Public-Private Partnerships for Health Systems Strengthening: Case Studies from Nigeria

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Public-Private Partnerships for Health Systems Strengthening: Case Studies from Nigeria

This thesis is submitted in partial fulfilment of the requirement for the degree of Master in International Health

By

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Declaration: This thesis 'Public-Private Partnerships for Health Systems Strengthening: Case Studies from Nigeria' is my own work and where other peoples' work have been used, this has been carefully acknowledged and referenced in accordance with departmental requirements

Signature.....

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Executive Summary

Public-Private Partnerships (PPPs) are currently dominating the global health agenda as powerful strategies for improving health care delivery in developing countries. However the increasing calls for health-related PPPs have not been matched with corresponding amount of evidence to demonstrate the effectiveness of this approach. This creates information gaps to be further explored.

This study aimed to analyze health-related PPPs with two selected case studies in Nigeria to evaluate the effectiveness of this approach.

Methodology: Exploratory case study with desk review and seven key informant interviews.

Findings: From this study, the partnerships' aligned and integrated into the national health strategies. They also stimulated increased public spending on healthcare and scale-up of the health intervention through management efficiency, operational research and high level advocacy. Although they targeted poor and vulnerable groups, these groups were yet to receive the maximum benefits from their schemes. Moreover the schemes were not yet self-sustainable without heavy subsidization from the partnerships.

Conclusions: PPPs can serve as catalytic instruments for health system strengthening. The case studies show medium-term sustainability, but longer term sustainability remains to be evaluated.

Recommendations: PPPs do benefit from conducting independent evaluation of their programs but these benefits will be maximized if these evaluations include assessment of trust, governance and efficiency of the partnerships.

Further research on strategies to address the needs of the poorest and most vulnerable groups are required for optimal distribution of benefits of health interventions.

Key words: *Public-Private Partnerships; health system strengthening; system thinking; Sub-Saharan Africa; Nigeria.*

Word Count: 13, 106

Acronyms

AFP	African Philanthropy Forum
ANC	Antenatal care
BIA	Benefit Incident Analysis
FMOH	Federal Ministry of Health
GDP	Gross Domestic Product
GMoU	Global Memorandum of Understanding
GPF	Global Philanthropy Forum
HCHC	Hygeia Community Health Care
HDI	Human Development Index
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome
HMO	Health Maintenance Organization
KIT	Royal Tropical Institute
Kwara CHIS	Kwara State Community Health Insurance Scheme
LGA	Local Government Area
MoU	Memorandum of Understanding
NBS	National Bureau of Statistics
NDHS	Nigerian Demographic Health Survey
NHA	National Health Accounts
NPC	National Population Commission
NSHDP	National Strategic Health Development Plan
OCH	Obio Cottage Hospital
PHN	Private Health Sector Alliance of Nigeria
PMTCT	Prevention of Mother to Child Transmission
PPP(s)	Public-Private Partnership(s)
Shell CHIS	Shell Petroleum Community Health Insurance Scheme
SPDC	Shell Petroleum Development Company Nigeria
UNDP	United Nations Development Programme
WEF	World Economic Forum
WHO	World Health Organization

NHIS	National Health Insurance Scheme
CHIS	Community Health Insurance Scheme

Glossary

System Thinking	'System thinking is an approach problem solving that views 'problems' as part of a wider, dynamic system' (WHO, 2009).
Inclusive Business Models	'Inclusive business models means doing business with low-income populations anywhere with a company's value chain, including them in the supply, production, distribution and/or marketing of goods and services' (UNDP, 2012).
Strategic Philanthropy	'The practice of companies by which they target their respective charitable and philanthropic activities around a specific issue or cause that will in turn support their own business objectives' (DWDG, 2014).
Lean Management	''Lean' is a production philosophy that considers the expenditure of resources in any aspect other than the direct creation of value for the end customer to be wasteful, and thus a target for elimination' (Wikipedia, 2014)
Change Mindset	A strategy to embed research within the decision-making at all stages of policy and programme development (WHO, 2012).
Core Competencies	'A harmonized combination of multiple resources and skills that distinguish a firm in the marketplace' (Schilling, 2013)

