenditure only.

Up until 1980s, as stated earlier private health insurance has very limited role in health provision in Malaysia (Abdallahi & Ng, 2009; Suubramaniam Pillay, 2005). The governmental announcement in 1981, led to a substantial expansion in the health care delivery and provision business in Malaysia. This is evidenced by the records as presented in the results of 1995 survey of private health care practice in Malaysia, which show that, the estimated insured population had risen to 15 percent. In 2006, 18.8 percents of Malaysian population aged 18 and above had private insurance coverage either for (i) medical and health (ii) life insurance (iii) other types of insurance related to health. The total premium (weighted for the total population aged 18 and above) was estimated at RM 2.99 billion (Davis, Rohaizat Safiee, & Nordin, 2006). Private insurance premium paid by the population was RM 2.99 billion of which it was estimated that RM 1.21 billion was paid specifically for the medical and health component (David et al., 2006).

According to Abdallahi and Ng (2009), in 2007, insurers in Malaysia issued a total of 1,169,616 new individual life policies with total sum assured at RM. 51,073,459.00 (Bank Negara, as cited in Abdallahi & Ng, 2009). It then means that, medical coverage plan or health insurance is one of the most popular plan and the business is

growing with tremendous competitive products introduced for the citizens, it as well serve as a check to the public sector to sit up and meet the healthcare needs of the population.

Today according to Jacob (2007), the chairman of private hospitals practitioners in Malaysia, there are 10,000 private sector beds in Malaysia, with over 210 private hospitals, which accounts for 20 percent of the Malaysian hospitals beds, which employ 45 percent out of the nation's 18,300 doctors. Malaysia also recorded a total number of 68,349 numbers of registered nurses.

Jacob (2007) also reported that Malaysia has hundreds of individual pharmacy companies, such as Boots, the chemists in the form of Boots companies for East Private Limited. The largest group being Guardian-A, network of 142 stores nationwide, with the presence also of healthcare insurance companies such as Prudential, ING, AIG, BUPA International, American International Assurance (AIA). The quality of service is ensured by the Malaysian Society of Quality in Health (MSQH) (Jacob, 2007).

CHAPTER THREE

METHODOLOGY

3.1 Introduction

In every evaluation research, the methods and procedures adopted are critical to achieving the desired objectives. Since this study is concerned with the evaluation of some parameters of economic and health relationship and with the comparison, by means of these parameters, the values of economic and health variables between two countries, its methodology must be carefully articulated and outlined. In the case of this research Nigeria and Malaysia has a number of medical personnel, beneficiaries, safety experts, in both public and private hospitals that serve as target of this research. The National Health Scheme Reform that serves as a platform for the operation of the countries health system targeted the workers in the formal sector of the economy in case of any reform. Therefore both the practitioners and the beneficiaries use the public and the private clinics available in the two countries. The public clinics are basically being finance by the government under the strict supervision of the ministry of health and in the case of Nigeria with the National Health Insurance Scheme outfit as a new intervention to ensure efficiency, accessibility, equity and affordability of health services to the taxpayers. At the same time in the two countries private for profit clinics exist as supplement alongside the public provision. Therefore this study is limited to only five institutions of higher learning in both Nigeria and Malaysia and some selected privates and public control clinics in the country as depicted in the samples selected. Thus, the research was planned and conducted by the following strategy.

3.2 Research Design

There is no single blueprint for planning research and choosing a research design. Hence, research design is governed by the notion of “fitness for purpose”. The purpose of the research determines its design and methodology. This research is a combination, both in purpose and in design, of evaluation research and causal comparative (ex post facto) research design. It is evaluative as it seeks to evaluate the NHS scheme overtime and it is causal-comparative because it compares the schemes in two countries – Nigeria and Malaysia.

It is worth mentioning that the socioeconomic context within which evaluation research is planned and conducted poses numerous constraints on undertaking rigorous research to measure programme’s effectiveness. Various groups often have an interest in the programme under study including academicians, professionals, practitioners, legislators, administrators and the general public. Among these groups, there may well be different interests in the evaluation study, especially if the results are expected to influence decisions about the insertion, termination, continuation or expansion of programmes. It is within such a context that the focus of the evaluation is defined, the variables for inclusion in the study are identified, the design is determined and the findings considered for utilization.

On the other hand, in the causal-comparative design, the researcher is not interested in a mere collection of haphazard facts. Concepts, facts and hypotheses must be coordinated, results compared, likeness recognized, anomalies explained and essential components discerned. In causal-comparative design, in particular, scholars and researchers typically use one of two approaches; Mill (1950) labeled the “method of

agreement” and the “method of disagreement”. In the method of agreement, the researcher tries to establish that several cases sharing crucial similarities, NHS in this research, have in common the hypothesized causal factor. The reverse is applicable in the method of disagreement.

In an evaluation research, the major statistical components form the basis of the research design which includes both the sampling plan and the estimation procedures. The sampling plan is the methodology used for selecting the sample from the population. The estimation procedures are the algorithms or formulae used for obtaining estimates of population values from the sample data and for estimating the reliability of these population estimates (Levy & Lemeshow, 2008).

As envisaged herein, the choice of a particular research design should be a collaborative effort involving input from the statistician who will design the survey. The personnel involved in executing the survey and the researcher who will use the data from the survey. The researcher is tasked with the specification of the variables needed for the estimates, and what restrictions are placed on the survey with respect to timeliness and costs. Those individuals involved in executing the survey must be well trained and adequately remunerated. Having received such input, the researcher can then propose a comprehensive research design that will meet the required specifications at the lowest possible cost. In this research design, having considered all the factors involved, the stratified random sampling with proportional allocation is the chosen sampling design.

3.3 Sample Size Determination

In this research six samples were taken each using a stratified random sampling and non-proportionate probability. The first strata of the sample are the institutions selected as the strata representing the medical experts, safety experts, and the beneficiaries of healthcare and safety services in the two countries. For the second secondary sample, the medical doctors, dentists, nurses, safety and health experts and as well as members of both academic and non-teaching staff of the faculties in both Nigeria and Malaysian higher institutions selected samples were chosen as respondents. The third secondary sample included, workers and those attending both public and private hospitals were selected and those attending only public and/or only private clinics were also selected.

From the above selected samples the target population was obtained from the records of the schools (websites). Based on the lists of the staff in faculties respondents were selected and as well as those working in the various school clinics were selected in addition to other academic staff and non-teaching staff in the selected samples who showed interest to participate in the research. The number of samples used in this study was dependent on personal inquiry and available records of the respondent on internet, in addition to being an employee of the selected stratum as well beneficiary or professional or any of the category stated earlier herein. Criteria for samples inclusion in each inquiry were the medical personnel, staff of the selected strata, experts and workers in private and public hospitals that were willing to participate in the study. In this research the primary sample or subject of the study involved taking a proportion from the population, making observation on this smaller group and generalizing the findings to the larger population from which the sample was drawn.

According to Anne (1998), technically the size of the sample depends upon the precision of the researcher's desire in estimating parameter at a particular confidence level. Schumache and Macmicky (1993) emphasized that the sample size is directly related to the purpose of the study, the research problem, the data collection methods and availability of information rich participants.

In this study, the three criteria employed to compute the sample size were, using estimation precision, for example, confidence intervals, estimating expected response rate based on previous research or studies in which the design is similar to this study and calculating the design effects, after which the sample size was finalized. The primary sample selection was concluded as follows:

The determination of sample size is a common task for many organizational researchers. Inappropriate, inadequate, or excessive sample sizes continue to influence the quality and accuracy of research. A formula for selecting the sample size for a research problem based on a level of significance and a set error rate was proposed by Cochran, (1977) and this research adopted the formula to obtain the sample.

Table 3.1: Descriptive Statistics: Sample Size Determination

	N	Minimum	Maximum	Mean	Std. Deviation
Highest Educational Achievement	290	4	5	4.21	0.411
Valid N (listwise)	290				

$$n = \left(\frac{Z_{\alpha/2} \hat{\sigma}}{\delta} \right)^2 = \left(\frac{1.96 \times 0.411}{0.03} \right)^2 = 721$$

That is, we need a sample size of at least 721 to arrive at a sample with a sampling error of at most 3%. Hence, for convenience, we shall take our sample size to be 750.

Based on the formula, this study needed 750 respondents to complete the survey using the questionnaire instrument. This size range was as suggested by Ferketich (1991) and Dillman (2000) that the size of 200-300 should be considered adequate for a survey. It was within the sample frame of plus or minus 5% margin errors based on the formula and sample size table of Krejcie and Morgan, (1970). Normally “p” is set at 0.01 or 0.05 or more (Dill man, 2000). However, using 0.05 would lead to a larger sample size therefore, 0.05 was chosen and used in this research (Weaver, 2006) though it always provides enough sample size for smaller or larger population (Bruns et al., 2003; & Lyberg, 2003). For example β = acceptable amount of sampling error or precision. It could be set at 0.1. 0.05, or 0.03, which are plus or minus 10, 5, or 3 % (percent) of the true population value respectively. C=Z statistics associated with the confidence level set at 95% level.

Based on the data retrieval from the internet’s and request for an estimate from contact people, the total number of the mentioned professionals and beneficiaries such as medical experts, safety experts, and staff beneficiaries as respondents in both the institutions, public and private clinics in Nigeria and Malaysia were obtained. Therefore, the sample size with the proportion to answer dichotomous items of 0.01-0.05% acceptable sampling error and 95% confidence level was computed.

3.4 Estimating Expected Response Rate

For the expected response rate to be at least 50.0%, the respondents were expected to be 750. The response rate of 50% was set in order to assure that non-response bias would not affect the results. In order to get the exact 750 response rates several round of questionnaire administration were made to account for incomplete, improper filled

questionnaires and non-return, this activity accounted for the high response rate. These questionnaires were distributed to staff beneficiaries and experts in both safety and health in the selected sample institutions and organizations in Nigeria and Malaysia. In addition this percentage was established in accordance with a response rate of previous studies employing stratified random sampling (Sindhu & Pookboonmer, 2001; Phokwang, 2008). The former study used a self-reported questionnaire assessing the barriers to research utilization. It received a response rate of 47.8% (Sindhu & Pookboonmer, 2001). The latter study received a 77.7% response rate (Phokwang, 2008). Going by the results of previous computation this study is expected to sample 750 experts in both safety and health and as well as the beneficiaries of national health insurance scheme. The expected response rate should at least be 85% with rounds of repeated distribution until the 750 were collected, for reliable and valid results. Since this is about the first time a comparative study is being conducted between Nigeria and Malaysia, as well as about the first time an assessment of health care reform is associated with safety issue in the two countries the chosen rate is adequate.

With each selected institution and/or organization, beneficiaries, medical practitioners, nurses, safety experts were selected using non-proportionate probability and random sampling technique. Unequal number of respondents was selected from each of the selected strata. A result of this step yielded 85% for example. However, these sampling strategies resulted in design effect of cluster response rate.

3.5 Design Effects

The design effect is the ratio of the actual variance calculated under the assumption of simple random sampling. It represents the likelihood that two units drawn randomly from the same cluster will have similar values on the variable in question relative to two units drawn at random from the population as a whole. The design effects are calculated as $1+p/(m-1)$ (Kish, 1995). As such rho (p) is assumed to be 0.01 for correlation of responses among samples within group or states (Weaver, 2006). Calculating the number of respondents as a result of design effects from each stratum was based on the assumption that the institutional respondents from each stratum were selected randomly from every selected institution or sector. This random selection could provide enough sample sizes for smaller and large group.

In every institution and sector, a random sample of the respondents equal to 85 percent selected from the faculties with a specified number of medical, dentists, nurses, pharmacists, health care beneficiaries, safety experts, per each institution. This was considering the design effects, $1+0.01(15) = 1.15$. Therefore, the sample size $x_{deff} = 86 \times 1.15 = 97.75 = 98\%$ (e.g. medical, nurses, dentists, pharmacists, environmental health and safety experts, occupational safety experts, beneficiaries), in the overall selected institutions are the sample size with design effects for the six selected institutions and organizations which is equal to the number of the total respondents.

3.6 Percent of Response Error

Cochran, (1977) and Dillman, Eltinge, Groves, and Little (2001), stated that non-response errors may happen in a proposed survey study. That is, a smaller number of

samples or from which fewer samples will respond to the survey than required. As a result, the sample mean is not an unbiased estimator of the population mean. Thus, the values of the characteristics for sample units should be weighted or adjusted prior to averaging to compensate for the unequal selection probabilities (Beimer & Lyberg, 2003; Dillman et al., 2001). To avoid such response to happen, a statistical procedure, a survey mean procedure to adjust for mean and standard error, was used as described by (Weaver, 2006). Therefore, besides adjusting such errors during data analysis, this study also used 5% to adjust for sampling errors and response errors such as item non-response errors. The number of respondents sampled after the 5 percent adjustment was equal to the number of response realized, approximately 98 percent. A total of the number of those who participated will be the study total response rates.

First strata were made up of the institutions and clinics with total of six strata one each was selected to represent the whole by unequal proportion and random selection because of homogeneity of the issue under investigation. Second Strata, experts in health and safety and beneficiaries of the health and safety services, were selected by unequal proportion and random selection because of the homogeneity of the issue under investigation.

3.7 Stratified Random Sampling

In this research work the necessity of stratification is due to administrative convenience and increase in precision of survey results. Thus for administrative convenience, each institution is hereby treated as a stratum. Since a stratified sample consists of units selected separately from each stratum, such a sample is expected to be better representation of the population than a simple random sample selected from

the entire population. In practice, the population often consists of heterogeneous units with respect to the character under study. Thus, in this research work, some beneficiaries of the NHS are from the private sector while some are from the public sector. Similarly, some are senior staff while some are junior staff, among others. Moreover, it is evident that the nature of sampling problem will be different from these different sectors of the population and each sector needs to be treated as a separate stratum.

Table 3.2: The Summary of the Sample Size Allocation in this Study

	NIGERIA			MALAYSIA		
	Name of institutions/org.	Population Size (estimate)	Sample Size	Name	Population Size (estimate)	Sample Size
1	Kaduna City university (Kaduna Polytechnic)	6,532	120	Universiti Malaya	6242	50
2	Ahmadu Bello University Zaria-Nigeria	8,182	130	Universiti Putra Malaysia	5126	45
3	American University of Nigeria-Adamawa-Nigeria	407	20	Universiti Utara Malaysia	4822	38
4	Bayero University Kano, Kano-Nigeria	2,250	70	Universiti Sains Malaysia	6010	32
5	Shehu Idris College of Health and Technology Makarfi-Kaduna-Nigeria	300	15	Cyberjaya Universiti College of Medical Sciences, Cyberjaya-Malaysia	217	15

6	Private and Public Clinics in Nigeria	212,115	145	Private and Public Clinics in Malaysia	85,853	70
	Total	229786	500	Total	108270	250

3.8 Objectives of the Survey

A lucid statement of the objectives is most helpful. Without this, it is easy in a complex survey of this nature to forget the objectives when engrossed in the details of planning, and to make decisions that are at variance with the objectives. The main objective of this research is to asses' reform in health care sector in Nigeria and Malaysia and to compare the health care scheme in both Nigeria and Malaysia.

3.9 Degree of Precision Desired

The results of sample surveys are always subject to some uncertainty because only part of the population has been measured and because of errors of measurements. This uncertainty can be reduced by taking larger samples and by using superior instruments of measurement. But this usually costs time and money. Consequently, the specification of the degree of precision wanted in the result is an important step. This study therefore has 750 samples in order to have high precision and reduced the degree of uncertainty.

3.10 The Pretest

It has been found useful to try out the questionnaire and the field methods on a small scale. This nearly always results in the improvements in the questionnaire and many

reveal other troubles that will be serious on a large scale. For example, is to test whether the cost will be much greater than expected benefits. This study have conducted pilot test twice in order to determine the reliability of the instrument and to predict how the results will look like at the end of the survey.

3.11 Information Gained for Future Surveys

The more information one has initially about a population, the easier it is to devise a sample that will give accurate estimates. Any completed sample is potentially a guide to improved future sampling, in the data. That is it to say the least it supplies about the means, standard deviation, and nature of the variability of the principal measurements and about the costs involved in getting the data. Sampling practice advances more rapidly when provisions are made to assemble and record information of this type. This study therefore used this to its advantage.

3.12 Population

A finite population is a collection of a known N number of identifiable units. In this case, N is called the population size. The population of this study, therefore, consists of the number of adults enjoying the NHS as at the time of the survey.

3.13 Data Analysis

Data obtained from this study were analyzed using descriptive and inferential statistics. Descriptive statistics are methods of deriving characteristics or summary of indices from raw data collected from a survey or questionnaire. According to Huck, Corner and Bound, (1974), descriptive statistics are used to transform large group

numbers into more meaningful characteristics form. Therefore a pilot test was conducted with an alpha coefficient of more than 0.60 and this result is accepted able according to Sekaran (2000). On the other hand, factor analysis was conducted to determine the construct dimensionality and measurement equivalence across all items. The results of factor analyses showed 0.89 values for measurements of sampling adequacy exceeding the minimum value of 0.60 as stated by (Tebachnic & Fidel, 2007). While the Bartlet's test of sphericity reached the statistical significance of $p<0.05$ which supported the factorability of the correlation matrix. Inferential statistics was also used in order to allow the researcher to generalize the findings from this set of data to a larger population. In general the descriptive and inferential statistics were used in this study. The study used SPSS software for quantitative data analysis. Data collected from the questionnaire was analyzed via content analysis where by themes were coded by percentage basis and analysis was made using inferential statistics.

In addition, the variables were subjected to more advanced statistical method in order to analyze the study variables. These variables are on the comparison of private and public hospitals, healthcare delivery before and after the National Health Care reform in Nigeria and Malaysia, effectiveness and efficiency of the National Health Care reform, among other issues. In each case, the mean and standard deviation of the sampling distribution of the responses were used to measure them. Also the difference-in-difference models log-linear models, chi-square test, t-test, regression, were used among others.

3.14 The t-test Procedure

An independent sample t-test is a procedure used for comparing sample means to see if there is sufficient evidence to infer that the means of the corresponding population distributions also differ. The independent sample t-test may be used to explore issues such as: Does method (A) yield higher rate of recovery than method B? Does one advertising technique produce higher sales than another technique? The key word is that: independent sample t-test always compares two different means or values. When using t-test to determine if two distributions differ significantly from each other, the test may be either a one-tailed or two-tailed test of significance. The two-tailed test examines whether the mean of one distribution differs significantly from the mean of the other distribution, regardless of the direction (positive or negative) of the difference. The one-tailed test measures only whether the second distribution differs in a particular direction from the first. Therefore in an attempt of this research to determine the differences between Nigeria and Malaysian national health scheme, the t-test of independent sample was conducted. The result obtained was encouraging which further necessitated the application of other instrument in order to see the direction of the differences or similarities.

3.15 One-Way Analysis of Variance (ANOVA)

Analysis of variance is a procedure used for comparing sample means to see if there is sufficient evidence to infer that the means of the corresponding population distributions also differ. One-way analysis of variance is most easily explained by contrasting it with t-test. Whereas t-tests compare only two distributions, analysis of variance is able to compare many (two or more). If for instance, a sample of women's response and there is a distribution of men's response, and a t-test will tell

if the means of these two distributions differ significantly from each other. If however, we wished to see if any of five different ethnic groups' response to the drug differed significantly from each other, it would require one-way analysis of variance to accomplish this. Therefore this study used ANOVA to establish whether there is a significant difference between Nigeria and Malaysian national health scheme and to also established whether the reform succeeded in improving healthcare to the citizens.

3.16 Difference-in-Difference (DD) Models

In order to apply the difference-in-difference model, this study recorded the responses on the five Likert scales into binary variables indicating the impact of the NHS scheme or otherwise; for both Nigeria and Malaysia. The difference-in-difference model was obtained through regression model with binary regressors with a single dependent variable. One of the most useful devices in regression analysis, especially for DD models, is the binary or dummy variable. In this study a dummy variable takes the value one for some observations to indicate the presence of an effect or membership of a group and zero for the remaining observations. Binary variables are a convenient means of building discrete shift of the function into a regression model (Green, 2003). Dummy variables are usually used in regression equations that contain other quantitative variables. In recent applications, researchers in many fields have studied the effects of treatment on some kind of response as revealed by this study. Examples include the effect of education on income, sex difference in labour supply (or salary), pre-versus post regime shift in microeconomic models, effects of reform on health care delivery to mention but a few. These examples can all be formulated in regression model involving a single

dummy variable. Thus; $Y_i = X_i \beta + \delta D_i + \varepsilon_i$.

When there are several categories, a set of binary variable is necessary. Correcting for seasonal factors in microeconomic data is a common application. This could be written as consumption function for quarterly data in the form below:

$$C_t = \beta_0 + \beta_1 X_t + \delta_1 D_{t1} + \delta_2 D_{t2} + \delta_3 D_{t3} + \varepsilon_t$$

Where; X_t = Disposable income

Here, only three of the four quarterly dummy variables are included in the model. If the fourth were included, then the four dummy variables would sum to one at every observation, which would reproduce the constant term, a case of perfect multicollinearity. This is known as the dummy variable trap. Thus to avoid the dummy variable trap, the variable for the fourth quarter was drop. Any of the four quarters can be used as the base period, also called the reference category. In this case, the required DD model is of the form:

$$Y_i = \beta_0 + \beta_1 P + \beta_2 N + \beta_3 (P * N) + \varepsilon_i$$

The difference-in-difference model is therefore the process of building multiple regression models with binary regressors using the method of least squares. Hence, the required regression model is of the form given below:

$$Y_i = \beta_0 + \beta_1 D_{1i} + \beta_2 D_{2i} + \varepsilon_i$$

$$\hat{Y}_i = \hat{\beta}_0 + \hat{\beta}_1 D_{1i} + \hat{\beta}_2 D_{2i}$$

The method of difference-in-difference model via the multiple regression models was used for analyzing the part of the data. In addition, difference-in-difference coefficients, various statistical inferences and diagnostic methods were computed and compared. The Statistical Package for Social Sciences (SPSS) was employed for the analysis. Recall the estimated model above: $\hat{Y}_i = \hat{\beta}_0 + \hat{\beta}_1 D_{1i} + \hat{\beta}_2 D_{2i}$. Where

the parameters are obtained through the method of least squares. by solving the following systems of normal equations:

$$\sum_{i=1}^n \hat{Y}_i = \hat{\beta}_0 n + \hat{\beta}_1 \sum_{i=1}^n D_{1i} + \hat{\beta}_2 \sum_{i=1}^n D_{2i} \quad (1)$$

$$\sum_{i=1}^n D_{1i} \hat{Y}_i = \hat{\beta}_0 \sum_{i=1}^n D_{1i} + \hat{\beta}_1 \sum_{i=1}^n D_{1i}^2 + \hat{\beta}_2 \sum_{i=1}^n D_{1i} D_{2i} \quad (2)$$

$$\sum_{i=1}^n D_{2i} \hat{Y}_i = \hat{\beta}_0 \sum_{i=1}^n D_{2i} + \hat{\beta}_1 \sum_{i=1}^n D_{1i} D_{2i} + \hat{\beta}_2 \sum_{i=1}^n D_{2i}^2 \quad (3)$$

Automated solution increases accuracy, precision and speed. Hence the bulk of the calculations will be done by *SPSS*.

3.17 Content Validity

In order to content validate the entire research instruments, the draft of the instrument was sent for validation to content experts as suggested by Grant and Davis, (1998) and Lyn (1986) that the content experts should be between 3-10. This study utilized 10 experts from Nigeria and Malaysia from medical personnel, psychologists, safety and health experts, educationists, human resources experts among them are, PhD. Students, PhD. holders with years of experience, Associate Professors, and Professors in the related field of specialization, in addition to statisticians, in all 15 experts in both Nigeria and Malaysia validated the instrument.

In the content validation, Tilden (1990) suggested that the rating for each of the dimensions or constructs should include a brief statement describing the background and context of the concept, the concept definition and the item statements or contents. In this study, for reviewing and grading the contents of the questionnaire, the content experts received a package containing a copy of actual research instruments, cover letter, which included an instruction of item evaluation, a

description of the questionnaire being developed and two appendices. One appendix provided an overview of models, concepts, and the conceptual framework of this study. The other appendix included statements of problem, research questions, and objectives of the study and significance of the study, literature and gap in the literature all submitted to the experts. The documents submitted to the experts facilitated their understanding of the subject under study and gave an insight on the kind of contribution they can give in improving the instrument. In addition, the experts were asked to suggest items that needed revisions and suggest ways and/or add items to the phenomena that were not included in the questionnaire.

3.18 External Validity and Reliability

External validity means the extent to which the results can be generalized or extended to other situations. External validity depends on similarities between contexts of researcher and the user. The study provided a solid descriptive technique to allow judgment and generalization of findings to other situations. The primary strategy used in this study was to ensure transferability through the provision of rich and detailed description, so that any one that would be interested in transferability might have a solid framework for comparison as described by (Merian, 1998). Additionally, this study provided detailed description in accordance with external validity of methods and theory such that other researchers can determine whether findings could be compared with those of their own studies by employing open ended, in-depth questionnaire.

3.19 Instrument and Operationalization of the Variables

The survey questionnaire used in this study represents a compilation of survey items

used in the field of health care and safety studies. Some of the questions were already tested for reliability and used in the earlier empirical studies by other researchers in the field of healthcare reform. The acquired questions were modified and some totally change to meet the purpose of this study. In the process of determining the internal consistency, three dimensions of reliability; stability; equivalence were considered as proposed by (O'sullivan, Rassel, & Berner, 2003). The format of the questionnaire was closed ended questions, which give uniform frame of reference for respondents to decide on the best answer among the alternative (Bowen & Rassel, 1977). A survey questionnaire that is well structured with clarity, simplicity, and attractiveness encourages high response and results oriented (Foltz, 1995). According to Kumar & Casley, (1998), the chronological flow of questions and its, simplicity makes it easy for the respondents to establish logical relationship between the questions and objectives of the research. The target of the survey questionnaire was to answer the research questions and to test the hypothesis. The questionnaire was divided into seven sections; section one; background information; section two; Efficiency of Healthcare Delivery and Safety; section three; Demographic Characteristics and Healthcare Delivery and Safety; section four; Equity of Healthcare Delivery and Safety; section five; Accessibility and Healthcare Delivery and Safety; section six; Affordability and Healthcare Delivery and Safety and Finally section seven; Control Mechanisms use in ensuring Healthcare Delivery and Safety. To grade the degree of the respondent's views, a five-point Likert Scale was employed. The questionnaire was validated by a number of professionals in the field of medicine, safety, human resources, psychology, and paramedical professionals in addition to the numerous faculty members (lecturers), all with intention of detecting content validity of measurement items. The whole

exercise was geared towards identifying the area of weaknesses and ambiguity and to some degree invalidity of the questions. That really assisted the researcher in knowing the strengths and weakness of the questionnaire, in its wordings, format and order of arrangement. After all the review, the questionnaire was revised to solve the identified short comings. The face and content validity was successfully achieved through the review. In addition to all that the questionnaire was reviewed by the researcher and his supervisor in order to detect if there is any anomalies associated with the questionnaire considering the fact that, the subject matter under investigation is new to both Nigeria and Malaysia.

3.19.1 Operationalization of Variables: An Introduction

According to Babbie, (1992), the operationalization of variables refers to the process of developing specific research procedures that is geared towards an empirical observation that portrays those concepts in a practical sense. Simply put, it refers to the process under which the variables will be measured. Six constructs were measured, each with minimum of two, three and four dimensions, were measured in this research; namely; Efficiency, Demographic Characteristics, Equity, Accessibility, Affordability and Control Mechanisms of health care delivery and safety of employees. The operational definitions of the variables are described below:

3.19.2 Efficiency of Health Care Delivery and Safety of Employees

Efficiency was measured by 3 main dimensions of technical efficiency, economic efficiency and allocative efficiency, with 15 questionnaire items. This is reflected in the factor analysis conducted as well as adopted from the research conducted by

Hutton (2000). Technical efficiency refers to ability to produce health and safety product with least input, or the most output from a given inputs. These outputs could be number of outpatient's visits, vaccination and number of safety services provided to affected employees at a given time in a given working place. Economic Efficiency is a way of developing a mix where the health and safety service producer produces output at a lower cost, which need not require to achieve only technical or allocative efficiency but that input are least utilize with maximum output. Allocative efficiency refers to the ability of the producer to put the resources to an appropriate use (Hutton, 2000).

Table 3.3: Efficiency of Health care Delivery and Safety Scale

1. I am treated well in private clinic more than in a public/government clinic with reform in health sector.
2. I feel workers in private clinics are well trained than those in public/government clinics in the area of health and safety practices in the workplace.
3. I feel the private sector clinics ensure value for money in terms of healthcare services and safety.
4. I feel the private hospitals have genuine drugs for safety of employees compared to public/government clinic.
5. I witnessed less waiting period in private hospitals compared to public/government hospitals.
6. I feel accident patients on emergency are promptly attended to in private clinics than in public/government.
7. I feel the employees have more advanced hospital equipment in private clinics than in public/government.
8. I feel the coexistence of private and public clinics as from 1980's improves referral of employees/workers on emergency in the workplace.
9. I feel the referral of employees on emergency to specialists is meant to ensure cost effectiveness and efficiency.
10. I feel the reform in health sector in the 1980's improves referrals to specialists which ensure efficiency of health and safety management.

11. I feel the reform in health sector which started in 1980's will ensure nearness to clinics in case of industrial accidents.
12. I feel the efficiency recorded by health sector reform as from 2006 will ensure, equity, safety, and efficient service delivery to employees in the workplace.
13. I feel the reform improves health care services and safety affordable and encourages safety culture in the workplace.
14. I feel the reform in health sector encourages reduction in the cost of the provision of healthcare services, which ensures prompt service delivery.
15. I feel the equity provided by the reform in health sector contributed in making safety and health practices possible in the workplace.

3.19.3 Demographic Characteristics and Health Care for Safety

Two dimensions were identified to be the major constituent of this construct as it relates to health care delivery and safety services reform. These two dimensions were adopted from the research conducted by Hutton (2000). In the previous research the dimension were treated as the constituent of the discussion of equity and effectiveness in health care reform and safety but treated independently in this study. The dimensions are gender and lifestyle, educational status, employment type as demographic factors and location representing urban and rural setting. According to (Braveman, 1998; Hutton, 2000; Murray et al., 2000), that in assessing the performance of health and safety reform certain identified areas of morbidity, mortality, children growth and nutritional status, life expectancy, maternal mortality ratio are very important indicators of good delivery system. Recent study which showed that every day in the world over 1000 pregnant women died and 570 of this report is recorded in Africa, (WHO, 2010) is pointer to the poor health care systems

of most nations. It also includes tobacco use, drunkardness, which should be considered as important, and can be improved under health care and safety reform. A sample item in the questionnaire is; I feel health sector reform will encourage the treatment of working class pregnant women. Responses were measured on a 5-point Likert Scale and ranged from, 'strongly disagree' as (1) and 'strongly agree' as (5). Higher score reflect higher acceptance, rejection or indecision. The scale items on demographic characteristics are listed in the table 3.4.

Table 3.4: Demographic Characteristics and Health care and Safety Scales

- (1) I feel health sector reform will encourage the treatment of working class pregnant women.
- (2) I feel healthcare reform will provides efficient services to children of working class.
- (3) I feel the reform in healthcare will succeed in making health care services cheaper to all gender of working class.
- (4) I feel the reform in healthcare will improve health care services to old and retirees.
- (5) I feel the reform is as results of the high hospital bill associated with old age, poor and sick status of the working class.
- (6) I feel the reform is as a result of increase in aging population in the country.
- (7) I feel the reform will reduce the use of age, gender identity as is the case with most healthcare and safety reform when registering patients and treatment.
- (8) I feel the reform will encourage the treatment of drunkards, smokers, size of the family (life style) in various working place.
- (9) I feel reform will reduce the use of health history, income and employment before getting better health care services.

3.19.4 Equity and Healthcare for Safety

The items below measure equity and health care for safety of the employees. The basic indicators of equity adopted from Braveman (1998) and Hutton (2000) are, demographic differentiation, geographical location consideration and health

insurance coverage. Operationally equity in health and safety refers to ability to minimize avoidable differentiation in health and its determinants, including but not limited to health care, between people of different group with differing level of social status, such as; (1) Socio-economic status, such as (income/expenditure, occupation, wealth/assets, education (2) geographic location (urban, rural), (3) marital status (widowed, large family size, small family size, single) (4) gender, (5) age, (6) and health insurance possession. As for this study age is merged to family and health insurance as the program is young to both Nigeria and Malaysia (Hutton, 2000). Therefore, 8 items are considered for the study and analysis. These items are also measured on five Likert Scale of strongly disagree as (1) and strongly agree as (5). The scale items on equity of healthcare for safety are presented in table 3.5.

Table 3.5: *Equity and Healthcare for Safety Scale*

- (1) I feel the reform will ensure equity to healthcare services to workers/employees.
- (2) I feel the reform will increase the number of time employees will attend clinics.
- (3) I feel the equity provided by government clinics before is better than the one provided with reform in the healthcare sector.
- (4) I feel healthcare and safety services to employees will improve with the reform than without it.
- (5) I feel accessibility which improves equity will increase with reform in healthcare and safety services delivery than without it.
- (6) I feel doctors and professionals became more accessible and ensure equity of consultation than without it.
- (7) I feel the reform will increase the number of healthcare providers to employees which will increase choice.
- (8) I feel equity and fairness in hospital treatments to employees will increase with reform than without it.

3.19.5 Accessibility and Health Care for Safety Scale

Access according to Knowles et al., (1997) and WHO (2000), is an absence of any barrier that may serve as an obstacle to using health and safety services by the employees. One of the most important interests of reform is to increase access to healthcare and safety services. This is measured by three identified dimension adopted from Hutton (2000) time and distance to health and safety facility, transport for emergency medical cases and referrals and access to qualified staff, healthcare and safety utilization and waiting lists (Hutton, 2000). One of the items for the measurements is; I feel that the reform will make hospitals to be within 3-5 kilometers to the employees. The items were also measured on five point Likert scale where, strongly disagree is indicated by (1) and strongly agree with (5). The scale items on accessibility of healthcare for safety are listed in the table 3.6.

Table 3.6: Accessibility and Health Care for Safety Scale

- (1) I feel health care services will be more accessible to all employees with the reform than without it.
- (2) I feel that, the reform will make hospital to be within 3-5 kilometer to employees.
- (3) I feel that the reform will ensure access to health care services to employees than without it.
- (4) I feel that the reform will increase competition, which improves services to the employees.
- (5) I will support the continuous reform in healthcare sector, especially the existence of both private and public hospitals at a time.
- (6) I will support the institution of age limits on children enjoying subsidy in healthcare services as from 18 years as independent of family dependency.
- (7) I and my family have more access to health care services with reform in the healthcare sector.
- (8) I feel the reform in health care sector is the best thing that happens to the workers/employees in the country.
- (9) I feel the limits place on four children entitle to enjoy subsidized health care per each family

is the best thing that happen to health care delivery in the country.

(10) I feel the reform did not improve the provision of expensive drugs to the patients in the country.

(11) I feel the nurses and pharmacists are rude to the patients despite the existence of reform in the health sector.

3.19.6 Affordability and Health Care for Safety

Affordability of health care for safety has three dimensions as adopted from Alan and Joel (2004). One of which is the issue of disparity in cost, mitigation of questionable selection and provision of safety nets to the poor, retirees, and underprivileged groups. Safety nets simply refer to a situation where certain resources will be set aside in anticipation of the fact that certain disadvantage group that cannot afford to have access to or afford care will be taken care of under it.

Items for measurement of affordability include all items under section of affordability in the questionnaire. The items were measured using Likert five Scale, (1) for strongly disagree and (5) for strongly agree. The scale items on employee's affordability for healthcare and safety are listed in the table 3.7.

Table 3.7: Affordability and Health Care and Safety Scale

(1) I feel health care services are not affordable to most employees due to population increase or imbalance in the resource distribution.

(1) I feel that, the retirees and widows hardly afford health care services after retirement and death of spouse.

(2) I feel that, employees hardly afford home care due to high cost of such services.

(3) I feel that home care is purely for the rich and highly educated employees.

(4) I feel that rising life expectancy will increase health care services demand, which will increase the price of healthcare services in the country.

(5) I feel that healthcare demand will encourage the coming up of health care insurance privately and public/government control in the country.

(6) I feel that, the reform in health care sector will reduced employee's individual and collective expenses on healthcare services.

(7) I feel that, demand for health care services will be triggered by poor health status not by affordability of employees.

(8) I feel that, employed families will have higher records of hospital attendance than unemployed families

(9) I feel that, the reform in the health care sector will enhance quality and hospital performance, which will make services affordable to employee.

(10) I feel that, continuous provision of health care services by the government will encourage over use of the hospital services by the employees.

3.19.7 Control Mechanism of Health Care and Safety

The construct has two dimension of institutional through enactment or promulgation of law for control or institution of an indirect control means through formulation of reform under the guidance of National Health Scheme, formation of Health Maintenance Organization or both. The second dimension is financial control through subsidy, premium ceiling and equipment lease. These items were adopted from (Hutton, 2000). The items were measured using five Likert scale with (1) for strongly disagree and (5) for strongly agree. The scale items on control mechanism for healthcare and safety are listed in the table 3.8.

Table3. 8: Control Mechanism and Healthcare for Safety Scale

(1) I feel that, the reform in healthcare sector will provides strong check and balances between patients and healthcare and safety service providers.

(2) I feel that, the price of healthcare is basically subsidized by the government control mechanism and not by market forces.

(3) I feel that, reform will reduce the quality of healthcare provided to the employees than without it, due to stringent control by NHS.

(4) I feel that employees will become vulnerable with the reform in the health sector than without it.

(5) I feel that, reform in the health care sector will not be the best for employees in the country due to poor tool of control in the system.

(6) I feel that, poor supervision in the healthcare and safety reform will lead to lack of productivity which will affects the benefits accruing to employees

(7) I feel that, the government will control providers through NHS by controlling the HMO's effectively for efficient services to the employees.

(8) I feel the tool for controlling healthcare providers for effective health care delivery for safety of the employees is through HMO's.

(9) I feel that, the strict condition associated with registration of HMO's and health care providers serve as one of the effective control mechanism in the reform.

(10) I feel that, affordability, access, equity, and efficiency of health care delivery system started deteriorating as from 1980's to date not as a result of lack of control, but because of the existence of private clinics.

3.20 Pilot Study

A pilot study was conducted to ensure that the question items as contained in the questionnaire are clear to the understanding of the respondent. There is this need, even though majority of the respondents are educated or highly educated, this is so because the issue under study health care reform and safety is new to most of the respondents. The pilot was also conducted to confirm the reliability and usability of the instrument in data collection at a large scale. A total of 100 questionnaires were distributed to the respondents in both Nigeria and Malaysia. The distribution method was hand to hand by the researcher and 69 completed questionnaires were return

which is about 60 percent. From the Cronbach Alpha test for Malaysia Affordability had .829, Demographic Characteristics .893, Accessibility .825, Equity .882, Efficiency .950, and Control Mechanism .890. And Cronbach Alpha results for Nigeria recorded the following, Demographic Characteristics .626, Efficiency .770, Affordability .732, Equity .589, Accessibility .478, and Control Mechanisms .670. From the results above accessibility recorded the least results and the questions in this section were amended and/or reworded in order to record better responses.

Table 3.9: Cronbach Alpha Test Results for Pilot Study

Country Name	Variable Name	Number of Question items	CronbachAlpha Results
Nigeria	Affordability	1-10	.732
Malaysia	Affordability	1-10	.829
Nigeria	Demographic Characteristics	1-9	.626
Malaysia	Demographic Characteristics	1-9	.893
Nigeria	Accessibility	1-11	.478
Malaysia	Accessibility	1-11	.825
Nigeria	Equity	1-8	.589
Malaysia	Equity	1-8	.882
Nigeria	Efficiency	1-13	.626
Malaysia	Efficiency	1-13	.950
Nigeria	Control Mechanism	1-10	.670
Malaysia	Control Mechanism	1-10	.890

Source: Field Study

In addition, factor analysis was also conducted to confirm the construct dimensionality, it was established after the factor analysis that, the whole six construct has 17 dimensions, efficiency 3, demographic characteristics 2, equity 4, accessibility 3, affordability 3, and control mechanisms has 2. The detailed explanation on results of factor analysis for individual construct is in chapter four.

Number of factorability Assessments Results Value Required for Factor Analysis

- (1) KMO measure of Sampling adequacy 0,890 minimum value is 0.6
- (2) Bartlett's test of sphericity Approx Chi-square 9499.944 P< 0.05

From the above results the Kaiser-Meyer-Olkin value for measurements of sampling adequacy was 0.89, exceeding the minimum value of 0.6 for good factor analysis (Tebachnic & Fidell, 2007). While the Bartlett's test of sphericity reached the expected statistical level of significance of $P < 0.05$, which supported the factorability of the correlation matrix.

3.21 Reverse Order

In order to ensure the accuracy of the result of this research and also to reduce the level of outliers in the results all negatively worded questions in the questionnaire were entered into the SPSS in a reverse order. The sequence of the reverse order is as follows; strongly disagreed represented by (1) was entered as (5) strongly agreed represented by (5) was entered as (1) disagreed represented by (2) was entered in spss as (4) and agreed represented by (4) was entered in spss as (2) and indecision represented by (3) retained its original (3).