Introduction

Public-Private Partnerships (PPPs) are currently dominating the global health agenda as powerful strategies for improving health care delivery in developing countries. However there are still significant evidence gap on how the PPPs can strengthen health systems. It is therefore imperative to analyze the health-related PPPs in-order to contribute to existing evidence on how the partnerships can serve as mechanisms for health system strengthening.

Policy makers in global health (e.g. World Health Organizations (WHO)) and members of the business community such as the World Economic Forum (WEF), argue that the PPPs for health are vital due to the limited resources and management skills for health in the public sector (WHO, 2010; WEF, 2007)**.** The critical preconditions required for complete state-led health initiatives to work such as high per capital Gross Domestic Product (GDP), state capacity for mobilization of taxes and effective health policy implementation at all levels of government are not present in most developing countries especially in Africa (Schellekens et al. 2007; ILO, 2002). In the absence of these prerequisites, the health systems are underfunded and inefficient (Schellekens et.al. 2007). These inefficiencies were a key driver for health reforms and establishing PPPs was seen as one of the mechanisms developed to address these complex problems (Shaw et al. 1994).

On the other hand, Buse and Harmer (2004) suggested that the discussions depicting PPPs for health interventions as both inevitable and imperative may inhibit broader analysis of alternative value-for-money public sector investments. They argue that these dominant discourses on PPPs are mostly driven by the private sector stakeholders as they are progressively shaping international agenda, and because the immense resources of the private sector are seen to be critical for advancing global health initiatives (Buse & Harmer, 2004). Oxfam also argues that market-led or for-profit private sector engagement in health often leads to inequities in health care delivery, especially for the poorest and most vulnerable (Oxfam, 2006).

Evidence for the success of the PPPs for health interventions remain mixed, for instance UNAIDS (2009) identified Sodge Bank in Haiti (a principal recipient of Global Fund Grants) as an exemplary success story of a PPP in implementing HIV interventions in the country (UNAIDS, 2009). However, Oxfam (2014) raised concerns that the International Finance Corporation (IFC)'s flagship PPP for health in Lesotho was negatively impacting on the finances of country's ministry of health (Oxfam, 2014).

Defining PPPs

Public-Private Partnerships are commonly defined as formal collaborations between the public and private sectors in the country where the partnership is implemented (FMOH, 2010; UNAIDS, 2009; WEF, 2009). This partnership entails a formal agreement such as Memorandum of Understanding (MOU) or contract documents, joint objectives, mutual contributions and an interaction in partnership management (FMOH, 2010; UNAIDS 2009; WEF, 2009). The private sector here refers to not-for-profit organizations like NGOs**,** civil society organizations, and for-profit organizations such as commercial enterprises and foundations; while the public sector includes ministries and government agencies both at country and international level (Sania, 2004; FMOH, 2010; WEF, 2009).

Evolution of PPPs

PPPs are not new concepts in the international community but have evolved over time. This concept was introduced between 1919 and 1939 as new instruments for governance due to the significant shifts in the political and economic landscapes influencing health policies in many countries (Loughlin and Berridge, 2002). See Annex 1 for an overview.

Focus on commercial enterprises and their foundations

The Nigerian Ministry of Health's PPP Policy elaborates on different types of public-private partnerships such as contractual agreements; concessions; or partnerships where the public and private partners play active roles (FMOH, 2005). This paper will focus on PPPs where both the public and private (commercial enterprises) partners play active roles, with a broad strategy for health interventions that drive towards sustainability (Sania, 2004; FMOH, 2005; UNAIDS, 2009).