3.22 Hypotheses Development and Restatement

In order to develop and form the hypotheses of this study, some literature that are basically connected to the variables were cited as back up for the choice of the different hypothesis. Most of the literature analysis the relationships and symbiosis that could be established between reform, efficiency, affordability, accessibility, demographic factors and control systems of healthcare and safety delivery systems. The relevance of this frame is founded on the assumption that reform in most countries is motivated by the desire to ensure efficiency of delivery and provides more access at an equitable and affordable manner with state control in order to avoid demographic discrimination. For the purpose of this research the following factors

were selected to measure the performance of reform in health and safety reform; accessibility, equitability, affordability, demographic characteristics, control mechanism and efficiency of delivery. These factors were selected because of their strategic importance in previous study in the determination of performance and as well as their availability in most literature. They were therefore used in formulating the following hypotheses as will be seen after going through the reviewed literatures or models.

The health commodity hypothesis believed that, higher socio-economic status (SES) brings health and longevity in part, because it supplies the insurance that allow individual to buy more medical care and treatments which improves health and safety outcomes (Catherine & John, 2000; Yu-Luen & mark, 2005), thus, the hypothesis was interpreted to represents the “employees affordability and socioeconomic status” in this study. The process studies model postulated that, the SES hypotheses did not represents the reality on the issue of Equality in healthcare and safety in spite of reform.

The process model believed that in the case of America, uninsured American, received less medical care than people with either private or public insurance, they have lower utilization rates for physician visits and hospitals services. A confirmatory study reaffirm the position of process studies model of healthcare delivery system, that both private and public provision of healthcare and safety services did not have any significant difference in health status with the unemployed. It was also confirmed that cost factor consideration was the major hindrance to ensuring “equity and affordability to healthcare and safety” services to employees.

The Access pathway model, postulated that access over time transcends the near having access to physician and maintaining relationship with a single provider. Access in the context of this model means an incorporation of effectiveness and appropriateness as well as considering both individual and system level determination of healthcare and safety services which is propelled by reform. This model represented “Access and equity” factor of this study (Meal, Moira, & Paul, 1999).

The Developing countries Healthcare model, which postulated that, any healthcare reform in the developing countries should consider, the issue of institutional restructuring, which should includes, developing strong economy, education, adequate nutrition, poverty reduction, equity, effective government, a functional public health system, that provides, sanitation, clean water and infection control and as well as a comprehensives primary healthcare delivery system. This hypotheses or model represented the “demographic characteristics and control “or constructs of the study (Thomas, Amand, & Aviva, 2006).

In implementing health sector reform (HSR) and sector-wide approaches, both healthcare services purchasers and ministries of health are interested in putting in place a manageable monitoring and evaluation system, against which the success of reform can be judged. Recognition of the weaknesses of health indicators to monitor health sector reform in the short-term, led to inclusion of other indicators to reflect major aims of the reform. Some of those indicators newly recommended are: access, equity, quality, efficiency, and sustainability. In choosing performance measures to reflect, a number of scientific (validity, relevance, reliability, quantifiable) and pragmatic (data available or easily collectable, data timely) criteria are proposed by

which to judge the most appropriate performance indicators. Using these criteria, the strengths and weaknesses of performance indicators are discussed, as well as links between indicators and where they overlap. In particular, the conclusions about the success or failure of any healthcare and safety sector reform depend not only on which performance indicators are chosen, but how they are defined and measured (Hutton, 2000). National health systems throughout the world face a number of pressures in common related to demography, epidemiology, developments in science and technology, medical demand, and rising public expectations. These pressures are producing convergence in the objectives and activities of these systems in several key areas, including cost-containment, health promotion, expansion of access, primary health care, patient choice, and the linkage between health and social services. At the same time, it is also necessary to recognize the role of political and governmental processes, as well as clinical and professional variables, in shaping different societal responses to health care challenges (Cortez, 2009).

Most of the research questions and hypotheses evolved in an attempt to answer the following questions raised by conversion theorists. Questions such as, how do we explain the recent international trends in healthcare and safety provision. What can we do with the widespread physician emigration, or the growing phalanx or intertwining relationship of international hospital? Why have global sales of pharmaceutical and medical devices grown by hundreds of billions of dollars in less than a decade. How do we explain reason why hundreds of thousands of patients are now seeking for medical treatments in foreign environment other than their own? And what is the rationale behind health care industries' increasingly outsourcing clinical trials, insurance claims processing, diagnostic test interpretations, and other tasks outside

their country of residence. These circumstances were explained using an extended theory called Market convergence theory, this theory helps explain convergence postulations as well as the environment in which these trends have emerged (Cortez, 2009; Bennett, 1991; Chernchovsky, 1995; Saltman, 1997; Blau, 2006).

Although no single theory can fully account for these trends, the hypothesis posited that what is presently happening in the healthcare and safety industry was fully enabled by growing “convergence” in the health care industry. This situation can best be defined as a new “market-driven convergence” (Cortez, 2009). This is clear looking at the way various methods, practices, and standards in the health care industry are converging or are becoming more alike across all borders. One of the typical examples of the convergence issue relates to an internationally recognized uses of many drugs and antibiotics. The world wide acceptance of hospital quality standards are also spreading. The expectations for doing business in health care are becoming more universal. And basic principles of scientific medicine are being taught. Health and safety policies are being consciously and unconsciously replicated all over the world. With all these mentioned facts it showed that modern medicine is converging (Bennett, 1991; Mechanic & Rocheforte, 1996). The convergence hypothesis postulation was challenge by Blank (2006) that the trend is not simple as postulated by the proponent, that convergence could be multifaceted, having both diffusion and emulation frame of reference.

Principally convergence is being driven primarily by the private, rather than the public sector. Private healthcare and safety providers push for convergence because they benefit from it. The push by the private providers is furthermore fortified by the

market incentives to eliminate inconsistencies in healthcare and safety service provision worldwide. The hypotheses of this study were developed based on the questions and research gaps suggested for future studies. The dimensions were also developed in order to measure the various constructs of the study. Thus the results of the factor analysis also prompted an adjustment to the initial conceptual framework. This gave rise to the insertion of more hypotheses in order to capture all the necessary dimension of reform and efficiency in relation to this study.

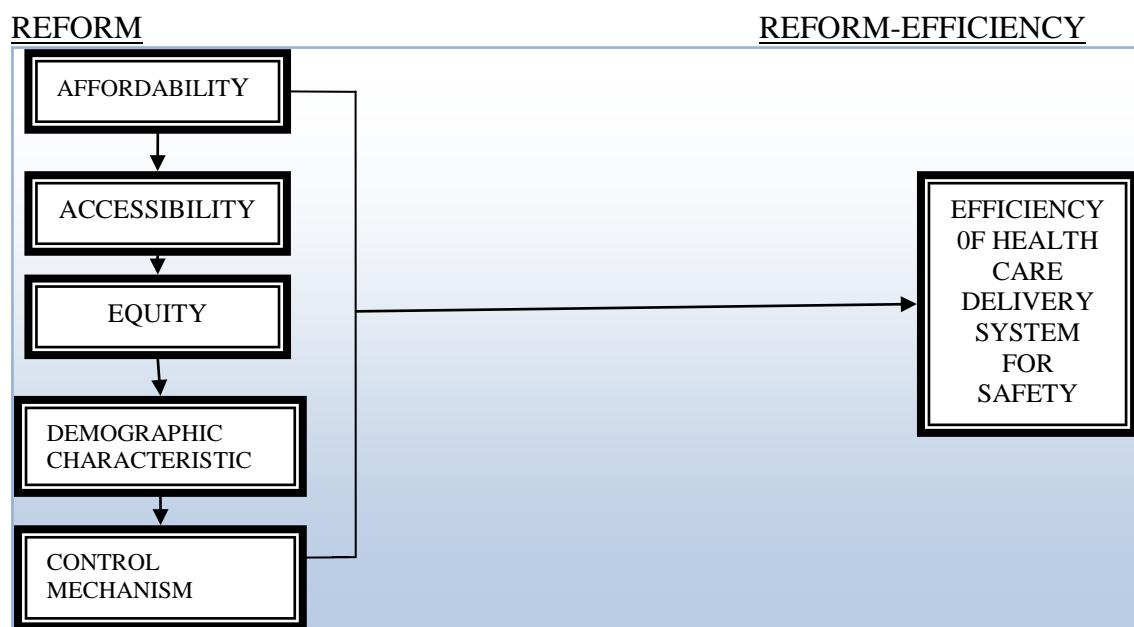


Figure 3.1: Conceptual Model

Hypothesis 1: There is no difference between Nigerian and Malaysian Healthcare and Safety delivery under Reform.

Hypothesis 2a There is no difference between Healthcare and Safety Delivery under Reform and Gender in Nigeria and Malaysia

Hypothesis 2b There is no difference between Healthcare Delivery and Safety under Reform based on the Location differences (Rural and Urban) in

Nigeria and Malaysia.

Hypothesis 2c There is no difference in the healthcare Delivery and Safety under Reform based on the Ethnic Group differences in Nigeria and Malaysia

Hypothesis 2d There is no difference in the Healthcare Delivery and Safety under Reform based on the Educational Attainment of Employees in Nigeria and Malaysia

Hypothesis 2e There is no differences in the Healthcare Delivery and Safety under Reform of the Employees of different Sector Type (occupation) in Nigeria and Malaysia

Hypothesis 2f There is no Difference between Healthcare and Safety Delivery under Reform and Type of Clinic Attended by Employees in Nigeria and Malaysia

Hypothesis 3: Efficiency and Reform.

Hypothesis 3a: There is no significant difference between better treatment (efficiency) under reform as from 2006 in private clinic more than in public clinics in Nigeria and Malaysia as well as before and after reform.

Hypotheses 3b: There is no significant differences between Reform efficiency as from 2006 and equity, safety and healthcare services delivery to the employees in Nigerian and Malaysian working places as well as before and after reform.

Hypothesis 3c: There is no significant difference between reform and improvement in competition (efficiency) in the healthcare and safety services to the employees in Nigerian and Malaysian working Places as well as before and after reform.

Hypothesis 3d: There is no significant difference between better treatments (efficiency) of employees in private clinics more than in public clinics under reform as well as before and after reform.

Hypothesis 3e: There is no significant difference between reform and provision of genuine drugs in private clinics more than in Public clinics (efficiency) in Nigerian and Malaysian working places as well as before and after reform.

Hypotheses 3f: There is no significant difference between reform and less waiting period (efficiency) in Private clinics compared to public clinics in Nigerian and Malaysian working places as well as before and after reform.

Hypotheses 3g: There is no significant difference between reform and promptness in attending to emergencies/accidents cases in private clinics compared to public clinics in Nigerian and Malaysian working places as well as before and after reform.

Hypotheses 3h: There is no significant difference between ensuring employees value for money in the private clinics more than in public clinics in Nigerian and Malaysian clinics as well as before and after reform.

Hypothesis 4: There is no significant difference between reform in healthcare and safety sector and ensuring equity in efficient healthcare and safety services delivery in Nigerian and Malaysian working place as well as before and after reform.

Hypothesis 5: Accessibility dimension:

Hypothesis 5a: There is no significant difference between reform and employees number of accessibility (number of clinical attendance) to efficient

healthcare delivery in Nigerian and Malaysian working places as well as access before and after the reform.

Hypotheses 5b: There is no significant difference between reform and better access to efficient healthcare and safety services than without the reform in Nigeria and Malaysian health sector as well as before and after reform.

Hypothesis 6: There is no significant difference between the public (government) healthcare and safety outfits and healthcare outfits for safety/health of employees as well as whether the scheme depends on the outfit.

Hypotheses 7: There is no significant difference between gender and efficient healthcare delivery for safety as well as whether healthcare delivery of employees depends on gender type of the employees in Nigerian and Malaysian working place.

Hypothesis 8: There is no significant difference between government control mechanism and reduction in employee's affordability, accessibility, equity, equity and demographic variation in healthcare and safety services delivery under reform as well as whether delivery depends on government control mechanism.

Hypotheses 9: There is no significant difference between public-private-partnership and spread of innovation in both public and private healthcare and safety delivery to employee in Nigeria and Malaysia as well as whether innovation depends on public-private-partnership in the two countries.

Hypothesis 10: There is no significant difference between healthcare affordability and efficiency to both government and private employee's in Nigeria and Malaysia as well as whether healthcare and safety affordability and

efficiency depends on both government and private employee in Nigeria and Malaysia.

Hypothesis 11: there is no significant difference between Nigerian and Malaysian reform performance in terms of equity, access, affordability, demographic differentiation, control and efficiency.

3.23 Summary

The research design for this study employed a quantitative cross sectional survey type (Cresswell, 2003). In addition to this a quantitative approach is appropriately use in answering all the questions relating to the measured variables. This is with the intention of explaining and as well predicting the phenomena under study (Leedy & Ormrod, 2005). This study was conducted in the field with individual respondents responding to the distributed questionnaires from their individual experiences relating to the subject under research. Therefore, the reported feedback represents the views of the sample respondents whom represented different background. This help in providing very important insights of their catalogue of experiences under reform situation in the two countries.

The population of the study comprises of the medical practitioners, safety experts, healthcare and safety beneficiaries, and staff of both private and public clinics in both Nigeria and Malaysia. The six randomly selected institutions from which the respondents were selected were Kaduna City University of Technology (Kaduna polytechnic), Ahmadu Bello University (ABU), American University (AU), Bayero University Kano (BUK), Shehu Idris College of Health Technology Makarfi, and Public/Private Clinics in Nigeria. In Malaysia, the selected institutions for the

research were Universiti Malaya (UM), Universiti Putra Malaysia (UPM), Universiti Utara Malaysia (UUM), Universiti Sains Malaysia (USM), Cyberjaya University College of Medical Sciences (CUCMS) and some selected Public/private clinics in Malaysia. A sample of 750 based on Cochran (1977) formula was selected as adequate for this study. The 750 respondents out of which 500 were Nigerians and 250 Malaysian. Sampling adequacy issue was well debated by scholars such as Any et al. (1998) and Macmicky (1993). A stratified random sampling was adopted for its administrative and precision in survey results compilation.

The reliability of the survey questionnaires used in this study was tested. The questions used were closed ended to allow more understanding. In addition the questions were simplified for the respondents to comprehend easily. The questionnaires were divided into seven sections, with each section addressed particular independent or dependent variable and other demographic factors. There were 64 questions measuring the variables. From these numbers, 9 questions were directed at getting the respondents background. Likert scale of five points was employed to indicate the intensity of respondent's views to each question.

In order to content validate the questionnaire, the draft of the questionnaire was sent to expert to content validate as suggested by Grent and Davis (1998) and Lyn (1986), that the content experts should be between 3-10 in number. This study relied on this and sent the instrument to 10 experts from both Nigeria and Malaysia. The experts who content validate the instrument were medical personnel, psychologists, safety experts, educationists, human resources experts as well as College/Faculty members of UUM and PhD. Students and College Members of Kaduna City University (kad-

poly) Nigeria. Additional validation was conducted through thorough review by the researcher and his supervisor in order to detect and correct the anomalies identified by experts and other content reviewers. These corrections range from wording and terminological misplacements.

Six variables were structured and used in this study. The six variables used were efficiency of healthcare delivery and safety, demographic characteristics in healthcare and safety reform, equity and health care and safety reform, accessibility and health care and safety reform, affordability and health care and safety reform and control mechanism in healthcare and safety reform. Each one of them had a number of items which were used in measuring its impacts on the reform system. Efficiency has 15 items, a demographic characteristic has 9 items, equity has 8 items, accessibility has 11 items, affordability has 11 items and control mechanism has 10 items totaling to 74 items in all. All these items used on Likert 5-point scale with 1 indicating -strongly disagree to 5-strongly agree. The pilot study conducted was to ensure reliability of the tools used in this study. The reliability of the study revealed a Cronbach alpha of 0.6-0.7 in Nigeria and 0.8-0.9 in Malaysia. This goes to show that the instrument has a strong internal consistency as accepted by Sekaran (2000) and Devellis (2003). Refer to table 3.8 for the detail of the data.

In administering the questionnaire in the field, on the site method was used to collect the data from the participating respondents. This method was highly recommended by Snow and Thomas (1994) to have high probability of improving response rate. To overcome the problem of suspicion, an internal research person was recruited for the distribution and retrieval of the questionnaires. Before the commencement of the

questionnaire administration, the recruited research assistants were briefed on the purpose of the study. Some difficult concepts were explained to them with some back up literature in case of an unsuspecting question from the respondents in the field. The participants were told that participation was optional and therefore no coercion. A total of 1500 questionnaires were distributed in anticipation of 750. The target of 750 was achieved through repeat administration of questionnaire and visitation to the respondent's offices. This is necessary because a comparative study requires a wider coverage and representation. Given the on-site data collection method, the need to test response bias by comparing early and late response was dismissed or even not appropriate in this context.

The collected data were analyzed using SPSS version-15 software. The process entails screening and analyzing the data followed by descriptive analysis, validity, reliability, analysis, dimensionality determination, through factor analysis. A t-test, one way Analysis of Variance (ANOVA), Regression, Difference-in-Difference with Log-Linear Model of analysis and goodness of chi-square were used to test the hypothesis and research questions.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

The data were collected through a well designed cross-sectional survey to assess and evaluate the performance of NHS scheme in Nigeria and Malaysia. The study compares health care development between the two countries. After the data collection process, data were classified into purposeful and logical categories in order to facilitate analysis. Hence, the process of analysis is partially concurrent with data collection and presentation methods. Therefore, the need to present the summary of the data in tabular form, prior to analysis to actually reflect the originality of the data collected through the survey questionnaires. The Statistical Package for the Social Sciences (SPSS) was employed for data analysis.

Moreover, a data file containing the original codes of the survey questionnaire were entered into the SPSS-version-15 Data Editor. Then the creation of reports of Cronbach Alpha analysis was conducted to test and presents the reliability of the data, after which tables and analyses were conducted. The most useful measures to track the level of performance and the adequacy of the existing facilities of the NHS scheme were already captured in the survey questionnaire with some key variables. More so, there were some additional data preparation features that were done prior to the data analysis. In a nutshell, the assignment of the study variables has given the desired analysis for the research findings. These variables are on the comparison of private and public hospitals, health care delivery before and after the NHS,

affordability, equity, efficiency of NHS and accessibility, among others. In each case, the mean and standard deviation of the sampling distribution of the responses were used to measure them. Also the ANOVA, regression, difference-in-difference models, log-linear models, chi-square test, and independent sample t-test were used among others.

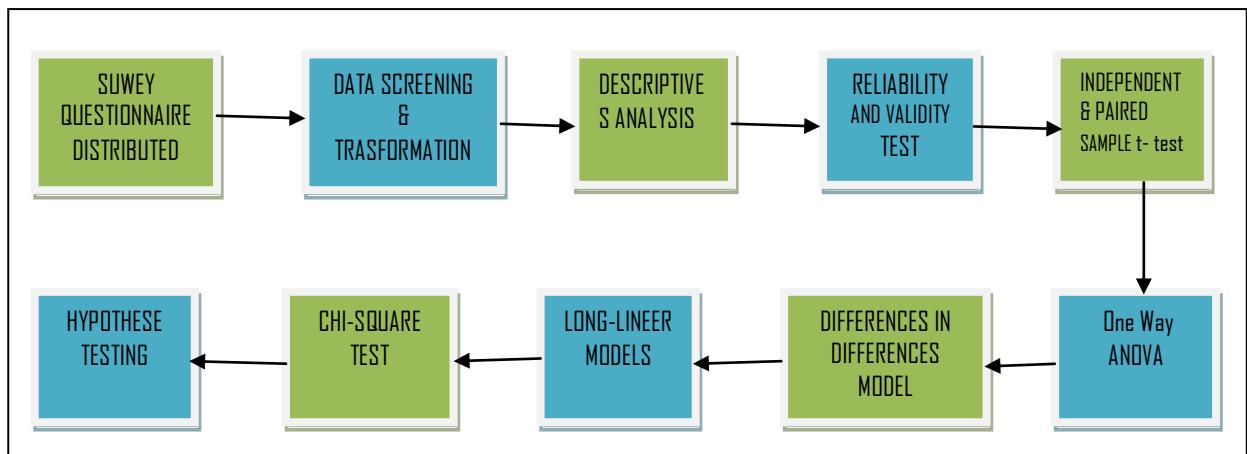


Figure 4.1: Process Flow Diagram for Data Analysis

4.2 Survey Questionnaire Distributed

The flow chart of the data analysis in figure 4.1 represents the process of the data analysis of this study. The survey questionnaire s were prepared in English language, bearing in mind that all the respondent were working in the institution of higher learning and with English language as the medium of instruction. Prior to the conduct of the survey the recruited research assistants were detailed on the purpose of the study. The time limit for the conducts of the research was one month to speed up high response, after which late responses were also accepted. The second round and third rounds were also conducted to make up for the non response problem. The total number of questionnaire distributed were 1500 for whole round of distributions, this is with the desire to have 750 returns and also to avoid non response problem to affects the needed data since the study is comparative in nature.

4.3 Data Screening

In the data editor, the identified cases that contain duplicate information, non-response and incomplete questionnaires were traced. In the final analysis those cases were excluded from the analysis or deleted from the data file; fresh questionnaires were administered to replace them. This is a necessary step of data editing to check errors and to improve the accuracy and precision of the responses captured by the questionnaires. These include, for example, instances where more than one answer or no answer is provided to a question and many other inconsistencies.

The variables with a few distinct categories that represent ranges of values from variables with large number of possible values were created. This banding (binning) process enables the researcher to create ranges of values from distinct values. In this study, the variables family size was banded to new sets of variables which simplified the analysis.

4.4 Reliability Measurement

Table 4.1: Case Processing Summary

<i>Country</i>			<i>N</i>	<i>%</i>
Nigeria	Cases	Valid	500	100.0
		Excluded*	0	0.0
		Total	500	100.0
Malaysia	Cases	Valid	250	100.0
		Excluded*	0	0.0
		Total	250	100.0

* Listwise deletion based on all variables in the

Table 4.2: Reliability Statistics

Country	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
Nigeria	0.911	0.920	64
Malaysia	0.920	0.923	64

Table 4.3: Summary Item Statistics

Country		Mean	Minimum	Maximum	Range	Max / Min	Variance	N. Items
Nigeria	Item Means	3.453	2.018	4.070	2.052	2.017	0.204	64
	Item Variances	1.038	0.645	1.737	1.092	2.694	0.069	64
	Inter-Item Correlations	0.152	-0.220	0.660	.880	-3.001	0.022	64
Malaysia	Item Means	3.471	2.700	4.028	1.328	1.492	0.113	64
	Item Variances	0.993	0.457	1.719	1.262	3.760	0.070	64
	Inter-Item Correlations	0.158	-0.565	0.791	1.355	-1.401	0.017	64

Cronbach's alpha for the whole measurements exceeded the acceptable and recommended threshold value of 0.6. None of the value was deleted this is due to the internal consistency of the values. The inter item correlation and the maximum to minimum range of the items were less than ten (10). The mean inter-item was 3.453 for Nigeria and 3.471 for Malaysia, with values ranging from 2.018-4.070 for Nigeria and 2.700-4.028 for Malaysia. Briggs and Cheek (1986) recommended that an acceptable optimal level or range for the inter-item correlations should be 0.2 and 0.4. Therefore, the results of this study suggested a good or strong relationship between the items, signifying a good internal consistency. Previous studies had recorded similar reliability results with similar internal consistencies for all the measurements tools. Research conducted by Wallace and Vodanovich (2003) on work place safety behavior and performance recorded 0.83 internal consistency of the items. In a similar

study in Australia Neal (2006) recorded and internal consistency results of 0.86 to 0.92 while studying safety behavior and performance in hospital. The results of Neal (2006) revealed an alpha value of 0.85 to 0.92 for other variables relating to performance measurements and motivation. The closer the alpha is to 1.00, the greater the internal consistency of items in the instrument being assessed. At a more conceptual level, coefficient alpha may be thought of as the coefficient between a sincere response and all other sincere responses of the same item that are drawn randomly from the same population of interest. In the case of this study the 64 construct question items in the questionnaire were meant to evaluate health sector reforms in Nigeria and Malaysia. From table 4.2, the Cronbach's alpha of 0.911 for the instrument used in Nigeria implies that the Nigerian instrument is reliable. Similarly, the Cronbach's alpha of 0.920 for the instrument used in Malaysia implies that the Malaysian instrument is also reliable. Both instruments have excellent reliability as far as internal consistency is concerned.

4.5 Test of Normality

Normality of distribution of scores is very important if the desire is to conduct factor analysis and regression analysis (Pallant, 2007). Normality is described as symmetrical, bell-shaped curve which has the highest frequency of scores in the middle and smaller frequencies towards the extreme ends. There are several statistical methods available to assess the normality of these distributions. In this study, the normality was assessed by determining the value of kurtosis and skewness statics results as recommended by Ferguson and Cox (1993). The skewness value represents the symmetrical shape of the distribution, whereas kurtosis value represents the peakedness of the distribution. Under normal condition, the kurtosis and skewness

value should be zero, this results is not common in social sciences study (Pallant, 2007). According to Tabachnick and Fidell (2007) a research that had a large sample that is more than 200 may have slight deviation which would not have substantive difference in the analyses. Adding to the discussion on kurtosis and skewness Muthen and Kaplan (1985) stated that an acceptable degree of univariate skew and kurtosis for the majority of variables if neither value exceeds plus or minus 2.0 may not be a problem. An acceptable percentage of variables adversely affected by both kurtosis and skewness should be within the cutoff point of 25 percent (Ferguson & Cox, 1993). Applying the two principles or cutoff points for the assessments of normality, the results showed only one item (Equity) with 2.791 cut off points exceeding 2.0 which is within the second cutoff points of less than 25 percent. The individual analysis of items measuring the constructs showed 13 percent out of the 73 items in the questionnaire which are less than 25 percent. This therefore showed that the items on the questionnaire are normal and the data is qualified for parametric analysis see Table 4.4.

Table 4.4: Data Variable Skewness and Kurtosis Results

Variable	Mean			Skewness		Kurtosis	
	Name	Statistic	Statistic	Std. Error	Statistic	Std. Error	
Efficiency	3.4555		-.620	.089		.998	.178
Demographic Characteristics	3.4720		-.691	.089		.898	.178
Equity	3.6150		-1.069	.089		2.791	.178
Accessibility	3.4072		-.576	.089		1.067	.178
Affordability	3.5285		-.784	.089		1.799	.178
Control Mechanisms	3.3100		-.116	.089		.876	.178

Factor analysis was conducted to confirm the construct dimensionality and factorability of the results. it was established after the factor analysis that, the whole six construct has 17 dimensions, efficiency 3, demographic characteristics 2, equity 4,

accessibility 3, affordability 3, and control mechanisms has 2. The constructs as obtained in this research were supported by past research in, (Huton, 2000; Alan & Joel, 2004; Richard et al., 2004; Anna, Martin, & Jean, 2004; Marria & Isabelle, 2004; Manfred, Andrew, & Wendy, 2004; Johannes, 2005). Some of the items in the questionnaire were modified and as well adopted from the previous research/ studies. The whole 17 items or dimensions had shown or revealed the presence of two components with eigenvalues exceeding 1. A review of the screeplot using Cartell's, (1966) scree, revealed a gap after the second component, but since the results of the principal component analysis was to determine the construct dimensionality or to confirm the construct dimensionality, a decision to retain the component in order to have full detailed of the phenomenon under investigation and for future investigation that may likely use principal component analysis to find out the resultants effects of factor loading on more than one item. This was so, because the available literature conducted in the similar field relied heavenly on descriptive and correlation analysis, to compare health systems of five developing countries (Johannes, 2005). As revealed by Thurstone, (1947), the components revealed a strong loadings and basically all variables load substantially only on one component. The detailed result is contained on Table 4.5

Table 4.5: Factor Analysis Summary of the Study Variables

VARIABLE	KMO RESULTS	BARTLET'S APPROX SQUARE	TEST& CHI- FREEDOM	DEGREE OF	SIGNIFICANT LEVEL
EQUITY	.795	1634.406	28	.000	
AFFORDABILITY	.736	1213.514	55	.000	
ACCESSIBILITY	.748	1230.56	55	.000	
CONTROL MEC	.747	1810.667	45	.000	
DEMOGRAPHY	.818	1480.856	36	.000	
EFFICIENCY	.799	1604.004	66	.000	
SUM OF VARIABLES	ALL .889	9682.037	2016	.000	

4.6 Demography Profile of Respondents

The data presented in the tables were the frequency distribution and percentages of the respondent's response on the variables in the questionnaires. First and foremost data were classified into logical categories. Subsequently, the desired analytical tables were extracted for the proper data analysis. The presentations of the original data sets in a form of frequency tables as well as the analytical tables are as follows:

From Table 4.6 it can be seen that in Nigeria 48.4% of the beneficiaries of the health insurance scheme are within the 38-47 years age bracket while in Malaysia 49.2% are within the 18-27 years age bracket. This implies younger people enjoy the scheme in Malaysia more than Nigeria. The above results is partially attributed to the early age under which the Malaysian citizen started working of 18-21 immediately after second or first stage of the schooling period, couple with the fact that there is an existing better opportunities for employment compared to Nigeria (world Bank, 2007).the results also showed that in Nigeria 75.4% of the beneficiaries of health insurance scheme are male while in Malaysia 45.2% are male. This implies more female enjoy the scheme in Malaysia than in Nigeria. And finally it can be seen that in Nigeria 82.4% of the beneficiaries of health insurance scheme are married while in Malaysia 53.6% are married. This implies more married people enjoy the scheme in Nigeria than in Malaysia.

Table 4.6: Demographic Characteristics of the Study

Country	Parameter	Age	Frequency	Percentage
Nigeria				
	18-27 yrs	46		9.2
	28-37 yrs	137		27.4
	38-47 yrs	242		48.4
	48-57 yrs	75		15.0
	Total	500		100.0
Malaysia				
	18-27 yrs	123		49.2
	28-37 yrs	73		29.2
	38-47 yrs	43		17.2
	48-57 yrs	11		4.4
	Total	250		100.0
Country	Parameter		Frequency	Percent
Nigeria				
	Male	377		75.4
	Female	123		24.6
	Total	500		100.0
Malaysia				
	Male	113		45.2
	Female	137		54.8
	Total	250		100.0
Country	Marital Status		Frequency	Percent
Nigeria				
	Married	412		82.4
	Single	72		14.4
	Divorced	3		0.6
	Separated	6		1.2
	Widowed	7		1.4
	Total	500		100.0
Malaysia				
	Married	134		53.6
	Single	112		44.8
	Divorced	3		1.2
	Widowed	1		0.4
	Total	250		100.0

The profile tabulated in Table 4.7, it showed that in Nigeria 40.6% of the beneficiaries of health insurance scheme have 1-4 family members while in Malaysia 88.4% have 1-4 family members. This implies that smaller family sizes enjoy the scheme in Malaysia than in Nigeria. While the singles had 44.8 divorced and widowed had 3 and 1 percent respectively in Malaysia, in the case of Nigeria, singles had 14.4 percent and the divorced, separated and widowed 72, 3 and 6 percent. While only 11.6% families have 5-9 members in Malaysia in contrasts to Nigerian 33.4%. The results also showed that in Nigeria 36.8% of the beneficiaries of health insurance scheme belong to the middle class mostly working in the government. While in Malaysia only 3.6% belong to the minority groups whose population was not up to that of the Malay middle class populated working members in the country. A survey on the level of education showed that in Nigeria 93.2% of the beneficiaries of health insurance scheme had tertiary education while in Malaysia 79.6% had tertiary education. This implies more elites enjoy the scheme in both Nigeria and Malaysia. With 10.8% in Malaysia as against 2.4% in Nigeria for those beneficiaries who completed only secondary schools showed that, the Malaysian scheme is more universalistic in terms of coverage than that of Nigeria. Considering 0.2% for primary leavers in Nigeria and 3.2% in Malaysia as percentage of those who benefited from the scheme, show a significant level of coverage for all citizens within the society more in Malaysia than in Nigeria.

Table 4.7: Family Size, Ethnic Group and Educational Attainment of the Respondents

Country	Size	Frequency	Percent
Nigeria	1-4 members	203	40.6
	5-9 members	167	33.4
	10 or more members	130	26.0
	Total	500	100.0
Malaysia	1-4 members	221	88.4
	5-9 members	29	11.6
	Total	250	100.0
Country	Ethnicity	Frequency	Percent
Nigeria	Hausa/Fulani	266	53.2
	Yoruba	35	7.0
	Igbo	15	3.0
	Others in Nigeria	184	36.8
	Total	500	100.0
Malaysia	Malay	189	75.6
	Chinese	32	12.8
	Indian	20	8.0
	Others in Malaysia	9	3.6
	Total	250	100.0
Country	Education	Frequency	Percent
Nigeria	None	21	4.2
	Primary School	1	0.2
	Complete School	12	2.4
	Tertiary/University Education	466	93.2
	Total	500	100.0
Malaysia	None	10	4.0
	Primary School	8	3.2
	Complete School	27	10.8
	Tertiary/University Education	199	79.6
	Others Specify	6	2.4
	Total	250	100.0

A close look at the location of the respondents showed that in Nigeria 91.4% of the beneficiaries of health insurance scheme are from urban area while in Malaysia 94.0% are from urban area. This implies that most of the beneficiaries are from urban area in both Nigeria and Malaysia. The results also signifies the lopsided nature of the scheme more to the urban dwellers than the rural population, in essence the system seem to favour urban minority to the detriment of the rural majority in the two countries. This is evident from the research conducted by Tan Phoi Tsze in Sarawak, which show a wide gap between the urban employed and rural employed Sarawakian citizens on medical expenses, urban having RM 46 as against rural RM12 for medical expenses (Tan Phoi, 2010). Most the respondents in Nigeria and Malaysia belong to the formal sector employment with Nigerian 87.8% of the beneficiaries of health insurance scheme belonging to the formal sector while in Malaysia 94.4% are from the formal. This implies most beneficiaries from both Nigeria and Malaysia are from the formal sector. This impliedly show that any healthcare reform at the initial stage targeted formal sector of the economy. The reason being that the formal sector has some level of income stability, which serves as a starting point for the establishment of a formidable resource base that will guarantee the evolution of a social solidarity healthcare and safety system. This is evident from the study conducted by (Alan & Joel, 2004; Chollet, 2004; Deborah, 2004).

A cursory look at the scheme showed that in Nigeria 29.6% of the beneficiaries of health insurance scheme attend public hospitals while in Malaysia only 23.2% attend public hospitals. This implies more beneficiaries attend public hospitals in Nigeria than in Malaysia. The results for those who attended both private and public hospitals in Malaysia showed 52.4% as against Nigeria 36.8% which signifies that more

beneficiaries has the consciousness of using alternative medical source in Malaysia than in Nigeria or it invariably showed that more Malaysian have extra income above Nigerians who solely depend on governmental intervention or out of pocket contribution from relatives. In Malaysia those who attended private clinics 24.2% while in Nigeria 33.6% attended private hospitals, they may be attributed to the better services rendered in the Malaysian public hospital which made the citizen to retain their confidence on the public as done the private. A close look at the data showed that, there are those who move from public to private and private to private with 29.6% public, 33.6% private and 36.8% both public and private in Nigeria and 23.2% public, 24.4% private and 52.4% both public and private in Malaysia.

Table 4.8: Location of the Respondents

Country	Location	Frequency	Percent
Nigeria	Urban	457	91.4
	Rural	43	8.6
	Total	500	100.0
Malaysia	Urban	235	94.0
	Rural	15	6.0
	Total	250	100.0
Country	Occupation	Frequency	Percent
Nigeria	Formal sector/ public/ private	439	87.8
	Informal business	11	2.2
	irregular source of income	8	1.6
	Regular source of income	40	8.0
	Professional	2	0.4
	Total	500	100.0
Malaysia	Formal sector/public/private	236	94.4
	Informal sector/own	3	1.2
	Total	239	100.0

Country	Clinic Attended	business irregular source of income	1	0.4
		Regular source of income	4	
Nigeria	Professional	6		2.4
	Total	250		100.0
	Frequency			Percent
Malaysia	Public/governmental hospital	148		29.6
	Private hospitals	168		33.6
	Both Private and Public Hospitals	184		36.8
	Total	500		100.0
	Frequency			Percent
	Public/governmental hospital	58		23.2
	Private hospitals	61		24.4
	Both Private and Public Hospitals	131		52.4
	Total	250		100.0

4.7 Independent Sample T-test

4.7.1 Hypothesis 1

H_0 : There is no difference between healthcare and safety delivery under reform in Nigeria and Malaysia.

The results for efficiency of delivery by country, represented by Table 4.9 demonstrated the mean and standard deviation of the efficiency, demographic characteristics, equity, accessibility, affordability, and control mechanisms of the reform between Nigeria and Malaysia. Therefore, reform with all the six variables were recorded as (1) and countries were recorded as (2) which had a mean of 3.45 on efficiency, 3.46 on demography, 3.63 on equity, 3.42 on accessibility, 3.51 on affordability, and control mechanisms had 3.30 in Nigeria, while Malaysia had an average of 3.46, 3.50, 3.62, 3.39, 3.54 and 3.35 respectively in all the variables. To test for the statistical significance of the difference on the reform performance rate

between these two countries (Nigeria and Malaysia) an independent sample t-test was used.

The result for efficiency of delivery by country is represented by Tabled 4.10 in this study. The summary of the analysis showed no significant differences between Malaysia and Nigeria in terms of the efficiency of healthcare and safety delivery, $t_{(748)} = 0.324$, $P > 0.05$. The mean result showed a minor variation between the two countries signifying an insignificant difference due to either procedural method used in the two countries or statistical chances, (Malaysia, $M=3.64$, and Nigeria, $M=3.43$). This result supported the null of no significant difference between efficiency and country. The result of demography showed a no significant differences between demographic classification and country in terms of healthcare and safety delivery in Nigeria and Malaysia as demonstrated in the result, $t_{(748)} = 0.772$, $P > 0.05$. The mean result further showed that, there is no significant differences between the two countries in terms of demographic variation in delivery of healthcare and safety services with mean for (Malaysia at $M=3.5$ and Nigeria $M= 3.46$). Testing the level of difference between Nigeria and Malaysia in terms of equity of delivery under reform presents a result of no significant differences with $t_{(748)} = 0.261$, $P > 0.05$. Expanding an understanding of this results the mean result of the two countries showed that (Malaysia $M=3.62$ and Nigeria $M=3.61$) in terms of providing equitable healthcare and safety services to employees under reform in the two countries. This showed that there is no significant evidence to conclude that Malaysian healthcare and safety reform is better than that of Nigeria. This could be associated with the initial start or flag up period, which is all in the early 1980's. Accessibility result produced a no significant differences in terms of better access of healthcare and safety services in the

two countries with, $t_{(748)} = 0.841$, $P > 0.05$, this results also showed a specific direction of no differences between Nigeria and Malaysia in terms of accessibility of healthcare and safety services provision to the employees under reform using the mean result as confirmatory results it showed that, (Nigeria is shaving $M=3.41$ access compared with Malaysia $M=3.39$). Affordability as one of the dimension measuring reform performance recorded a no significant differences with, $t_{(748)} = 0.655$, $P > 0.05$. The mean result on Table 4.9 supported a no significant difference between Nigerian and Malaysian healthcare delivery system with Malaysia mean of 3.54 affordability and Nigeria 3.52. And finally control mechanisms used to ensure healthcare and safety service delivery to the employees in both Nigeria and Malaysia showed a no significant differences between control used in Nigeria and Malaysia with $t_{(748)} = 1.46$, $P > 0.05$. The mean result also supported a no significant differences with mean for Malaysia on Table 4.9 as $M=3.35$ and Nigeria 3.29, in terms of healthcare and safety delivery control mechanism and country. Summarizing the entire results of the t-test showed a no significant differences in terms of performance of healthcare and safety reform by country.

Table 4.9: Mean and Standard Deviation of the Variables

Reform by	Country	N	Mean	Std. Deviation	Std. Error Mean
Eff	Nigeria	500	3.4511	0.53072	0.02373
	Malaysia	250	3.4643	0.51433	0.03253
Demo	Nigeria	500	3.4593	0.58334	0.02609
	Malaysia	250	3.4973	0.66003	0.04174
Equit	Nigeria	500	3.6113	0.57424	0.02568
	Malaysia	250	3.6225	0.52083	0.03294
Acc	Nigeria	500	3.4176	0.47836	0.02139
	Malaysia	250	3.3862	0.49104	0.03106
Affor	Nigeria	500	3.5205	0.53792	0.02406
	Malaysia	250	3.5444	0.43085	0.02725
Con	Nigeria	500	3.2908	0.51978	0.02325
	Malaysia	250	3.3484	0.49139	0.03108

Table 4.10: *t-test Analysis Differences in Healthcare and Safety Delivery between the Two Countries*

Refor m	Nigeria and Malaysia	F	Sig.	T	Df	Sig. (2- tailed)	Mean Differenc e	Std. Error Differen ce
Eff	Equal variances assumed	0.283	0.595	-0.324	748	0.746	-0.01320	0.04069
	Equal variances not assumed			-0.328	512.2 46	0.743	-0.01320	0.04027
demo	Equal variances assumed	5.349	0.021	-0.804	748	0.421	-0.03800	0.04725
	Equal variances not assumed			-0.772	447.4 25	0.441	-0.03800	0.04923
equit	Equal variances assumed	0.160	0.689	-0.261	748	0.794	-0.01125	0.04315
	Equal variances not assumed			-0.269	543.4 84	0.788	-0.01125	0.04177
acc	Equal variances assumed	1.055	0.305	0.841	748	0.400	0.03145	0.03738
	Equal variances not assumed			0.834	486.6 95	0.405	0.03145	0.03771
affor	Equal variances assumed	12.436	0.000	-0.609	748	0.543	-0.02382	0.03910
	Equal variances not assumed			-0.655	605.0 05	0.513	-0.02382	0.03635
con	Equal variances assumed	0.940	0.332	-1.457	748	0.146	-0.05760	0.03954
	Equal variances not assumed			-1.484	523.7 44	0.138	-0.05760	0.03881

4.7.2 Hypothesis 2a

H_0 : There is no difference between gender in terms of healthcare and safety delivery under reform in Nigeria and Malaysia.