The challenges of health and development are complex and interdependent, thus the capacities to address these challenges does not rest on one sector alone, but are shared between both the public and private sectors (WEF, 2005). The global health and business community advocates that commercial enterprises as drivers of economic growth have important roles to play in health and development (Penny Davies, 2011). The growing evidence as illustrated by WHO shows that at a macro level, business involvement in healthcare and health outcomes itself can become a virtuous cycle, as fighting diseases, improving healthcare and increasing life expectancy are crucial for driving economic growth, and in-turn lead to sustainable business growth and market expansion (WHO, 2001).

The role of business in society is expected to change as companies are being held accountable as to how their core competencies can be used to address broader societal issues (WHO, 2001; WEF 2005). From the UN Summit on MDGs (2010) assumptions are that the leading companies of the future will be those whose core businesses are aligned to addressing major societal and developmental challenges (UN, 2010; Blanchfield et al. 2010).

This study will review the available evidence to demonstrate how corporate-driven public-private partnerships in Nigeria can contribute to the strengthening of health systems and the impact they may have on health.

Chapter 1

Country overview

1.1. Background

1.1.1. Geography and Demography

Nigeria is the most populous country in Africa with an estimated population of 170 million and more than 250 different ethnic groups (National Population Commission (NPC), 2014). The major religions are Christianity (50%), Islam (49%) and other indigenous religions (1%) (NPC, 2014). The country operates a federal level government, with 36 states, a Federal Capital Territory, and 774 Local Government Area (NBS, 2014). These figures highlight the challenges associated with managing such a complex and diverse country.

1.1.2. Economy

Nigeria is considered as a middle income country with a mixed economy, and as of 2014 its economy became the largest in Africa in-terms of GDP (National Bureau of Statistics (NBS), 2014). This significant growth is driven in-part by a vibrant and expanding private sector (NBS, 2014). However, this growth is not broad-based and inclusive, as poverty still persists. The GDP per capita was $3,010 in 2013, and Gini coefficient of 48.8 in 2010 showed that the income distribution is skewed with high levels of inequality (World Bank (WB)). Nigeria's rating on the Human Development Index (HDI) is very low at 153 out of 187 countries with HDI data for 2012, despite the country's GDP per capita (UNDP, 2013). For instance 63% of the population live on less than $1 a day and many lack access to safe drinking water and basic sanitation (39% and 70% respectively) (NBS 2014; National Population Commission (NPC), 2013).

1.1.3. Health Status

Many of Nigeria's health indicators have remained poor over the past decades irrespective of the government's efforts to improve healthcare provision (FMOH, 2010). There are marked inequalities in health status and access to health care between the states and six geo-political zones of the country. According to key health indicators, health status is worse in the northern parts than in the southern parts of the country (NPC, 2013). The complexities in the economic, educational, religious, political, cultural and behavioral environments are factors that can account for the inequities in health outcomes in the country. See Table 1.

Table 1. Country Development Indices adapted from (NPC, 2013; UNDP, 2013; FMOH, 2010, NACA GARPR; 2012)

Under-5 mortality	Neonatal Mortality	Life Expectancy at birth (years)	Maternal Mortality Ratio	HIV Prevalence rate	Adult (15+) Literacy rate %	Children Underweight for age	Human Development Index
128 (per 1000 live births)	37 (per 1000 live births)	52	800 (deaths per 100,000 live births)	4.2%	71.0	29 (% ages 0-5)	153 out of 187 countries with data

1.2. The Nigerian Health System

The Nigerian health systems includes the formal health sector as well as alternative and traditional systems of health care which are regulated by the government. There are primary, secondary and tertiary levels of health care delivery in the country.

1.2.1. Organization and management of the public health sector

Nigeria has a devolved health system in which the local government (LG) is responsible for primary care, state government for secondary care and the federal government for tertiary care (FMOH, 2010; NBS, 2014). Each level is largely self-governing under its own jurisdiction. This limits the power of the federal government to influence other levels of government to invest in social services such as public healthcare (FHOM, 2010). However this can also reduce bureaucratic bottlenecks in developing strategies and partnerships that suit the state and local government contexts (Schellekens et al. 2007).