To establish the difference between gender (male and female) in terms of reform performance in healthcare and safety delivery, an independent sample t-test was conducted. The mean result on Table 4.11 showed a mean of 3.78 efficiency for females as the highest mean among all the variables and lowest mean average score for females is control mechanisms with 3.29. The male mean average score recorded highest score on equity with lowest mean average associated with control mechanisms

as well. This is a prelude to testing of the significance of the differences between gender in terms of healthcare and safety delivery in Nigeria and Malaysia.

The result on Table 4.12 showed a significant differences between gender (male and female) in terms of the efficiency of delivery of healthcare and safety services in both Nigeria and Malaysia, $t_{(748)} = 2.98$, $P < 0.05$. The result of the mean showed a specific comparison between the gender with male $M = 3.5$ and females 3.38 in terms of efficiency of reform on health and safety delivery system in Nigeria and Malaysia. This showed moderate differences between the gender with 0.15 differences between male and female efficiency in terms of reform. The result of differences between gender in terms of other demographic factors and better delivery of healthcare and safety services showed a significant differences based on the result of the t-statistics $t_{(748)} = 3.76$, $P < 0.05$. The mean result showed the difference between gender with (male $= m = 3.53$ and female $m = 3.36$), in terms of other demography and healthcare and safety delivery to the employees in the various working places in Nigeria and Malaysia. Gender was also compared in terms of equity of healthcare and safety delivery. The results of differences between gender in terms of equity of healthcare and safety delivery showed a significant result with, $t_{(748)} = 3.42$ $p < 0.05$. The result of the mean showed that the males in terms of equitable healthcare and safety services delivery in both Nigeria and Malaysia ($m = 3.67$ male) compared with ($m = 3.52$ female) as a criterion. The t-statistics was also used to test the differences between gender in terms of access to healthcare and safety delivery. The results showed a significant differences between gender in terms of access to healthcare and safety delivery, considering the result of the t-test, $t_{(748)} = 2.96$, $P < 0.05$. Testing differences between gender in terms of affordability of healthcare and safety delivery in Nigeria and Malaysia, using t-test

showed a significant differences between gender in terms of affordability of healthcare and safety delivery with t-test result of, $t_{(748)} = 2.38$, $P < 0.05$. The mean result showed a mean of ($M = 3.56$ male and 3.47 female) in both Nigeria and Malaysia. Lastly the differences between gender in terms of control mechanisms for healthcare and safety delivery revealed a no significant differences between gender with, $t_{(748)} = 0.92$, $P > 0.05$. The mean of the male and that of the females showed ($M = 3.32$ male and 3.29 female) it also showed a no significant differences between gender in terms of control and healthcare delivery and safety.

Table 4.11: Mean and Standard Deviation of the Variables

Reform &	Gender	N	Mean	Std. Deviation	Std. Error Mean
Eff	Male	490	3.4969	0.52399	0.02367
	Female	260	3.3774	0.51899	0.03219
Demo	Male	490	3.5324	0.58702	0.02652
	Female	260	3.3581	0.63627	0.03946
Equt	Male	490	3.6653	0.59116	0.02671
	Female	260	3.5202	0.47177	0.02926
Acc	Male	490	3.4449	0.48796	0.02204
	Female	260	3.3360	0.46475	0.02882
Affor	Male	490	3.5603	0.51954	0.02347
	Female	260	3.4685	0.47031	0.02917
Con	Male	490	3.3224	0.52268	0.02361
	Female	260	3.2865	0.48801	0.03027

Table 4.12: *t-test Analysis Differences in Healthcare and Safety Delivery between the Two Countries*

Reform	& Gender	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
eff	Equal variances assumed	0.046	0.831	2.981	748	0.003	0.11943	0.04007
	Equal variances not assumed			2.989				
demo	Equal variances assumed	3.242	0.072	3.758	748	0.000	0.17431	0.04638
	Equal variances not assumed			3.666				
equit	Equal variances assumed	1.975	0.160	3.422	748	0.001	0.14511	0.04241
	Equal variances not assumed			3.663				
acc	Equal variances assumed	0.033	0.855	2.956	748	0.003	0.10888	0.03683
	Equal variances not assumed			3.001				
affor	Equal variances assumed	2.444	0.118	2.378	748	0.018	0.09177	0.03860
	Equal variances not assumed			2.451				
Con	Equal variances assumed	2.962	0.086	.916	748	0.360	0.03591	0.03920
	Equal variances not assumed			.935				

4.7.3 Hypothesis 2b

H_0 : There is no difference between rural and urban location in terms of healthcare and safety delivery under reform in Nigeria and Malaysia.

To determine whether there are differences between urban and rural location in terms of healthcare and safety services delivery to the employees due to location type in both Nigeria and Malaysia, an independent sample t-test was conducted. The result of the test demonstrated on Table 4.13 showed a mean of 3.53 affordability as the highest mean in urban location and 3.31 for control mechanisms as the lowest for the urban location. The rural location recorded the highest mean value of 3.49 represented by equity and lowest recorded mean of 3.26 for control mechanisms.

The results of the t-test analysis indicated a significant differences between urban and rural location in terms of efficiency of healthcare and safety delivery in Nigeria and Malaysia with $t_{(748)} = 2.22$, $p < 0.05$. Table 4.13 indicates that, the mean for urban employees ($m=3.48$) and rural had ($m=3.31$). The result of differences between urban and rural in terms of demography and healthcare and safety delivery indicated a no significant difference with, $t_{(748)} = 1.23$ $p > 0.05$. The mean results of ($M=3.48$ urban and rural $m=3.38$) in both Nigeria and Malaysia. The result of t-test comparing the differences between rural and urban in terms of equity of healthcare and safety delivery to employees revealed a no significant differences, $t_{(748)} = 1.70$, $P > 0.05$. The mean result of ($m=3.63$ urban and rural $m=3.5$) also indicating a no significant differences between rural and urban location. Testing the differences between rural and urban location in terms of accessibility of healthcare and safety delivery revealed a no significant differences, $t_{(748)} = 1.024$, $p > 0.05$ from Table 4.14. The mean result comparing urban and rural in terms of access to healthcare and safety services

delivery revealed a mean of ($M=3.41$ urban and rural $m= 3.34$ rural). The result comparing urban and rural location in terms of affordability of healthcare and safety delivery indicated a no significant differences between the location $t_{(748)} =0.644$, $P>0.05$. The mean result for differences between the two locations in terms of affordability of healthcare and safety delivery showed ($M=3.53$ urban and rural 3.26). at the same time the result of t-test testing the difference between urban and rural location in terms of enjoying the benefits of governmental control on healthcare and safety services delivery in urban and rural location in Nigeria and Malaysia showed a no differences between them, $t_{(748)} =0.851$, $P>0.05$. Checking the mean result to fortify conclusion indicated that the mean for (urban $M=3.31$ and rural 3.26) which supported a no significant differences between the locations.

Table 4.13: Mean and Standard Deviation of the Variables

Reform &	Location	N	Mean	Std. Deviation	Std. Error Mean
Eff	Urban	692	3.4677	0.51664	0.01964
	Rural	58	3.3092	0.60210	0.07906
Demo	Urban	692	3.4799	0.60304	0.02292
	Rural	58	3.3774	0.68397	0.08981
Equit	Urban	692	3.6250	0.54546	0.02074
	Rural	58	3.4957	0.67048	0.08804
Acc	Urban	692	3.4124	0.47620	0.01810
	Rural	58	3.3448	0.55331	0.07265
Affor	Urban	692	3.5319	0.49559	0.01884
	Rural	58	3.4875	0.60535	0.07949
Con	Urban	692	3.3146	0.50400	0.01916
	Rural	58	3.2552	0.58913	0.07736

Table 4.14: *t-test Analysis Differences in Healthcare and Safety Delivery between the Two Countries*

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Eff	Equal variances assumed	3.441	0.064	2.215	748	0.027	.15853	0.07158
	Equal variances not assumed			1.946	64.232	0.056	.15853	0.08146
Dem	Equal variances assumed	1.835	0.176	1.230	748	0.219	.10253	0.08333
	Equal variances not assumed			1.106	64.647	0.273	.10253	0.09269
Equit	Equal variances assumed	1.817	0.178	1.701	748	0.089	.12931	0.07600
	Equal variances not assumed			1.430	63.483	0.158	.12931	0.09045
Acc	Equal variances assumed	3.560	0.060	1.024	748	0.306	.06755	0.06596
	Equal variances not assumed			0.902	64.277	0.370	.06755	0.07487
Affo	Equal variances assumed	2.677	0.102	0.644	748	0.520	.04446	0.06900
	Equal variances not assumed			0.544	63.567	0.588	.04446	0.08169
Con	Equal variances assumed	2.002	0.158	0.851	748	0.395	.05942	0.06985
	Equal variances not assumed			0.746	64.187	0.459	.05942	0.07969

4.7.4 Hypothesis 2c

H_0 : There is no difference between ethnic groups in terms of healthcare and safety delivery under reform in Nigeria and Malaysia.

The second method of analysis used is one way analysis of variance (one way ANOVA) to determine the differences in the ethnic grouping in terms of healthcare

and safety reform. The analysis answered the hypothesis that there is no difference between ethnic group and healthcare delivery and safety of employees under reform in Nigeria and Malaysia. The results of the one way ANOVA on Table 4.15 showed that, there was no difference among the groups in terms of efficiency of reform $F(7,742) = 0.49$, $p > 0.05$. This result supported the null hypothesis of this study of no differences between the ethnic groups. The difference between ethnic groups in terms of demography in healthcare and safety delivery showed $F_{(7,742)} = 0.509$, $p > 0.05$ supporting the null of no significant difference. The result of ANOVA for differences between ethnic groups in terms of equity of healthcare and safety delivery showed $F_{(7,742)} = 1.595$, $p > 0.05$, this result also affirm the null of no significant difference between the two ethnic group. The result of ANOVA comparing the differences between the ethnic groups in terms of accessibility of the healthcare and safety delivery showed $F_{(7,742)} = 1.660$, $P > 0.05$, this result also supported a no significant difference between the ethnic groups. As for the differences between ethnic groups in terms of affordability of healthcare and safety delivery showed $F_{(7,742)} = 3.78$, $P < 0.05$, this results supported the alternate that, there is significant difference between ethnic group (Igbo and Hausa/Fulani, Igbo and Malay as well as Igbo and Chinese). The post-hoc, (turkey HSD), result showed that there are differences between Hausa/Fulani and Igbo ethnic group in Nigeria in terms of affordability of healthcare and safety delivery. The mean result of Hausa ethnic group is better than that of the Igbo ethnic group. There are also differences between Igbo and other ethnic groups in terms of affordability of healthcare and safety delivery. The mean score of the other ethnic groups is higher compared to that of the Igbo ethnic group in terms of affordability of healthcare and safety delivery. The result also showed a difference between the Igbo ethnic group in Nigeria and Malay and Chinese in Malaysia. The

mean difference of Malay and Chinese is higher than that of Igbo in Nigeria. This result showed specific differences between the ethnic groups in Nigeria and Malaysia. See multiple comparisons Table on **Appendix D**. The results of control mechanism comparison with ethnic group in the two countries showed, $F_{(7,742)} = 1.65$, $p > 0.05$, supporting the null of no significant difference between ethnic groups in terms of governmental control mechanisms of healthcare and safety service delivery.

Table 4.15: ANOVA Results between Ethnic Groups Differences on Healthcare and Safety Reform

Refor m & eff	Ethnic Groups	Sum of Squares	df	Mean Square	F	Sig.
eff	Between Groups	0.954	7	0.136	0.492	0.841
	Within Groups	205.494	742	0.277		
	Total	206.448	749			
demo	Between Groups	1.332	7	0.190	0.509	0.828
	Within Groups	277.185	742	0.374		
	Total	278.517	749			
equit	Between Groups	3.442	7	0.492	1.595	0.133
	Within Groups	228.671	742	0.308		
	Total	232.112	749			
acc	Between Groups	2.688	7	0.384	1.660	0.116
	Within Groups	171.701	742	0.231		
	Total	174.390	749			
affor	Between Groups	6.564	7	0.938	3.778	0.000
	Within Groups	184.146	742	0.248		
	Total	190.710	749			
con	Between Groups	2.994	7	0.428	1.649	0.119
	Within Groups	192.501	742	0.259		
	Total	195.495	749			

4.7.5 Hypothesis 2d

H_0 : There is no difference between educational attainments of employees in terms of Healthcare delivery and Safety under Reform in Nigeria and Malaysia.

The results of the ANOVA Table 4.16 showed that, there was no difference between educational attainment of employees in terms of efficiency of healthcare and safety

reform $F_{(4,745)} = 0.796$, $p > 0.05$. The difference between educational attainment of employees in terms of demographic characteristics in the healthcare and safety services delivery under reform revealed an ANOVA results of no differences between educational attainment in terms of demography and healthcare and safety delivery, $F_{(4,745)} = 0.502$, $p > 0.05$. Computing the result of ANOVA for differences between educational attainment in terms of equity in healthcare and safety delivery under reform showed no difference $F_{(4,745)} = 0.923$, $p > 0.05$. The result of ANOVA testing the differences between educational attainment in terms of accessibility of healthcare and safety delivery under reform presented a significant differences between the attributes, $F_{(4,745)} = 2.683$, $P < 0.05$. The result of posthoc (turkey HSD) supported the alternate of significant difference. It basically showed that there are differences between non educated employees and those classified as others in terms of accessibility of healthcare and safety delivery in both Nigeria and Malaysia. The mean score of non educated employees is higher than that of those specified as others. This showed reform succeeded in improving access for the non educated employees in the two countries. The mean result can be cited in the multiple comparison Tables in **Appendix D**. As for the differences between educational attainment in terms of affordability to healthcare and safety delivery, the results showed a no significant differences, $F_{(4,745)} = 1.409$, $P > 0.05$. The results of ANOVA comparing the differences between educational attainment in terms of control mechanism use by the government to ensure healthcare and safety service delivery to the employees under reform in the two countries showed a no significant differences, $F_{(4,745)} = 1.425$, $p > 0.05$. This result supported the null that there is no significant difference between educational attainment in terms of control

mechanisms use for delivery of the healthcare and safety services to the employees under reform in both Nigeria and Malaysia.

Table 4.16 : ANOVA Results between Educational Levels differences on Healthcare and Safety Reform

Refor m &	H/Education Attain	Sum of Squares	df	Mean Square	F	Sig.
eff	Between Groups	0.879	4	0.220	0.796	0.528
	Within Groups	205.569	745	0.276		
	Total	206.448	749			
demo	Between Groups	0.748	4	0.187	0.502	0.735
	Within Groups	277.769	745	0.373		
	Total	278.517	749			
equit	Between Groups	1.144	4	0.286	0.923	0.450
	Within Groups	230.968	745	0.310		
	Total	232.112	749			
acc	Between Groups	2.476	4	0.619	2.683	0.031
	Within Groups	171.913	745	0.231		
	Total	174.390	749			
affor	Between Groups	1.432	4	0.358	1.409	0.229
	Within Groups	189.277	745	0.254		
	Total	190.710	749			
con	Between Groups	1.485	4	0.371	1.425	0.224
	Within Groups	194.010	745	0.260		
	Total	195.495	749			

4.7.6 Hypothesis 2e

H_0 There is no difference between occupation type or sector in terms of healthcare and safety delivery to the employees under reform in Nigeria and Malaysia.

From the results of the ANOVA on Table 4.17, there was no difference between the groups based on their sector or occupational type in terms of efficiency of reform in healthcare and safety delivery, $F_{(4,745)} = 1.56$, $p > 0.05$. The second test on the difference between sector type or occupation type in terms of demography of healthcare and safety services delivery to the employees under reform showed an ANOVA result with a significant differences based on occupation $F_{(4,745)} = 3.99$,

$p<0.05$ signifying that there is differentiation based on occupation type in terms of healthcare and safety delivery in both Nigeria and Malaysia. The mean result has given the specific variation with $M=3.49$, for those in formal sector having higher mean compared with other sectors in terms of demographic variation. The pos-thoc result (turkey HSD) supported this result that, there is difference between occupational type or sector type in terms of demographic characteristics of healthcare and safety delivery to employees in Nigeria and Malaysia. The mean results showed that the mean score of formal sector employees is higher than that of the informal sector in the two countries. The result also reported differences between occupational type in terms of demographic characteristics of healthcare and safety delivery. The mean score of those on regular income is higher than that of those on informal non regular income employees in the two countries. Computing the result of ANOVA for differences between occupational type in terms of equity in healthcare and safety delivery under reform showed a significant differences, $F_{(4,745)} =3.07$, $p<0.05$. The result of posthoc (turkey HSD) supported significant differences between occupational type in terms of equity in healthcare and safety delivery in Nigeria and Malaysia. The mean results for formal sector is higher than that of informal sector signifying the superiority of those in the formal sector in terms of equity of healthcare and safety services delivery to the employees in the two countries. The result of ANOVA to determine the differences between occupation type in terms of accessibility of healthcare and safety delivery under reform presented a result supporting a no significant differences, $F_{(4,745)} =0.820$, $P>0.05$. The results of test of difference between occupational type in terms of affordability of healthcare and safety delivery to the employees under reform revealed a significant differences between occupational types of the employees in Nigeria and Malaysia, ($F_{(4,745)} =$

4.398, $P<0.05$). The posthoc results supported this conclusion of significant differences between formal and informal sector in terms of affordability of healthcare and safety delivery services to the employees in Nigeria and Malaysia. The mean result showed that the score for the formal sector is higher than that of the informal sector employees. There are also differences between informal sector and irregular source of income employees in terms of affordability of healthcare and safety services delivery. The mean score of those employees in the irregular source of income is better than that of those in the informal sector. There is also a difference between employees of the informal sector and those of the regular source of income in terms of affordability of healthcare and safety delivery services in Nigeria and Malaysia. The mean score for those in informal sector is lower than that of those in the regular source of income in the two countries. See (**Appendix D**) for more detail of the posthoc result. This showed that the intention of the reform to cross subsidized for the poor and incapacitated recorded the desired result. The results of ANOVA to determine the differences between occupation type in terms of control mechanism use by the government to ensure healthcare and safety service delivery to the employees under reform in the two countries showed a no significant differences, $F_{(4,745)} = 2.196$, $p>0.05$). This result showed that governmental control plays an insignificant role.

Table 4.17: ANOVA Results of Occupational Type Differences on Healthcare and Safety Reform

Reform &	Type of Sector occupation	Sum of Squares	df	Mean Square	F	Sig.
eff	Between Groups	1.709	4	0.427	1.555	0.185
	Within Groups	204.739	745	0.275		
	Total	206.448	749			
demo	Between Groups	5.844	4	1.461	3.992	0.003
	Within Groups	272.673	745	0.366		
	Total	278.517	749			
equit	Between Groups	3.763	4	0.941	3.069	0.016
	Within Groups	228.349	745	0.307		
	Total	232.113	749			
acc	Between Groups	.764	4	0.191	0.820	0.513
	Within Groups	173.625	745	0.233		
	Total	174.390	749			
affor	Between Groups	4.400	4	1.100	4.398	0.002
	Within Groups	186.310	745	0.250		
	Total	190.710	749			
con	Between Groups	2.278	4	0.569	2.196	0.068
	Within Groups	193.217	745	0.259		
	Total	195.495	749			

4.7.7 Hypothesis 2f

H_0 There is no difference between clinic types attended by the employees in terms of healthcare and safety delivery under reform in Nigeria and Malaysia.

From the results of the ANOVA Table 4.18, there was significant difference between the clinic type attended by the employees in terms of efficiency of healthcare delivery and safety under reform, $F_{(2,747)} = 3.62$, $p < 0.05$. The result of posthoc (turkey HSD) supported this conclusion that, there is a difference between clinic type attended by the employees in terms of efficiency of healthcare and safety delivery. The mean scores specifically showed that private clinic scores better than public clinic in terms of efficiency of healthcare and safety delivery to the employee. This result supported the governmental reform in the healthcare and safety sector in the two countries.

The mean results from multiple comparisons on (Appendix D) showed an enabling tool to make a clear conclusion that the private clinics have an edge over

governmental clinics in terms of efficiency provision in both Nigeria and Malaysia. The second test on the difference between clinic attended in terms of demographic characteristics of healthcare and safety services delivery under reform showed an ANOVA result with no significant differences between the type of clinic attended by the employees, $F_{(2,747)} = 1.971$, $p > 0.05$. Computing the result of ANOVA for differences between clinic type attended in terms of equity in healthcare and safety services delivery under reform revealed a no significant differences, $F_{(2,747)} = 1.152$, $p > 0.05$. The result of ANOVA testing the differences between clinic type attended by the employees in terms of accessibility of healthcare and safety services delivery under reform presented a no significant result $F_{(2,747)} = 1.83$, $P > 0.05$. Considering the results of test of difference between clinic type attended in terms of affordability of healthcare and safety delivery under reform revealed a no significant result between the attributes, $F_{(2,747)} = 0.936$, $P > 0.05$. So also the result from ANOVA testing the differences between clinic types attended in terms of control mechanisms use by the government to ensure healthcare and safety delivery to the employee revealed a no significant differences, $F_{(2,747)} = 1.32$, $p > 0.05$.

Table 4.18: ANOVA Results of Clinic Types Differences on Healthcare and Safety Reform

		Sum of Squares	Df	Mean Square	F	Sig.
eff	Between Groups	1.983	2	0.992	3.622	0.027
	Within Groups	204.465	747	0.274		
	Total	206.448	749			
demo	Between Groups	1.462	2	0.731	1.971	0.140
	Within Groups	277.055	747	0.371		
	Total	278.517	749			
equit	Between Groups	0.714	2	0.357	1.152	0.317
	Within Groups	231.399	747	0.310		
	Total	232.112	749			
acc	Between Groups	0.849	2	0.425	1.828	0.161
	Within Groups	173.540	747	0.232		
	Total	174.390	749			
affor	Between Groups	0.477	2	0.238	0.936	0.393
	Within Groups	190.233	747	0.255		
	Total	190.710	749			
con	Between Groups	0.687	2	0.343	1.317	0.269
	Within Groups	194.808	747	0.261		
	Total	195.495	749			

4.8 Difference-in-Difference (DD) Models

In order to apply the difference-in-difference model, there is the need to convert the responses on the five Likert scales into binary variables indicating the impact of the NHS scheme or otherwise; for both Nigeria and Malaysia. The results of the difference-in-difference model could be obtained through the regression model with binary regressors with a single dependent variable.

One of the most useful devices in regression analysis, especially for DD models, is the binary or dummy variable. A dummy variable takes the value one for some observations to indicate the presence of an effect or membership of a group and zero for the remaining observations. Binary variables are a convenient means of building discrete shift of the function into a regression model (Greene, 2003). Dummy variables are usually used in regression equations that also contain other quantitative

variables. In recent applications, researchers in many fields have studied the effects of treatment on some kind of response. Examples include the effect of education on income, sex difference in labour supply (or salary), pre-versus post regime shift in microeconomic models, to mention but a few. These examples can all be formulated in regression model involving a single dummy variable. Thus; $Y_i = X_i \beta + \delta D_i + \varepsilon_i$.

When there are several categories, a set of binary variable is necessary. Correcting for seasonal factors in microeconomic data is a common application. We could write a consumption function for quarterly data in the form below:

$$Y_i = C_t = \beta_0 + \beta_1 X_t + \delta_1 D_{t1} + \delta_2 D_{t2}$$

Where; γ_i = Estimated average response with respect to the efficiency of the scheme, C_t is the consumption function, β_0 = is the estimated regression constant, β_1 = is the estimated regression coefficients for country, β_2 = estimated regression coefficient for period, D_{1i} = country = (1 Nigeria and $D_{1i} = 0$ Malaysia), D_{2i} = period ($D_{2i}=1$ after the NHS scheme and $D_{2i}=0$ before the scheme and X_t = Disposable income

Here, only three of the four quarterly dummy variables are included in the model. If the fourth were included, then the four dummy variables would sum to one at every observation, which would reproduce the constant term – a case of perfect multicollinearity. This is known as the dummy variable trap. Thus to avoid the dummy variable trap, the variable for the fourth quarter would be dropped. Any of the fourth quarters can be used as the base period, also called the reference category as indicated in the appendix.

The difference-in-difference model is therefore the process of building multiple regression models with binary regressors using the method of least squares. The method of difference-in-difference model via the multiple regression models was used

for analyzing the part of the data. In addition, difference-in-difference coefficients, various statistical inferences and diagnostic methods were computed and compared. The Statistical Package for Social Sciences (*SPSS*) was employed for the analysis. Automated solution increases accuracy, precision and speed. Hence the bulk of the calculations will be done by *SPSS*.

Hypotheses 3a: To compare if there is no significant relationship between Nigeria and Malaysia, as well before and after the NHS scheme, whether employees are treated well in private clinic more than in public clinic. The DD technique through a linear regression model is hereby employed for the analysis, indicated in the Difference-in-Difference Coefficients 1

Table 4.19: Difference-in-Difference Coefficients 1Result Comparing Public and Private Clinics

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	9.860	2.839		3.473	0.001
Country	26.452	1.213	0.624	21.81 4	0.000
Employees are treated well in private clinic more than in public with the recent development in healthcare sector.	0.462	1.349	0.010	0.342	0.732

Table 4.20: Difference-in-Difference 1Result Comparing Public and Private Clinics

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	116911.315	2	58455.658	239.728	0.000
Residual	182149.444	747	243.841		
Total	299060.759	749			

From the regression results on Table 4.19 and 4.20, the *p-value* is (0.001) and F-value=239.728 and T-value= 3.473 imply that all the *DD* regression coefficients are

statistically significant. Hence, from the coefficient table $4.22 \beta_1 = 26.452$ implies that Malaysian employees are treated well in private clinic more than in public with the recent development (reform) in healthcare sector more than Nigerian employees. Also from the coefficient table, $\beta_2 = 0.462$ implies that after the NHS scheme employees are treated well in private clinics more than in public clinics than before the scheme. The standardized coefficient $\beta'_1 = 0.624$ implied that Malaysian employees are 62.4% better treated in private clinic more than in public with the recent development (reform) in healthcare sector more than Nigerian employees. Also standardized coefficient $\beta'_2 = 0.010$ implies that after the NHS scheme reform employees are 1.0% better treated in private clinics more than in public clinics than before the scheme. This result did not support the null hypotheses that there is no difference in terms of private clinics performance between Nigeria and Malaysia and before and after healthcare and safety reform. These results therefore supported the alternate hypothesis that there is difference in terms of private clinics performance between Nigeria and Malaysia as well as before and after healthcare and safety reform.

Hypotheses 3b: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme, whether the efficiency provided in the recent development (reform) as from 2006 in the health sector will not ensures equity, safety and healthcare services to employees in the working place. The DD technique through a linear regression model is hereby employed for the analysis.

Table 4.21: Difference-in-Difference Coefficients 2Result on Equity, Safety of Healthcare Services

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	10.987	4.382		2.507	0.012
Country	26.487	1.211	0.625	21.837	0.000
The efficiency provided in the recent development as from 2006 in the health sector will ensures equity, safety and healthcare services to employees in the working place.	0.186	2.137	0.002	0.087	0.931

Table 4.22: Difference-in-Difference 2Result on Equity, Safety of Healthcare Services to Employees

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	116884.566	2	58442.283	239.638	0.000
Residual	182176.193	747	243.877		
Total	299060.759	749			

The results from Tables 4.21 and 4.22 showed that the $p\text{-value} = (0.001)$ this results showed that the p-value is less than 0.05 therefore the null hypotheses is rejected and the alternate is supported. The results on coefficient Table 4.21 is $\beta_1 = 26.487$ the F-value= 239.63 and t-value=2.507 implies that the efficiency provided in the recent development (reform) as from 2006 in the health sector in Malaysia has ensured equity, safety and healthcare services to employees in the working place more than in Nigeria. Also from the coefficient table 4.21, $\beta_2 = 0.186$ implying that the efficiency provided in the recent development (reform) as from 2006 in the health sector has ensured equity, safety and healthcare services to employees in the working place more than before the scheme. The standardized coefficient $\beta'_1 = 0.625$ implies that Malaysian scheme is 62.5% more than Nigeria in terms of the efficiency provided in

the recent development (reform) as from 2006 in the health sector to ensure equity, safety and healthcare services to employees in the working place. Also standardized coefficient $\beta'_2 = 0.010$ implies that the efficiency is 0.1% better than before the scheme. The results supported the alternate hypotheses that Malaysia is better or more efficient in terms of equity in the provision of healthcare and safety services provision to the beneficiaries.

Hypothesis 4: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme, whether the recent development in healthcare sector, will not ensures equity, affordability and efficiency to healthcare and safety services to all employees in their working place. The DD technique through a linear regression model is hereby employed for the analysis.

Table 4.23: Difference-in-Difference Coefficients 3Result of Reform and Equity of Healthcare

	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
Model						
(Constant)	17.191	4.147			4.145	0.000
Country	26.566	1.208	0.627		21.988	0.000
The recent development in healthcare sector will ensures equity to healthcare services to all employees in their working place.	3.487	2.010	0.049		1.734	0.083

Table 4.24: Difference-in-Difference 3Result of Reform and Equity of Healthcare

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	117613.307	2	58806.654	242.101	0.000
Residual	181447.451	747	242.902		
Total	299060.759	749			

From the regression Tables 4.23 and 4.24 the *p-value* (0.001) from the coefficient Table 4.24 $\beta_1 = 26.566$ the F-value=242,10 and t-value=4.145 implies that the efficiency provided in the recent development (reform) in healthcare sector in Malaysia has ensured equity to healthcare services to all employees in their working place more than in Nigerian. Also from the coefficient table, $\beta_2 = 3.487$ implied that there is efficiency provided in the recent development (reform) in healthcare sector which will ensure equity to healthcare services to all employees in their working place more than before the scheme. The standardized coefficient $\beta'_1 = 0.627$ implies that Malaysian scheme is 62.7% more than Nigeria in terms of the efficiency provided in the recent development as from 2006 in the health sector to ensure equity to employees in the working place. Also standardized coefficient $\beta'_2 = 0.049$ meaning that, the efficiency is 4.9% better than before the scheme. This therefore supported the alternate hypotheses of this study.

Hypotheses 5a: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme, whether the recent development (reform) in healthcare sector will not successfully increases the number of time employees will attends hospital/clinics in the working place. The DD technique through a linear regression model is hereby employed for the analysis.

Table 4.25: Difference-in-Difference Coefficients 4 and Reform and Increase in Clinic Attendance

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	17.273	2.910		5.936	0.000
Country	26.831	1.210	0.633	22.18	0.000

The recent development in healthcare sector will successfully increases the number of time employees will attends hospital/clinics in the working place.	3.960	1.408	0.080	2.812	0.005
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Table 4.26: Difference-in-Difference 4 and Reform and Increase in Clinic Attendance

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	118791.104	2	59395.552	246.123	0.000
Residual	180269.654	747	241.325		
Total	299060.759	749			

From the regression Table 4.25 and 4.26 we can see that, the *p-value* (0.001) and the coefficient Table 4.28 $\beta_1 = 26.831$ the F-value=246.12 and t-value=5.936 mean that the recent development (reform) in healthcare sector has successfully increased the number of time employees will attends hospital/clinics in Malaysia in their working place more than in Nigeria. Also from the coefficient table, $\beta_2 = 3.960$ implies that the recent development (reform) in healthcare sector will successfully increases the number of time employees will attends hospital/clinics in the working place than before. The standardized coefficient $\beta'_1 = 0.633$ implies that Malaysian attendance rate is 63.3% more than Nigeria. Also standardized coefficient $\beta'_2 = 0.080$ implying that, the attendance rate now is 8.0% better than before the scheme. Since the desire of this research is to compare the two countries as well as before and reform period the conclusion will then be that the alternate hypotheses is supported, that there is significant relationship between the attributes.

Hypotheses 5b: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether the recent development (reform) will not ensure better

access to healthcare and safety services to employees than without it. The DD technique through a linear regression model is hereby employed for the analysis.

Table 4.27: Results of Difference-in-Difference Coefficients 5 Reform and Better Access to Healthcare

	Unstandardized Coefficients		Standardized Coefficients			
Model	B	Std. Error	Beta	t	Sig.	
(Constant)	17.888	4.488		3.986	0.000	
Country	26.558	1.208	0.627	21.986	0.000	
The recent development will ensures better access to health care services to employees than without it.	3.817	2.184	0.050	1.747	0.081	

Table 4.28: Results of Difference-in-Difference Coefficients 5 Reform and Better Access to Healthcare

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	117624.267	2	58812.134	242.138	0.000
Residual	181436.491	747	242.887		
Total	299060.759	749			

From the regression Table 4.27 and 4.28 the *p-value* (0.001), *F-value*=242.13 and *t-value*=3.986 implies that all the *DD* regression coefficients are statistically significant. Hence, from the coefficient table 4.30 $\beta_1 = 26.558$ implies that the recent development has ensured better access to healthcare and safety services to employees in Malaysia more than in Nigeria. Also from the coefficient table 4.27, $\beta_2 = 3.817$ implies that the recent development has ensured better access to healthcare and safety services to employees than without it or more than before. The standardized coefficient $\beta'_1 = 0.627$ implies that Malaysian access rate is 62.7% more than Nigeria. Also standardized coefficient $\beta'_2 = 0.050$ implies that the access rate now is 5.0% better than before the scheme. The conclusion is that the result supported the alternate hypotheses.

Hypotheses 3c: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether the recent development (reform) in the healthcare sector will not improve competition in the healthcare and safety services delivery to the employees in the working place. The DD technique through a linear regression model is hereby employed for the analysis.

Table 4.29: Difference-in-Difference Coefficients 6 and Result of Reform and Increase in Competition

Unstandardized Coefficients		Standardized Coefficients		
B	Std. Error	Beta	t	Sig.
18.426	4.080		4.516	0.000
26.433	1.206	0.624	21.912	0.000
4.057	1.930	0.060	2.102	0.036

Table 4.30: Difference-in-Difference 6 and Result of Reform and Increase in Competition

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	117953.685	2	58976.842	243.258	0.000
Residual	181107.074	747	242.446		
Total	299060.759	749			

From the regression Tables 4.29 and 4.30 the *p-value* (0.001), *F-value*=243.25 and *t-value*=4.516, this confirmed that all the *DD* regression coefficients are statistically significant. At the same time the coefficient Table 4.29 showed $\beta_1 = 26.433$ implies that the recent development (reform) in the healthcare and safety sector will improve competition in the healthcare and safety sector in Malaysia more than in Nigeria. Also from the coefficient in Table 4.29, $\beta_2 = 4.057$ implies that the recent development (reform) has ensured better competition in the healthcare and safety sector more than before. The standardized coefficient table 4.29 $\beta'_1 = 0.624$ implies that Malaysian competition rate is 62.4% more than Nigeria. Also standardized coefficient

$\beta'_2 = 0.060$ implies that the competition rate now is 6.0% better than before the scheme. The results supported the alternate hypotheses.

Hypotheses 3h: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether the private sector clinics will not ensure employees value for money in terms of healthcare services than public sector clinics. The DD technique through a linear regression model is hereby employed for the analysis.

Table 4.31: Difference-in-Difference Coefficients 7 and Results of Private Clinics and Value for Money

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
(Constant)	12.786	2.673			4.783	0.000
Country	26.640	1.218	0.629		21.869	0.000
The private sector clinics ensure employees value for money in terms of healthcare services than public sector clinics.	1.361	1.301	0.030		1.046	0.296

Table 4.32: Difference-in-Difference 7 and Results of Private Clinics and Value for Money

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	117149.210	2	58574.605	240.530	0.000
Residual	181911.549	747	243.523		
Total	299060.759	749			

From the regression Table 4.32 reported $p\text{-value} = (0.001)$, $F\text{-value} = 240.53$ and $t\text{-value} = 4.783$ confirmed that all the DD regression coefficients are statistically significant. At the same time from the coefficient Table 4.31, it showed that $\beta_1 = 26.640$ this indicated that the private sector clinics ensure employees value for money in terms of healthcare and safety services than public sector clinics in Malaysia more than in Nigeria. Also from the coefficient table, $\beta_2 = 1.361$ implies

that the recent development (reform) has ensured better service for money more than before. While the standardized coefficient Table 4.31 $\beta'_1 = 0.629$ implies that Malaysian private clinics' value for money rate is 62.9% more than Nigeria. Also standardized coefficient $\beta'_2 = 0.030$ implies that the private clinics' value for money rate is 3.0% better than before the scheme. The conclusion supported the alternate hypotheses that there is significant relationship in terms of comparative between Nigerian and Malaysian relationship since Malaysian private clinics are better.

Hypotheses 3e: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether the private hospitals did not have genuine drugs for the employees compared to public hospitals. The DD technique through a linear regression model is hereby employed for the analysis.

Table 4.33: Difference-in-Difference Coefficients 8 and Result of Private Clinics and Genuine Results

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	9.728	2.466		3.945	0.000
Country	26.462	1.210	0.625	21.868	0.000
The private hospitals have genuine drugs for the employees compared to public hospitals.	0.591	1.156	0.015	0.511	0.609

Table 4.34: Difference-in-Difference 8 and Result of Private Clinics and Genuine Results

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	116946.415	2	58473.207	239.846	0.000
Residual	182114.344	747	243.794		
Total	299060.759	749			

From the regression Table 4.33 the *p-value* (0.001), *F-value*=239.84 and *t-value*=3.945 mean that all the DD regression coefficients are statistically significant.

Hence, from the coefficient table, $\beta_1 = 26.462$ implies that the private hospitals have genuine drugs for the employees compared to public hospitals in Malaysia more than in Nigeria. Also from the coefficient Table 4.34, $\beta_2 = 0.591$ confirmed that the recent development (reform) has ensured better drugs than before. The standardized coefficient $\beta'_1 = 0.625$ implied that Malaysian private clinics' genuine drugs rate is 62.5% more than Nigeria. Also standardized coefficient $\beta'_2 = 0.015$ implied that the private clinics' genuine drug rate is 1.5% better than before the scheme. Conclusively this result supported the alternate hypotheses.

Hypotheses 3f: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether the employees did not witnessed less waiting period in private hospitals compared to public hospitals. The DD technique through a linear regression model is hereby employed for the analysis.

Table 4.35: Difference-in-Difference Coefficients 9 of Reform/Reduce waiting Period in Private Clinics

Model	Unstandardized Coefficients		Standardize d Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	6.932	3.845		1.803	0.072
Country	26.458	1.209	0.625	21.88 6	0.000
The employees witnessed less waiting period in private hospitals compared to public hospitals.	1.974	1.836	0.031	1.075	0.283

Table 4.36: Difference-in-Difference 9 of Reform and Reduction waiting Period in Private Clinics

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	117164.288	2	58582.144	240.581	0.000
Residual	181896.471	747	243.503		
Total	299060.759	749			

From the regression Table 4.36 the recorded *p-value* is (0.001), *F-value*=240.58 and *t*-value=1.803, while the coefficient results in Table 4.35 $\beta_1 = 26.458$ mean that the employees witnessed less waiting period in private hospitals compared to public hospitals in Malaysia more than in Nigeria. Also from the coefficient table, $\beta_2 = 1.974$ showed that the recent development (reform) has ensured fewer queues than before the reform were instituted. The standardized coefficient $\beta'_1 = 0.625$ also indicated that Malaysian private clinics witnessed 62.5% less queues than Nigeria. Also standardized coefficient $\beta'_2 = 0.031$ which suggests that the private clinics' queue rate is 3.1% better than before the scheme, therefore in comparison between Nigeria and Malaysia the alternate hypotheses is therefore supported.

Hypotheses 3g: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether in case of employee's accident/ emergency cases the private hospitals are not more prompt than the public hospitals. The DD technique through a linear regression model is hereby employed for the analysis.

Table 4.37: Difference-in-Difference Coefficients 10 and Private Clinics Prompt Attendance to Accidents

Model	Unstandardized Coefficients		Standardized Coefficients		<i>t</i>	<i>Sig.</i>
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>			
(Constant)	5.673	3.130			1.812	0.070
Country	26.487	1.207	0.625		21.949	0.000
<i>In case of employee's accident/ emergency cases the private hospitals are more prompt than the public hospitals.</i>	2.739	1.448	0.054		1.891	0.059

Table 4.38: Difference-in-Difference 10 and Private Clinics Prompt Attendance to Accidents

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	117751.051	2	58875.525	242.568	0.000
Residual	181309.708	747	242.717		
Total	299060.759	749			

From the regression Table 4.36 the *p-value* is (0.001), *F-value*=242.56 and *t-value*=1.812 the result from the *DD* regression showed that the coefficients are statistically significant. The coefficient Table 4.37 revealed that, $\beta_1 = 26.487$ mean that in case of employee's accident/emergency cases the private hospitals are more prompt than the public hospitals in Malaysia more than in Nigeria. Also from the coefficient table, $\beta_2 = 2.739$ signifies that the recent development (reform) has made the hospitals more prompt in attending to accidents victims than before. The standardized coefficient $\beta'_1 = 0.625$ which confirmed that Malaysian employees in private clinics witness 62.5% prompts attendance to accidents victims than Nigeria. Also standardized coefficient $\beta'_2 = 0.054$ implies that the private clinics' prompt response rate is 5.4% better than before the scheme. Comparatively the results supported the alternate hypotheses with $p=0.001<0.05$.

4.9 Research Hypotheses testing and Results (Loglinear, χ^2 and Nominal

Correlation)

The chi-square test, log-linear models and nominal correlations will be used to answer this research question. Detailed log-linear model and nominal correlations tables that answer hypotheses and the research questions are contained herein.