The public health system is in a poor state, with weak infrastructure, limited human resources, poor service coverage and lack of essential drugs (FMOH, 2010). For instance the capacity to provide basic emergency obstetric services is very limited as only 20% of facilities are able to provide these services (FMOH, 2010).

1.2.2. Private Health Sector

The corporate private sector has always played a role in the health system in Nigeria. The first introduction of modern medical services in the country was in the early 19th century from the western merchants (United African Company and The Royal Niger Company) and colonial governments to treat their staff and protect their commercial interest in the country (Scott-Emuakpor et al. 2010). See Annex 2.

Currently, the private health sector is poorly integrated into the public health system (FMOH, 2005; USAID, 2009). This indicates that possible synergies in both sector are missed and potential impacts remain unrealized (FMOH 2005, 2010). Due to the inability of the public sector to deliver quality healthcare efficiently, the private sector by default to fills in this gap (FMOH 2010; USAID 2007; Schellekens et al. 2007). The private sector is responsible for about 70% of the national health expenditure and about 50% of the health facilities in the country (FMOH, 2010).

1.2.3. Healthcare Financing

The federal government allocates funds to federal, states and local ministries of health. The states and local government have the autonomy over utilization of their funds and are not obligated to report budgets and expenditures to the FG (FMOH, 2010). This budgetary arrangement may create vulnerability to misuse of public funds in the system (FMOH, 2010).

The public budget allocation for health was only 6% in 2012 well below the Abuja declaration of 15% for the health sector budget allocation, showing insufficient prioritization of health (FMOH, 2010). Consequently household expenditure (out-of-pocket) on health is extremely high at 69% of the total health expenditure shown in Figure 1 (FMOH, 2010).

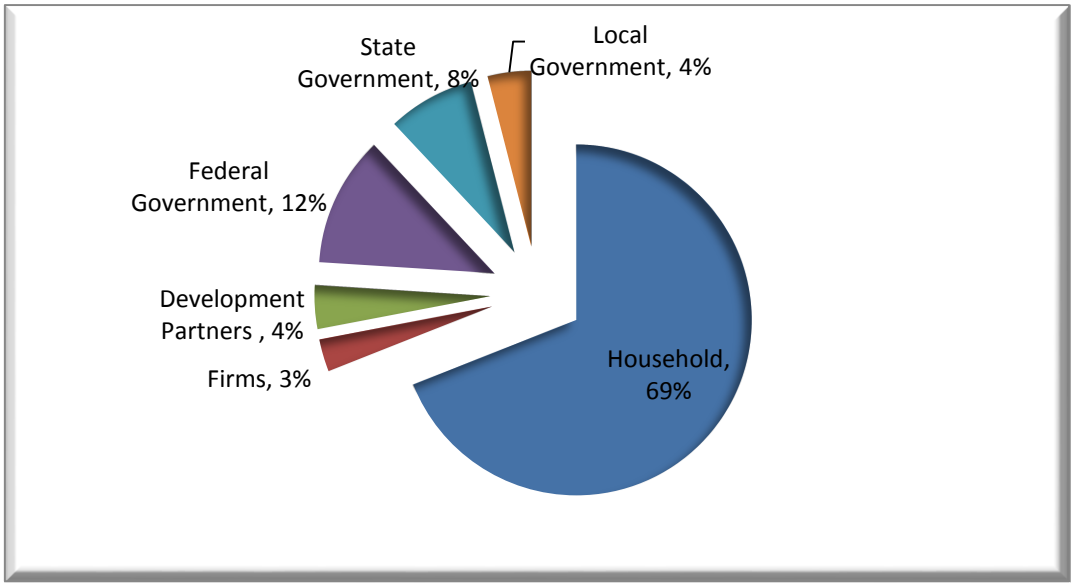

Figure 1: Funding sources for the Nigeria Health System (FMOH, 2010).

This high level of out-of-pocket expenditure on healthcare exposes the poorest and most vulnerable populations to financial impoverishment from diseases (WHO, 2006).

The country has a federal funded National Health Insurance Scheme (NHIS) launched in 2005. However since its inception, the scheme has covered only 3% of the population and mostly insures people working in the government sector (NHA, 2003-2005; FMOH 2010). This means that the poorest and the most vulnerable populations in the informal sector are left out, thus the program essentially benefits the more affluent in the society (NHA, 2003-2005; FMOH, 2010).

In 2007, the NHIS also rolled out 12 pilot community health insurance schemes in 12 states in the country (FMOH, 2010) to include the informal sector. However this study did not find evidence that demonstrates the successful roll-out of these NHIS community health insurance schemes.

Chapter 2

Problem Statement, Objectives and Methodology

2.1. Problem Statement

The public sector has not been able to finance and manage the health services adequately. Thus the Federal Ministry of Health in Nigeria in a search for solutions, strongly emphasizes on Public-Private Partnerships as instruments for strengthening the health system (FMOH, 2005). The goal is to harness the resources across both the public and private sectors to strengthen the health systems in the country (FMOH, 2005; 2010).

PPPs are not novel concepts in Nigeria as they are already practiced in different ways in every state (FMOH 2005, 2010). The objective of the FMOH is to build upon the existing knowledge of PPPs for health in Nigeria to create enabling environments for the partnerships in health (FMOH, 2005). Thus the economic and transformational agenda elaborated in the NSHDP 2010-2015 provides opportunities for Public-Private Partnerships to address the persistent fiscal constraints and inequity in health services (FMOH, 2010). Consequently companies such as General Electric, Shell Petroleum Development Company (SPDC), MTN and private philanthropists in Nigeria are increasingly influencing the agenda on PPPs for health. Promoting concepts such as strategic philanthropy and inclusive business models and building networks such as Private Health Sector Alliance of Nigeria (PHN) (PHN, 2013).

2.2. Justification of the Study

PPPs for health may seem to be inevitable and win-win collaborations given the potential to combine expertise and resources in the context of limited resources. However they are not likely to solve all the challenges in the health systems (Buse and Harmer, 2004). On the contrary, the PPPs can lead to further distortions in the already weak health system through a plethora of fragmented activities (Buse and Harmer, 2004).

The FMOH in Nigeria concludes that poor coordination of the numerous actors in the health sector is a major cause of the disappointing national health indices (FMOH, 2005).These concerns have prompted calls from the government and other global bodies like WHO, for more research to carefully examine the impact of the partnerships on the health system (FMOH, 2005; WEF, 2007; Nelson 2006). This is to ensure that best practices are identified and incorporated, while negative effects are minimized.

However, there are few studies that have looked at Public-Private Partnerships from a health system perspective in developing countries such as Nigeria, thus presenting clear information gaps in this discourse.

This study therefore aims to answer some persistent questions such as: How can PPPs for health serve as mechanisms to strengthen the Nigeria health systems? What are the possible impacts on the health systems? What are the keys to successful and sustainable partnerships? (FMOH, 2005; Buse and Walt 2000; Buse and Harmer, 2004).

2.3. Study Objectives

The objective is to analyze Public-Private Partnerships for health with selected case studies from Nigeria, identify their contributions to the health systems and impact on health outcomes; and make recommendations on effective strategies to optimize health-related PPPs for health systems strengthening.

The specific objectives are to:

- Explore the scope and the structure of the two selected Public-Private Partnerships for Health
- Identify the impact on health and equity of the partnerships
- Identify the possible system wide effects of the partnerships on the health systems
- Identify the successes and challenges of the partnerships
- Make recommendations on a more strategic and effective approach for health-related PPPs in health systems strengthening.