4.9.1 Research Hypothesis

The hypotheses are stated in null and alternate but the null will always be written at the beginning of the result presentation, assuming that the opposite refer to the alternate hypotheses, such as: hypotheses 1: To investigate if there is no significant relationship between the health care schemes in Nigeria and Malaysia under the reform as well as to investigate if the scheme depends on country.

Computations:

The computations are summarized in Tables 4.38 and 4.39:

Table 4.39: Cross-Tabulation 1: Reform Make Safety and Health Practice Possible in the Working

Place by Country

			Country		
			Nigeria	Malaysia	Total
The recent development in health sector	Strongly Disagreed	Count	15	13	28
		Expected Count	18.7	9.3	28.0
		Count	32	25	57
		Expected Count	38.0	19.0	57.0
	Disagreed	Count	58	73	131
		Expected Count	87.3	43.7	131.0
	Undecided	Count	284	115	399
		Expected Count	266.0	133.0	399.0
	Agree	Count	111	24	135
		Expected Count	90.0	45.0	135.0
	Strongly Agree	Count	500	250	750
		Expected Count	500.0	250.0	750.0
Total					

Table 4.40: Log-linear Models and χ^2 Chi-Square Tests 1

	Value	Df	Asymp. (2-sided)	Sig. (2-sided)
Pearson Chi-Square	52.914	4	0.000	
Likelihood Ratio	52.456	4	0.000	
Linear-by-Linear Association	34.733	1	0.000	
N of Valid Cases	750			

Table 4.41: Nominal Correlation Measures 1

Nominal by Nominal	Contingency Coefficient	Value	Approx. Sig.
		0.257	0.000
N of Valid Cases		750	

From table 4.39 and 4.40 the log-linear and chi-square test, since $\chi^2 (4) = 52.91$ N 750 p< 0.05 in each case we can conclude that the recent development in the healthcare sector is dependent on the country. The nominal correlation coefficient of (r=0.257, p<0.05, showed that there is a weak but significant relationship between the healthcare schemes for safety and health of employees in Nigeria and Malaysia. Hence the p-value is less than 0.05 therefore it is confirmed that there is a weak but significant relationship with 26% nominal correlation. Consistent with the proportion of the responses from the cross tabulation table 4.39, on the statement that there is relationship between Nigerian and Malaysian healthcare and safety reform it showed that the observed counts that has the highest count score than the expected count score on the cross tabulation results table 4.38 the score of Agreed and strongly agree contributed more to the results of the χ^2 , this supported the conclusion of the results that the scheme depend on country.

Hypothesis 6: is to investigate whether there is no significant relationship between the public healthcare outfits and healthcare outfits for safety/health of employees and also to investigate if the scheme depends on the outfit. The chi-square test, log-linear models and nominal correlations were used to answer this research question.

Table 4.42: Cross-Tabulation 2: Reform and Effective Healthcare Delivery for Safety of the Employee through HMO's by Clinic Attended

		Clinic Attended				Total
		Public/go vernment al hospital	Private hospital	Private & Public Hospital		
That the tool of control of healthcare for safety of the employee	Strongly Disagreed	Count	1	3	5	9
	Disagreed	Expected Count	2.5	2.7	3.8	9.0
	Undecided	Count	23	13	37	73
		Expected Count	20.1	22.3	30.7	73.0
	Agree	Count	82	111	145	338
		Expected Count	92.8	103.2	142.0	338.0
	Strongly Agree	Count	94	89	102	285
		Expected Count	78.3	87.0	119.7	285.0
	Total	Count	6	13	26	45
		Expected Count	12.4	13.7	18.9	45.0

Table 4.43: Log-linear Models and χ^2 Chi-Square Tests 2

	Value	Df	Asymp. (2-sided)	Sig. (2-sided)
Pearson Chi-Square	20.628	8	0.008	
Likelihood Ratio	21.913	8	0.005	
Linear-by-Linear Association	0.742	1	0.389	
N of Valid Cases	750			

Table 4.44: Nominal Correlation Measures 2

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	0.164	0.008
N of Valid Cases		750	

From the log-linear and chi-square test, since $\chi^2 (8) = 20.63$, N750 p< 0.05, Table 4.42 and 4.43 showed that the p-value is less than 0.05 providing evidence to support alternate hypotheses that the public controlled healthcare is dependent on the healthcare delivery for safety and health of employees. The nominal correlation

coefficient of $r=0.164$ showed that there is weak relationship of 16.4% between the two attributes. There is weak but significant relationship between public controlled healthcare and effective healthcare delivery for safety and health of employees in Nigeria and Malaysia. The dimension that contributed most to the χ^2 results is the combination of public and private mix which recorded observed count of 315, on strongly agreed column of the cross tabulation Table 4.42, while public controlled clinic recorded 206 observed counts and 219 for privately controlled clinics in both Nigeria and Malaysia. This result supported alternative hypotheses and the conclusion that there is significant relationship between public control clinics and efficient delivery of healthcare services to the employees in Nigeria and Malaysia.

Research Hypothesis 6: Is to investigate whether there is no significant relationship between the efficiency of public healthcare delivery and private healthcare delivery and to also investigate if the scheme depends on the nature (outfit) of the healthcare delivery. The chi-square test, log-linear models and nominal correlations were used to answer this hypotheses and research question.

Computations:

The computations are summarized Tables 4.45 and 4.46

Table 4.45: Cross-Tabulation 3: Reform will Ensures Equity, Safety and Healthcare Services to Employees in the Working

		Clinic Type				Private & Public Hospital	Total
		Public/g overnme ntal hospital	Private hospital s	Private hospital s			
The efficiency provided in the recent health sector will ensures equity, safety and healthcare services to employees in the working place.	Strongly Disagreed	Count	5	8	8	21	
	Disagreed	Expected Count	5.8	6.4	8.8	21.0	
	Undecided	Count	7	13	17	37	
	Agree	Expected Count	10.2	11.3	15.5	37.0	
	Strongly Agree	Count	21	17	58	96	
		Expected Count	26.4	29.3	40.3	96.0	
		Count	126	140	153	419	
		Expected Count	115.1	127.9	176.0	419.0	
		Count	47	51	79	177	
		Expected Count	48.6	54.0	74.3	177.0	
Total		Count	206	229	315	750	
		Expected Count	206.0	229.0	315.0	750.0	

Table 4.46: Log-linear Models and χ^2 Chi-Square Tests 3

	Value	Df	Asymp. (2-sided)	Sig. (2-sided)
Pearson Chi-Square	21.658	8	0.006	
Likelihood Ratio	21.891	8	0.005	
Linear-by-Linear Association	1.637	1	0.201	
N of Valid Cases	750			

Table 4.47: Nominal Correlation Measures 3

Nominal by Nominal	Contingency Coefficient	Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	0.168	0.006
N of Valid Cases		750	

From Table 4.46 and 4.47 the log-linear and chi-square test, since $\chi^2 (8)=21.66$, N750, $p< 0.05$ since the p-value is lower than 0.05 the study concluded that the efficiency of public controlled health care depends on the clinic type attended. Therefore the alternate hypothesis is supported. The nominal correlation coefficient $r=0.168$ showed that there is weak relationship between the two attributes with 17% effects. There is weak but significant relationship between the efficiency of public healthcare delivery and private healthcare delivery for safety of employees. That means that the private provision of healthcare and safety services is complimentary to public provision. This therefore did not provide enough evidence to conclude that, either of the clinic type is superior to the other. The results of the cross tabulation in table 4.45 showed that the dimension that contributed most to the χ^2 results is 'Agreed' with 173 for public clinic, 191 private clinic and 232 private/public mix being the highest contributor.

Hypothesis7: Is to investigate whether there is no significant relationship between efficient healthcare delivery for safety, health of employees and gender. Also we need to investigate if the healthcare delivery for safety depends on gender. The chi-square test, log-linear models and nominal correlations were used to answer this research question.

Computations:

The computations are summarized in tables 4.48 and 4.49

Table 4.48: Cross-Tabulation 4: Reform and Effective Health Care Delivery for Safety of the Employee by Gender

		Clinic Attended		
		Male	Female	Total
That the tool of controlling healthcare providers for effective health care delivery for safety of the employee	Strongly Disagreed	Count	6	3
		Expected Count	5.9	3.1
	Disagreed	Count	48	25
		Expected Count	47.7	25.3
	Undecided	Count	204	134
		Expected Count	220.8	117.2
	Agree	Count	198	87
		Expected Count	186.2	98.8
	Strongly Agree	Count	34	11
		Expected Count	29.4	15.6
Total		Count	490	260
		Expected Count	490.0	750.0

Table 4.49: Log-linear Models and (χ^2) Chi-Square Tests 4

	Value	Df	Asymp. (2-sided)	Sig. (2-sided)
Pearson Chi-Square	7.945	4		0.094
Likelihood Ratio	8.037	4		0.090
Linear-by-Linear Association	3.954	1		0.047
N of Valid Cases	750			

Table 4.50: Nominal Correlation Measures 4

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	0.102	0.094
N of Valid Cases		750	

From table 4.49 and 4.50 the log-linear and chi-square test, since $\chi^2(4) = 795$, N 750 $p>0.05$. Since the p-value is greater than 0.05 the null hypothesis is supported, leading to the conclusion that the public controlled healthcare is not dependent on gender. The nominal correlation coefficient of $r=0.102$ shows that there is weak relationship between the attributes with 10.2% effects. There is weak and no significant relationship between healthcare delivery for safety/health of employees and gender. The dimension that contributed in the χ^2 results is 'Agreed' with 232 observed counts for males and 98 observed counts for females Table 4.48. This results supported the null hypotheses since the p-value is greater than 0.05 we rejects the alternate hypothesis and concludes that there is no significant relationship between gender and public controlled healthcare and safety services delivery in both Nigeria and Malaysia.

Hypothesis 8: Is to investigate whether there is no significant relationship between government control mechanism and efficient reduction in affordability, accessibility, equity and demographic characteristics of healthcare and safety services to the employees under reform, and also to investigate if healthcare and safety services did not depend on government control mechanism. The chi-square test, log-linear models and nominal correlations were used to answer these research question/hypotheses.

Table 4.51: Cross-Tabulation 5 Access and Equity to Health Care Services by Government Control Mechanism

		Control mechanism instituted by the government.						
			Affordability of Ref	Accessibility of Ref	Equity of Reform	Demographic Mec	Efficiency of Refo	Total
Access and equity to healthcare services	Strongly Disagreed	Count	1	5	6	7	0	19
		Expected Count	1.6	4.9	6.3	5.3	0.9	19.0
	Disagreed	Count	2	19	9	5	1	36
		Expected Count	3.1	9.3	12.0	10.0	1.7	36.0
	Undecided	Count	3	14	46	29	3	95
		Expected Count	8.1	24.4	31.5	26.3	4.6	95.0
	Agree	Count	42	125	149	132	18	466
		Expected Count	39.8	119.9	154.7	129.2	22.4	466.0
	Strongly Agree	Count	16	30	39	35	14	134
		Expected Count	11.4	34.5	44.5	37.2	6.4	134.0
Total		Count	64	193	249	208	36	750
		Expected Count	64.0	193.0	249.0	208.0	36.0	750.0

Table 4.52: Log-linear Models and (χ^2) Chi-Square Tests 5

	Value	Df	Asymp. (2-sided)	Sig. (2-sided)
Pearson Chi-Square	44.554	16	0.000	
Likelihood Ratio	42.524	16	0.000	
Linear-by-Linear Association	0.301	1	0.583	
N of Valid Cases	750			

Table 4.53: Nominal Correlation Measures 5

Nominal by Nominal	Contingency Coefficient	Value	Approx. Sig.
		0.237	0.000
N of Valid Cases		750	

From Table 4.52 and 4.53 the log-linear and chi-square test, since χ^2 (16) =44.55, N750, $p<0.05$. This result showed that the p-value is less than 0.05 which provide evidence to support alternate hypothesis that the attributes depends on governmental control mechanisms to function effectively. Therefore result having satisfied all χ^2 and log linear parameters concluded that the affordability, accessibility, equity, control and demographic characteristics of healthcare and safety services are dependent on government control mechanism. The nominal correlation coefficient of $r=0.237$ showed that there is weak relationship with 24% between the attributes. There is weak but significant relationship between government control mechanism and the variables of healthcare services and safety reform. From the cross tabulation Table 4.52 the dimension that contributed more to the results of the χ^2 are variable accessibility with 155 observed counts ‘Agreed’ equity with 188 observed count ‘agreed, and control with 167 observed counts agreed. The results of the test on Table 4.51 supported the acceptance of the alternate hypothesis, that there is significant relationship between control under reform and the variables in terms of efficient service delivery in both Nigeria and Malaysia. At the same time the results showed that control has contributed 24% to the reform attributes being, access, equity, affordability and demographic variable.

Hypothesis 9: Is to investigate whether there is no significant relationship between public-private-partnership and spread of innovation in both public and private healthcare delivery to the employees and also to investigate if innovation in the healthcare delivery did not depend on public-private-partnership. The chi-square test, log-linear models and nominal correlations were used to answer this research question.

Computations:

The computations are summarized in tables 4.54 and 4.55

Table 4.54: Cross-Tabulation 6: Partnership of Private and Government Hospitals in the same Environment by Type of Clinic

		Types of Clinic				Private & Public Hospital s	Total
		Public/government hospital	Private hospital s	Private & Public Hospital			
As an employee would you support continuous reform in health care sector that is the existence of private and government hospitals in the same environment	Strongly Disagreed	Count	9	3	15	27	
		Expected Count	7.4	8.2	11.3	27.0	
	Disagreed	Count	12	20	17	49	
		Expected Count	13.5	15.0	20.6	49.0	
	Undecided	Count	22	28	33	83	
		Expected Count	22.8	25.3	34.9	83.0	
	Agree	Count	118	119	159	396	
		Expected Count	108.8	120.9	166.3	396.0	
	Strongly Agree	Count	45	59	91	195	
		Expected Count	53.6	59.5	81.9	195.0	
Total		Count	206	229	315	750	
		Expected Count	206.0	229.0	315.0	750.0	

Table 4.55: Log-linear Models and (χ^2) Chi-Square Tests 6

	Value	Df	Asymp. sided)	Sig. (2-
Pearson Chi-Square	11.259	8	0.187	
Likelihood Ratio	12.117	8	0.146	
Linear-by-Linear Association	0.584	1	0.445	
N of Valid Cases	750			

Table 4.56: Nominal Correlation Measures 6

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	0.122	0.187
N of Valid Cases		750	

From Table 4.55 and 4.56 the log-linear and chi-square test, since $\chi^2 (8) = 11.26$, N 750, $p > 0.05$ respectively, this result showed that the p-value is higher than 0.05 which supported null hypothesis. In each case the result showed that the public-private-partnership is independent of spread of innovation in both public and private clinics. The nominal correlation coefficient of $r=0.122$ showed that there is weak relationship between the two attributes with 12.2% effects. There is weak and no significant relationship between spread of innovation in both public and private and public-private-partnership in the area of health and safety of employees. The results of the test supported the null hypotheses therefore, it is accepted. The dimension that supported the result of the χ^2 from the cross tabulation Table 4.54 are ‘Agreed’ with public clinic contributing 163 observed count, private clinic contributing 178 observed counts and public-private-mix having the highest contribution of 250 observed counts.

Hypothesis 10: Is to investigate whether there is no significant relationship between healthcare affordability and efficiency to both government and private employees in Nigeria and Malaysia and also to investigate if healthcare affordability and efficiency did not depend on both government and private employees in Nigeria and Malaysia. The chi-square test, log-linear models and nominal correlations were used to answer this research question.

Computations:

The computations are summarized in tables 4.57 and 4.58

Table 4.57: Cross-Tabulation 7: The Recent Development in Healthcare Services will succeed in Affordability Reduction by Country

		Country		
			Nigeria	Malaysia
The recent development in healthcare services will reduce cost	Strongly Disagreed	Count	20	10
	Disagreed	Expected Count	20.0	10.0
	Undecided	Count	43	16
	Agree	Expected Count	39.3	19.7
	Strongly Agree	Count	56	39
		Expected Count	63.3	31.7
		Count	279	126
		Expected Count	270.0	135.0
		Count	102	59
		Expected Count	107.3	53.7
Total		Count	500	250
		Expected Count	500.0	250.0
				750

Table 4.58: Log-linear Models and (χ^2) Chi-Square Tests 7

	Value	Df	Asymp. (2-sided)	Sig. (2-sided)
Pearson Chi-Square	5.268	4	0.261	
Likelihood Ratio	5.220	4	0.265	
Linear-by-Linear Association	0.174	1	0.677	
N of Valid Cases	750			

Table 4.59: Nominal Correlation Measures 7

Nominal by Nominal	Contingency Coefficient	Value	Approx. Sig.
		0.084	0.261
N of Valid Cases		750	

From Table 4.58 and 4.59 the log-linear and chi-square test, since $\chi^2(4)=5.27$, N750 p=>0.05 respectively. Since the results of the p-value are greater than 0.05 the null hypothesis is accepted. In each case the research concluded that the healthcare

affordability and efficiency is not dependent on both government and private employees in Nigeria and Malaysia. This means that, the reform has not improved affordability and efficiency irrespective of the country or the type of organization. The nominal correlation coefficient of $r=0.084$ shows that there is weak relationship between the two attributes with 8.4% effects on the attributes. There is weak and no significant relationship between healthcare affordability or cost and efficiency of healthcare delivery for safety of the employees to both government and private employees under reform in Nigeria and Malaysia. Affordable cost and efficiency reduction in the provision of health and safety services has nothing to do with the country or type of organization. The results of the χ^2 is supported by the results of the cross tabulation Table 4.57 by an individual contribution of the dimensions with 'Agreed' on the Nigeria side contributing 381 observed counts and Malaysia contributing 185 observed counts. These results supported the conclusion that affordability and efficiency has nothing to do with country or type of organization. This therefore supported the acceptance of the null hypothesis, that there is no significant relationship between healthcare affordability or cost and efficiency to both government and private employees under reform in Nigeria and Malaysia. invariably the study can conclude that from the variation in the cross tabulation results of 381 in Nigeria and 185 in Malaysia accepting that there is no relationship between affordability and efficiency under reform showed that Malaysia ensure affordability .

4.10 Goodness of Fit χ^2 test Results

One of the problems or task in interpreting chi-square tests has to do with the determination of which of the cell contributed or produced the statistically significant difference of chi-square value results. One way to do it is by the examination of the

percentages in the contingency table as well as that of the expected frequency table. Even though some researchers prefer using the residual or the difference between the observed count or frequency and the expected count or frequency as seen to be more reliable all of the two are indicators that can be used to establish differences between statistical attributes. Therefore, this study uses both residual, observes and expected counts in addition to graphs, in order to establish the differences between Nigerian and Malaysian healthcare and safety reform efficiency. This test is confirmatory test of the previous analysis conducted in this study.

From Table 4.59 the chi-square results a test of efficiency of reform on demographic variable and control mechanisms variable had shown that $\chi^2(1, N=750)=83.33$ for country, that is Nigeria and Malaysia and efficiency, control mechanism and demographic variable in both Nigeria and Malaysia had χ^2 results of .658, .821, .737 and $p=.0001$. The result supported the alternate hypothesis and the null is rejected since the p-value is lower than 0.05. The conclusion from the results is that there is significant difference between the three attributes in the two countries in terms of performance. This finding may be partly due to environmental differences, cultural variation, leadership style, commitments and institutional variation. This result did not provide specific differences between the variables a further analysis is required in order to determine the differences.

Table 4.60: Cross tabulation Results 1

NUMBER	OBSERVED NUMBER (EFFICIENCY)	EXPECTECTED NUMBER (EFFICIENCY)	OBSERVED NUMBER (DEMOGRAPHY)	EXPECTED NUMBER (DEMOGRAPHY)	OBSERVE NUMBER CONTROL	EXPECTED NUMBER CONTROL
1	16	16.7	11	22.1	10	23.4
2	12	16.7	10	22.1	14	23.4
3	15	16.7	8	22.1	17	23.4
4	14	16.7	14	22.1	17	23.4
5	33	16.7	16	22.1	37	23.4
6	20	16.7	14	22.1	39	23.4
7	34	16.7	12	22.1	52	23.4
8	30	16.7	14	22.1	75	23.4
9	37	16.7	24	22.1	69	23.4
10	39	16.7	27	22.1	63	23.4
11	54	16.7	49	22.1	67	23.4
12	59	16.7	58	22.1	47	23.4
13	36	16.7	72	22.1	59	23.4
14	29	16.7	62	22.1	38	23.4
15	39	16.7	73	22.1	24	23.4
16	46	16.7	66	22.1	16	23.4
17	33	16.7	63	22.1	26	23.4
18	34	16.7	44	22.1	11	23.4
19	20	16.7	31	22.1	20	23.4
20	13	16.7	17	22.1	11	23.4
21	12	16.7	10	22.1	13	23.4

Table 4.61: Test Statistics 1: Chi-Square Results (χ^2)

	Country	eff	Demo	con
Chi-Square(a,b,c,d)	83.333	658.200	820.709	736.165
Df	1	44	33	31
Asymp. Sig.	.000	.000	.000	.000
Monte Carlo Sig.	.000(e)	.000(e)	.000(e)	.000(e)
Sig.	95% Confidence Interval	Lower Bound	.000	.000
	Upper Bound	.004	.004	.004

a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 375.0.

b 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 16.7.

c 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 22.1.

d 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 23.4.

e Based on 750 sampled tables with starting seed 743671174.

The results of the analysis from the chi-square results table 4.61 had shown a significant relationship in terms of performance of the reform in the two countries without necessarily discriminating between the variables. The figure 4.1 herein presented the mean value contribution in relation to performance of each of the variable in terms of reform performance in the two countries. This has further strengthen the comparison of the two countries in this study. The demographic variable represented by various dimensions such as gender, age, occupation type, location, lifestyle, presented a mean results confirming the differences between variables in Nigeria and Malaysia. the mean value for Nigeria started from 1.33 and

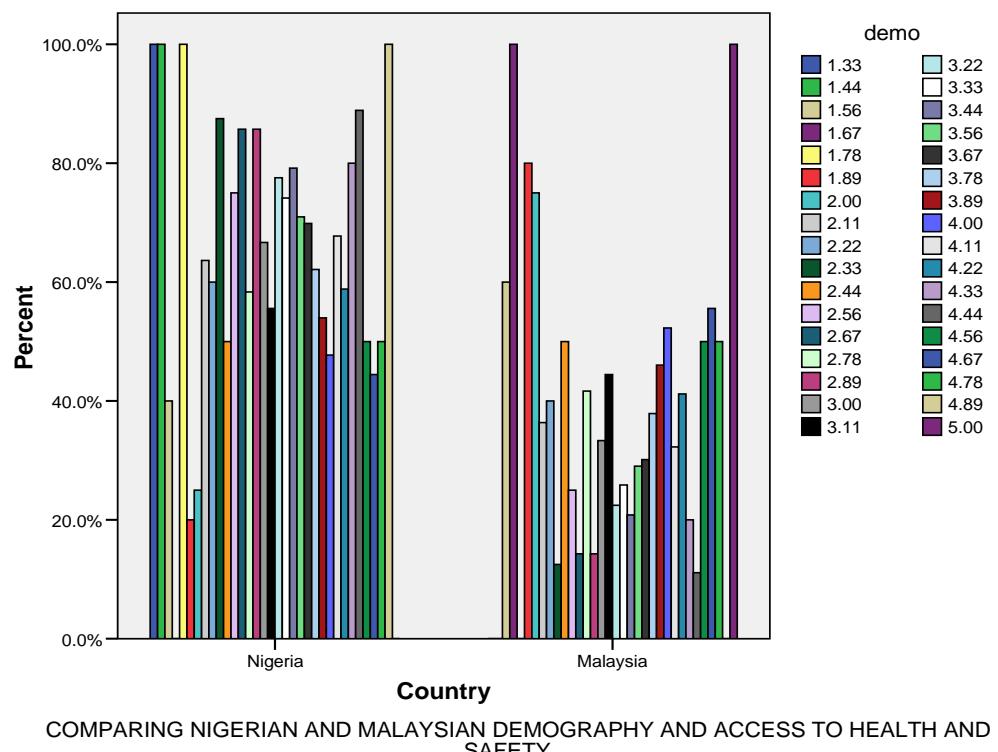


Figure 4.2: Comparing Nigerian and Malaysian Demography and Access to Health and Safety

keep increasing as a results of the reform upto 3.11 showing the strength of the reform. This results translated in comparison to the χ^2 results and crostabulation results on table 4.61, it then showed that, there is differences between Nigeria reform performance and that of Malaysia with Malaysia having mean of 3.22 in terms of performance and maximum of 5.00 mean. This showed a gap of -1.99 in the first instance that is $1.33-3.22 = -1.89$ and $3.11-5.00 = -1.89$. the results from this figure supported the results obtained from regression and difference-in-difference model as well as from the loglinear and independence Chi-square test conducted in this study. The negative results showed that one of the scheme is better than the other, in this case Malaysian scheme is better than that of Nigeria in terms of non discrimination due to certain demographic status of the beneficiary or employee.

From figure 4.2 the graphical presentation of the results had shown that, the differences of performance between Nigeria and Malaysia in terms of reform using control mechanism as a tool to ensure efficiency showed a mean value of between 1.50-3.00 in Nigeria and a mean value of 3.10-4.70 in Malaysia symbolising that there is high performance of the reform using control mechanism as a tool to ensure efficiency to all the beneficiaries more than in Nigeria. The difference became more glaring if the mean are subtracted from each other, $1.50-3.10 = -1.6$ for the lowest mean as depicted in figure 2.2 and on the highest mean $3.00-4.70 = -1.5$ this showed that there is a negative differences between Nigerian performance of control as a tool to ensure efficiency of healthcare and safety delivery compared to Malaysia.

From test statistics Table 4.60 the χ^2 test for equity, accessibility and affordability was

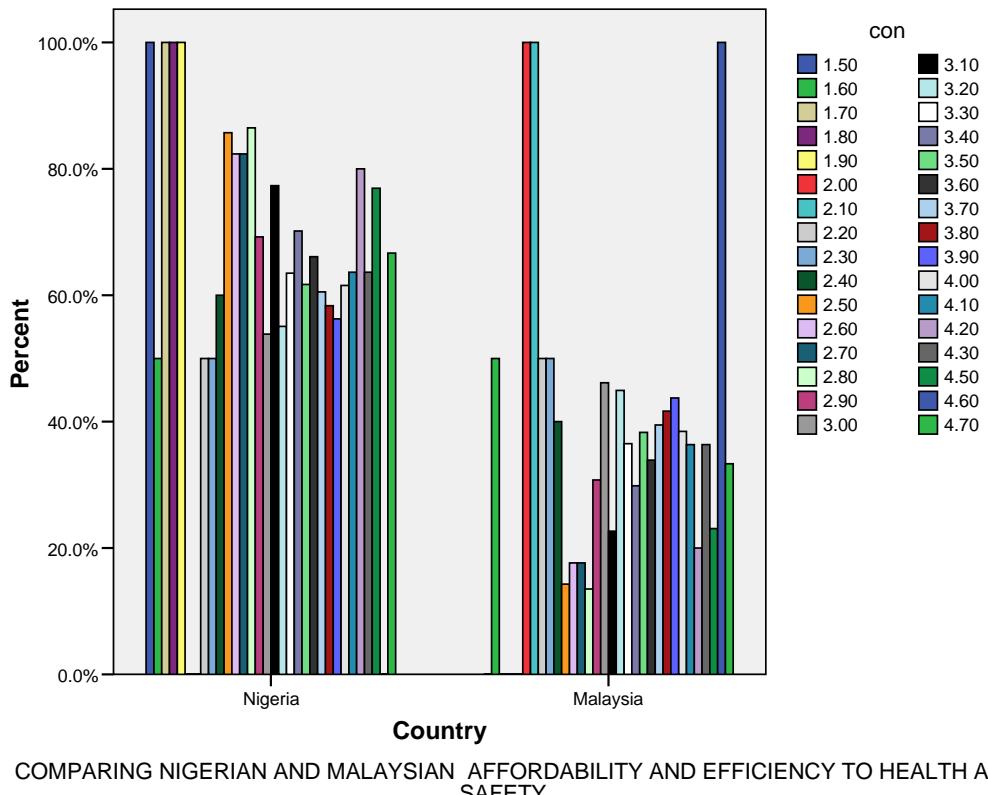


Figure 4.3: Comparing Nigerian and Malaysian Affordability and Efficiency to Health and Safety

conducted to determine whether there is no significant difference in terms of performance between Nigerian and Malaysian reform in healthcare and safety sector in respect of the three variables. The results of the chi-square analysis (goodness of fit) table 4.61 showed that, χ^2 (df=30, 33, and 36, N=750) = χ^2 1094.5, 797.1 and 868.7 respectively $p=0.001$, 0.001 and 0.001 respectively. With these results it was concluded that there is a significant difference between equity, accessibility and affordability in terms of reform performance and implementation in Nigeria and Malaysia since all the P -value are less than 0.05. These results therefore supported the rejection of null hypothesis and acceptance of alternate hypothesis. These results serve as confirmatory to the previous result obtained from regression and chi-square test of independent in this research. From table 4.62 of the cross tabulation there are 15 cells out of 31 cells under equity, 20 out of 36 under acces and 19 out 37 under

affordability that contributed for χ^2 goodness of fit result of this study, this showed that this result is very strong and therefore supported the conclusion made using the χ^2 results. The results of χ^2 goodness of fit for efficiency, demography and control are supported by the observed counts of 21 efficiency out of 45 cells demography has 21 out of 35 cells and control has 21 out of 33 cells. In this case the three variables contributed over 63 cells supporting the chi-square goodness of fit results as against out of 113 cells, this is a very good supported for the conclusion made with the χ^2 results in this case. The residual statistics showed negative results in Nigeria and a positive results in Malaysia showing the reform recorded more success in Malaysia compared to Nigeria.

Table 4.62: Cross tabulation Results 2

NUMBER	OBSERVED NUMBER Equity	EXPECTED NUMBER Equity	OBSERVED NUMBER Accessibility	EXPECTED NUMBER Accessibility	OBSERVED NUMBER Affordability	EXPECTED NUMBER Affordability
1	11	24.2	12	22.1	11	20.3
2	19	24.2	-	-	19	20.3
3	25	24.2	8	22.1	29	20.3
4	26	24.2	16	22.1	29	20.3
5	45	24.2	14	22.1	46	20.3
6	47	24.2	26	22.1	52	20.3
7	76	24.2	32	22.1	43	20.3
8	105	24.2	44	22.1	49	20.3
9	78	24.2	43	22.1	65	20.3
10	92	24.2	66	22.1	67	20.3
11	59	24.2	50	22.1	48	20.3
12	43	24.2	70	22.1	75	20.3
13	33	24.2	87	22.1	38	20.3
14	19	24.2	52	22.1	43	20.3
15	13	24.2	39	22.1	23	20.3
16	-	-	41	22.1	16	20.3
17	-	-	27	22.1	16	20.3
18	-	-	35	22.1	14	20.3
19	-	-	11	22.1	12	20.3
20	-	-	17	22.1	--	-
21	-	-	12	22.1		

Table 4.63: Test Statistics 2 Chi-Square Results (χ^2)

	Equ	acc	Affor
Chi-Square(a,b,c)	1094.459	797.045	868.725
Df	30	33	36
Asymp. Sig.	.000	.000	.000
Monte Carlo Sig.	.000(d)	.000(d)	.000(d)
Sig.	95% Confidence Interval	Lower Bound	.000
		Upper Bound	.004
			.004

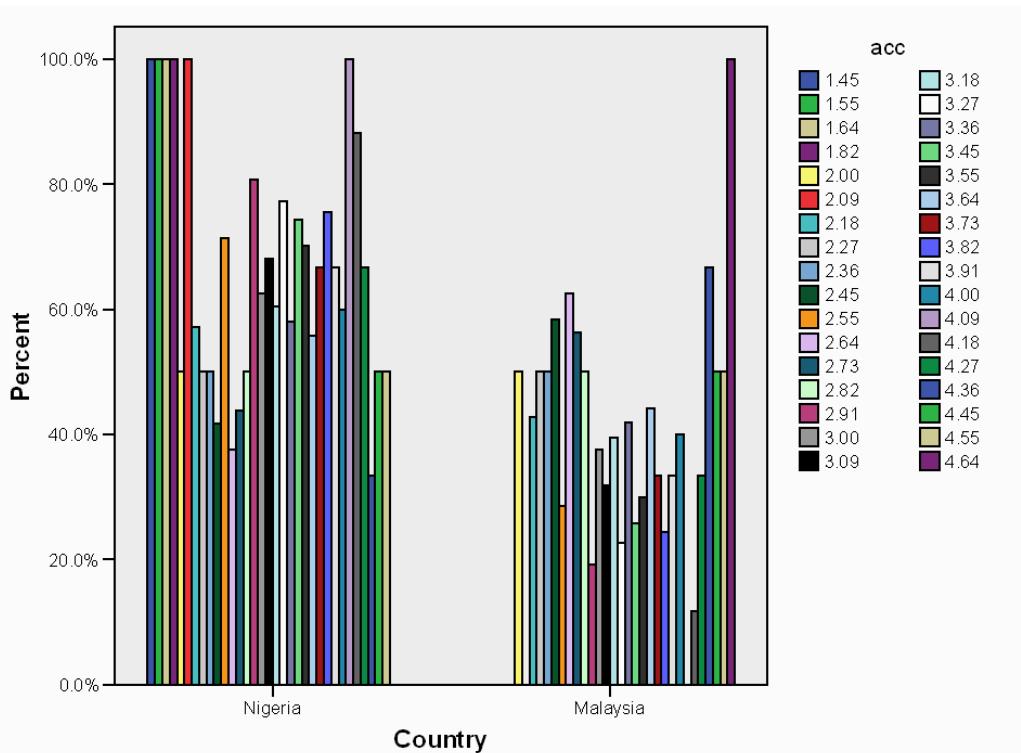
a 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.2.

b 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 22.1.

c 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 20.3.

d Based on 750 sampled tables with starting seed 303130861.

From figure 4.3 using the mean results from the tabulated results on the legend of the graph showed there is gap interms of reform performance in relation to improvement in equity and access of healthcare and safety services to the employees in both Nigeria and Malaysia. But the degree of improvement varies between the two countries with malaysian having an edge over Nigeria. From the mean value it showed that Nigeria had a mean improvement ranging from 1.25-3.13 and Malaysia had mean value ranging from 3.25-5.00 in respect to an improvement in the area of equity and access provided by the reform in healthcare and safety. This result is supportive of the previous result of this study using correlation, t-test, regression, loglinear and chi-square test of independence, which showed a positive results with Malaysia having an edge over Nigeria.



COMPARING NIGERIAN AND MALAYSIAN ACCESS AND EFFICIENCY TO HEALTH AND SAFETY

Figure 4.4: Comparing Nigerian and Malaysian Access and Efficiency to Health and Safety

From figure 5.4 the result of χ^2 represented in a form of a graph showed that there is differences in terms of reform performance in the area of access and efficiency of healthcare and safety delivery to employees in both Nigeria and Malaysia with Malaysia having more performance record compared to Nigeria. The differences as represented by the mean value is showed on the legend by the side of figure 4.4. The mean value for Nigeria ranges from 1.45-3.09 and that of Malaysia ranges from 3.18-4.64, this showed differences between the two countries, the mean values when subtracted from each other it showed that there is a gap of -1.73 in the first or initial mean value and -1.55 mean value at the peak between Nigeria and Malaysia with Malaysia having superiority over Nigeria in terms of reform performance in the provision of better access and efficiency of healthcare and safety services to the employee. The results from this mean value is supportive of all the other statistical tools used to compare the level of reform performance in this research/study. This results also complemented the previous conclusions made using all the other

statistical tools in this research. This therefore conform with the conclusions made that Malaysia has achieved more success in terms of reform compared with Nigeria. This also showed most of the p-values in Nigeria in comparison to Malaysia has lower p-value which supported null hypothesis and Malaysia having higher p-value which supported alternate hypothesis of this study as embeded in most of the hypothesis testing conclusions. The results from the residual statistics also showed negative value for Nigeria and positive value for Malaysia symbolizing a significant difference between the two systems.

4.11 Conclusion on Findings

In this chapter all the statistical analysis performed using the data of this research were discussed. Most of the results obtained in this study did are contained herein.

Table 4.64 is the summary table for the findings of this study.

Table 4.64: *Summary of Hypotheses Testing*

	Hypotheses	Significance Level	Conclusion
H1:	There is no significant relationship between the national healthcare and safety schemes in Nigerian and Malaysia	Not Substantiated	Rejected
H2a	There is no Difference between Healthcare and safety Delivery under Reform and Gender in Nigeria and Malaysia	Substantiated	Accepted
H2b	There is no difference between healthcare delivery and safety under reform and Location (Rural and Urban) in Nigeria and Malaysia	Substantiated	Accepted
H2c	There is no difference between healthcare delivery and safety under reform Ethnic Group in Nigeria and Malaysia	Substantiated	Accepted
H2d	There is no difference between healthcare delivery and Safety under reform and educational attainment of employees in Nigeria and Malaysia	Substantiated	Accepted
H2e	There is no difference between healthcare delivery and safety under reform and employees sector type (occupation) in Nigeria and Malaysia	Not Substantiated	Rejected
H2f	There is no difference between healthcare and safety delivery under reform and type of clinic attended by employees in Nigeria and Malaysia	Substantiated	Accepted
H3a	There is no significant difference between better treatment	Not	Rejected

	(efficiency) under reform as from 2006 in private clinic more than in public clinics in Nigeria and Malaysia as well as before and after reform.	Substantiated	
H3b	There is no significant difference between Reform efficiency as from 2006 and equity, safety and healthcare services delivery to the employees in Nigerian and Malaysian working places as well as before and after reform.	Not Substantiated	Rejected
H3c	There is no significant difference between reform and improvement in competition (efficiency) in the healthcare and safety services to the employees in Nigerian and Malaysian working Places as well as before and after reform	Not Substantiated	Rejected
H3d	There is no significant difference between better treatments (efficiency) of employees in private clinics more than in public clinics under reform as well as before and after reform.	Not Substantiated	Rejected
H3e	There is no significant difference between reform and provision of genuine drugs in private clinics more than in Public clinics (efficiency) in Nigerian and Malaysian working places as well as before and after reform.	Not Substantiated	Rejected
H3f	There is no significant difference between reform and less waiting period (efficiency) in Private clinics compared to public clinics in Nigerian and Malaysian working places as well as before and after reform.	Not Substantiated	Rejected
H3g	There is no significant difference between reform and promptness in attending to emergencies/accidents cases in private clinics compared to public clinics in Nigerian and Malaysian working places as well as before and after reform.	Not Substantiated	Rejected
H3h	There is no significant difference between ensuring employees value for money in the private clinics more than in public clinics in Nigerian and Malaysian clinics as well as before and after reform.	Not Substantiated	Rejected
H4	There is no significant difference between reform in healthcare and safety sector and ensuring equity in efficient healthcare and safety services delivery in Nigerian and Malaysian working place as well as before and after reform.	Not Substantiated	Rejected
H5a	There is no significant difference between reform and employees number of accessibility (number of clinical attendance) to efficient healthcare delivery in Nigerian and Malaysian working places as well as access before and after the reform.	Not Substantiated	Rejected
H5b	There is no significant difference between reform and better access to efficient healthcare and safety services than without the reform in Nigeria and Malaysian health sector as well as before and after reform.	Not Substantiated	Rejected

H6	There is no significant difference between the public (government) healthcare and safety outfits and healthcare outfits for safety/health of employees as well as whether the scheme depends on the outfit.	Not Substantiated	Rejected
H7	There is no significant difference between gender and efficient healthcare delivery for safety as well as whether healthcare delivery of employees depends on gender type of the employees in Nigerian and Malaysian working place.	Substantiated	Accepted
H8	There is no significant difference between government control mechanism and reduction in employee's affordability, accessibility, equity, equity and demographic variation in healthcare and safety services delivery under reform as well as whether delivery depends on government control mechanism.	Not Substantiated	Rejected
H9	There is no significant difference between public-private-partnership and spread of innovation in both public and private healthcare and safety delivery to employee in Nigeria and Malaysia as well as whether innovation depends on public-private-partnership in the two countries.	Substantiated	Accepted
H10	There is no significant difference between healthcare affordability and efficiency to both government and private employee's in Nigeria and Malaysia as well as whether healthcare and safety affordability and efficiency depends on both government and private employee in Nigeria and Malaysia.	Substantiated	Accepted
H11	There is no significant difference between Nigerian and Malaysian reform performance in terms of equity, access, affordability, demographic differentiation, control and efficiency.	Not Substantiated	Rejected

CHAPTER FIVE

DISCUSSIONS

5.1 Introduction

The major findings of this study were anchored on statistical methods. Mainstream statistical methods are like mechanical process especially designed to facilitate the condensation and analysis of the large body of quantitative data. The aim of statistical methods, in this study, is to facilitate comparison and study relationships between Nigeria and Malaysia in terms of healthcare reforms. Also the study has isolated key phenomena in the reforms so as to adequately interpret the complicated data set. Many a time, comparisons have to be made between the changes and results brought about by changes in time, frequency of occurrence and many other factors. Statistical methods are used for such comparisons among past, present and future estimates. The best result from a particular cause on particular phenomena can be ascertained through statistical methods. Hence, objective and factual discussions of statistical findings are paramount to achieving major research objectives.

5.2 Discussion of Findings

H_0 : There is no Difference between Healthcare and Safety Delivery under Reform in Nigeria and Malaysia.