Intended Readership

This thesis is intended for policy makers in the Federal and State Ministries of Health in Nigeria. It is also intended for multinational and indigenous companies, as well civil society organizations and donors and implementing partners in Nigeria.

2.4. Methodology

This is an exploratory case study to gain more insight into health-related Public-Private Partnerships in Nigeria and their contributions for health systems strengthening. The focus is on two case studies, the Kwara State Community Health Insurance Scheme (Kwara CHIS) and the Shell Petroleum Development Company (SPDC) funded Obio Community Health Insurance Scheme (Obio CHIS) at Obio Cottage Hospital (OCH) in Rivers State. The selected PPPs were chosen because they conducted independent evaluations and scientific studies on their schemes which meant that data was readily available. In addition, some of the schemes' review documents were publicly available.

Data sources and search strategy

The study design consists of a literature review and few key stakeholder interviews. The literature review covered both peer-reviewed and gray literature.

For the peer-reviewed literature, data bases accessed were PubMed, Web of Science, Cochrane library, Campbell Collaboration and WHO database. Google Scholar was used as a search engine, but information on PPPs, national and state issues were also searched through Google. Relevant journals on health policy such as Health Policy Planning-Oxford Journals and Global Health Policy were used to obtain information on PPPs. The Vrije Universiteit, Royal Tropical Institute and University of Bergen libraries were also sourced for information. Reference list of reviewed articles were searched for relevant literature, and study authors were contacted to obtain information when needed. The aim was to reflect on and critically evaluate peer-reviewed literature and policy reports.

Gray literature such as policy documents, audit reports and evaluations were sourced directly from the respective PPPs. Organizations websites such as World Bank; World economic Forum; United Nations; Private Health Sector Alliance of Nigeria; Save One Million Live Initiatives Nigeria, were also accessed for gray literature.

PPPs have broad search terms, in-order to limit the results to the most relevant studies, the following criteria where used:

Inclusion criteria

Literature on health-related PPPs with formal agreements. The objective of the literature must be clearly defined. Policy documents must be applicable and relevant in the Nigeria context.

Exclusion criteria

Literature that did not have full text in the databases. Literature not in English Language. There was no time limitation as the study aimed for a historical perspective

In-order to fill some information gaps on the case studies, seven key stakeholders interviews were conducted, 4 stakeholders from the selected PPPs and 3 stakeholders who are policy makers with experience in PPPs at both international and country levels (see Annex 3 for description)**.** The key informants were purposively sampled, and the interviews were conducted either by face-to-face or via telephone calls. The interviews also provided a means for triangulation of data sources.

This mixed method of desk review and qualitative approach was appropriate as the study explores complex social interactions to gain more insight on the PPPs for health systems strengthening.

Keywords: *Public-Private Partnerships; strategic philanthropy; corporate social responsibility; health system strengthening; system thinking; system-wide effects; Sub-Saharan Africa; Nigeria.* Different combination of key words were used and frequently in addition to: *service delivery; health equity; financial risk protection; quality of service, community health insurance.*

2.5. Framework and Data Analysis

The framework used for the literature review was WHO's Health Systems framework and the Alliance for Health Policy and Systems Research framework showing the dynamic architecture and the interconnectedness of the health system building blocks.