From Table 4.9 of the descriptive statistics representing the mean of all the study variables in Nigeria and Malaysia with a mean result of 3.45 representing efficiency variable, 3.46 demography, 3.63 equity, 3.42 accessibility, 3.51 affordability, and control mechanisms had 3.30 in Nigeria, while Malaysia had an mean of 3.46 efficiency variable, 3.50 demography, 3.62 equity, 3.39 accessibility, 3.54

affordability and control mechanisms had 3.35 respectively in all the variables. To test for the statistical significance of this difference on the reform performance rate between these two countries (Nigeria and Malaysia) an independent sample t-test was used. The results showed no significant differences between Malaysia and Nigeria in terms of $t(748)=0.324$, $P>0.05$; for efficiency, $t(748)=0.804$, $P>0.05$ for demography, $t(748)=0.261$, $P>0.05$; equity; $t(748)=0.841$, $P>0.05$, access $t(748)=0.609$, $P>0.05$, affordability; $t(748)=1.46$, $P>0.05$; control mechanism in terms of efficiency the mean result showed Malaysia is not better than Nigeria. In addition to the explanation cited by the convergence hypotheses on the insignificant difference between the two systems by Mechanic and Rocheforte (1996), another study showed that, National health systems throughout the world face a number of pressures in common related to demography, epidemiology, developments in science and technology, medical demand, and rising public expectations. These pressures are producing convergence and/or changes in the objectives and activities of these systems in several key areas, including cost-containment, health promotion, expansion of access, primary health care, patient choice, and the linkage between health and social services. At the same time, it is also necessary to recognize the role of political and governmental processes, as well as clinical and professional variables, in shaping different societal responses to health care challenges (Cortez, 2009). These changes might have explained the insignificant result obtained from this study.

In the first place, the underlying differences between the healthcare reforms in Nigeria and Malaysia through independent sample t-test analysis were investigated. The independent sample t-test result has been helpful in enlarging the researcher's experiences and knowledge of the reforms in both countries. The results obtained

from the analysis as shown by the mean result of the independent sample *t*-test of 3.45 efficiency, 3.46 demography, 3.63 equity, 3.42 accessibility, 3.51, affordability and control had 3.30, and the conclusion would be that both countries have some degree of differences in terms of functionality and applicability of the new healthcare scheme. Since the mean result was based on multitude questionnaire results, we talk of block differences between the two systems instead of item-by-item comparison. This comparison was based on the systems being operational in both countries; which have some underlying differences.

The independent sample *t-test* has provided this research with the opportunity to compare significant difference between the performances of the system in both countries. By extension a comparison in terms of policy formulation, efficiency, demography, equity, access, affordability and control mechanisms, between the healthcare reforms in Nigeria and Malaysia was made using independent sample *t*-test.

The first hypothesis was trying to assess whether there is no difference between Nigerian and Malaysian national healthcare and safety scheme. The observed levels of significance were greater than 0.05 which has indicated a high probability for accepting the null hypothesis of no significant difference. Therefore, we have evidence to conclude that, there is no significant difference in the performance and functionality of the healthcare reforms in Nigeria and Malaysia. This finding supported the proposal of convergence model that the world healthcare and safety systems are tending to converge on one similar systems or structures. The major causative factor could be globalization and communication or technology (Mechanic

& Rocheforte, 1996). Another reason is that, most of the research questions and hypotheses evolved in an attempt to answer the following questions raised by convergence theorists. Questions such as, how do we explain the recent international trends in healthcare and safety provision. What can we do with the widespread physician emigration, or the growing phalanx or intertwining relationship of international hospital. Why have global sales of pharmaceutical and medical devices grown by hundreds of billions of dollars in less than a decade. How do we explain reason why hundreds of thousands of patients are now seeking for medical treatments in foreign environment other than their own. And what is the rationale behind health care industries' increasingly outsourcing clinical trials, insurance claims processing, diagnostic test interpretations, and other tasks outside their country of residence. These circumstances were explained using an extended theory called Market convergence theory, this theory helps explain convergence postulations as well as the environment in which these trends have emerged (Cortez, 2009; Bennett, 1991; Chernchovsky, 1995; Saltman, 1997; Blau, 2006). These therefore expand the reason for the insignificant results in this study. This so because development of healthcare and safety services in one country may help alleviate healthcare and safety problem of another country.

H_02a : There is no Difference between gender in terms of Healthcare and Safety Delivery under Reform and in Nigeria and Malaysia.

The second hypothesis Table 4.10 was first tested using the independent sample *t-test*, to test whether there is no significant difference between gender in Nigeria and Malaysian in terms of reform efficiency, demographic variation, equity, access, affordability and control mechanisms. In this respect to obtain the results an

evaluation of group phenomena between Nigeria and Malaysia through collections of large volume of data was conducted. Hence the findings showed that, it is possible to have significant differences when making item-to-item comparisons of the system in each country. By and large, the independent sample *t-test* has revealed that there is significant difference between gender and variation in demography with p-value=.003, 0.00 equity, 0.01 access, 0.18 affordability, while efficiency and control mechanism had higher p-value signifying no differences between gender in terms of delivery of healthcare and safety. The result comparison between urban and rural location in terms of healthcare and safety reform in both Nigeria and Malaysia and it affects on services to urban compared to the rural also revealed a P-value and mean= efficiency; $t(748)=2.215$, $p<0.05$, demography, $t(748)=1.230, p>0.05$, equity, $t(748)=1.701$, $P>0.05$, accessibility, $t(748)=1.024$, $P>0.05$, affordability, $t(748)=0.644$, $P>0.05$, control mechanisms $t=(748)=0.851$, $P>0.05$. This result gave a specific explanation of ($M=3.31$ urban and rural 3.26) on the differences between performance of control and better healthcare for all location and gender in both Nigeria and Malaysia. Aggarwal, Kumar, Gupta and Tiwari (1997) studied utilization rate of antenatal services (access) among semi-urban residents of East Delhi in India and found that 74.3 percent of the 276 women registered for the antenatal received the required medication. The results further showed that access to most important vaccines and tablets for pregnant women were usually low. Bhattacharya and Tandan (1991) recorded a similar results in a study conducted in rural Varanasi in Uttar Pradesh. The study revealed that literacy rate played a significant role in the level of healthcare access and utilization. The result in part is in contrast with other studies; it showed that women close to the clinic did not record higher clinical attendance than those from far places. This result contradicted most health report insisting on

closeness of clinic and/or distance are basic factors that encourage or discourage attendance. This resulted into an insinuation that other factors must have contributed to this disgusting result. In another study, the result revealed that poor residents and low educated members of rural and urban societies attends tertiary healthcare mostly located in the urban centers due to either economic reasons or were force through referrals from the rural clinics. This showed that access to affordable healthcare may not necessarily be the major factor compelling people to attend tertiary clinics (Chabba & Saraf, 1997).

The group statistics result showed that a mean of 3.78 efficiency for females is the highest mean average among all the variables and lowest mean score for females is control mechanisms with 3.29. The male mean score recorded highest score on equity with lowest mean associated with control mechanisms as well. This is a prelude to testing of the significance of the statistics to determine the difference between gender in Nigeria and Malaysia. Efficiency, $t(748)=2.98, P<0.05$, demography, $t(748)=3.758, P<0.05$, equity, $t(748)=3.422, P<0.05$, access, $t(748)=2.956, P<0.05$, affordability, $t(748)=2.378, P<0.05$, control mechanisms $t(748)=0.916, P>0.05$. These results presented a similar result with the previous research conducted in Japan by Nakao, Honda, Moji, Abe, and Ayoyagi (2011) to establish the relationship between life style and mental health disorder showed a result with a Significant differences between women and men in the assign factors such as eating meals regularly, smoking and alcohol drinking. The study presented a proportion of eating meals regularly by women to be (90.6%) which was higher than that recorded by men at (85.2%). This showed that the current smoking and alcohol drinking in almost everyday life of the Japanese were more prevalent in women than in men. The study

also revealed that mental health condition was poor among women and in the age group of 20 to 39 years. It has been reported that the mental health of men is the worst at around 35 years due to heavy occupational stress and not drunkardness or smoking. A research conducted to determine the effectiveness of the Veterans Health Administration (VHA) Diabetes Epidemiologic Cohort, using data from database. This dataset contained information on all the recorded Veteran Health Administration on diabetic patients for a very long time precisely from 1998-2006. The study had an identified record of the patient as the final study population. This population includes 22,475 women and 89,431 men suffering from diabetes and hyperlipidemia during the 2006 fiscal year. The final result of this study found that women were more likely to have higher mean value of Lipi-Lowering (L D L) than men within all the age group. The study also attested that both men and women included in the study had a similar number of LDL tests in the study year. The study revealed that LDL values for younger women below 45 years of age recorded severe condition than younger males, and were less likely to receive a prescription for lipid-lowering medication compared to women 65 years or older. Initiation of lipid-lowering therapy was also lower for women compared to men, 37% as against 42% respectively, (Vimalananda, Miller, Palnati, Christiansen, & Finker 2011). The result of this study recorded 3.79 mean efficiency for female as well as 3.29 mean for performance of governmental control mechanism for women in both Nigeria and Malaysia under healthcare and safety reform, this showed reform recorded a moderate success in the two countries.

H₀2b: There is no difference between rural and urban location in terms of healthcare delivery and safety under reform in Nigeria and Malaysia.

To determine whether there are differences between location in terms of reform of healthcare and safety to employees in Nigeria and Malaysia, an independent sample t-test was conducted. The result of the test showed a group statistics with mean of 3.53 affordability as the highest mean in urban location and 3.31 for control mechanisms as the lowest for the urban location. The rural location recorded the highest mean value of 3.49 represented by equity and lowest recorded mean of 3.26 for control mechanisms. A close look at the t-test results further revealed, efficiency; $t (748) = 2.215$, $p < 0.05$, demography, $t (748) = 1.230$, $p > 0.05$, equity, $t (748) = 1.701$, $P > 0.05$, accessibility, $t (748) = 1.024$, $P > 0.05$, affordability, $t (748) = 0.644$, $P > 0.05$, control mechanisms $t (748) = 0.851$, $P > 0.05$. This result gave a specific explanation of ($M=3.31$ urban and rural 3.26) on the differences between performance of control and better healthcare for all location in both Nigeria and Malaysia. The results also signifies the lopsided nature of the scheme more to the urban dwellers than the rural population, in essence the system seem to favour urban minority to the detriment of the rural majority in the two countries taking the mean result as a relying base. This result agreed with the research conducted by Tan Phoi Tsze in Sarawak, which show a wide gap between the urban employed and rural employed Sarawakian citizens on medical expenses, urban having RM 46 as against rural RM12 for medical expenses (Tan Phoi, 2010). The research by Tan phoi (2010), elaborated that the reason for the insignificant result of most of variables was because health in Malaysia was significantly urban concentrated. The concentration of variety of health services in urban city centers created competitiveness which guaranteed alternative choices for the patient unlike restrictive available clinic mostly owned by the government in the rural areas. The case is not different in Nigeria; most of the clinics are urban concentrated as left over by the colonial rulers. The clinics were mainly to serve the

colonial administrators predominantly in urban centers. This gave more priority to the urban dwellers. Despite the effort by the government to spread such services to the rural areas; there is still a wide gap (Labiran et al., 2008; David, 2009 & Falegan, 2008).

H_02c : There is no difference between ethnic groups in terms of healthcare Delivery and Safety under Reform in Nigeria and Malaysia.

The results of the ANOVA Table 4.12 showed that, there was no difference between the groups in terms of efficiency of reform with ($F(7,742)=0.49$, $p>0.05$, demography, ($F(7,742)=0.509$, $p>0.05$, equity, ($F(7,742)=1.595$, $p>0.05$, access ($F(7,742)=1.660$, $P>0.05$, affordability, ($F(7,742)=3.78$, $P>0.05$), control mechanism $F(7,742)=1.65$, $P>0.05$. This result showed across ethnic group there was no significant difference in terms of equity, demographic variation and access to healthcare and affordability. While the result of control mechanism showed that the reform succeeded in improving services generally.

A study conducted to determine treatment variation by race among people suffering from stroke. The result revealed that, there is a significant disparity in hospitalizations for patient suffering from stroke between blacks and whites in the USA District of Columbia. Another study, conducted by a consortium of University Hospitals in the same District found that only 3 percent of black patients were treated with the clot busting treatment tPA, compared to 10 percent of white patients who were treated with tPA (Kaiser Foundation, 2007). The conclusion of this was that there was element of racial bias promoted by the general practitioners in the primary care in the

district. The researchers in this study track 45 patients who were treated for life saving treatment in the district. From this selected group seventy percent of the interviewd patients were blacks in comparison to seventy six percent of white. Out of the followed patients, seventy percent of the makeup was black as compared to seventy-six (Amie, 2011; Family Foundation, 2007; Vimalananda, Miller, Palnati, Christiansen, & Finker, 2011).

H_0 2d: There is no Difference between educational attainments of employees in terms of Healthcare delivery and safety under reform in Nigeria and Malaysia.

The analysis of ANOVA table 4.13 was conducted to determine the differences between educational attainments and improve delivery of healthcare and safety under reform to the employees in Nigeria and Malaysia. The result of analysis showed that, there was no difference between the groups in terms of efficiency of reform with educational attainment of employees with $(F(4,745)=0.796, p>0.05)$, demography, $(F(4,745)=.502, p>0.05)$, equity, $(F(4,745)=.923, p>0.05)$, accessibility, $(F(4,745)=2.683, P>0.05)$, affordability, $(F(4,745)=1.409, P>0.05)$, control mechanism, $(F(4,745)=1.425, p>0.05)$. From the result of this research it is evidence that the result for control mechanism showed a moderate difference between the performances of governmental control mechanism before and after reform which showed there was an improvement after reform in both Nigeria and Malaysia. It has also showed that there was difference between educational level and accessibility and educational level invariable translated by the status occupied by the individual and the earning as define by the office occupied. The reform systems encourage patronage of private clinic with subsidy provided by the government. The whole intention was to discourage and decongest the public hospital in order to provide more opportunity for

the poor and the down trodden members of the citizens. This singular design though beneficial but it encourage categorization based on level of education and/or economic level or status (David, 2009; Ismail Merican, 2009; Abdurrahim, 2009). The significant result was fully explained by the socio economic status or commodity hypotheses model, (SES) Catherine and John (2000), that the higher the socio/economic status one occupies the more the chances of having access to healthcare and safety services. This so because such person has the affordable resources to pay for the healthcare and safety services provided by all the providers. The conclusion made on this by Yu-Luen and Mark (2005) was that healthcare and safety programmes intending to achieve good result, should first targets a system that prioritize illiteracy and socioeconomic hardship reduction. It was further concluded that the negative relationship between public health insurance and health of the citizen is not causal but rather due to prior health and socioeconomic status of the person (Amie, 2004).

H_0e : There is no Difference between occupation types of employees in terms of Healthcare Delivery and Safety under Reform in Nigeria and Malaysia

The ANOVA test Table 4.14 conducted was to determine whether healthcare delivery is subject to the kind of sector the employee work in both Nigeria and Malaysia. From the results of the ANOVA, efficiency result revealed that, there was no difference between the type of sector and employees having efficient healthcare service in terms of efficiency of reform with type of sector (occupation) of employees. So also is the result of equity, and accessibility. While the results of demography $F(4,745)=1.56$, $p>0.05$, demography, $F(4,745)=3.99, p<0.05$, equity, $F(4,745)=3.07$, $p<0.05$, accessibility, $F(4,745)=.820, P>0.05$, affordability $F(4,745)=4.40$, $P<0.05$, control

mechanism, $F(4,745)=2.196$, $p>0.05$. In the previous studies conducted by Kawakami, Takeshima, Ono, Hidenori, Nakane, Nakamura, et al. (2008) & Amie, (2011) to determine the level of mental health disorders as a recently seen and recognized health problem in the Japanese population revealed work stress was one of the major cause. In most industrialized societies, the existence of depression or anxiety associated with health disorders is mostly associated with unemployment and suicide. Kawakami *et al.* (2008) reported that the continuous existence of common mental disorders in Japan stood at 8.8% out of which 17% of the cases were severe and 47% were of moderate status. The research also showed that only 19% of those severe and moderate cases received medical treatment (Kawakami, Takeshima, Ono, Hidenori, Nakane, Nakamura, et al., 2008; & Amie, 2011).

Another study by the Kaiser Family Foundation (2007) which showed that, health insurance premium charges keep increasing at a consistent level, in fact the estimate of health insurance price increase was said to be more than inflationary increase. The insurance premium was also more than the growth in workers' take home. This continuous increase or growth in the price of health insurance premiums is one good way of measuring changes in the cost of private health insurance in USA. A comparative analysis of the annual increase in employee premiums to both employee earnings increase and an overall inflation growth showed that, the premium growth has outpaced the growth in workers' earnings almost every year. The only exception was in the mid-1990s. The premium increases have been between 8 and 14 percent per year since 2000, inflation and changes in workers' earnings are typically in the 3 to 4 percent range. This usually means that workers have to spend more of their income each year on healthcare to maintain coverage. This singular factor brewed the

problem of bankruptcy in the US today. In addition to these the situation affects the employee through direct or indirect increased worker contributions for premiums by the employee. It also affects the employee through a reduced benefit by for going wage increases for the employer to offset increases in healthcare and safety insurance premiums (Kaiser Family Foundation, 2007).

H_0 2f: There is no difference between types of clinic attended by employee in terms of Health care and safety delivery under reform in Nigeria and Malaysia

The analysis of ANOVA table 4.15 conducted to determine the differences between clinic type attended by the employees in Nigeria and Malaysia revealed a results that shows only one p-value out of the six variables of reform which supported differences between type of clinic and reform better performance all the rest showed no significant difference in access, affordability, equity, reduction in demographic variation and performance of government control ability under reform. Only efficiency out of all showed an effect of healthcare delivery and safety under reform with type of clinic attended by the employees with, $F(2,747)=3.622$, $p <0.05$, but the rest have score thus, demography, $F(2,747)= 1.971$, $p>0.05$, equity, $F(2,747)=1.152$, $p>0.05$, accessibility, $F(2,747)=1.828$, $P=0.05$, affordability, $F(2,747)=.936$, $P>0.05$, control mechanisms , $F(2,747)=1.317$, $p>0.05$. This study showed that reform did not actually change much in terms access, affordability, equity and variation due to demographic factors in both Nigeria and Malaysia. Previous study in USA showed that healthcare spending was highly differentiated based on factors such as age and sex. The research had showed that Adults aged 65 and older have the highest healthcare, with mean average spending of \$8,647 per person in just 2004. A more devastating factor is that, the mean average spending skyrocket with advancement in

age of the beneficiary. The same study showed that children and young adults within the age bracket of 24 years and those younger spent roughly the same amount per person in 2004. Worst hit by the ever increasing healthcare price are women with an average mean spending than men with approximately \$3,715 vs. \$2,836, respectively (Kaiser Family Foundation 2007). These results presented a similar result with the previous research conducted by (Abdallahi & Ng, 2009). Their finding revealed that, Private health insurance play a very important role in the provision and funding of healthcare in Malaysia. However, there has been fear over the role of the private sector in healthcare financing as a product associated with state welfare. This so because the private sectors have the tendency to encouraging illegitimate and unethical practices in the discharge of their services for profits or just to maintain business. The study focuses on the operational system of the private health insurance providers to know whether there were differences in healthcare billing between the insured and non-insured patients in Malaysia. The baseline of the findings was specifically on hospital bills of two groups of private hospitals. The findings of the study showed that there is no difference in charges between the insured and the non-insured patients (Abdallahi & Ng, 2009). This study also agreed with finding of this study.

The Indonesian experience of reform showed a mix results in one way supporting an inadequate public provision and the other way facing serious problem of sustaining business due to lack of incentive. It was on record that, the Indonesian private health spending accounted for up to 76% to 83% of the accumulated health care service provision in 1990. The research conducted by James (2002) showed that examining the healthcare expenses in Indonesia presents a situation where the poorest citizen

classes spent greater part of their earnings on private healthcare. Despite this record of high healthcare expenses by the poor there were large disparities in access to healthcare cutting across all income earning categories. In furtherance to the Indonesian analysis of healthcare utilization across all societal strata showed that one of the most important obstacles to access to healthcare service in Indonesia is economic status of the citizen. The Unstructured subsidies provided by the government instead of improving healthcare and safety provision have resulted in inadequate funding for the poor as well as serve as a discouragement to the growth of private insurance or managed care. The study also showed that private insurance and managed care membership accounted for less than 2% of the population of the country. The contribution of private health care services to improving national health status has not been commensurate with expenditures in Indonesia. There are indications of supplier-induced demand, moral hazard, market conduct problems, and inefficiency and this is basically what reform is intending to address (James, 2002). While the present study showed that there was no variation in equity, access, affordability, demographic variation and control in both private and public clinics in Nigeria and Malaysia, except in efficiency where there was a difference in private and public clinics in the two countries. This study did not agree with the Indonesian study. In furtherance to the comparative analysis Difference-in-difference models for more detailed analysis between Nigeria and Malaysia was applied to eleven specific research questions/hypotheses of the study.

Hypotheses 3a: One: whether employees are treated well in private clinics more than in public clinics.

The difference-in-difference model, as defined by the first principle, was achieved through least squares regression model with two binary regressors (Bill, 2008). The

regression model has therefore, made the interpretation of the difference-in-difference easier; especially towards achieving the research objectives. There are always two tables in the output results of the difference-in-difference models (John, 1999); the table of the coefficients and regression table 4.19-21. Here the study is not really interested in the regression equation as a function; rather with the objective interpretation of the coefficients. The difference-in-difference model is a linear model with a sample size of 750 as embarked upon by the study; this will assist in having a reliable interpretation of these coefficients to reflect research findings. Before running the regression analysis, some preliminary editing was put in place to facilitate the analysis (Cohen, 1988). The independent variables which were originally on five-Likert scale were binned to binary variables using the mean as the threshold for dichotomy (John, 1999). Values below the mean were recorded as zero otherwise recoded as 1. The dependent variable is the performance index obtained from the mean responses and expressed as percentage. The research carefully and objectively modeled the difference-in-difference using all the principles of linear modeling as well as model validity diagnosis.

The third hypothesis was whether employees are treated well in private clinics more than in public clinics, from the regression table 4.19 the findings of the research showed that the p-value of 0.001 and 0.001 simply implies that all the model parameters are statistically significant. Hence, the difference-in-difference model itself is statistically significant. The coefficients are valid and their interpretations are reliable. Moreover, from the table of coefficients; $\beta_1 = 26.452$ the finding showed that the relationship is positive which indicates that the Malaysian employees are better treated in the private clinics than in the public clinics with the advent of the health

sector reform. This finding from the coefficient has given a specific comparison between Nigeria and Malaysia in terms of private clinics' performance. Again, from the table of coefficients, $\beta_2 = 0.462$ showed a positive relation which indicates that, irrespective of the country, the findings from the results revealed that health sector reform has brought about a positive difference in terms of private clinics' performance between Nigeria and Malaysia as well as before and after the reform. The finding of this research is supported by the study conducted by Antiel, Curlin, James, and Tilburt (2009) stated that physicians endorsed their obligation to care for people with limited care.

Previous research was conducted to determine whether or not reform has any positive impact on the issue of access, there was no discrimination as to whether the healthcare and safety services is provided by the public with partial commercialization or private-for-profit. To do that, number of physician visits was measured with a self administered questionnaire, with questions such as "During the past twelve month about how many times did you see or talk to medical doctor about your health?. This study was conducted in 1998 and a mean of 3.7 was obtained in signifying a positive impact of reform on healthcare and safety services delivery (Catherine & John, 2000).

Hypothesis 3b: Whether the efficiency provided in the recent development as from 2006 in the healthcare sector will ensure equity, safety and healthcare services to employees in the working place.

The difference-in-difference model using all the principles of log linear modeling (John, 1999; Bill, 2008; Imbens & Wooldridge, 2007), as well as model validity diagnosis obtained the following results. The results of regression table 4.21 showed a

P-value of 0.01 and 0.01, which showed statistically significant relationship. More so, from the table 21-22, the finding from the coefficient result showed $\beta_1=26.487$ positive relationship, which indicates that substantially the efficiency, equity, safety and healthcare services to employees in the working place in Malaysia is more than in Nigeria. This finding has given a specific comparison between Nigeria and Malaysia in terms of the effects of reform on efficiency, equity, safety and healthcare service delivery to the employees. This has gone to show that the performance of the reform in Malaysia, considering the following dimensions (efficiency, equity and safety) is more than in Nigeria. Again from the table 4.21 of coefficient $\beta_2=0.186$ impliedly revealed that, the efficiency provided by the recent development in the healthcare and safety delivery has ensured efficiency, equity, safety and healthcare services to the employees, in the working place more than before the scheme or reform. While the finding from the standardized coefficient $\beta_1=0.625$, showed that the Malaysian scheme is 62.5 percent more efficient than that of Nigeria as from 2006, this ensures, efficiency, equity, safety and healthcare services to employees in the working place. The $\beta_2=0.010$ implied that the efficiency is 0.1 percent better than before the new scheme or reform.

A similar study which uses correlation in some developing countries such as, Senegal, Thailand, India, and Rwanda shows a less than 0.1 percent significant point effects of reform on efficiency, equity and service delivery (Johannes, 2004). The problem of equity is one of the greatest challenges in most reforms that has relationship with healthcare and safety in most of the developed world, developing nations inclusive. In America for instance Blacks and Hispanic are bitter specifically on issue of equal treatment of equal or unequal treatment of unequal (Nicholas, 2006). Researchers

(Bernerdt, Pedro, & Bultman, 2004; David, Matthian, & Claude, 2004), conducted a similar study that treated the issue of efficiency, effectiveness and equity, as a result of reform on healthcare and safety delivery and the study succeeded in obtaining similar results with this research.

Manfred, Andre & Wendy, (2004) highlighted on the issue of responsiveness which is otherwise defined as efficiency, patient satisfaction which is also defined as efficiency, outcomes referring to equity, which tends to agree with the results of this research. Study conducted in Europe prior to the coming of the tax-funded system of health Care in Denmark, Italy, Portugal, Greece, and Spain, in the year 1973, 1978, 1979, 1983, and 1986 respectively, showed an argument for or against, which revealed a rather conflicting results, with some study reporting positive effects of private insurance as done by this research and with little challenges awaiting the publically owned health and safety insurance outfits (Catherine & John, 2000; Richard, 2004). This position was seriously queried by (Sylverson, Charkin, & Atrash, 1991).

Hypothesis 3c: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme, whether the recent development in healthcare sector, will ensures equity and affordability to healthcare and safety services to all employees in their working place.

Based on the regression results table 4.23, the p-value of 0.01 and 0.01 simply implied that all the model results are statistically significant. Hence, from the finding on table 23 with coefficients value of; $\beta_1 = 26.566$ signifying a positive relationship between the two attributes. This finding indicated that the recent development (reform) in healthcare and safety sector ensures equity to health care services to all employees in

their working place. This finding from the coefficient result has given a specific comparison between Nigeria and Malaysia in terms of performance of the reform in the area of equity. Again, from the finding the coefficients, $\beta_2 = 0.049$ showed a positive relationship which indicates that, irrespective of the country, the health sector reform has brought about a positive change or differences in terms of private clinics' performance between Nigeria and Malaysia as well as before and after reform.

From the previous studies Simon, (2004) submitted that any prediction using pre-reform and post-reform data comparison or from one healthcare and safety insurance type to another using a simple comparison technique, may tends to find out that stringent law against providers has the potentiality of reducing coverage which will translates into service inequality. Commenting on the American healthcare reform Simon (2004) states that, to simply agree that if the reform had not been put in place coverage would have stabilize is to say the least that the reform is a failure. An analysis conducted on the reform by US states department of insurance shows that, 40 percent of the consumers saw their premium fall by certain amount. And on the way round prices increased for the younger consumers, this act provided more access for older consumers and inequality for younger consumers. This study show a clear test for the hypothesis that community rating reduces coverage by driving lower risks (young) consumers from having access through premium charges inequality (DiNardo & Buchmueller, 2004). While to the contrary this study showed an improvement in the area of delivery in both Nigeria and Malaysia, with Malaysia having better services. The results of this research also showed an improvement of healthcare services in both Nigeria and Malaysia with better results compared with the period before the reform.

Hypothesis4: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme, whether the recent development in healthcare sector will successfully increases the number of time employees will attends hospital/clinics in the working place.

From the interpreted results of the regression table 4.25, the p-value of 0.001 and 0.001 simply implies that all the model parameters are statistically significant. Hence, the finding from table 25, of coefficient $\beta_1 = 26.831$ showed a positive relationship between the attributes, which supported the alternate hypothesis, indicating that the recent development (reform) in the healthcare sector increases the number of time employee attends hospital/clinics in the working place. The finding from this coefficient has given a specific comparison between Nigeria and Malaysia in terms of the number of time employees attends hospitals/clinics in their working place. Again, from finding showed that the relationship is positive with $\beta'_2 = 0.080$ which indicates that, irrespective of the country, the health sector reform has brought about a positive change or difference in terms of the number of times the employees attends hospitals/clinics' with 8.0 percent effects, in both Nigeria and Malaysia.

A research conducted to test the relationship between hospital bill and insurance coverage in Malaysia revealed a significant value of 0.327, where $p>0.05$. The results from this research revealed a no relationship between bill and insurance coverage. The study applied Pearson correlation tests to obtain the no significant results. In another study using regression to asses 41 hospitals admission in Malaysia revealed that hospital charges based on admission ranged from 42 percent doctors charges, 36 percent facility charges, medication has 14 percent, while the least fee being room charges with 8 percent (Abdallahi & Daniel, 2009). And finally, in another research

which try to assess the level of bias in selection and access to healthcare and safety services. It was reported that 19 percent of the patient with coverage reported that, they and their families had three or fewer visits, 32 percent reported four to six visits and 49 percent reported seven or more visits. This show high level of access to healthcare and safety services (Pamela et al., 2004). These results showed that hospital charges may reduced the number of time beneficiaries will attend clinics. In contrast to the previous studies this study recorded an improvement in the services with beneficiaries having 8% improvement in clinic attendance in Malaysia.

Hypothesis 5a: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether the recent development will ensures better access to health care services to employees than without it.

Considering the regression results from table 4.28, the p-value of 0.001and 0.001 simply implies that the results are statistically significant. Moreover, from the finding of this research the coefficients showed that, $\beta_1 = 26.558$ which indicated a positive relationship that the recent development (reform) ensures better access to healthcare and safety services to employees than without it. This coefficient has given us a specific comparison between Nigeria and Malaysia in terms of the reform performance in relation to access to healthcare and safety services. Further finding from Table 4.28and 4.29, of coefficients, $\beta_2 = 0.050$ also showed a positive relation which indicated that, irrespective of the country, the health sector reform has brought about 5 percent positive differences in terms of private clinics' performance after the coming up of the reform in healthcare and safety sector in Nigeria and Malaysia.

Relating this research to previous studies one find an interesting relationship, Susan & Fengyu, (2004) conducted a research which revealed that, substantial percentage of rural women have access to maternity services in rural China. The research showed that roughly 60 percent of the women use prenatal care and approximately 40 percent of them deliver with professionally trained assistance or midwife. Marrie-pascale, Pierre-Gerlie, Howard, and Elizebeth, (2007), also conducted similar research and reported similar results in Quebec. Jocelyn, (2007), in a submission, observed that, the goal of health insurance and safety reform is to improve or assure accessibility, but most reforms left behind health insurance that is neither safe nor equitable to the employee. It is neither coherent, comprehensive, cost effective nor is there choice for consumers.

Hypothesis 5b: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether the recent development in the healthcare sector will improve competition in the healthcare services to the employees in the working place.

Although reform may not necessarily be the final solution to poor state of healthcare and safety provision, but it in a way contribute towards ameliorating some of the seeming problems. The results of the regression analysis from table 4.30, showed p-value of 0.001 and 0.001 which simply implied that there is a statistically significant relationship between the attributes. A further interpretation of the finding from table 4.30 and 4.31, showed that coefficients; $\beta_1 = 26.433$ indicated a positive relationship, that the recent development (reform) in the healthcare sector has improved competition between public and private clinics in the provision of healthcare services to the employees in the working place. This finding has presented a specific

comparison between Nigeria and Malaysia in terms of improvement in competition between public and private and private and private which improves performance. Again, from the table of coefficients, $\beta_2 = 0.060$ the finding indicated a positive relationship which showed that, irrespective of the country, the health sector reform has brought about 6 percent positive differences in terms of competition and performance in both Nigeria and Malaysia as well as before and after the reform in the healthcare and safety sector.

In a research published by the World Bank (1998) which showed that in most of the developing countries private provision of healthcare and safety services accounts for the most effective system that has the wider coverage and cost effective than the public provision. Despite almost two decades of government's prioritization of the public healthcare provision with huge financial support. Statistic had shown that, policy makers and planners in most of the developing countries have given less and less attention to the resultant effects that the neglect of the private sector will have on the provision of healthcare and safety services to the general population and the achievement of national healthcare and safety goals (World Bank, 1993). The results of this research therefore is supported by the world bank research, since they showed a serious competition posed by the private healthcare providers force the public care provision to improve in both Nigeria and Malaysia. This showed that reform have succeeded in improving services through competition.

According to Peter (1997) for a successful healthcare and safety reform to evolve, new modes of communication and interaction need to be created, between the public and private healthcare and safety service providers. This will be through creating a

broad platform that will require governmental action that will be geared towards enhancing the positive contribution of private healthcare and safety and reduce the negative effects of uncontrolled market forces in the health sector.

Peter (1997) also states that, one of the fundamental problems in determining the degree of competition between public and private healthcare and safety providers is the understanding of their dividing line, as to what is private and which one is public. Another confusion lie in the area of creating a clear dividing line between strictly public physician and private as the two are found in each. Yet there is an existing competition between them, to some degree one may tend to argue that, this mixed up may be at the beginning of the initiation of each healthcare sector reform, but will be demystified in the long run.

Hanson and Berman (1996) as cited in peter (1997), showed that many country whose data is available on the service provision capacity of private healthcare and safety providers, revealed that the private healthcare providers dominates the physician supply for ambulatory and curative services. These providers have the capacity to treat most of ailments associated with primary care, such as tuberculosis which is an occupational safety issue, sexually transmitted diseases, malaria, diarrheas, and respiratory infections which have all direct relationship with occupational safety hazards. This group of practitioners comprising of paramedics, pharmacy's, and other less than fully qualified providers, constituted over 5 percent of the Indian providers, which seem to be more than the number of physicians in the country (Rohde & Vishwanathan, 1996, as cited in Peter, 1997).

One very serious draw back in the study of private-public-mix in the provision of healthcare and safety seem to lie heavenly on inadequate data. The most reference point was and is the study conducted by Murray et al. (1994) this seem to be the largest and most widely use, in addition to several countries level studies such as Philippines by (Griffins et al., 1994a), Sri Lanka (Griffins et al., 1994b), India (Rohde & Vishwanathan, 1996), Tanzania, (Munishi et al., 1995) all cited in Peter (1997). Most a time the government view the private provision of healthcare and safety services as a threat to their effort and politically, it is seen as an obstacle to achieving political goals. They are totally seen as competitors or irrelevant, international donors heavenly concentrated on public providers. Public health professionals tend to look at private providers with disregard, exploitative, low quality, and are not relevant to the public health concerns (Peter, 1997).

From the fore going, this study can tacitly concludes that the reform in health care sector has succeeded in creating serious competition between private and private and between private and public health care and safety providers in the two countries. This has even gone far to challenge the dominance of public hospitals in the provision of healthcare and safety services for the teaming citizens requiring such services. It has as well gone a long way in accepting the conclusion made by this study that, the reform in its entirety succeeded in creating competition which in turn created advancement in the improvement of medical infrastructures in order for each facility to retain its prima place in the economy. Both public and private practitioners are watch dog to each other; this will go a long in creating virile ground for innovation through research and development effort of the two sectors.

Hypothesis 6: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether employees are treated well in private clinic more than in public with the recent development in healthcare sector.

The finding from the regression table 4.32 showed a p-value of 0.001 and 0.001 which simply implied that all the model parameters are statistically significant. Hence, the difference-in-difference model itself is statistically significant. The coefficients are valid and their interpretations are reliable. Moreover, from the finding on table 4.32 and 4.33, of coefficients; $\beta_1 = 26.452$ showed a positive relationship which indicates that the employees are treated well in private clinic more than in public with the recent development in the healthcare sector. This coefficient has given us a specific comparison between Nigeria and Malaysia in terms of private clinics' performance. Again, from the table of coefficients, $\beta_2 = 0.010$ present the strengths of the relationship as positive, with 1 percent effect, which indicated that, irrespective of the country, the health sector reform has brought about a positive change or difference in terms of private clinics' performance.

Research on the public-private-mix revealed a scanty literature on its record of utilization. Except the existing records or data on healthcare and safety expenditure of the OECD countries, there is no international statistics on public-private healthcare and safety provision, even for the most commonly known measures, such as private doctors, hospitals, and hospital beds with the exception of some individual countries records which may not be devoid of the confusion of degree of certainty on the fact that, this medical staff are entirely for public or private. In most cases they are usually found in the two practicing settings (Hanson & Berman, 1996; Peter, 1997).

The coming on board of CUEPACS (that is congress of union employees in public and civil services) in Malaysia a report had shown within five month of inception over 50,000 policy holders registered with such outfits of healthcare and safety insurance in anticipation of better medical services (Nik & Daniel, 2009).

The provisions of healthcare with an accessibility measurement, availability at patient convenience are the major factors that will symbolise service satisfaction (Eddy & George, 2007). Therefore this is related to the results obtained in this case, where the ANOVA and the coefficient results are positive meaning that the beneficiaries are satisfied with the fact that private clinics treat them better than the public.

Hypothesis 7: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether the private sector clinics ensure employees value for money in terms of healthcare and safety services than public sector clinics.

The finding from this study showed that regression analysis on table 4.34, showed p-value of 0.001 and 0.01 simply implying that the model is statistically significant. Moreover, from the table 4.34 and 4.35, of coefficients; $\beta_1 = 26.640$ the finding showed that there is a positive relationship between the two attributes, meaning that the private sector clinics ensure employees value for money in terms of healthcare and safety services than public sector clinics. This coefficient has given a specific comparison between Nigeria and Malaysia in terms of private clinics' performance which supported the alternate hypotheses of this study. Again, from table 4.34 and 4.35, of this study the coefficients; $\beta_2 = 0.030$ showed also a positive relationship which indicates that, irrespective of the country, the health sector reform has brought

about a 3 percent positive change or difference after the reform in terms of private clinics' performance in the two countries.

Comparing this result with previous study by Lena (2004) which compares two different insurance societies in order to determine their cost effectiveness and efficiency in Sweden reveal the following results, the study compiled data from 1892 to 1910, for two regions Stockholm city and Ostergotland County. The data consists of annual information from a total of 493 registered societies (3,849 observations) divided between 222 mutual insurance societies (1,770 observations) and 271 pure insurance societies (2,079 observations). The study also describe the societal characteristics as membership size, insurance benefits, insurance premiums, moral hazards controls (such as waiting time, qualifying time, minimum sick days), financial status, age, and number of policy categories (Lena, 2004).

In order to analyze the differences between, logit analyses is performed with respect to given independent variables, by using the mean values of the explanatory variables, per society over time. This is due to the fact that the independent variable (type of financing system) is constant over time by definition. The results show that higher mean levels of the following variables are significantly and consistently associated with a positive likelihood of the society being a pure insurance society; coverage per sick day, coverage per annual total fees, initial fees, waiting time, qualifying time, average assets, society age, number of policy categories, mean levels of the explanatory variables-members, coverage per member, and average sick cases- are significantly and consistently associated with a lower probability of being a pure insurance society. The study concludes that, due to more careful screening and

selection of members, and built-in controls for moral hazard problems, mutual's are able to provide more generous insurance solutions to members, controlling for differences in initial fees and registered sick days. It also confirm that pure insurance societies attract a more heterogeneous tendency to lacking the motivation to minimize moral hazard problems, thereby reducing cost and improving service efficiency and accessibility, as indicated by higher mean levels of moral hazard controls (Lena, 2004). The study by Lena (2004) corroborated the result of this research with private clinics controlling for moral hazard such as waiting time more than the public clinics in both Nigeria and Malaysia with 3% reduction. This result supported the implementation of reform in healthcare and safety sector in the two countries.

The emergence of a private health sector in Malaysia may partly be as a result of population increase and partly driven by demand. The highly educated and those with economic affluence make the most use of them. This category of members of the population expects high quality healthcare and safety services and in which the feeling remained that only the private sector provider can meet up. The quality of care at private facilities was perceived to be non comparable to that of the public sector. In Malaysia today newly built private hospitals are equipped with large, ultramodern and latest medical technology. The prompt and non rowdy nature of private clinics and services provided at the private general practitioners' clinics also offer convenient, reliable and value for money medical services in particular to the nearby population (Chai, David & Tracey, 2008). This study agrees with the finding of this research.

Hypothesis 8: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether the private hospitals have genuine drugs for the employees compared to public hospitals.

The results obtained from the regression analysis on table 4.36, showed that the p-value of 0.001 and 0.001 simply implied that all the model parameters are statistically significant. Also from the finding on table 4.36, with coefficients value of; $\beta_1 = 26.452$ the results of the finding showed a positive relationship which indicates that the private hospitals have genuine drugs for the employees compared to public hospitals. The results from this coefficient table 4.36 and 4.37, has given a specific comparison between Nigeria and Malaysia in terms of private clinics' performance in relation to having genuine drugs for the employees compared to public hospitals. By an extended analysis the coefficients, $\beta_2 = 0.462$ indicated advancement in the analysis that there is a positive relationship between the two attributes, irrespective of the country, that the health sector reform has brought about 46.2 percent positive changes or difference between the two attributes in terms of private clinics' performance before and after the reform.

In a related literature a regulatory system was instituted in Dutch reform policy, in 2006, the control instituted by the policy ensures control of drugs spending or costs, this singular action makes drugs accessible to Dutch residents. This type of national system in addition to the direct and indirect price controls serves as the main platform to achieving this policy objective visa vis. the drugs quality. Costs are usually measured from the point of view of the societal affordability, which by implication serve as a measurement of health-related costs and/or expenses as well as costs generated outside the healthcare system in this case drugs. Costs-effectiveness or efficiency is measured in terms of costs per quality of services rendered in a year (Joshua, 2007). In addition to the aforementioned, costs-effectiveness could also be measured in relation to the efficiency of the budget and severity of disease (Joshua,

2007). According to the Dutch prediction in 2002, Dutch's prescription drug market is expected to reach \$24 billion and become the fifth largest market following Japan in the world.

In China the Medical doctors control the distribution of prescription drugs which ensures quality. In some hospitals and clinics patients were force to buy prescription drugs from the hospitals or directly from the doctors who make the prescriptions. This led to lack of freedom of the patients; this restriction basically aims at preventing losses of sales on prescription drugs to drug retailers. The retailing drug stores who were acting as private providers are unhappy with such a restrictions place on patients. This has encouraged the coming up of some of the retailers to try by all means to discourage prescription drugs buyers from hospitals. The tactics used includes, offer to pay drug buyers half a dollar for each prescription the potential buyers brought to the private drug stores (Beijing Physician Association, 2002).

The computer technology provided the Physicians the opportunity to make prescriptions directly from computer. Excessive demand for better hospital services, and increase in health care service utilization rate is unfortunately associated with patient low attendance for the simple fact that the hospital charges are beyond the affordability of general public. The deregulation of health care service delivery due to the inception of reform, which separated medical consultation from drug dispensing services, serve as a potential enemy to most private drug store owners in China. The coming up of medical insurance reform will boost traffic in most of the clinics but at the expense of profit margins (BPA, 2002).

A report release by China Statistics Annals (2004) reveals that, most of the health care and safety services providers in both private and public will be adversely affected by the regulatory changes in terms of their earnings outlook. For example, separation of medical consultation and drug prescription and dispensing may reduce the turnover of a typical hospital by 45-58%, this is, because drug charges account for 45-58% of a patient's hospital expenses. This could have been the reason why the reform faces a lot of resistance from hospitals. The implementation of reform in the medical insurance system did not go down well with hospital and the operators either. While there is no doubt that the introduction of medical insurance system will certainly lead to higher utilization rate of health facilities, the issue of profit margins remained a contentious issue between hospitals and insurance providers. Considering the fact that, with the existence of intense competition, hospitals have little bargaining power (CSA, 2004).

With the changes in prescription drugs and consultation, the hospitals will need to upgrade its infrastructure, equipment and services in order to attract medical insurance participants. The result will be additional financial burden for hospital operators and consequently fewer profit margins.

The Genuine drug stock under the basic medical scheme in the Dutch reform was sets aside; this was targeted towards controlling the expenses on drugs, which specifies the drugs that are enlisted by the scheme and eligible for reimbursement. This policy serves as the government-driven drug pricing regulation mechanism. The centralization of tender for drug procurement program applied only to the drugs

covered by the scheme, the scheme plays an important role in the development of the drug industry in the country.

The scheme provided a vibrant level playing ground for qualified manufacturers with patent products or operating in a less competitive product segment with sales growth. According to the statistics from the Social Insurance Fund Administration Center, Ministry of Labor and Social Security, gross revenue of medical institutions qualified for the insurance scheme rose by more than 30% in 2002 (SIFAC, 2004). This led to serious development in research and development among the drug manufacturers. Some manufacturers that have the ability to imitate off-patent products quickly sustain their existing profit margins (China Statistics Annals, 2002).

Botswana's happens to be one of the worst hit African countries with 40 percent or more affected with HIV/AIDS. The government in reaction provides high-stakes effort to provide comprehensive HIV/AIDS treatment to all the affected citizens. Botswana became the first African country to provide its citizen with such an expensive, but life-saving, anti-retroviral drugs (ARVs) and other drugs to all those who need them, through the public health distribution system (Roman, 2002).

A research conducted in some governmental hospitals or medical centers in Yamen reveals that in most of those clinics the patient are not taken care up unless and only if the patient has a relative in the hospital or is affiliated with an influential citizen. Added to the dilemma is that, patients are expected to buy everything including papers to write for prescriptions and at the end the patient will end up without drugs. The study also concluded that the drugs imported for sole use of public hospitals and

health centers are later sold at an exorbitant price in the private pharmacies and hospitals. In circumstances where the medicine got to the patient's it was discovered that such patient belong to the most affluent members of the society (Hakim, 2008).

This study had shown that only governmental control could bring the accessibility and genuinely of drugs possible in most countries. Contrary to our research finding which shows that the private hospitals have more genuine drugs than the public hospitals. The results could also be interpreted from the point of view that, the private practitioners are more advanced in adhering to the ethics of medical practices in the two countries. Another reason could be that, the professionals are predominantly in the private sector as depicted by the brain drain of the medical personnel from public to private hospitals. This position was supported by the literature in both Nigeria and Malaysia with hundreds of medical professionals leaving to private within and outside the country (Jacob, 2008; Labiran et al., 2008).

Hypothesis 9: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether the employees witnessed less waiting period in private hospitals compared to public hospitals.

After performing a regression analysis as depicted in table 4.38, the p-value of 0.001and 0.001 was obtained, this finding simply mean that all the model parameters are statistically significant. The results from the finding on table 28a,b,showed coefficients; $\beta_1 = 26.458$ represents a positive relationship indicating that employees witnessed less waiting period in private hospitals compared to public hospitals with the advent of the health sector reform in the two countries. This result from the coefficient table 4.38, described the specific comparison between Nigeria and

Malaysia in terms of private clinics' performance. The last results of the coefficients, showed a coefficients results of, $\beta_2 = 0.031$ indicating a positive relationship between the attributes that irrespective of the country, the health sector reform has brought about 3.1 percent positive changes in terms of private clinics' performance in both Nigeria and Malaysia as well as before and after the reform.

From a research conducted in Yemen by Hakim (2008) the general characteristics of both the private and publically control clinics seem to be, the existence of dozens of patients lining in rows waiting for their turn to be admitted to see the doctor. However, there is the existence of class differentiation with those highly influential people being admitted as soon as they are cited in the hospitals. Vast majority of the citizens complain that the medical services provided in public hospitals and centers are below the expected standard. The same practice is in existence in the private hospitals whose sole aim is to extort the patients but with an unsatisfactory service (Hakim, 2008).

Hypothesis 10: To compare, between Nigeria and Malaysia, as well before and after the NHS scheme; whether in case of employee's accident/ emergency cases the private hospitals are more prompt than the public hospitals.

This result provided a regression table 4.39; with results of the p-value at 0.001 and 0.001 this simply implied that there is a statistically significant parameter for the study. Moreover, from the finding on table 4.39, the coefficients; $\beta_1 = 26.487$ showed a positive relationship between private clinics promptness in attending to emergency/accidents cases in the working places compared to public clinics under reform. The results of this coefficient have given a specific comparison between

Nigeria and Malaysia in terms of private clinics' performance. The next results from the analysis showed coefficients, $\beta_2 = 0.054$ indicating a positive relationship between the two attributes that, irrespective of the country, the health sector reform has brought about 5.4 percent positive changes or difference in terms of private clinics' performance in both Nigeria and Malaysia as well as before and after reform. Previous studies indicated that, it has been an established fact that, self reported condition seem to be one of the most valid and reliable measurement of the general state of physical wellbeing (Davies & Ware, 1981; Idler & Benyamini, 1997; Mossey & Shapiro 1982) in Catherine and John. The self reported result always address issues that has direct relationship with human state of being in relation to acute and chronic, fatalistic and nonfatalistic diseases and as well as musculoskeletal issues, that are mostly associated with ,back pain, headache, eyestrain, neck strain and industrial accidents. This is in tandem with the World Health Organization definition of healthy condition as simply 'being in a state of health, not only by absence of any sickness but of the general wellbeing' (Catherine & John, 2000).

The self reported health condition in most cases has direct correlation with more scientific measures, such as physician assessment, clinical examination, chronic and acute disease examination, physical disability and health behaviors (Davies & Ware, 1981; Idler & Benyamini, 1991; Liang, 1986: Mossey & Shapiro, 1982, as cited in Catherine & John, 2000). Conclusively according to Catherine and John (2000) self reported healthiness had a mean value of 4.17 in a research conducted to test the degree of human wellness 1995 and as well mean of 4.05 was obtained measuring the same issue in 1998 in American medical researchers, which make it a better predictor of mortality than medical assessments. This showed that the result of this study has

replicated the previous researches with 5.4 percent improvement. This showed that, the reform succeeded in evolving a new trend in healthcare and safety services in relation to emergency and accident in Nigeria and Malaysia.

Conclusively from the different literature reviewed so far, couple with availability of latest medical technology in most of the private clinics in Malaysia and the presence of most senior professionals in most of the private hospitals in Nigeria, one will be tempted to conclude that our research findings is positively in line with the previous researches. That is to say, in the case of emergencies and accidents the private hospitals are most prompt. Couples with the fact that, the protocols associated with most public hospitals before admitting emergency/accident victims which most have contributed to the confirmation of the result of this research.

5.3 Discussion of Findings on Hypotheses tested with Log linear and χ^2 test of Independence and χ^2 Goodness of Fits

Hypothesis 1: The aim of this research was to study the direct and indirect relationship of the selected constructs and dimensions, such as, access, equity, affordability, demographic characteristics factors and control mechanisms and efficiency of healthcare delivery system for safety in both Nigeria and Malaysia under reform. This is important because efficiency of any reform policy will have a role in improving access, equity, affordability as well as by using a structured control system that will be devoid of any demographic differentiation. This will in the long run ensure the safety and health of all the employees in both Nigeria and Malaysia (NIOSH, 2003; Workover, 2007). The understanding of the underlying importance of the functioning of the major constructs of this study will serve as a tool that will make

the practitioners and academicians to improve health and safety practice. The issues presented in the construct reflected the main dimensions and goals of the reform policy that is geared towards instituting an efficient healthcare and safety services in the two countries. For example an effective healthcare and safety reform policy is the one that ensures accessibility, equitability, affordability and efficiently treats employees devoid of demographic discrimination with less waiting time and at an affordable cost. The reform also ensures that the safety and health norms and/or culture are strictly adhered to. The availability of these factors will motivate employees to be steadfast in performing the various assignments expected of them in their working places. The achievement of a better reform policy in tandem with a better employer and beneficiary's committeemen's will ensure a better health and safety practices, which will ensure the reduction of job related fatalities in the working places. It is the goals of the employers to attain an accident free working place and as well to ensure that the employees are safe and healthy. For this reason reform policy has to be efficient and effective in improving employee's health and safety condition in the working place. The efforts of any reform policy will be beneficial only if an effective control mechanism that has an enabling laws and powers to control those who violated the reform policy guideline. Only with a standard guideline that is positive towards achieving an efficient and cost effective health and safety services, can the mission and vision of the reform policy be achieve.

The setting of this study involved the examination of performance of the reform of healthcare and safety system in Nigeria and Malaysia. The research targeted medical doctors, nurses, dentists, environmental health and safety experts, and health and safety beneficiaries in both public and private institutions of higher learning in Nigeria and Malaysia, as well as workers in public and private hospitals in the two

countries. The study considered the importance of health and safety condition of employees, who suffered various health and safety related illnesses that are work related. The employees (beneficiaries), medical doctors, nurses, environmental health and safety experts daily encountered various health and safety fatalities in the hospitals and working places, which make them the best sets of observers to asses the performance of health and safety policy in the two countries.

The government of both Nigeria and Malaysia through its legislation and policy statements mandated that a reform be put in place in the healthcare and safety system, in order to ensure efficiency, equity, affordability and accessibility of services (Abdurrahim, 2009; NHIS, Decree, 1999). However, safety and health improvement relied heavenly on the success of these policies. For this reason, this research focused on the performance of reform policy in various working places as a breakthrough in healthcare and safety study.

In the first research hypothesis, it was investigated if there is significant relationship between the health sector reform in Nigeria and Malaysia. Since this relationship is to be measured between categorical variables, chi-square χ^2 tests of independence and a log-linear test was conducted, so as to obtain the ideal nominal correlation. From the from the findings of the χ^2 analysis table 4.40, both the chi-square χ^2 test of independence and a log-linear test produced a p-value of 0.001and 0.001 which less than 0.05 the null is redetect, meaning that there is a significant relationship between the two attributes, which implied that the reform is dependent on the country where it is being implemented. In other words, the reform is not functioning or being implemented in exactly the same manner in both Nigeria and Malaysia. Hence, there

are some peculiarities due to location. The finding from nominal correlation of $r=0.257$ showed an effect of 26% this showed some level of positive association between the schemes in Nigeria and Malaysia. In other words, there are some extents to which the schemes are similar in both countries with 26 percent positive response effects of the reform. With this result the study concluded that there is a positive relationship meaning that, the healthcare sector reform has some level of significant relationship between the two countries with 26% positive reform effects.

This has actually confirmed the position of some of the literatures cited earlier in this study. That the two countries healthcare systems have historical relationship due to the colonial heritage from England, who nurtured the health systems during colonial occupation of the Cameron Island in the case of Malaysia and Niger Area in the case of Nigeria with 26% conclusion accuracy that there is significant association between the two healthcare and safety systems.

The protectorate of Northern Nigeria was amalgamated in 1914 with Southern part to form what we call Nigeria today. The amalgamation anchored with constitutional review as from 1922 up to 1958 serve as a platform for struggle for independence in 1957 and 1959 respectively (Adulkadir, 2007). This shows that the health structure remain colonial in origin considering the period the colonialists were in control in Nigeria. The structure includes dispensaries mostly located in the interior to serve colonial estates. In addition to the colonial structure, the religious organizations also complemented the governmental efforts in the provision of health facilities in Nigeria. Provision of health is basically the function of the three arms of government in Nigeria. The economic arrangement visibly provided an enabling environment for the

operation of private providers. The functions stated above are clearly included in the concurrent section, exclusive section and residual section of the constitution of Nigerian Law (Constitution of Nigeria, 1999).

Scrutinizing the total expenditure on healthcare in relation to GDP in Nigeria revealed the following indices, as at 2007, the total expenditure stood at 4.6 percent, while total Federal government expenditure stood at 1.5 percent (Nigeria National Expenditure, 2007).

A further analysis on Nigeria GDP as at 1999 showed advancement compared to the results of 2007 with 2.7 percent, 2000 showed 2.8 percent with 0.1 percent increase 2001 revealed 3.8 with 1 percent increase (CBN, 2007). There was a decrease in the GDP as from 2004 with 3 percent then move to 7.1 percent improvement in 2005 and again back to 6.9 percent in 2006 and 5.3 percent in towards the end of 2007 (National Bureau of Statistics Annual Report, 2008).

Translating governmental contribution in form of budgetary allocation as at 2007 revealed a 4.3 percent allocation to health in Nigeria (WHO, 2007; CBN, 2007). At the same time the number of people living below poverty level for the period of three years showed that as at 2005 the number of those within the poverty category was 56.8 percent, in 2006 58 percent and as at 2007, 60 percent, while unemployment rates stood at 5.8 percent in 2007 (NBS, 2007).

The history of healthcare sectoral development seems the same between Nigeria and Malaysia. This is so because; the independent territories of Malaya became self

governing in 1957 and a federation in 1963, from the British colonial mastership. The healthcare structure and healthcare delivery system, as well as both healthcare and safety financing and administration were inherited from the colonial government under Britain.

The position above was further substantiated by Subramaniam Pillay (2005), claimed that, the healthcare system in Malaysia is prominently urban concentrated as inherited from the colonial government. These structures underwent small patches of amendments or adjustments to cater for local peculiarities in the country only. A survey on Health Morbidity Survey (NHMS) conducted in 2004 in Malaysia revealed that 92 percent of urban settlers were living within proximity of 3 kilometers to healthcare facilities as compared to 69 percent of the rural population living closer to healthcare facilities, especially in Sabah and Sarawak (WHO, 2006).

After the departure of colonialists, the structure of healthcare remain that of sanitation and preventive health in addition to network of public hospitals put in place by the colonial government (Jacob, 2007).

Hypothesis 2: the second research hypothesis, investigated if there is significant relationship between the public health care outfits and private healthcare outfits in the healthcare delivery for safety using, HMO as a tool. From the final analysis the finding obtained on table 4.30a,b, of both the chi-square test of independence and a log-linear test produced a p-value of 0.008 and 0.005 respectively, this showed that the p-value is less than 0.05, therefore the null is rejected. Hence there is significant evidence to conclude that there is relationship between public healthcare outfits and

private healthcare outfits in the healthcare delivery for safety of employees in both Nigeria and Malaysia using the HMO as a tool. Bearing in mind that the reform is dependent on the country where it is being implemented. In other words, the tools of control in both private and public clinics are not exactly the same in both Nigeria and Malaysia. Hence, there are some peculiarities due to location. The nominal correlation of $r=0.164$ shows 16.4% effects or some level of association between the outfits in Nigeria and Malaysia. In other words, there are some extents to which the outfits and tool of control are similar in both countries with 16.4 percent evidently representing the degree of positive relationship or effect between the two countries. This has actually confirmed the position of some of the literatures cited earlier in this study.

As confirmed by Abdurrahman (2009) that, in Malaysia with coming up of the new health and safety financing scheme the government will still be the main source of healthcare fund, this is going to be by way of given governmental subsidies to the disadvantaged members of the society. The monitoring of the activity of both the private and public providers will be by the Ministry of Health, to ensure access, utilization, quality and safety. Basically this will be through ensuring that the population is covered base on formal and informal sector health and safety policy, by ensuring that the normal clinical operations of outpatient and inpatient are maintain and even invigorated. In addition to this, accessibility as said earlier will be through public and private providers by adopting good practices that succeeded in other countries, such as diagnostic accuracy. There is also plan on ground to ensure that the spirit of social solidarity is ensued in the system, this will evolve a new National Health Scheme with the government as an intermediary body, with National Health Fund Financing Authority as a single fund manager. This had shown the power of the

ministry of health to appoint the HMO who will work under the supervision of National Health Insurance Scheme in the case of Nigeria and National Health Fund Financing Authority as propose in Malaysia, with Ministry of Health still having the upper hand, this showed that there is relationship between the control mechanism use in both private and public controlled healthcare and safety delivery. In the case of Malaysia the Act governing the operation of healthcare and insurance business remain the Malaysian Insurance Act of 1996 and the Private Health Facilities and Services Act of 1998, the first Act is enforced by Bank Negara and the second by the Malaysian Ministry of Health. These make the two arms of government to have control on the operations of the providers or operators of healthcare scheme in the country (Abdaalahi & Ng, 2009; Jacob, 2007).

To this end the position of this research is anchored by the position of the previous studies, that there is serious relationship between the tool of control in both private and public control healthcare and safety scheme in both Nigeria and Malaysia. This implies that the government has to determine the level of control that will make the system to work, as well as the tool by whatever name be it HMO, NHIS, NHFFA.

Hypothesis 3: The third research hypothesis; investigated if there is any significant relationship between the efficiency of public and healthcare delivery system and private healthcare delivery system in terms of equity, safety and healthcare services to the employees in both Nigeria and Malaysia. This relationship was measured using Chi-square test of independence and a log-linear test and nominal correlation was obtained. From the final analysis both the results of Chi-square test of independent and log-linear test produced on table 4.44, a p-value of 0.006 and 0.005 respectively

was obtained and this is less than 0.05, therefore ($p=0.006$ and $0.005 < .05$). By this results of the null hypotheses is rejected, and the alternative is supported. Impliedly the finding indicated that there is an association between the efficiency of public healthcare delivery system and private healthcare delivery system in terms of equity, safety, and healthcare services to the employees. In other words the public healthcare delivery is dependent to some degree on the equity, safety and healthcare services of the privately controlled providers in both Nigeria and Malaysia. In each case, the finding from the nominal correlation showed $r=0.168$ converted to percentage 17 percent, which showed that, there is weak but significant relationship between the two compared items with 17% effects or influence. It is significant, since the p-value is less than 0.05.

Similar study was conducted by Raynald et al. (1993), on whether or not reform that targeted at combining both private and public healthcare and safety facilities to operate has a goal and or has succeeded in achieving such goals. The research summarized as follows, that the healthcare reform plan should have the likelihood of achieving maximum efficiency, but not to have the likelihood of plan of failure. The reform should have planned to succeed and work toward it. Any reform that is to the contrary may hardly achieve any efficient results. The researchers states that, the Quebec health care reform which achieve maximum efficiency, equity, access and has control over the excesses of power from both patients, providers and professionals was strictly based on plan to succeed.

The democracy instituted in the Quebec reform where 40 percent of the members were elected by the public and private institution, 20 percent elected by the

community, 20 percent elected by the socioeconomic groupings and finally 20 percent elected by the municipalities have succeeded in making the system to achieve efficient, equal, accessible, affordable and safety healthcare products (Raynalds et al., 1993). The Quebec system in addition to achieving efficiency has also succeeded in making efficient participation of the beneficiaries. Prior to the reform local community centers were represented by only 7/14 members but immediately after the reform the percentage rose to 9/15 members. The university general hospitals were before represented by only 4/16 members after the reform it turn out to be 8/20 members. Non university general hospital has 4/14 members, after 8/17 and regional representation was 6/15 members which later rose to 21/23 or 23/25. This representation was more prominent in Montreal and Montegie region in Quebec, (Raynald et al., 1993). This shows that the organization of the reform is what ensures efficiency not the reform itself. The more organize the reform by engaging all those responsible participants with responsibilities the more the reform work towards achieving its goals.

Another study by Catherine and John (2000) revealed that, efficiency in itself does not ensure equity, access, and affordability, but rather the socioeconomic position occupied by the beneficiary. This is well rooted in health commodity hypothesis or theory. It postulated that SES brings about health and long live, this is because one has the means to purchase the insurance, that will give him better medical treatment or more expensive healthcare and safety products, which will improve his health outcome (Catherine & John, 2000). This theory challenge the presumption that sophisticated equipment and development resulted in efficient medical and safety services. The theory was challenge with question such as, what if resources are not

available to purchase the products. To confirm this position a study was conducted with different people having different socioeconomic background and the final results revealed that, 56.2 percent of the respondents were females and 51.2 percent were male, 85.1 percent were white, 82.9 percent were married and 55.7 were separated. The mean household income for those with degree was 43,949 dollars and 41,285 respectively. The results of the regression shows that almost 80 percent exactly 79.9 percent had private insurance 9.6 percent had MEDICARE alone, 1.4 percent had MEDICARD and 9.1 percent were uninsured (Catherine & John, 2000). This shows that efficiency is dependent on the income of the individual beneficiary not on the efficiency of the reform alone. This result also was in tandem with this position. This is so, because the reform targeted specifically those employed in both formal and informal sector. The question remains what about those unemployed and retirees or simply put the tweeners as called in America.

Hypothesis 4: the fourth research hypothesis investigated if there is significant relationship between healthcare delivery for safety, safety of employees and gender. At the end of the analysis both the results of Chi-square test of independent and log-linear test produced a p-value of 0.094 and 0.090 on table 4.48, respectively and this results are greater than 0.05, therefore since the finding of ($p=0.094$ and $0.090 > 0.05$) is higher than 0.05 the null hypotheses is accepted hence the alternate is not supported. The study concludes that there is no significant influence between gender and healthcare delivery for safety and efficiency to the employees. Impliedly there is no evidence to concludes that the private hospital has favored any gender as per as its services are concern. This showed that there is no evidence to prove the existence of demographic differentiation or effect between the healthcare delivery for safety and

efficiency to the employees and gender. In other words there is no significant gender differentiation between healthcare delivery efficiency for safety and health of employees and gender in both Nigeria and Malaysia. In each case, this can also be affirm by the nominal correlation result of $r=0.102$, converted to percentage 10.2 percent, with this we can concludes to say there is no significant relationship between delivery efficiency for safety and gender differentiation in both countries. Meaning to say the reform did not encourage gender differentiation in the delivery of healthcare and safety services to the employees regardless of demographic characteristics. This invariably encourages practice of safety and health in most of the working places in both Nigeria and Malaysia.

This result is similar with the research conducted by (Lena, 2004) in China on the Community Health Centers in relation to pregnant women having access to healthcare service. This by Lena (2004) showed that there was no gender variation in most of community health centers healthcare service delivery. Another study compares two different insurance societies in order to determine their cost effectiveness and efficiency in Sweden. The study revealed that there was no discrimination based on demographic characteristics of gender and/or pregnant woman in the community healthcare centers in the area of study.

Discussing the issue of socio-economic status as demographic character, Catherine and John (2000) study revealed that, an average education level of some selected residents in Sweden after the research recorded, 13.48 health expenses: average household income has 44.03 dollars: average economic hardship was 1.32. In addition to the above results, 51 percent of those interviewed were employed; 63 percent were

married; 58 percent were females; 89 percent were white; and the average age was 53 (Catherine & John, 2000). Both the study conducted by Lena, (2004) and that of Catherine John, (2000), significantly show the influence of demographic factors in the provision and cost of healthcare and safety products with significant percentage results. This is in variance with the results of this study.

Hypothesis 5: the fifth research hypothesis investigated if there is significant relationship between governmental control mechanism and improvement in access and equity of healthcare and safety services to the employees. From the final analyses on table 4.50 and 4.51 both the results of Chi-square test of independent and log-linear test produced a p-value of 0.001 and 0.001 respectively and this is less than 0.05, therefore since the ($p=0.001$ and $0.001<0.05$) the null is rejected hence the alternate hypotheses is accepted that there is positive relationship between equity and access provided by the new reform which heavenly relied on the governmental control mechanisms. The finding strongly means that for any health and safety practice to be in place in most of our working place governmental support is most important.

This is possible by way of enacting law in the two countries. The laws serve as platform which permitted both the Ministry of Health and the National Health Insurance Scheme, in the case of Nigeria and National Health Finance Fund and Ministry of Health in the case of Malaysia survey or ensure compliance. One of the fundamental areas includes registration of both the HMO and the healthcare services providers in addition to the supervision of the operation of the public healthcare and safety provision. The governmental agencies in both Nigeria and Malaysia rely on these laws to operate. In Nigeria the operators rely on NHIS decree of 1999, and

Malaysia on Insurance Act of 1996 and Private Healthcare Facilities and Services Act of 1998. Hence we can conclude to say that control mechanisms play a vital role in ensuring equity and access of healthcare and safety delivery and efficiency in both Nigeria and Malaysia. In other words there is significant relationship between governmental control mechanisms and improvement in access and equity of healthcare and safety services to the employee. This is in addition to the fact the equity and access depends heavenly on the existence and efficiency of the governmental control mechanisms in both Nigeria and Malaysia. In each case, this can also be affirm by the nominal correlation of $r=0.237$, converted to percentage which is 24 percent, this variation shows that, there exists a positive relationship between equity, access and the governmental control mechanisms.

Hypothesis 6: research hypothesis six, investigated if, there is significant relationship between public-private-partnership and spread of innovation in both public and private health care delivery to the employees. And as well to investigate if the innovation in healthcare and safety delivery depends on public-private-partnership. The analyses of the final result obtained on table 4.54 showed a p-value of 0.187 and 0.146 respectively and this are greater than 0.05, therefore ($p=0.187$ and $0.146 > 0.05$). since the p-value is greater than 0.05 the null hypotheses is accepted impliedly there is no significant relationship between public-private-partnership and spread of innovation in both private and public healthcare delivery for safety to the employees in both Nigeria and Malaysia. Which means that, to a greater degree, the spread of innovation in the healthcare delivery system is not dependent on public-private-partnership in the two countries. This showed that, the reform in relation to spread of innovation did not present evidence to conclude that there is a relationship between

the two attributes. In each case, this can also be affirm by the nominal correlation of $r=0.122$, converted to percentage 12.2 percent, with this conclusion from the finding showed a week and no significant relationship between spread of innovation and public-private-partnership in both public and private healthcare providers, as well as in Nigeria and Malaysia. This implied that, the results of this study supported the null hypothesis with the p-value = (0.187 and $146>0.05$).

Hypothesis 7: research hypothesis seven investigated if there is no significant relationship between healthcare cost or affordability and efficiency to both government and private employees in Nigeria and Malaysia and to also investigate if healthcare cost or affordability and efficiency did not depend on both government and private employees in Nigeria and Malaysia. Both results of Chi-square test of independence and nominal correlation on table 4.4.57 showed a p-value of 0.261 and 0.265 respectively and this are greater than 0.05, therefore ($p=0.261$ and $0.265 >0.05$) by implication, the null hypotheses is accepted, that there is no significant relationship between healthcare affordability and efficiency to both government and private employees in Nigeria and Malaysia and also healthcare affordability and efficiency is not dependent on both government and private employees in the two countries. This showed that, it is the private and public healthcare that depend on the public and private (formal sector) employees to function and not the other way round. Hence the nominal correlation of $r=0.084$, converted to percentage equals to 8.4 percent. The percentage of 8.4 showed that, there is a positive effect between the two attributes. But at the same time there is no significant relationship between healthcare affordability and efficiency to both government and private employees under reform

in Nigeria and Malaysia. Affordability reduction has nothing to do with the country or type of organization.

In a research conducted by Pamela to determine the factors employees consider before the choice of which healthcare and safety insurance to register. The study basically tries to assess the level of bias in selection and access to healthcare and safety services. It was confirmed that 19 percent reported that, they and their families had three or fewer visits, and 49 percent reported seven or more visits. This show high level of access to healthcare and safety services (Pamela et al., 2000). It has been confirmed that education rather than cost has the potentiality of improving healthy condition more than an investment in health itself. This is exemplified with the US expenditure on education as compared with health, as at 1965 both the investment in health and education remained 6 percent. By 1995 that of health rose to 14 percent while that of education stood at 6 percent, with the investment in education producing more results than that of health (Pincus, 1998, as cited in Catherine & John, 2000). Another research by Mirowsky and Ross (1999) states that, medical insurance provided protection for the household budgets from exorbitant medical bills, therefore, reducing overall economic hardship. Such protection variable that tends to reduce cost improves health of the household. This study rather than seeing medical health insurance as an obstacle to achieving healthy condition due to high service charges see it as a remediation and cost saving venture. In another study by Yu-luen and Mark (2005) to determine employer premium (cost) charges, using some demographic features, such as married, unmarried, widowed, divorce with no dependents, family size; this study wants to determine whether family members other than the bread winner are important determining factor in the ability to obtained

health insurance. A descriptive statistics was applied, the research control for four variables that are visualized to cause discrepancy in premiums paid and anticipated benefits, this includes demographic features, insurance provision, job characteristics and health related characteristics (Yu-luen & Mark, 2005).

In another study, conducted by Richard Any and Kevin (2003) revealed that propensity to retire is premise on the price of health insurance, the lower the percentage charges on healthcare and safety insurance, the higher the propensity for employees to retire earlier. This study reliably revealed that, insurance cost reliably reduce retirement rates for full time wage and salary workers ages 51-61. Simulation proves that, 1000 dollar rise in healthcare and safety insurance price, reduces the probability of early retirement by 0.17 percent for men and 0.24 for women. This research concludes that, in the case of America increasing the MEDICARE program to aged 62-64 tend to increase retirement rates, for workers with employer sponsored healthcare and safety insurance coverage. This will as well increase the retirement of those without coverage if a subsidy is place on their coverage (Richard, Any, & Kevin, 2003). The study confirmed the importance and influence of cost or affordability in healthcare and safety service provision as confirm by this study.

The eleventh hypothesis wants to test if there are significant differences between Nigerian and Malaysian reform performance in terms of equity, accessibility, efficiency, control mechanism use, demographic differentiation and affordability. The finding from the chi-square goodness of fit results on table 4.59 showed a mean difference of between 1.25-3.13 equity in Nigeria and 3.25-5.00 in Malaysia, accessibility recorded 1.45-3.09, in Nigeria and 3.18-4.64 mean value in Malaysia as

well as affordability also recorded similar results. The mean score for efficiency also recorded 1.45-3.09 in Nigeria and 3.18-4.64 in Malaysia, the differences if the countries mean values are subtracted from each other will show -1.73 and -1.55 variation. The mean value for demographic differentiation showed a mean value of 1.33-3.11 in Nigeria and 3.22-5.00 in Malaysia. This results broadcasted the superiority of Malaysian reform in its ability to reduce the level of differentiation based on demography with mean value of -1.99 and -1.89, reduced differentiation based on factors such as location, occupation type, age and gender of the employee. This showed that there is great differences more than 1.5 mean in each of employees response in terms of the assessment of the reform whether it has really impacted on the key variables. The study therefore concluded that the reform contributed in both Nigerian and Malaysian healthcare and safety delivery but with Malaysia having higher performance compared to Nigeria. The reason being structural or institutional maturity, leadership capability, environmental variability and/or matured organizational culture in Malaysia more than in Nigeria (Dogo, 2009; David, 2007).

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Introduction

The aim of this research was to assess and evaluate the performance of national health scheme reform in Nigeria and Malaysia, as well as to compare the period before and after the reform of the scheme. Specifically the comparative analysis method try to evaluate on whether the reform in health (NHS) has any positive influence on access, equity, efficiency, affordability or cost, demographics characteristics and control mechanisms, which invariably may have a stricken influence on healthcare delivery and safety in Nigeria and Malaysian public and private sector employees.

The world today recognizes the importance of reform as a tool to use in the health sector in order to meet up with the challenges of increase in the demand for healthcare and safety services (WHO, 2000). The inability of the government of most countries to meet up with these challenges in the provision of healthcare and safety services to the teeming citizens called for the need to initiate reform with the aim of improving equity, accessibility, affordability, and efficient delivery to all (Abdurrahim, 2009; Dogo, 2010).

The financial burden associated with accident and emergencies that used to occur in the workplace, our roads, factories, ministries, and parastatals call for urgent attention. The working hour's loss due to accidents and emergencies demanded for reform and improvement of the health sector to meet up with such challenges (Goetch, 2008). An

estimated cost of accidents in the United States alone is approximately 150 billion dollars. These costs includes such factors as lost wages, medical expenses, insurance administration, fire related losses, motor vehicle property damage and indirect costs (Goetsh, 2008).

These factors therefore, necessitated the conducts and selection of this topic and research area. That is the examination of health insurance scheme reform, as one of the programmes or activities plan with the aim of ensuring the safety and health condition of the employees and their families. That is to say, most of the NHS reform programmes are employee directed, but little attention was given to its association with employee safety and health improvement or wellness in the various working places. The health insurance scheme programme today is one of the pre-condition and incentive that attracts people to work in an industry or public agencies. This is also an issue clearly spelt out in most labor organizations laws and incorporated as an integral part of occupational safety and health programmes in most developed countries (Deborah, 2004).

As parts of its efforts to ensure safety and health of workers OSHA's regulation stipulated that a physician be employed to check the fitness of workers in most hazardous workplaces. This regulation also included those who had accident and hazards during work. This is in addition to hospital treatment and insurance compensation (Goetsh, 2008).

These efforts by the labor organization to ensure the safety and health of the employees by the employers through the institution of appropriate healthcare system

resulted into the various reforms taken place in different sectors and countries. It is as well interesting to note that reform in health sectors attracts a number of literatures. But specifically healthcare reform in relation to safety and health of employees seem very scanty. It was established also in the literature that countries wise, contributions in this area is also limited. Added to this also, is the near absence of literature on comparative studies on reform in healthcare and safety sector reform between Asian and West African countries. Thus, this study is seen to be first of its type between Nigeria and Malaysia, practical wise, thus this study seem to be the first that tested the Nigerian and Malaysian attempt to reform it healthcare and safety of employees comparatively. It as well tested the progress or spogress recorded before and after the reform.

Thus, the study has at least presented for the first time a position on the feeling of the healthcare and safety beneficiaries and practitioners in both Nigeria and Malaysia. To enhance participation and understanding of the subject understudy, training was conducted to the research assistants with literature to back up any argument in case, as may be confronted during questionnaires administration. A follow up time to time during the questionnaire administration was made by the researcher to ensure compliance and moral support to the research assistance. The target group happens to be people in academic institutions, (both teaching and non teaching), professionals in the fields of Medicine (medical doctors, nurses, dentists, pharmacists and safety /occupational safety and health experts, the workers and those in private clinics were also integral part of the study targets. A total of 1,500 survey questionnaires were distributed between June and September, 2010 with the intention to get 750 returns,

this was done through repeat administration in order to obtain the target 750, which was achieved within the speculated period above.

The research conducted previously on the reform performance by (Lena, 2004) uses 493 questionnaires divided between two healthcare and safety insurance type, therefore, for the two countries for comparative purpose this finding was within the common research range.

A review of the number of respondents by age group show that the age group within the range of 38-47 years has the highest percentage with 48.4% in Nigeria, while in Malaysia those within 18-27%. While the gender group has 75.4% males from Nigeria and Malaysia has 45.2% this shows that more females in Malaysia while more males in Nigeria. The study has also shown that in Malaysia the beneficiaries started working at an early age with age 18-21 having the highest percentage, this may also be couple with the fact that, there was more employment opportunities in Malaysia than in Nigeria (World Bank, 2007) marital status of the respondents was 82.4% married in Nigeria and 53.6% married in Malaysia, family size of respondents in Nigeria with 1-4 members was 40.6% and in Malaysia 1-4 is 88.4% while those with 5-9 members in Nigeria 33.4%. While in Malaysia those with 5-9 members were only 11.6% which shows that, those with highest members of family are in Nigeria more than in Malaysia. An analysis of the ethnic groups of the respondents show that, the Hausa/Fulani in Nigeria has the highest with 53.2 percent, while in Malaysia the Malay has the highest with 75.6 percent. Educational qualification of the respondents shows that those with tertiary/university education has the highest percentage with 95.2 percent, so also in Malaysia tertiary/university education has 79.6 percent, the

location of the respondents basically shows that, 91.4% are residing in urban in Nigeria and 94.0 are urban in Malaysia.

The cross examination of the occupation of the respondents shows that, 87.8% were in the formal sector in Nigeria, so also 94.4% were in the formal sector in Malaysia. Those who were using both private and public hospital in Nigeria were 36.8% and 52.4% were also using both public and private hospital in Malaysia.

The result of the correlation using Pearson correlation between Nigeria and Malaysian National Health Scheme and safety showed that there is a moderately strong positive correlation and the test of the significance of the correlation had shown that at 0.05 significance level using P-Value of the t-test shows that there is significant relationship between Nigeria and Malaysia. Therefore, the null hypothesis was rejected and the conclusion is therefore, there is relationship between the National Healthcare Scheme in Nigeria and Malaysia.

The result of paired sample t-test, using the entire constructs variables in the questionnaires showed that $P = 0.673 > 0.05$. We conclude that there is no significant difference in the efficacy or effectiveness between the National Healthcare schemes in Nigeria and Malaysia. In other words, so far, there is no evidence to suspect that, either country's National Healthcare Scheme surpasses the others in terms of performance.

The model presented in the study was based on the notion or postulations of the five hypothesis model, which supported the basic constructs depicted in a form of a model.

The first model is commodity hypothesis model representing “Affordability” (Yu-Luen, & Mark, 2005; Catherine & John, 2000; Anne, 2004). Process studies model representing “Equity and Affordability “construct (Davis & Rowland, 1990; Davis, Gold, & Makuc, 1981; Hurd & McGarry, 1997; Hurd & McGarry, 1997; Secombe, & Amey, 1995; Short, Monheit, & Beauregard, 1989; Spillman, 1992; Freeman, Aiken, Blendon, & Corey, 1990). Access pathway model represented the “demographic characteristics” of this study as postulated by (Thomas, Ahman, & Aviva, 2006). Convergence hypotheses model representing all the construct or variables as postulated by (Mechanic, 1975; Mechanic & Rocheforte, 1996), and finally the Cooperative/Community based Model in the developing world as postulated by (Johannes, 2005), which supported particularly the demographic characteristics and control of the study.

The health commodity hypothesis believed that, higher socio-economic status (SES) brings health and longevity in part, because it supplies the insurance that allow individual to buy more medical care and treatments which improves health and safety outcomes (Catherine & John, 2000; Yu-Luen & mark, 2005), thus, the hypothesis was interpreted to represents the “employees affordability and socioeconomic status” in this study. The process studies model postulated that, the SES hypotheses did not represents the reality on the issue of Equality in healthcare and safety in spite of reform. The process model believed that in the case of America, uninsured American, received less medical care than people with either private or public insurance, they have lower utilization rates for physician visits and hospitals services. A confirmatory study reaffirm the position of process studies model of healthcare delivery system, that both private and public provision of healthcare and safety services did not have

any significant difference in health status with the unemployed. It was also confirmed that cost factor consideration was the major hindrance to ensuring “equity and affordability to healthcare and safety” services to employees.

The Access pathway model, postulated that access over time transcends the near having access to physician and maintaining relationship with a single provider. Access in the context of this model means an incorporation of effectiveness and appropriateness as well as considering both individual and system level determination of healthcare and safety services which is propelled by reform. This model represented “Access and equity” factor of this study (Meal, Moira, & Poul, 1999).

The Developing countries Healthcare model, which postulated that, any healthcare reform in the developing countries should consider, the issue of institutional restructuring, which should includes, developing strong economy, education, adequate nutrition, poverty reduction, equity, effective government, a functional public health system, that provides, sanitation, clean water and infection control and as well as a comprehensives primary healthcare delivery system. This hypotheses or model represented the “demographic characteristics and control “or constructs of the study (Thomas, Amand, & Aviva, 2006).

The Cronbach’s alpha of 0.911 for the instrument used in Nigeria implies that the Nigerian instrument is reliable. Similarly, the Cronbach’s alpha of 0.920 for the instrument used in Malaysia implies that the Malaysian instrument is also reliable. Both instruments have excellent reliability as far as internal consistency is concerned.

The results of difference-in-Difference model supported all the hypotheses as proposed in this study, which in essence have fulfilled the objectives designed for this study. Reform has positively impacted on, Access, cost/Affordability, Equity/farness demographic characteristics and control, which have succeeded in improving the efficiency of healthcare delivery system for safety of the employees in both Nigeria and Malaysia. This has also improved healthcare and safety provision in both Nigeria and Malaysia than without it. We were able to established that from the log-linear model that, there was no evidence to show that, the reform in healthcare and safety delivery have tilted towards one gender as against any other gender.

It can be concluded that the reform is tilted towards employed members of the society who are gainfully employed with a stable income and socio-economic status which made it possible for them to affords other healthcare and safety services other than the publically provided services. Similar, concerted efforts should be toward, integrating both employees in the formal and informal sectors into the mainstream healthcare and safety reform in order to ensure wider coverage and convergence to ensure equity, affordability, accessibility and limits waiting periods and adverse selection.

6.2 Recommendation for Future Research

Longitudinal survey should be conducted in order to ascertain the effects or impacts of the reform in health and safety insurance scheme in the two countries. This is because a reform or a policy required long time to yield a positive outcome. America with over 50 years of health insurance still battle with reliable record of interstate comparative studies (Politz, 2004). This study is timely, because longitudinal surveys

are generally associated with sociological, health and physical changes (Donald, 1994).

That further study should be conducted on the extra burden created by the cultural set up of the local communities in most of the Africa societies, where a principal contributor to NHS stays with his family, mother, father, brothers, sisters, cousin and cross cousins. Health purchase wise, such extra burden over stretch the principal contributor's financial capability. In case one of the dependent will fall sick, the health charges /burden will have to be sorted out, through loan /assistance or he/she give it up to nature.

6.2.1 Culture/Tradition

That future study should concentrates on the determination of the influence of culture and tradition in the provision of health care services to both the employees and the general public, so also the way and manner an intended reform in the health care sector and safety is affected. This will go a long way in making the reform valid and the service provision equitable, accessible and affordable to all. The present reform did not consider the matrix-web or complexity of tradition as a strong factor that can deter acceptance of any reform resolution. This singular consideration can provoke further issue that may be very important to the implementation of reform and recorded good result.

6.2.2 Better Health Education

There should be study on a better health education campaign on the developments associated with health care provision, financing and management. The target group should first be the educational institutions, especially the academic staffs and other

supporting staffs. In the process of data collection the researcher realized that most respondent, even though working in higher institution did not have adequate knowledge of the reform. The nostalgia shown by most of the respondent and near rejection of the word reform demanded for a study on healthcare reform education. This is so because once an issue is well understood by the academic community its spread and possible understanding is a lot more easily. Bearing in mind that the academic community will open up frontiers of discussions, that will yield positive contribution to its genuineness or otherwise.

6.2.3 Herbal Medicine Option

The herbal medicine and treatment is one of the alternatives to high cost in medical care for the low, middle and upper members of the society. This subsector should be energized now and as well modernized in the developing countries, so as to serve as supplement to modern care and safety practice. Such medicine should be reintegrated into the community medicine and be formally integrated into mainstream health care and safety system and education. But care should be taken in the formalization process, so as not to formalize fake and unqualified practitioners. Therefore, the future study should concentrates more on the modalities to use in identifying the major players in such aspects. It should also aim at identifying the various plant species and their botanical names as well as instituting a curriculum in our health education that will provide avenue for further research in the educational institution.

6.2.4 Demographic Characteristics

Any reform intended in the health care and safety sector most recognized the peculiarities of the population in terms of gender, age, income, lifestyle, location and

employment type. The research should be geared towards studying issues that will help in meeting up with the challenges, needs and desires of the population. In the context of findings of this research having the demographic result in mind consideration must be given to ageing population in Malaysia with the people within the age of 50 and above highest in the population. While in Nigeria the reform must consider the healthcare system that will cater for young within the age of 25 years down being the highest in the population. Consideration should also be given to the study of reform and its connection with location (rural, urban, vulnerable locations to hazards of industries or natural happenings. This position was confirmed by a study conducted in EU states, which states that, there is close link between people health and their position in the society that is high and low income syndrome (EU, 2004).

There is the need to develop a comprehensive system that will address the economic and budgetary challenges posed by demographic characteristics or population. This may necessitated study on the reform on pension law together with the health care system and care for old with specialized subsidized budgetary allocations that will carry along with it high health care subsidy (SAFETYNET). All this should be contained in the protection law in which the future research should propose.

A comparative study on the effective and efficient health care and safety delivery and social care service for certain demographic factors which will include long term financing care and pension issues should be undertaken within the safety -nets arrangement.

6.2.5 Health Sector Reform and Occupational Health and Safety Practices

Future research should concentrate on studying the effects of reform on the practices of occupational safety and health in the two countries and as well find a way of including some of the core diseases associated with occupations in the main agenda and programmes of all healthcare and safety reforms in the two countries. This is so, because most reforms rely heavily on formal and informal sector employee's contributions for the bulk of its start up contribution and as well for the provision of the nucleus for the sustenance of the reform in the reforming country.

6.2.6 Social Protection or Safetynets act for the Vulnerable Group (Safety Net Provision)

There should be the enactment of social protection or safety nets act that will take into consideration the most vulnerable social group in the society. The identified vulnerable group will determine the kind of healthcare and safety reform policy that will be instituted in the country. This is in line with EU charter of fundamental rights, which states that everyone has the right of access to preventive healthcare and also the recognition and respects of the entitlements to a social security benefits and social services. This entails the provision of protection in cases such as maternity, illness, industrial accident, poor, dependency or old age (WHO, 2000).

6.2.7 Access to Healthcare and Safety Services

One of the convergent of social protection objective and policies is access to healthcare and safety and the grant of replacement income at sufficient level for the people who have accepted to interrupt their work for health reasons. This should be established and fortified in any reform relating to health. It is often difficult to

differentiate between public medical personal that are strictly private-for-profit provision. It is as well complex in the case of Nigeria to draw a line between welfare provision from the NGO's and religious organization or whether a not-for-profit is or on strictly welfare provision medical doctors. This is because most public or private doctors are on pay-for-service to most of the NGO's and religious organization hospitals except for the few nurses and mid-wives that are employed on a permanent basis. Unless a strict line is drawn on the practice as dictated by the principle of reform that is, by ensuring quality, affordable or cost effective and efficient services to the beneficiaries, the success of reform will be a myriad than reality. This is also true of Austria, England, and the Germany system (Wendt, 2009).

6.3 Practical Contribution

One of the practical contributions of this research is the proposal for the inclusion of health and safety fatalities in designing of any health reform program especially in the areas of:-

1. Retirees that suffered from chronic employment related sickness or diseases, payment of compensation notwithstanding there should be a specified programme with subsidy on incapacitation course by industrial accident.
2. For actively participating worker with vulnerability tendency, a stand by specialized or subsidized care system should be considered on the reform, notwithstanding, restriction on the period for retirement on a place with chemical and related vulnerabilities.
3. Considerations should be given to peculiarities of religion, culture and tradition in pegging the number of dependent the principal contributor can register on his health

card, considering the established culture and tradition instituted in most countries by the religious cum traditional heritage of having extended families living all together under sub-heads of families with one single head.

1. It has open up a frontier of research on comparability of studies in health care and its reform between Africa and Asia (Nigeria and Malaysia).
2. For practical purposes, it is recommended that the importance of environmental safety professionals should be echoed and instituted.
3. Safety monitoring units in the recent NHS policy in Nigeria and Malaysia cannot be overemphasized, especially in making the governance of safety of both the patient treatment and environment in most of the public and private hospital possible. These dual factors if not well taken care of are another potential threat to the safety of both the patients, the workers, visitors and those citizen residents close to those hospitals, therefore an environmental health and hospital safety monitoring units should be established to monitor the degree of safety of the operation of the patient, drug administration procedures and efforts towards environmental cleanliness of most of the clinics in the two countries (Merican, 2010).

6.4 Theoretical Contribution;

6.4.1 Socio-Economic-Status Hypotheses Model

With results of this study pointing at the organize formal sector as the single most reliable sector that can finance healthcare and safety sectoral reform in both Nigeria and Malaysia and as well as all other Countries that implemented reform in the sector, showed the strength of the employees in reform financing and sustenance. This also goes to show that socioeconomic status (SES) such as employment, educational

attainment, and location are fundamental to having to making citizens of the reforming community to have access to an affordable healthcare and safety services. To this level the results of this study supported the Socioeconomic Status Model hypotheses (SES). That is to say the socioeconomic status of the employer determines his level of accessibility, affordability and equity in the delivery of healthcare and safety services. This conclusion notwithstanding the source of the provision of the services, be it public/private (mix) or private/ private (mix). Therefore, this research reinvigorated the power of SES model in explaining the anticipated results of reform in healthcare and safety sector.

6.4.2 Process Studies Hypotheses Model

The results of this study also contributed in explaining further the meaning of process studies model hypothesis. The model attested that the problem with reform in health and safety insurance is heavenly in the process of its implementation. The process study model hypotheses criticizes the American health insurance model, which gave insurance more powers neglecting the citizen's right to affordable healthcare and safety services. This research results showed that the success of any reform rely heavenly on the strength of its control mechanism, the weaker the State control mechanism that goes with reform, the more disadvantage the beneficiaries will be. The research concludes that the State most retain its controlling power in healthcare and safety reform. The more the failure of State to ensure control through legislation and other legal apparatus the more the reform recorded failure as is the case in US.

6.4.3 Access Pathway Model

The access pathway model tends to fortify the position of process studies model. The access pathway model postulated that access to healthcare and safety services are multifaceted, ranging from number of time beneficiary has access to physician be it in public or private clinic to waiting period before having access to care services, to number of eligible beneficiaries to health and safety insurance. The ability of reform to tackle all these factors during its life span makes it a success. From the results of this study it was deducted that the reform is urban concentrated in both Nigeria and Malaysia with 70 and 90 percent of the beneficiaries' resident in urban centers respectively. Therefore, the result of this research is supportive of the access pathway model. But further study should concentrates more on the issue of general access to all eligible beneficiaries.

6.4.4 Convergence Hypotheses Model

Convergent hypotheses postulated that due to the degree of industrialization, nations most respond both to the technological and organizational obstacles that are created in health systems (Mechanic & Rochefort, 1996). One way to respond is through convergence of certain fundamental factors in order to meet up with such challenges in the health care systems. This will make national institutions to become similar despite cultural and/or ideological differentiation (Form, 1979). Convergence hypotheses also states that its postulations should not be misconstrued to mean that, the health system in the world will not be distinctive or totally believed that health system differentiation is impossible. But that the systems will look similar to a greater degree (Mechanic & Rochefort, 1996). This invariably will mean each health system in the world will look alike and from the results of this study the Pearson product's

moment correlation is positive with $r=0.69$ and $p\text{-value}=0.000$ which is significant in each case there is significant relationship between the national health scheme in Nigeria and Malaysia. This could be partly due to historical and demographic similarities of the two countries in terms of colonial heritage and multiethnic composition of the countries or partially due to globalization and its attendant impacts. This has proven the postulation of the convergent hypotheses model in these two countries, that health system of the world will converge on certain areas and look similar, notwithstanding cultural and environmental distinction.

6.5 Methodological Contribution

Previous research using difference-in-difference model applied the model to research conducted within country to determine the success or failure of reform in healthcare and safety or market sector situation. This study applied the difference-in-difference model in comparing two entirely different countries and as well from two different continents but with similarities in demographic characteristics, geology and politics. The comparative indices remain that of indices related to healthcare and safety reform performance indices for the first time using this method in the two countries. The study also compare healthcare and safety sectoral reform using the concept of 'before and after reform', in order to obtain the actual percentage contribution of the reform and compare same between the two countries.

It is worth noting that this study is not without constraints or limitation. Some of the prominent limitation is lack of adequate finances to look at the other essential aspects of the reform which includes expenditure and budgetary allocation by different countries. It also contributed in no small measure by making the sample as convenient

750 for both Nigeria and Malaysia and we know that a comparative analysis need a wide spread data especially of a phenomena like healthcare and safety reform. This also makes the researcher to restrict his analysis on the effects of only access, equity, affordability, control mechanisms, demographic characteristics, and efficiency of delivery of healthcare for safety of employees to reduce much expense. The second and most prominent limitation is the inability to acquire longitudinal and country wide budgetary allocation to healthcare and safety programmes per states in the two countries under study. The budgetary allocation will make it somewhat easy for a comparative analysis in terms of governmental commitment to healthcare and safety provision in the country. This limitation did not allow this research to develop a composite data for health and safety financing in the two countries but it is hope that future study will dwell on that.

The non existence of literature on the relationship between reform and wellness of the citizens as well as reform and impact on safety of the employees made this study to concentrates on western literature from which an inference based on the scanty literature in this area in the two countries were made. Therefore the generalizability of the study should be restricted to the two countries and in the area of access, equity, affordability, control mechanisms, demographic variables and efficiency of reform. The study used self administered questionnaire as a primary tool to collect the data from all the respondents. The tendency could be a resultants single-source bias. Even though the balancing of both beneficiaries and professionals could have reduced the degree of this limitation; but care should be taken in totally removing the tendency of having single-source bias effect.

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APPENDIX A



**(POSTGRADUATE STUDIES UNIT)
UNIVERSITI UTARA MALAYSIA-SINTOK KEDAH
PhD OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT**

**QUESTIONNAIRE ON HEALTHCARE REFORM: A COMPARATIVE ANALYSIS
OF NIGERIA & MALAYSIAN NATIONAL HEALTHCARE SCHEME: A SAFETY &
HEALTH PERSPECTIVE**

FOR THE AWARD OF PhD. DEGREE (Thesis)

Yahya Saleh Ibrahim

**For Healthcare/safety experts and healthcare services beneficiaries in both public and
private hospitals; this questionnaire is structured to determine the state of healthcare
reform as a recent development to ensure healthcare access, affordability, cost
effectiveness and efficiency of delivery for safety and health of employee**

Dear Sir,

The survey is designed to collects information on reform (public/private clinics coexistence) in the healthcare sector as a recent development in managing ailing healthcare provision in the world today and as well as the way it affects healthcare delivery system and health of employees in working places. A comparative approach in the area of Nigeria and Malaysian health sector development will be adopted with special reference to public-private-partnership provision of healthcare services. The study intend to determine whether healthcare sector reform has the ability to ensuring more accessibility, affordability, equity/ fairness, and efficiency in service delivery, as well as removal of demographic identities as an obstacle in healthcare services provision and as well as mechanisms of control put in place to control extraneous cost of health care services.

Your responses are strictly confidential and they will not be disclosed to anyone or in any publication other than the research intended herein. All information disclosed will take the form of statistical data. Please answer all questions honestly and accurately to make your Contribution to this thesis (research) and thus your effort and time spent are sincerely appreciated.

Thank you for your patience, time and assistance.

(Please return the completed copy to Departmental office or the contact person)

The following are information concerning you in an attempt to assess the ongoing development in Nigeria Health Sector or National Health Scheme (NHS). Please furnish/respond in your best possible manner.

Please tick (✓) your answer in the appropriate box below:

SECTION ONE: Background Information

Question

1.	Age	Response
	18yrs – 28yrs	<input type="checkbox"/>
		<input type="checkbox"/>
	29yrs – 39yrs	<input type="checkbox"/>
	40yrs – 50yrs	<input type="checkbox"/>
	51yrs – 61yrs	<input type="checkbox"/>
	62yrs – 72yrs	<input type="checkbox"/>
	73yrs and above	<input type="checkbox"/>

2. **Gender**

Male	<input type="checkbox"/>
	<input type="checkbox"/>
Female	<input type="checkbox"/>

3. **Marital Status**

Married	<input type="checkbox"/>
Single	<input type="checkbox"/>
Divorced	<input type="checkbox"/>
Separated	<input type="checkbox"/>
Widowed	<input type="checkbox"/>

4. **Family Size**

Spouse (s)	<input type="checkbox"/>
Number of children	<input type="checkbox"/>

Number of dependent

5. Ethnic Group

Hausa/Fulani/Malay

Yoruba/Chenese

Igbo/Indian

Others specify

6. Highest Educational Achievement

None

Primary School

Complete Secondary School

Tertiary/university Education

Others specify

7. Location/Place of Domicile (1) Urban { } (2)Rural { }

8. Occupation

Formal sector/public/private

Informal sector /own business

Irregular source of income

Regular source of income

Professional specify

(9) Hospitals/Clinic you are attending (selects and tick blow)

(i) public/government hospital (ii) private hospital (iii) both private and public

	Efficiency of Healthcare Delivery and Safety Scale	SD	D	U	A	SA
1	I am treated well in private clinic more than in a public/government clinic with reform in health sector.					
2	I feel workers in private clinics are well trained than those in public/government clinics in the area of health and safety practices in the workplace.					
3	I feel the private sector clinic ensures value for money on terms of healthcare services and safety.					
4	I feel the private hospitals have genuine drugs for safety of employees compared to public/government clinic.					
5	I witnessed less waiting period in private hospitals compared to public/government hospitals.					
6	I accident patients on emergency are promptly attended to in private clinics than in public/government.					
7	I feel the employees would have more advanced hospital equipment in private clinics than in public/government.					
8	I feel the coexistence of private and public clinics as from 1980's improves referral of employees on emergency in the workplace.					
9	I feel the referrals of employees on emergency to specialists is meant to ensure cost effectiveness and efficiency.					
10	I feel the reform in health sector in the 1980's improves referrals to specialists which ensure efficiency of health and safety management.					
11	I feel the reform in health sector which started in 1980's will ensure nearness to clinics in case of industrial accidents.					
12	I feel the efficiency recorded by health sector reform as from 2006 will ensures, equity, safety, and efficient service delivery to employees in the workplace.					
13	I feel the reform improves healthcare services and safety affordable and encourages safety culture in the workplace.					
14	I feel the reform in health sector encourages reduction in the cost of the provision of healthcare services, which ensures prompt service delivery.					

15	I feel the equity provided by the reform in health sector contributed in making safety and health practices possible in the workplace.					
	Demographic Characteristics and Healthcare and Safety scales	SD	D	U	A	SA
16	I feel health sector reform will encourage the treatment of working class pregnant women.					
17	I feel healthcare reform will provides efficient services to children of working class.					
18	I feel the reform in healthcare will succeed in making healthcare services cheaper to all gender of working class.					
19	I feel the reform in healthcare will improve healthcare services to old and retirees.					
20	I feel the reform is as a results of the high hospital bill associated with old age, poor and sick status of the working class.					
21	I feel the reform is as a result of increase in aging population in the country.					
22	I feel the reform will reduce the use of age, gender identity as is the case with most healthcare and safety reform when registering patients and treatment.					
23	I feel the reform will encourage the treatment of drunkards, smokers, size of the family (life style) in various working place.					
24	I feel reform will reduce the use of health history, income and employment before getting better healthcare services.					
	Equity and Healthcare for Safety Scale					
25	I feel the reform will ensure equity to healthcare services to workers/employees.					
26	I feel the reform will increase the number of time employees will increase the number of time employees attends clinics.					
27	I feel the equity provided by government clinics before is better than the one provided with reform in the healthcare sector.					
28	I feel healthcare and safety services to employees					

	will improve the reform than without it.					
29	I feel accessibility which improves equity will increase with reform in healthcare and safety services delivery than without it.					
30	I feel doctors and professionals became more accessible and ensure equity of consultation than without it.					
31	I feel the reform will increase the number of healthcare providers to employees which will increase choice.					
32	I feel equity and fairness in hospital treatments to employees will increase with reform in than without it.					
	Accessibility and Healthcare for Safety Scale	SD	D	U	A	SA
33	I feel healthcare services will be more accessible to all employees with the reform than without it.					
34	I feel that, the reform will make hospital to be within 3-5 kilometer to employees.					
35	I feel that the reform will ensure access to healthcare services to employees than without it.					
36	I feel that the reform will increase competition, which improves services to the employees.					
37	I will support the continuous reform in healthcare sector, especially the existence of both private and public hospitals at a time.					
38	I will support the institution of age limits on children enjoying subsidy in healthcare services as from 18 years as independent of family dependency.					
39	I and my family have more access to healthcare services with reform in the healthcare sector.					
40	I feel the reform in healthcare sector is the best thing that happens to the workers/employees in the country.					
41	I feel the limits place on four children entitle to enjoy subsidized healthcare per each family is the best thing that happens to healthcare delivery in the country.					
42	I feel the reform did not improve the provision of expensive drugs to the patients in the country.					
43	I feel the nurses and pharmacists are rude to the patients despite the existence of reform in the health sector.					

	Affordability and Healthcare for Safety Scale	SD	D	U	A	SA
44	I feel healthcare services is not affordable to most employees due to population increase or inbalance in the resource distribution.					
45	I feel that, the retirees and widows hardly afford healthcare services after retirement and death of spouse.					
46	I feel that, employees hardly afford home care due to high cost of such services.					
47	I feel that home care is purely for the rich and highly educated employees.					
48	I feel that rising life expectancy will increase healthcare services demand, which will increase the price of healthcare services in the country.					
49	I feel that healthcare demand will encourage the coming up of health care insurance privately and public/government control in the country.					
50	I feel that, the reform in healthcare sector will reduced employee's individual and collective expenses on healthcare services.					
51	I feel that, demand for healthcare services will be triggered by poor health status not by affordability of employees.					
52	I feel that, employed families will have higher records of hospital attendance than unemployed families.					
53	I feel that, the reform in the healthcare sector will enhance quality and hospital performance, which will make services affordable to employee.					
54	I feel that, continous provision of healthcare services by the government will encourage over use of the hospital services by the employees.					
	Control Mechanism and Healthcare for Safety Scale	SD	D	U	A	SA
55	I feel that, the reform in healthcare sector will provides strong check and balances between patients and healthcare and safety service providers					
56	I feel that, the price of healthcare is basically subsudized by the government control mechanism and not by market forces.					

57	I feel that, reform will reduce the quality of healthcare provided to the employees than without it, due to stringent control by NHS.				
58	I feel that employees will become vulnerable with the reform in the health sector than without it.				
59	I feel that, reform in the health care sector will not be the best for employees in the country due to poor tool of control in the system.				
60	I feel that, poor supervision in the healthcare and safety reform will lead to lack of productivity which will affects the benefits accrueing to employees				
61	I feel that, the government will control providers through NHS by controlling the HMO's effectively for efficient services to the employees.				
62	I feel the tool for controlling healthcare providers for effective healthcare delivery for safety of the employees is through HMO's.				
63	I feel that, the strict condition associated with registration of HMO's and healthcare providers serve as one of the effective control mechanism in the reform.				
64	I feel that, affordability, access, equity, and efficiency of healthcare delivery system started deteriorating as from 1980's to date not as a result of lack of control, but because of the existence of private clinics.				

APPENDIX B DESCRIPTIVE STATISTICS

Table 1: I am treated well in private clinic more than in public as a result the recent development in healthcare sector.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	50	10.0	10.0
	Disagreed	78	15.6	25.6
	Undecided	67	13.4	39.0
	Agree	191	38.2	77.2
	Strongly Agree	114	22.8	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	19	7.6	7.6
	Disagreed	29	11.6	19.2
	Undecided	32	12.8	32.0

	Agree	127	50.8	82.8
	Strongly Agree	43	17.2	100.0
	Total	250	100.0	

Table 2: I feel workers in private clinics are well trained than those in public sector to meet up with challenges of employees in the area of health and safety practices in the workplace.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	120	24.0	24.0
	Disagreed	206	41.2	65.2
	Undecided	67	13.4	78.6
	Agree	79	15.8	94.4
	Strongly Agree	28	5.6	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	26	10.4	10.4
	Disagreed	51	20.4	30.8
	Undecided	75	30.0	60.8
	Agree	81	32.4	93.2
	Strongly Agree	17	6.8	100.0
	Total	250	100.0	

Table 3: I feel the private sector clinics ensure employees value for money in terms of healthcare services than public sector clinics.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	34	6.8	6.8
	Disagreed	118	23.6	30.4
	Undecided	74	14.8	45.2
	Agree	224	44.8	90.0
	Strongly Agree	50	10.0	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	20	8.0	8.0
	Disagreed	27	10.8	18.8
	Undecided	61	24.4	43.2
	Agree	110	44.0	87.2
	Strongly Agree	32	12.8	100.0
	Total	250	100.0	

Table 4: I feel the private hospitals have genuine drugs for the employees compared to public hospitals

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	48	9.6	9.6

	Disagreed	167	33.4	43.0
	Undecided	112	22.4	65.4
	Agree	131	26.2	91.6
	Strongly Agree	42	8.4	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	40	16.0	16.0
	Disagreed	59	23.6	39.6
	Undecided	84	33.6	73.2
	Agree	51	20.4	93.6
	Strongly Agree	16	6.4	100.0
	Total	250	100.0	

Table 5: I witnessed less waiting period in private hospitals compared to public hospitals.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	18	3.6	3.6
	Disagreed	38	7.6	11.2
	Undecided	18	3.6	14.8
	Agree	243	48.6	63.4
	Strongly Agree	183	36.6	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	6	2.4	2.4
	Disagreed	19	7.6	10.0
	Undecided	37	14.8	24.8
	Agree	106	42.4	67.2
	Strongly Agree	82	32.8	100.0
	Total	250	100.0	

Table 6: I feel accident on emergency are promptly attended to in private hospitals than the public/governmental hospitals.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	38	7.6	7.6
	Disagreed	57	11.4	19.0
	Undecided	57	11.4	30.4
	Agree	224	44.8	75.2
	Strongly Agree	124	24.8	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	18	7.2	7.2
	Disagreed	30	12.0	19.2
	Undecided	45	18.0	37.2

	Agree	96	38.4	75.6
	Strongly Agree	61	24.4	100.0
	Total	250	100.0	

Table 7: I feel the employees would have more availability of advanced hospitals equipment in private clinics than in the public/government.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	60	12.0	12.0
	Disagreed	178	35.6	47.6
	Undecided	101	20.2	67.8
	Agree	110	22.0	89.8
	Strongly Agree	51	10.2	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	6	2.4	2.4
	Disagreed	61	24.4	26.8
	Undecided	79	31.6	58.4
	Agree	71	28.4	86.8
	Strongly Agree	33	13.2	100.0
	Total	250	100.0	

Table 8: I feel the coexistence of private and public clinics as from 1980's improves referral of employees on emergency in the work place.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	13	2.6	2.6
	Disagreed	78	15.6	18.2
	Undecided	141	28.2	46.4
	Agree	219	43.8	90.2
	Strongly Agree	49	9.8	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	7	2.8	2.8
	Disagreed	16	6.4	9.2
	Undecided	49	19.6	28.8
	Agree	108	43.2	72.0
	Strongly Agree	70	28.0	100.0
	Total	250	100.0	

Table 9: I feel referral of employees on emergency to specialists is meant to ensure cost-effectiveness and efficiency.

Country	Responses	Frequency	Percent	Cumulative Percent

Nigeria	Strongly Disagreed	46	9.2	9.2
	Disagreed	204	40.8	50.0
	Undecided	72	14.4	64.4
	Agree	161	32.2	96.6
	Strongly Agree	17	3.4	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	27	10.8	10.8
	Disagreed	67	26.8	37.6
	Undecided	75	30.0	67.6
	Agree	68	27.2	94.4
	Strongly Agree	13	5.2	99.6
	Total	250	100.0	

Table 10: I feel the reform in health sector in the 1980's improves referral to specialists which ensures efficiency of health and safety management.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	12	2.4	2.4
	Disagreed	58	11.6	14.0
	Undecided	116	23.2	37.2
	Agree	278	55.6	92.8
	Strongly Agree	36	7.2	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	4	1.6	1.6
	Disagreed	15	6.0	7.6
	Undecided	99	39.6	47.2
	Agree	103	41.2	88.4
	Strongly Agree	29	11.6	100.0
	Total	250	100.0	

Table 11: I feel the reform in health sector which started in the 1980's will ensure nearness to clinic in case of any industrial accident

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	16	3.2	3.2
	Disagreed	42	8.4	11.6
	Undecided	76	15.2	26.8
	Agree	1285	57.0	83.8
	Strongly Agree	81	16.2	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	5	2.0	2.0

	Disagreed	11	4.4	6.4
	Undecided	74	29.6	36.0
	Agree	124	49.6	85.6
	Strongly Agree	36	14.4	100.0
	Total	250	100.0	

Table 12: I feel the efficiency recorded by theb health sector as from 2006 will ensures equity, safety and efficient service delivery to employees in the working place.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	19	3.8	3.8
	Disagreed	24	4.8	8.6
	Undecided	37	7.4	16.0
	Agree	277	55.4	71.4
	Strongly Agree	143	28.6	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	2	0.8	0.8
	Disagreed	13	5.2	6.0
	Undecided	59	23.6	29.6
	Agree	142	56.8	86.4
	Strongly Agree	34	13.6	100.0
	Total	250	100.0	

Table 13: I feel the reform improves healthcare services and safety affordable and encourage safety culture in the working place.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	11	2.2	2.2
	Disagreed	56	11.2	13.4
	Undecided	56	11.2	24.6
	Agree	275	55.0	79.6
	Strongly Agree	102	20.4	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	8	3.2	3.2
	Disagreed	11	4.4	7.6
	Undecided	65	26.0	33.6
	Agree	135	54.0	87.6
	Strongly Agree	31	12.4	100.0
	Total	250	100.0	

Table 14: I feel the reform in health sector encourages reduction in the cost of the provision health care services which ensures promptness in service delivery.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	9	1.8	1.8

	Disagreed	45	9.0	10.8
	Undecided	44	8.8	19.6
	Agree	268	53.6	73.2
	Strongly Agree	134	26.8	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	9	3.6	3.6
	Disagreed	33	13.2	16.8
	Undecided	82	32.8	49.6
	Agree	103	41.2	90.8
	Strongly Agree	23	9.2	100.0
	Total	250	100.0	

Table 15: I feel the equity provided by the reform in health sector will contributed in making safety and health practices possible in the working place.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	15	3.0	3.0
	Disagreed	32	6.4	9.4
	Undecided	58	11.6	21.0
	Agree	284	56.8	77.8
	Strongly Agree	111	22.2	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	13	5.2	5.2
	Disagreed	25	10.0	15.2
	Undecided	73	29.2	44.4
	Agree	115	46.0	90.4
	Strongly Agree	24	9.6	100.0
	Total	250	100.0	

Table 16: I feel health sector reform will encourage the treatment of working class pregnant women.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	12	2.4	2.4
	Disagreed	48	9.6	12.0
	Undecided	94	18.8	30.8
	Agree	257	51.4	82.2
	Strongly Agree	89	17.8	100.0

	Total	500	100.0	
Malaysia	Strongly Disagreed	17	6.8	6.8
	Disagreed	11	4.4	11.2
	Undecided	37	14.8	26.0
	Agree	129	51.6	77.6
	Strongly Agree	55	22.0	99.6
	Total	1	0.4	100.0

Table 17: I feel health care reform will provides efficient services to the children of working class.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	11	2.2	2.2
	Disagreed	34	6.8	9.0
	Undecided	60	12.0	21.0
	Agree	285	57.0	77.8
	Strongly Agree	110	22.0	99.8
	Total	500	100.0	
Malaysia	Strongly Disagreed	7	2.8	2.8
	Disagreed	14	5.6	8.4
	Undecided	33	13.2	21.6
	Agree	137	54.8	76.4
	Strongly Agree	59	23.6	100.0
	Total	250	100.0	

Table 18: I feel the reform in healthcare will succeed in making healthcare services cheaper to all gender of working class

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	20	4.0	4.0
	Disagreed	43	8.6	12.6
	Undecided	56	11.2	23.8
	Agree	279	55.8	79.6
	Strongly Agree	102	20.4	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	10	4.0	4.0
	Disagreed	16	6.4	10.4
	Undecided	39	15.6	26.0
	Agree	126	50.4	76.4
	Strongly Agree	59	23.6	100.0
	Total	250	100.0	

Table 19: I feel the reform in the healthcare will improve health care services to the old and retirees.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	34	6.8	6.8
	Disagreed	81	16.2	23.0
	Undecided	160	32.0	55.0
	Agree	166	33.2	88.2
	Strongly Agree	59	11.8	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	29	11.6	11.6
	Disagreed	35	14.0	25.6
	Undecided	37	14.8	40.4
	Agree	112	44.8	85.2
	Strongly Agree	37	14.8	100.0
	Total	250	100.0	

Table 20: I feel the reform is as a results of the high hospital bill associated with old age, poor and sick status of the working class.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	27	5.4	5.4
	Disagreed	81	16.2	21.6
	Undecided	158	31.6	53.2
	Agree	171	34.2	87.4
	Strongly Agree	63	12.6	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	14	5.6	5.6
	Disagreed	36	14.4	20.0
	Undecided	94	37.6	57.6
	Agree	83	33.2	90.8
	Strongly Agree	23	9.2	100.0
	Total	250	100.0	

Table 21: I feel the reform is as a results of increase in aging population in the country.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	12	2.4	2.4
	Disagreed	62	12.4	14.8
	Undecided	140	28.0	42.8
	Agree	239	47.8	90.6
	Strongly Agree	47	9.4	100.0

	Total	500	100.0	
Malaysia	Strongly Disagreed	31	12.4	12.4
	Disagreed	30	12.0	24.4
	Undecided	79	31.6	56.0
	Agree	89	35.6	91.6
	Strongly Agree	21	8.4	100.0
	Total	250	100.0	

Table 22: I feel the reform will reduced the use of age and gender identity as is the case with most healthcare and safety reforms when registering patients and treatments.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	20	4.0	4.0
	Disagreed	98	19.6	23.6
	Undecided	107	21.4	45.0
	Agree	230	46.0	91.0
	Strongly Agree	45	9.0	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	19	7.6	7.6
	Disagreed	29	11.6	19.2
	Undecided	84	33.6	52.8
	Agree	94	37.6	90.4
	Strongly Agree	24	9.6	100.0
	Total	250	100.0	

Table 23: I feel the reform will encourage the treatment of drunkard, smokers, size of family (lifestyle)for medical treatments in various working places.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	36	7.2	7.2
	Disagreed	143	28.6	35.8
	Undecided	173	34.6	70.4
	Agree	121	24.2	94.6
	Strongly Agree	27	5.4	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	26	10.4	10.4
	Disagreed	36	14.4	24.8
	Undecided	86	34.4	59.2
	Agree	79	31.6	90.8
	Strongly Agree	23	9.2	100.0
	Total	250	100.0	

Table 24: I feel the reform will reduce the use of health history, income and employment before getting better healthcare services.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	24	4.8	4.8
	Disagreed	84	16.8	21.6
	Undecided	131	26.2	47.8
	Agree	220	44.0	91.8
	Strongly Agree	41	8.2	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	12	4.8	4.8
	Disagreed	23	9.2	14.0
	Undecided	42	16.8	30.8
	Agree	120	48.0	78.8
	Strongly Agree	53	21.2	100.0
	Total	250	100.0	

Table 25: I feel the reform will ensures equity to healthcare services to workers/employees.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	8	1.6	1.6
	Disagreed	40	8.0	9.6
	Undecided	36	7.2	16.8
	Agree	311	62.2	79.0
	Strongly Agree	105	21.0	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	4	1.6	1.6
	Disagreed	14	5.6	7.2
	Undecided	35	14.0	21.2
	Agree	140	56.0	77.2
	Strongly Agree	57	22.8	100.0
	Total	250	100.0	

Table 26: I feel the reform will increase the number of time employees will attend clinics.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	25	5.0	5.0
	Disagreed	93	18.6	23.6
	Undecided	104	20.8	44.4
	Agree	206	41.2	85.6
	Strongly Agree	72	14.4	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	14	5.6	5.6

	Disagreed	23	9.2	14.8
	Undecided	73	29.2	44.0
	Agree	110	44.0	88.0
	Strongly Agree	30	12.0	100.0
	Total	250	100.0	

Table 27: I feel the equity provided by the government clinics before is better than the one provided with reformt in the healthcare sector.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	127	25.4	25.4
	Disagreed	186	37.2	62.6
	Undecided	55	11.0	73.6
	Agree	102	20.4	94.0
	Strongly Agree	30	6.0	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	33	13.2	13.2
	Disagreed	58	23.2	36.4
	Undecided	77	30.8	67.2
	Agree	61	24.4	91.6
	Strongly Agree	21	8.4	100.0
	Total	250	100.0	

Table 28:I feel healthcare and safety Services to the employees will, improves the reform than without it.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	11	2.2	2.2
	Disagreed	24	4.8	7.0
	Undecided	56	11.2	18.2
	Agree	309	61.8	80.0
	Strongly Agree	100	20.0	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	7	2.8	2.8
	Disagreed	16	6.4	9.2
	Undecided	65	26.0	35.2
	Agree	123	49.2	84.4
	Strongly Agree	39	15.6	100.0
	Total	250	100.0	

Table 29:I feel accessibility which improves equity will increase with reform in healthcare and safety services delivery than without it.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	14	2.8	2.8

	Disagreed	18	3.6	6.4
	Undecided	33	6.6	13.0
	Agree	334	66.8	79.8
	Strongly Agree	101	20.2	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	6	2.4	2.4
	Disagreed	16	6.4	8.8
	Undecided	64	25.6	34.4
	Agree	127	50.8	85.2
	Strongly Agree	37	14.8	100.0
	Total	250	100.0	

Table 30:I feel doctors and professionals became more accessible and ensure equity of consultation than without it.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	20	4.0	4.0
	Disagreed	35	7.0	11.0
	Undecided	83	16.6	27.6
	Agree	293	58.6	86.2
	Strongly Agree	69	13.8	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	5	2.0	2.0
	Disagreed	14	5.6	7.6
	Undecided	44	17.6	25.2
	Agree	135	54.0	79.2
	Strongly Agree	52	20.8	100.0
	Total	250	100.0	

Table 31:I feel reform will increase number of healthcare providers to employees which will increase choice.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	18	3.6	3.6
	Disagreed	42	8.4	12.0
	Undecided	82	16.4	28.4
	Agree	294	58.8	87.2
	Strongly Agree	64	12.8	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	6	2.4	2.4
	Disagreed	10	4.0	6.4
	Undecided	50	20.0	26.4
	Agree	128	51.2	77.6
	Strongly Agree	56	22.4	100.0

	Total	250	100.0	
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Table 32: I feel equity and fairness in hospital treatments to employees will increase with reform in the healthcare and safety than without it.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	14	2.8	2.8
	Disagreed	33	6.6	9.4
	Undecided	29	5.8	15.2
	Agree	287	57.4	72.6
	Strongly Agree	137	27.4	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	9	3.6	3.6
	Disagreed	22	8.8	12.4
	Undecided	81	32.4	44.8
	Agree	113	45.2	90.0
	Strongly Agree	25	10.0	100.0
	Total	250	100.0	

Table 33: I feel healthcare services will be more accessible to all employees with the reform than without it.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	26	5.2	5.2
	Disagreed	92	18.4	23.6
	Undecided	129	25.8	49.4
	Agree	224	44.8	94.2
	Strongly Agree	29	5.8	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	14	5.6	5.6
	Disagreed	25	10.0	15.6
	Undecided	75	30.0	45.6
	Agree	111	44.4	90.0
	Strongly Agree	25	10.0	100.0
	Total	250	100.0	

Table 34: I feel that, the reform will make hospitals to be within 3-5 kilometers to employees.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	26	5.2	5.2
	Disagreed	92	18.4	23.6
	Undecided	129	25.8	49.4
	Agree	224	44.8	94.2
	Strongly Agree	29	5.8	100.0

	Total	500	100.0	
Malaysia	Strongly Disagreed	14	5.6	5.6
	Disagreed	25	10.0	15.6
	Undecided	75	30.0	45.6
	Agree	111	44.4	90.0
	Strongly Agree	25	10.0	100.0
	Total	250	100.0	

Table 35: I feel that, the reform will ensure access to healthcare services to employees than without it.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	13	2.6	2.6
	Disagreed	27	5.4	8.0
	Undecided	50	10.0	18.0
	Agree	333	66.6	84.6
	Strongly Agree	77	15.4	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	6	2.4	2.4
	Disagreed	9	3.6	6.0
	Undecided	45	18.0	24.0
	Agree	133	53.2	77.2
	Strongly Agree	57	22.8	100.0
	Total	250	100.0	

Table 36: I feel that the reform will increase competition which improves services to the employees.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	12	2.4	2.4
	Disagreed	34	6.8	9.2
	Undecided	70	14.0	23.2
	Agree	296	59.2	82.4
	Strongly Agree	88	17.6	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	6	2.4	2.4
	Disagreed	20	8.0	10.4
	Undecided	69	27.6	38.0
	Agree	113	45.2	83.2
	Strongly Agree	42	16.8	100.0
	Total	250	100.0	

Table 37: I will support continuous reform in health care sector especially the existence of both private and public hospitals at a time.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	19	3.8	3.8
	Disagreed	25	5.0	8.8
	Undecided	39	7.8	16.6
	Agree	296	59.2	75.8
	Strongly Agree	121	24.2	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	8	3.2	3.2
	Disagreed	24	9.6	12.8
	Undecided	44	17.6	30.4
	Agree	100	40.0	70.4
	Strongly Agree	74	29.6	100.0
	Total	250	100.0	

Table 38: I would support the institution of age limits on children enjoying subsidy in healthcare services as from 18 years as independent of family dependency.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	223	44.6	44.6
	Disagreed	152	30.4	75.0
	Undecided	38	7.6	82.6
	Agree	67	13.4	96.0
	Strongly Agree	20	4.0	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	56	22.4	22.4
	Disagreed	53	21.2	43.6
	Undecided	61	24.4	68.0
	Agree	52	20.8	88.8
	Strongly Agree	28	11.2	100.0
	Total	250	100.0	

Table 39: I and family have more access to healthcare services with reform in the health sector.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	14	2.8	2.8
	Disagreed	46	9.2	12.0
	Undecided	61	12.2	24.2
	Agree	273	54.6	78.8
	Strongly Agree	106	21.2	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	11	4.4	4.4

	Disagreed	19	7.6	12.0
	Undecided	55	22.0	34.0
	Agree	104	41.6	75.6
	Strongly Agree	61	24.4	100.0
	Total	250	100.0	

Table 40: I feel the reform in healthcare sector is the best thing that happens to the workers/employees in the country

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	14	2.8	2.8
	Disagreed	45	9.0	11.8
	Undecided	62	12.4	24.2
	Agree	254	50.8	75.0
	Strongly Agree	125	25.0	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	7	2.8	2.8
	Disagreed	14	5.6	8.4
	Undecided	44	17.6	26.0
	Agree	134	53.6	79.6
	Strongly Agree	51	20.4	100.0
	Total	250	100.0	

Table 41: I feel the limits placed on four children entitle to enjoy subsidized healthcare per family is the best thing that happens to health care delivery in the country.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	146	29.2	29.2
	Disagreed	148	29.6	58.8
	Undecided	69	13.8	72.6
	Agree	93	18.6	91.2
	Strongly Agree	44	8.8	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	65	26.0	26.0
	Disagreed	48	19.2	45.2
	Undecided	48	19.2	64.4
	Agree	75	30.0	94.4
	Strongly Agree	14	5.6	100.0
	Total	250	100.0	

Table 42:I feel the reform did not improves the provision of expensive drugs to the patients in the country.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	37	7.4	7.4
	Disagreed	68	13.6	21.0
	Undecided	90	18.0	39.0
	Agree	181	36.2	75.2
	Strongly Agree	124	24.8	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	23	9.2	9.2
	Disagreed	52	20.8	30.0
	Undecided	86	34.4	64.4
	Agree	73	29.2	93.6
	Strongly Agree	16	6.4	100.0
	Total	250	100.0	

Table 43:I feel the most nurses and Pharmacists are rude to the patient despite the existence of reform in the health sector

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	35	7.0	7.0
	Disagreed	179	35.8	42.8
	Undecided	125	25.0	67.8
	Agree	116	23.2	91.0
	Strongly Agree	45	9.0	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	40	16.0	16.0
	Disagreed	52	20.8	36.8
	Undecided	81	32.4	69.2
	Agree	58	23.2	92.4
	Strongly Agree	19	7.6	100.0
	Total	250	100.0	

Table 44: I feel health care service is not affordable to most employees due to population increase and unbalanced resources distribution.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	35	7.0	7.0
	Disagreed	110	22.0	29.0
	Undecided	68	13.6	42.6
	Agree	208	41.6	84.2
	Strongly Agree	79	15.8	100.0
	Total	500	100.0	

Malaysia	Strongly Disagreed	9	3.6	3.6
	Disagreed	34	13.6	17.2
	Undecided	88	35.2	52.4
	Agree	80	32.0	84.4
	Strongly Agree	39	15.6	100.0
	Total	250	100.0	

Table 45:I feel that the retirees and widows hardly afford health care services after retirement and death of spouse.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	16	3.2	3.2
	Disagreed	51	10.2	13.4
	Undecided	128	25.6	39.0
	Agree	201	40.2	79.2
	Strongly Agree	104	20.8	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	23	9.2	9.2
	Disagreed	69	27.6	36.8
	Undecided	43	17.2	54.0
	Agree	81	32.4	86.4
	Strongly Agree	34	13.6	100.0
	Total	250	100.0	

Table 46:I feel that employees hardly afford home care due to high cost such services.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	21	4.2	4.2
	Disagreed	106	21.2	25.4
	Undecided	117	23.4	48.8
	Agree	178	35.6	84.4
	Strongly Agree	78	15.6	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	4	1.6	1.6
	Disagreed	17	6.8	8.4
	Undecided	30	12.0	20.4
	Agree	116	46.4	66.8
	Strongly Agree	83	33.2	100.0
	Total	250	100.0	

Table 47: I feel that home care is purely for the rich or highly educated employees

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	24	4.8	4.8
	Disagreed	104	20.8	25.6
	Undecided	75	15.0	40.6
	Agree	200	40.0	80.6
	Strongly Agree	97	19.4	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	6	2.4	2.4
	Disagreed	18	7.2	9.6
	Undecided	35	14.0	23.6
	Agree	109	43.6	67.2
	Strongly Agree	82	32.8	100.0
	Total	250	100.0	

Table 48: I feel that rising life expectancy will increase health care services demand, which will increase the price of health care services in the country.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	19	3.8	3.8
	Disagreed	96	19.2	23.0
	Undecided	155	31.0	54.0
	Agree	193	38.6	92.6
	Strongly Agree	37	7.4	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	7	2.8	2.8
	Disagreed	19	7.6	10.4
	Undecided	78	31.2	41.6
	Agree	116	46.4	88.0
	Strongly Agree	30	12.0	100.0
	Total	250	100.0	

Table 49: I feel that health care demand will encourage the coming up of health care insurance privately and public/government controlled in the country.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	11	2.2	2.2
	Disagreed	31	6.2	8.4
	Undecided	97	19.4	27.8
	Agree	315	63.0	90.8
	Strongly Agree	46	9.2	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	5	2.0	2.0

Disagreed	21	8.4	10.4
Undecided	98	39.2	49.6
Agree	99	39.6	89.2
Strongly Agree	27	10.8	100.0
Total	250	100.0	

Table 50: I feel that the reform in the health care sector will reduced employees' individual and collective expenses on health care services

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	18	3.6	3.6
	Disagreed	57	11.4	15.0
	Undecided	39	7.8	22.8
	Agree	277	55.4	78.2
	Strongly Agree	109	21.8	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	20	8.0	8.0
	Disagreed	39	15.6	23.6
	Undecided	69	27.6	51.2
	Agree	99	39.6	90.8
	Strongly Agree	23	9.2	100.0
	Total	250	100.0	

Table 51: I feel that demand for healthcare services will be triggered by poor health status not by affordability of the employees.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	15	3.0	3.0
	Disagreed	88	17.6	20.6
	Undecided	142	28.4	49.0
	Agree	222	44.4	93.4
	Strongly Agree	33	6.6	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	18	7.2	7.2
	Disagreed	26	10.4	17.6
	Undecided	94	37.6	55.2
	Agree	90	36.0	91.2
	Strongly Agree	22	8.8	100.0
	Total	250	100.0	

Table 52: I feel that employed families will have higher records of hospital attendance than the unemployed families.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	23	4.6	4.6
	Disagreed	74	14.8	19.4
	Undecided	55	11.0	30.4
	Agree	231	46.2	76.6
	Strongly Agree	117	23.4	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	23	9.2	9.2
	Disagreed	39	15.6	24.8
	Undecided	73	29.2	54.0
	Agree	91	36.4	90.4
	Strongly Agree	24	9.6	100.0
	Total	250	100.0	

Table 53: I feel that, the reform will enhance quality and hospital performance which will make services affordable to the employees

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	10	2.0	2.0
	Disagreed	32	6.4	8.4
	Undecided	60	12.0	20.4
	Agree	295	59.0	79.4
	Strongly Agree	103	20.6	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	3	1.2	1.2
	Disagreed	7	2.8	4.0
	Undecided	42	16.8	20.8
	Agree	145	58.0	78.8
	Strongly Agree	53	21.2	100.0
	Total	250	100.0	

Table 54: I feel that the continuous provision of health care services by the government will encourage over use of the hospital services by the employees

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	38	7.6	7.6
	Disagreed	134	26.8	34.4
	Undecided	93	18.6	53.0
	Agree	190	38.0	91.0
	Strongly Agree	45	9.0	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	8	3.2	3.2

	Disagreed	20	8.0	11.2
	Undecided	63	25.2	36.4
	Agree	120	48.0	84.4
	Strongly Agree	39	15.6	100.0
	Total	250	100.0	

Table 55: I feel that, the reform in healthcare sector will provides strong check and balances between healthcare providers and patients and healthcare and safety service providers.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	13	2.6	2.6
	Disagreed	53	10.6	13.2
	Undecided	102	20.4	33.6
	Agree	276	55.2	88.8
	Strongly Agree	56	11.2	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	6	2.4	2.4
	Disagreed	19	7.6	10.0
	Undecided	94	37.6	47.6
	Agree	100	40.0	87.6
	Strongly Agree	31	12.4	100.0
	Total	250	100.0	

Table 56: I feel that, the healthcare prices is basically subsidized by the government control mechanisms and not by the market forces.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	7	1.4	1.4
	Disagreed	47	9.4	10.8
	Undecided	91	18.2	29.0
	Agree	295	59.0	88.0
	Strongly Agree	60	12.0	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	23	9.2	9.2
	Disagreed	24	9.6	18.8
	Undecided	126	50.4	69.2
	Agree	63	25.2	94.4
	Strongly Agree	14	5.6	100.0
	Total	250	100.0	

Table 57: I feel that, reform will reduce the quality of health care provided to the employees, than without it, due to the stringent control by NHS..

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	56	11.2	11.2
	Disagreed	161	32.2	43.4
	Undecided	114	22.8	66.2
	Agree	146	29.2	95.4
	Strongly Agree	23	4.6	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	8	3.2	3.2
	Disagreed	32	12.8	16.0
	Undecided	135	54.0	70.0
	Agree	62	24.8	94.8
	Strongly Agree	13	5.2	100.0
	Total	250	100.0	

Table 58: I feel that, the employees will become vulnerable with the reform in health sector, than without it.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	24	4.8	4.8
	Disagreed	137	27.4	32.2
	Undecided	136	27.2	59.4
	Agree	175	35.0	94.4
	Strongly Agree	28	5.6	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	4	1.6	1.6
	Disagreed	22	8.8	10.4
	Undecided	91	36.4	46.8
	Agree	103	41.2	88.0
	Strongly Agree	30	12.0	100.0
	Total	250	100.0	

Table 59: I feel that, reform in the health care sector will not be the best for employees in the country due to poor tool of control in the system

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	42	8.4	8.4
	Disagreed	198	39.6	48.0
	Undecided	117	23.4	71.4
	Agree	122	24.4	95.8
	Strongly Agree	21	4.2	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	7	2.8	2.8

Disagreed	26	10.4	13.2
Undecided	82	32.8	46.0
Agree	96	38.4	84.4
Strongly Agree	39	15.6	100.0
Total	250	100.0	

Table 60: I feel that that poor supervision in the health care and safety reform will lead to lack of productivity which will affects the benefits accruing to employee.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	23	4.6	4.6
	Disagreed	130	26.0	30.6
	Undecided	112	22.4	53.0
	Agree	198	39.6	92.6
	Strongly Agree	37	7.4	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	11	4.4	4.4
	Disagreed	19	7.6	12.0
	Undecided	95	38.0	50.0
	Agree	94	37.6	87.6
	Strongly Agree	31	12.4	100.0
	Total	250	100.0	

Table 61: I feel that the government will control providers through National Health Scheme (NHS) by controlling the health maintenance organizations (HMO's) effectively for efficient service to the employees.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	7	1.4	1.4
	Disagreed	66	13.2	14.6
	Undecided	100	20.0	34.6
	Agree	259	51.8	86.4
	Strongly Agree	68	13.6	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	2	0.8	0.8
	Disagreed	6	2.4	3.2
	Undecided	134	53.6	56.8
	Agree	94	37.6	94.4
	Strongly Agree	14	5.6	100.0
	Total	250	100.0	

Table 62: I feel the tool for controlling healthcare providers for effective health care delivery for safety of the employee is through HMO's

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	5	1.0	1.0
	Disagreed	56	11.2	12.2
	Undecided	204	40.8	53.0
	Agree	205	41.0	94.0
	Strongly Agree	30	6.0	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	4	1.6	1.6
	Disagreed	17	6.8	8.4
	Undecided	134	53.6	62.0
	Agree	80	32.0	94.0
	Strongly Agree	15	6.0	100.0
	Total	250	100.0	

Table 63: I feel that the strict conditions associated with the registration of HMO's and healthcare providers, serves as one of the effective control mechanism in the reform.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	12	2.4	2.4
	Disagreed	55	11.0	13.4
	Undecided	124	24.8	38.2
	Agree	271	54.2	92.4
	Strongly Agree	38	7.6	100.0
	Total	500	100.0	
Malaysia	Strongly Disagreed	9	3.6	3.6
	Disagreed	14	5.6	9.2
	Undecided	140	56.0	65.2
	Agree	71	28.4	93.6
	Strongly Agree	16	6.4	100.0
	Total	250	100.0	

Table 64: I feel that, affordability, access, equity and efficiency in the healthcare delivery system started deteriorating as from 1980's to date not as a result of lack of control, but because of the existence of private clinics.

Country	Responses	Frequency	Percent	Cumulative Percent
Nigeria	Strongly Disagreed	45	9.0	9.0
	Disagreed	123	24.6	33.6
	Undecided	111	22.2	55.8
	Agree	163	32.6	88.4
	Strongly Agree	58	11.6	100.0

	Total	500	100.0	
Malaysia	Strongly Disagreed	22	8.8	8.8
	Disagreed	31	12.4	21.2
	Undecided	114	45.6	66.8
	Agree	62	24.8	91.6
	Strongly Agree	21	8.4	100.0
	Total	250	100.0	

APPENDIX C DESCRIPTIVE MEAN

Table 65: Descriptive Statistics 1

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q1)	500	3.48	0.057	1.273	<i>Agree</i>
	(Q2)	500	2.38	0.052	1.170	<i>Disagree</i>
	(Q3)	500	3.28	0.051	1.132	<i>Undecided</i>
	(Q4)	500	2.90	0.051	1.144	<i>Undecided</i>
Malaysia	(Q1)	250	3.58	0.072	1.131	<i>Agree</i>
	(Q2)	250	3.05	0.070	1.104	<i>Undecided</i>
	(Q3)	250	3.43	0.069	1.096	<i>Agree</i>
	(Q4)	250	2.78	0.072	1.136	<i>Undecided</i>

Table 66: Descriptive Statistics 2

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q5)	500	4.07	0.045	1.013	Agree
	(Q6)	500	3.68	0.053	1.184	Agree
	(Q7)	500	2.83	0.054	1.199	Undecided
	(Q8)	500	3.43	0.043	0.954	Agree
Malaysia	(Q5)	250	3.96	0.063	0.999	Agree
	(Q6)	250	3.61	0.075	1.185	Agree
	(Q7)	250	3.26	0.066	1.044	Undecided
	(Q8)	250	3.87	0.062	0.986	Agree

Table 67: Descriptive Statistics 3

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q9)	500	2.80	0.049	1.097	Undecided
	(Q10)	500	3.54	0.039	0.878	Agree
	(Q11)	500	3.75	0.042	0.936	Agree
	(Q12)	500	4.00	0.042	0.946	Agree
Malaysia	(Q9)	250	2.89	0.068	1.083	Undecided
	(Q10)	250	3.55	0.053	0.836	Agree
	(Q11)	250	3.70	0.053	0.842	Agree

	(Q12)	250	3.77	0.049	0.776	Agree
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Table 68: Descriptive Statistics 4

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q13)	500	3.80	0.043	0.962	Agree
	(Q14)	500	3.95	0.042	0.936	Agree
	(Q15)	500	3.89	0.041	0.924	Agree
	(Q16)	500	3.73	0.042	0.945	Agree
Malaysia	(Q13)	250	3.68	0.055	0.865	Agree
	(Q14)	250	3.39	0.060	0.952	Undecided
	(Q15)	250	3.45	0.062	0.977	Agree

	(16)	250	3.78	0.067	1.057	Agree
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Table 69: Descriptive Statistics 5

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q17)	500	3.90	0.040	0.896	Agree
	(Q18)	500	3.80	0.044	0.991	Agree
	(Q19)	500	3.27	0.048	1.080	Undecided
	(Q20)	500	3.32	0.047	1.059	Undecided
Malaysia	(Q17)	250	3.91	0.058	0.916	Agree
	(Q18)	250	3.83	0.063	0.992	Agree
	(Q19)	250	3.37	0.078	1.229	Undecided
	(Q20)	250	3.26	0.063	1.002	Undecided

Table 70: Descriptive Statistics 6

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q21)	500	3.49	0.041	0.912	Agree
	(Q22)	500	3.36	0.046	1.023	Undecided
	(Q23)	500	2.92	0.045	1.014	Undecided
	(Q24)	500	3.34	0.045	1.007	Undecided
Malaysia	(Q 21)	250	3.16	0.072	1.135	Undecided

	(Q22)	250	3.30	0.066	1.046	<i>Undecided</i>
	(Q23)	250	3.15	0.070	1.108	<i>Undecided</i>
	(Q24)	250	3.72	0.066	1.051	<i>Undecided</i>

Table 71: Descriptive Statistics 7

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q25)	500	3.93	0.039	0.862	<i>Agree</i>
	(Q26)	500	3.41	0.049	1.098	<i>Agree</i>
	(Q27)	500	2.44	0.055	1.235	<i>Undecided</i>
	(Q28)	500	3.93	0.037	0.835	<i>Agree</i>
Malaysia	(Q25)	250	3.93	0.054	0.857	<i>Agree</i>
	(Q26)	250	3.48	0.064	1.007	<i>Agree</i>
	(Q27)	250	2.92	0.073	1.157	<i>Undecided</i>
	(Q28)	250	3.68	0.058	0.910	<i>Agree</i>

Table 72: Descriptive Statistics 8

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q29)	500	3.98	0.036	0.815	<i>Agree</i>
	(Q30)	500	3.71	0.042	0.929	<i>Agree</i>
	(Q31)	500	3.80	0.040	0.888	<i>Agree</i>
	(Q32)	500	3.69	0.041	0.925	<i>Agree</i>
Malaysia	(Q29)	250	3.69	0.056	0.886	<i>Agree</i>

	(Q30)	250	3.86	0.056	0.878	Agree
	(Q31)	250	3.55	0.057	0.905	Agree
	(Q32)	250	3.87	0.056	0.887	Agree

Table 73: Descriptive Statistics 9

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q33)	500	4.00	0.041	0.922	Agree
	(Q34)	500	3.28	0.045	0.999	Undecided
	(Q35)	500	3.87	0.037	0.829	Agree
	(Q36)	500	3.83	0.039	0.881	Agree
Malaysia	(Q33)	250	3.49	0.058	0.919	Agree
	(Q34)	250	3.43	0.063	0.993	Agree
	(Q35)	250	3.90	0.055	0.873	Agree
	(Q36)	250	3.66	0.059	0.932	Agree

Table 74: Descriptive Statistics 10

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q37)	500	3.95	0.042	0.928	Agree
	(Q38)	500	2.02	0.053	1.192	Disagree
	(Q39)	500	3.82	0.043	0.961	Agree
	(Q40)	500	3.86	0.044	0.984	Agree

Malaysia	(Q37)	250	3.83	0.067	1.058	Agree
	(Q38)	250	2.77	0.083	1.311	Undecided
	(Q39)	250	3.74	0.066	1.049	Agree
	(Q40)	250	3.83	0.058	0.912	Agree

Table 75: Descriptive Statistics 11

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q41)	500	2.48	0.059	1.318	Disagree
	(Q42)	500	3.57	0.054	1.208	Agree
	(Q43)	500	2.91	0.049	1.107	Undecided
	(Q44)	500	3.37	0.053	1.188	Undecided
Malaysia	(Q41)	250	2.70	0.082	1.293	Undecided
	(Q42)	250	3.03	0.067	1.062	Undecided
	(Q43)	250	2.86	0.074	1.170	Undecided
	(Q44)	250	3.42	0.065	1.024	Undecided

Table : 76 Descriptive Statistics 12

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q45)	500	3.65	0.046	1.020	Agree
	(Q46)	500	3.37	0.049	1.106	Undecided
	(Q47)	500	3.48	0.052	1.159	Agree
	(Q48)	500	3.27	0.044	0.978	Undecided
Malaysia	(Q45)	250	3.14	0.077	1.225	Undecided

	(Q46)	250	4.03	0.059	0.933	Agree
	(Q47)	250	3.97	0.062	0.987	Agree
	(Q48)	250	3.57	0.057	0.899	Agree

Table 77: Descriptive Statistics 13

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q49)	500	3.71	0.036	0.805	Agree
	(Q50)	500	3.80	0.046	1.020	Agree
	(Q51)	500	3.34	0.042	0.943	Undecided
	(Q52)	500	3.69	0.050	1.121	Agree
Malaysia	(Q49)	250	3.49	0.055	0.870	Agree
	(Q50)	250	3.26	0.069	1.084	Undecided
	(Q51)	250	3.29	0.064	1.013	Undecided
	(Q52)	250	3.22	0.070	1.109	Undecided

Table 78: Descriptive Statistics 14

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q53)	500	3.90	0.039	0.868	Agree
	(Q54)	500	3.14	0.051	1.138	Undecided
	(Q55)	500	3.62	0.0410	0.911	Agree
	(Q56)	500	3.71	0.038	0.849	Agree
Malaysia	(Q53)	250	3.95	0.049	0.775	Agree

	(Q54)	250	3.65	0.060	0.946	Agree
	(Q55)	250	3.52	0.056	0.893	Agree
	(Q56)	250	3.08	0.061	0.968	Undecided

Table 79: Descriptive Statistics 15

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q57)	500	2.84	0.049	1.106	Undecided
	(Q58)	500	3.09	0.045	1.017	Undecided
	(Q59)	500	2.76	0.047	1.044	Undecided
	(Q60)	500	3.19	0.047	1.049	Undecided
Malaysia	(Q57)	250	3.16	0.053	0.830	Undecided
	(Q58)	250	3.53	0.055	0.874	Agree
	(Q59)	250	3.54	0.061	0.970	Agree
	(Q60)	250	3.46	0.061	0.957	Agree

Table 80: Descriptive Statistics 16

Country	Responses	N	Mean	Std. Error	Std. Deviation	Remark
Nigeria	(Q61)	500	3.63	0.041	0.925	Agree
	(Q62)	500	3.40	0.036	0.803	Agree
	(Q63)	500	3.54	0.039	0.875	Agree
	(Q64)	500	3.13	0.053	1.175	Undecided

APPENDIX D ANOVA

Table 81

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
eff	Hausa/Fulani	266	3.4664	.52319	.03208	3.4033	3.5296	1.53	4.67
	Yoruba	35	3.3219	.76312	.12899	3.0598	3.5840	1.47	4.53
	Igbo	15	3.3822	.38418	.09920	3.1695	3.5950	2.47	3.93
	Others in Nigeria	184	3.4591	.49817	.03673	3.3866	3.5315	1.73	4.60
	Malay	189	3.4681	.52973	.03853	3.3921	3.5441	1.93	5.00
	Chinese	32	3.4417	.49332	.08721	3.2638	3.6195	2.20	4.27
	Indian	20	3.5167	.36250	.08106	3.3470	3.6863	2.93	4.00
	Others in Malasia	9	3.3481	.59979	.19993	2.8871	3.8092	2.33	4.27
	Total	750	3.4555	.52501	.01917	3.4178	3.4931	1.47	5.00
demo	Hausa/Fulani	266	3.4833	.54221	.03324	3.4178	3.5487	1.33	4.89
	Yoruba	35	3.3810	.77557	.13110	3.1145	3.6474	1.78	4.56
	Igbo	15	3.3481	.84918	.21926	2.8779	3.8184	1.44	4.00
	Others in Nigeria	184	3.4487	.57628	.04248	3.3648	3.5325	1.78	4.89
	Malay	189	3.5073	.67588	.04916	3.4104	3.6043	1.56	5.00
	Chinese	32	3.4653	.67994	.12020	3.2201	3.7104	1.56	4.11
	Indian	20	3.5500	.44514	.09954	3.3417	3.7583	2.56	4.11
	Others in Malasia	9	3.2840	.70516	.23505	2.7419	3.8260	2.22	4.00
	Total	750	3.4720	.60980	.02227	3.4283	3.5157	1.33	5.00
equit	Hausa/Fulani	266	3.6490	.53438	.03277	3.5845	3.7135	1.50	5.00
	Yoruba	35	3.3571	.79181	.13384	3.0851	3.6291	1.38	4.50
	Igbo	15	3.4667	.51206	.13221	3.1831	3.7502	2.50	4.38
	Others in Nigeria	184	3.6168	.57700	.04254	3.5329	3.7008	1.25	5.00
	Malay	189	3.6124	.53401	.03884	3.5358	3.6891	2.00	5.00
	Chinese	32	3.6641	.52598	.09298	3.4744	3.8537	2.50	4.50
	Indian	20	3.7188	.41532	.09287	3.5244	3.9131	3.13	4.63
	Others in Malasia	9	3.4722	.44973	.14991	3.1265	3.8179	2.88	4.25
	Total	750	3.6150	.55668	.02033	3.5751	3.6549	1.25	5.00
acc	Hausa/Fulani	266	3.4655	.47136	.02890	3.4086	3.5224	1.45	4.36
	Yoruba	35	3.2260	.55752	.09424	3.0345	3.4175	1.55	4.00
	Igbo	15	3.3879	.45645	.11785	3.1351	3.6407	2.64	4.18
	Others in Nigeria	184	3.3874	.46605	.03436	3.3196	3.4551	1.64	4.55
	Malay	189	3.3882	.51653	.03757	3.3141	3.4623	2.00	4.64
	Chinese	32	3.3835	.42120	.07446	3.2317	3.5354	2.27	4.27
	Indian	20	3.4591	.34330	.07676	3.2984	3.6198	2.91	4.45
	Others in Malasia	9	3.1919	.46007	.15336	2.8383	3.5456	2.36	3.91
	Total	750	3.4072	.48252	.01762	3.3726	3.4417	1.45	4.64
affor	Hausa/Fulani	266	3.5796	.49882	.03058	3.5194	3.6399	1.45	4.55
	Yoruba	35	3.3792	.49228	.08321	3.2101	3.5483	2.45	4.45
	Igbo	15	3.0424	.64178	.16571	2.6870	3.3978	1.55	4.00
	Others in Nigeria	184	3.5010	.56935	.04197	3.4182	3.5838	1.36	4.82
	Malay	189	3.5527	.43999	.03200	3.4895	3.6158	2.00	4.64
	Chinese	32	3.6193	.33016	.05836	3.5003	3.7384	3.00	4.45
	Indian	20	3.5045	.42587	.09523	3.3052	3.7039	2.64	4.18

Multiple Comparisons
Table 82

Dependent Variable	(I) Ethnic Group	(J) Ethnic Group	Mean Difference (I-J)		Std. Error	Sig.	95% Confidence Interval	
			Lower Bound	Upper Bound			Lower Bound	Upper Bound
eff	Tukey HSD	Hausa/Fulani	.14451	.09463	.793	-.1431	.4321	
		Igbo	.08419	.13966	.999	-.3403	.5087	
		Others in Nigeria	.00736	.05046	1.000	-.1460	.1607	
		Malay	-.00166	.05006	1.000	-.1538	.1505	
		Chinese	.02475	.09847	1.000	-.2745	.3240	
		Indian	-.05025	.12202	1.000	-.4211	.3206	
		Others in Malasia	.11827	.17836	.998	-.4239	.6604	
		Hausa/Fulani	-.14451	.09463	.793	-.4321	.1431	
		Igbo	-.06032	.16241	1.000	-.5540	.4333	
		Others in Nigeria	-.13715	.09705	.851	-.4321	.1578	
		Malay	-.14617	.09684	.802	-.4405	.1482	
		Chinese	-.11976	.12871	.983	-.5110	.2715	
		Indian	-.19476	.14751	.891	-.6431	.2536	
		Others in Malasia	-.02624	.19668	1.000	-.6241	.5716	
Igbo	Igbo	Hausa/Fulani	-.08419	.13966	.999	-.5087	.3403	
		Yoruba	.06032	.16241	1.000	-.4333	.5540	
		Others in Nigeria	-.07684	.14131	.999	-.5064	.3527	
		Malay	-.08586	.14117	.999	-.5149	.3432	
		Chinese	-.05944	.16467	1.000	-.5600	.4411	
		Indian	-.13444	.17975	.995	-.6808	.4119	
		Others in Malasia	.03407	.22189	1.000	-.6404	.7085	
		Hausa/Fulani	-.00736	.05046	1.000	-.1607	.1460	
		Yoruba	.13715	.09705	.851	-.1578	.4321	
		Igbo	.07684	.14131	.999	-.3527	.5064	
		Malay	-.00902	.05450	1.000	-.1747	.1566	
		Chinese	.01739	.10080	1.000	-.2890	.3238	
		Indian	-.05761	.12391	1.000	-.4342	.3190	
		Others in Malasia	.11091	.17966	.999	-.4352	.6570	
Malay	Malay	Hausa/Fulani	.00166	.05006	1.000	-.1505	.1538	
		Yoruba	.14617	.09684	.802	-.1482	.4405	
		Igbo	.08586	.14117	.999	-.3432	.5149	
		Others in Nigeria	.00902	.05450	1.000	-.1566	.1747	
		Chinese	.02641	.10060	1.000	-.2794	.3322	
		Indian	-.04859	.12374	1.000	-.4247	.3275	
		Others in Malasia	.11993	.17955	.998	-.4258	.6657	
		Hausa/Fulani	-.02475	.09847	1.000	-.3240	.2745	
		Yoruba	.11976	.12871	.983	-.2715	.5110	
		Igbo	.05944	.16467	1.000	-.4411	.5600	
		Others in	-.01739	.10080	1.000	-.3238	.2890	

Table 83

Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
eff	Formal sector/publi/private	675	3.4600	.51243	.01972	3.4213	3.4988	1.47	4.67
	Informal sector/own business	14	3.1429	.74918	.20023	2.7103	3.5754	1.73	4.00
	irregular source of income	9	3.3481	.41201	.13734	3.0314	3.6648	2.33	3.73
	Regular source of income	44	3.5197	.64115	.09666	3.3248	3.7146	1.47	5.00
	Professional	8	3.3833	.45180	.15974	3.0056	3.7611	2.87	4.27
	Total	750	3.4555	.52501	.01917	3.4178	3.4931	1.47	5.00
demo	Formal sector/publi/private	675	3.4912	.59609	.02294	3.4461	3.5362	1.33	5.00
	Informal sector/own business	14	2.8651	.94400	.25229	2.3200	3.4101	1.44	4.00
	irregular source of income	9	3.4815	.72222	.24074	2.9263	4.0366	2.11	4.78
	Regular source of income	44	3.3965	.60593	.09135	3.2122	3.5807	1.78	4.44
	Professional	8	3.3194	.48409	.17115	2.9147	3.7242	2.67	4.11
	Total	750	3.4720	.60980	.02227	3.4283	3.5157	1.33	5.00
equ	Formal sector/publi/private	675	3.6307	.55568	.02139	3.5887	3.6727	1.25	5.00
	Informal sector/own business	14	3.1250	.65413	.17482	2.7473	3.5027	2.00	4.13
	irregular source of income	9	3.5417	.90139	.30046	2.8488	4.2345	1.38	4.25
	Regular source of income	44	3.5568	.40117	.06048	3.4349	3.6788	2.00	4.38
	Professional	8	3.5469	.42225	.14929	3.1939	3.8999	3.00	4.25
	Total	750	3.6150	.55668	.02033	3.5751	3.6549	1.25	5.00
acc	Formal sector/publi/private	675	3.4124	.48417	.01864	3.3758	3.4490	1.45	4.64
	Informal sector/own business	14	3.1883	.56206	.15022	2.8638	3.5128	2.36	4.00
	irregular source of income	9	3.4545	.57316	.19105	3.0140	3.8951	2.18	4.18
	Regular source of income	44	3.3781	.43441	.06549	3.2460	3.5102	2.64	4.27
	Professional	8	3.4545	.33314	.11778	3.1760	3.7331	3.00	4.09
	Total	750	3.4072	.48252	.01762	3.3726	3.4417	1.45	4.64
affor	Formal sector/publi/private	675	3.5339	.48610	.01871	3.4971	3.5706	1.36	4.73
	Informal sector/own business	14	3.0065	.96306	.25739	2.4504	3.5625	1.55	4.27
	irregular source of income	9	3.7374	.69151	.23050	3.2058	4.2689	2.45	4.82
	Regular source of income	44	3.5826	.47555	.07169	3.4381	3.7272	2.45	4.55
	Professional	8	3.4545	.45324	.16025	3.0756	3.8335	2.91	4.36
	Total	750	3.5285	.50460	.01843	3.4923	3.5647	1.36	4.82
con	Formal sector/publi/private	675	3.3130	.50379	.01939	3.2750	3.3511	1.50	4.70
	Informal sector/own business	14	2.9357	.76118	.20343	2.4962	3.3752	1.50	4.20
	irregular source of income	9	3.4778	.74293	.24764	2.9067	4.0488	1.90	4.70
	Regular source of income	44	3.3455	.44849	.06761	3.2091	3.4818	2.60	4.20
	Professional	8	3.3250	.47132	.16664	2.9310	3.7190	2.90	4.30
	Total	750	3.3100	.51089	.01866	3.2734	3.3466	1.50	4.70

DESCRIPTIVE STATISTICS
Table 84

Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
						3.3221	3.4598	1.47	5.00
eff	Public/governmental hospital	206	3.3909	.50123	.03492	3.3221	3.4598	1.47	5.00
	Private hospitals	229	3.5249	.50624	.03345	3.4590	3.5908	1.53	4.67
	Both Private and Public Hospitals	315	3.4472	.54868	.03091	3.3864	3.5080	1.73	4.60
	Total	750	3.4555	.52501	.01917	3.4178	3.4931	1.47	5.00
demo	Public/governmental hospital	206	3.5437	.53752	.03745	3.4699	3.6175	1.33	5.00
	Private hospitals	229	3.4474	.59671	.03943	3.3697	3.5251	1.44	4.89
	Both Private and Public Hospitals	315	3.4430	.65967	.03717	3.3699	3.5162	1.56	5.00
	Total	750	3.4720	.60980	.02227	3.4283	3.5157	1.33	5.00
equ	Public/governmental hospital	206	3.6632	.47544	.03133	3.5979	3.7285	1.63	4.63
	Private hospitals	229	3.5852	.57017	.03768	3.5109	3.6594	1.38	5.00
	Both Private and Public Hospitals	315	3.6052	.59440	.03349	3.5393	3.6711	1.25	5.00
	Total	750	3.6150	.55668	.02033	3.5751	3.6549	1.25	5.00
acc	Public/governmental hospital	206	3.4329	.45660	.03181	3.3702	3.4956	1.55	4.27
	Private hospitals	229	3.4383	.47497	.03139	3.3764	3.5001	1.45	4.45
	Both Private and Public Hospitals	315	3.3677	.50275	.02833	3.3119	3.4234	2.00	4.64
	Total	750	3.4072	.48252	.01762	3.3726	3.4417	1.45	4.64
affor	Public/governmental hospital	206	3.5362	.47865	.03335	3.4704	3.6019	1.45	4.55
	Private hospitals	229	3.4915	.56225	.03715	3.4183	3.5647	1.36	4.82
	Both Private and Public Hospitals	315	3.5504	.47615	.02683	3.4976	3.6031	2.00	4.73
	Total	750	3.5285	.50460	.01843	3.4923	3.5647	1.36	4.82
con	Public/governmental hospital	206	3.2976	.48805	.03400	3.2305	3.3646	1.50	4.70
	Private hospitals	229	3.3550	.55499	.03667	3.2828	3.4273	1.50	4.70
	Both Private and Public Hospitals	315	3.2854	.49117	.02767	3.2309	3.3398	1.60	4.70
	Total	750	3.3100	.51089	.01866	3.2734	3.3466	1.50	4.70

MULTIPLE COMPARISON
Table 85

Multiple Comparisons

Dependent Variable		(I) Clinic Attended	(J) Clinic Attended	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
eff	Tukey HSD	Public/governmental hospital	Private hospitals	-.13395(*)	.05024	.021	-.2519	-.0160
			Both Private and Public Hospitals	-.05626	.04688	.453	-.1663	.0538
		Private hospitals	Public/governmental hospital	.13395(*)	.05024	.021	.0160	.2519
			Both Private and Public Hospitals	.07770	.04543	.202	-.0290	.1844
		Both Private and Public Hospitals	Public/governmental hospital	.05626	.04688	.453	-.0538	.1663
	LSD	Public/governmental hospital	Private hospitals	.07770	.04543	.202	-.1844	.0290
			Both Private and Public Hospitals	-.05626	.04688	.231	-.1483	.0358
		Private hospitals	Public/governmental hospital	.13395(*)	.05024	.008	.0353	.2326
		Both Private and Public Hospitals	Both Private and Public Hospitals	.07770	.04543	.088	-.0115	.1669
			Public/governmental hospital	.05626	.04688	.231	-.0358	.1483
			Private hospitals	.07770	.04543	.088	-.1669	.0115
demo	Tukey HSD	Public/governmental hospital	Private hospitals	.09633	.05848	.227	-.0410	.2337
			Both Private and Public Hospitals	.10066	.05457	.156	-.0275	.2288
		Private hospitals	Public/governmental hospital	-.09633	.05848	.227	-.2337	.0410
			Both Private and Public Hospitals	.00432	.05289	.996	-.1199	.1285
		Both Private and Public Hospitals	Public/governmental hospital	-.10066	.05457	.156	-.2288	.0275
	LSD	Public/governmental hospital	Private hospitals	-.00432	.05289	.996	-.1285	.1199
			Private hospitals	.09633	.05848	.100	-.0185	.2111
		Both Private and Public Hospitals	Both Private and Public Hospitals	.10066	.05457	.066	-.0065	.2078
			Public/governmental hospital	-.09633	.05848	.100	-.2111	.0185
		Private hospitals	Both Private and Public Hospitals	.00432	.05289	.935	-.0995	.1081
			Both Private and Public Hospitals	-.10066	.05457	.066	-.2078	.0065
			Private hospitals	-.00432	.05289	.935	-.1081	.0995
equ	Tukey HSD	Public/governmental hospital	Private hospitals	.07808	.05345	.311	-.0474	.2036
			Both Private and Public Hospitals	.05807	.04987	.475	-.0590	.1752
		Private hospitals	Public/governmental hospital	-.07808	.05345	.311	-.2036	.0474
			Both Private and Public	-.02001	.04833	.910	-.1335	.0935

APPENDIX E

Difference in Difference Model Formular

In this case, the required DD model is of the form:

$$Y_i = \beta_0 + \beta_1 P + \beta_2 N + \beta_3 (P * N) + e_i$$

Where;

Y_i is the average response with respect to the efficacy of the scheme

P is the period dummy for the NHS scheme

N is the country dummy for Nigeria

$P * N$ is the interaction of the period and Nigeria's dummy

e_i is the random error component

We can display the coefficients as follows:

Period	Country	Total
	Malaysia	Nigeria
Before the scheme	A	B
After the scheme	C	D
Total	$a+c$	$b+d$
		$a + b + c + d$

The relationships between the coefficients are as follows:

Coefficients	DD values	Interpretation
β_0	Constant	<i>Impact before the scheme</i>
β_1	<i>Malaysia-Nigeria</i>	<i>Excess of Malaysia</i>
β_2	<i>After- Before</i>	<i>Impact of the scheme</i>
β_3	<i>Interaction</i>	<i>Not relevant in this model</i>

Hence, the required regression model is of the form given below:

$$Y_i = \beta_0 + \beta_1 D_{1i} + \beta_2 D_{2i} + \varepsilon_i$$

Where;

Y_i = is the average response with respect to the efficacy of the scheme

β_0 = Population regression constant

β_1 = Population regression coefficient for country

β_2 = Population regression coefficient for period

$\varepsilon_i \sim N(0, \sigma^2)$ = Random error component

Equation above is always estimated by the model given below:

$$\hat{Y}_i = \hat{\beta}_0 + \hat{\beta}_1 D_{1i} + \hat{\beta}_2 D_{2i}$$

Where;

\hat{Y}_i = Estimated average response with respect to the efficacy of the scheme

$\hat{\beta}_0$ = Estimated regression constant

$\hat{\beta}_1$ = Estimated regression coefficient for country

$\hat{\beta}_2$ = Estimated regression coefficient for period

D_{1i} = Country ($D_{1i} = 1$ Nigeria and $D_{1i} = 0$ Malaysia)

D_{2i} = Period ($D_{2i} = 1$ after the NHS scheme and $D_{2i} = 0$ before the NHS scheme)

Recall the estimated model above: $\hat{Y}_i = \hat{\beta}_0 + \hat{\beta}_1 D_{1i} + \hat{\beta}_2 D_{2i}$. Where the parameters are obtained through the method of least squares by solving the following systems of normal equations:

$$\sum_{i=1}^n \hat{Y}_i = \hat{\beta}_0 n + \hat{\beta}_1 \sum_{i=1}^n D_{1i} + \hat{\beta}_2 \sum_{i=1}^n D_{2i} \quad (1)$$

$$\sum_{i=1}^n D_{1i} \hat{Y}_i = \hat{\beta}_0 \sum_{i=1}^n D_{1i} + \hat{\beta}_1 \sum_{i=1}^n D_{1i}^2 + \hat{\beta}_2 \sum_{i=1}^n D_{1i} D_{2i} \quad (2)$$

$$\sum_{i=1}^n D_{2i} \hat{Y}_i = \hat{\beta}_0 \sum_{i=1}^n D_{2i} + \hat{\beta}_1 \sum_{i=1}^n D_{1i} D_{2i} + \hat{\beta}_2 \sum_{i=1}^n D_{2i}^2 \quad (3)$$