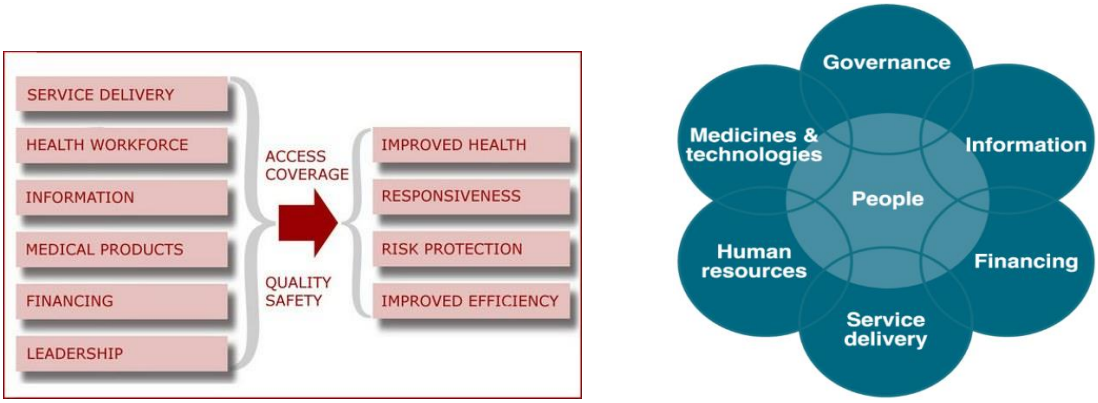

Figure 2. WHO Health System Framework and the dynamic architecture and interconnectedness of the health system building blocks (WHO Systems Thinking for Health System Strengthening, 2009).

The aim of the system thinking perspective was to provide a richer insight on how the corporate driven PPPs can contribute to health systems strengthening. The WHO frameworks were selected because they provided a platform where the activities of the partnerships could be 'disaggregated' in-order to clearly elicit their contributions to the health system; then 'reconnected' to see how the building blocks interact with each other and the influence of the people in the system. The purpose is to highlight areas where policies and interventions can have maximal impact at various connection points and stages.

WHO defines a health system as 'consisting of all organizations, people and actions whose primary intent is to promote, restore or maintain health' (WHO, 2007:2). The goals are to improve health and equity in ways that are responsive, financially fair in the most efficient ways (WHO, 2007). To better understand the health system, WHO developed a framework to disaggregate the health system into six building blocks. The building blocks consists of service delivery; health workforce; information; medical technologies; health financing; governance and people influencing the system (WHO, 2007). The building blocks on their own do not constitute a health system, but it is the multiple interactions between the blocks, and the roles of the stakeholders that make the system (WHO, 2009). Each of the building blocks will be defined in Chapter 3 of this study during the

presentations of findings from the case studies on the individual blocks to better illustrate the concepts.

'Health System Strengthening' can be viewed as strategies and initiatives to improve one or more of the functions of the different building blocks of the health system (WHO, 2009).

The qualitative data analysis was based on the principles of content analysis, as the goal was to understand the complexities of health related PPPs in the health system context. The data was analyzed with the aid of MAXQDA 11 software. The analysis proceeded systematically from transcripts, codes, categories and themes; with constant comparisons between the codes, categories and themes in an iterative process. The statements from the interviews were retained to capture meanings as the themes emerged. This facilitated the understanding of how the partnership models operate, the role of structure of the PPPs and the implications they have for the health system.

2.6. Limitations of the study

Limitations in study methodology

This study is primarily a literature review with a limited number of stakeholder interviews. Health users of the scheme and community members were not interviewed. An operational research would have been more appropriate for this study, for instance for detailed assessment of the system-wide effects of the schemes.

As the proponents of system thinking state, 'the whole is bigger than the sum of its component parts' (WHO, 2009). This suggests that this system thinking perspective may not fully capture the nuances that are intricate in the health systems. Nevertheless it is a step towards providing more knowledge and understanding on the contributions of the partnerships to strengthen the health systems.

Other limitations of the study include paucity of peer reviewed and gray literature on PPPs, particularly in Nigeria. There is also the limited number of PPPs that have carried out external evaluations their programs in Nigeria.

There are concerns that telephone interviews may lead to data loss and distortion due to lack of visual cues. However there are limited studies to demonstrate this effect. Telephones may even allow freer discussions on sensitive information (Novick, 2008).

Limitations in the study content

The study analyzed two case studies and both focused on community health insurance schemes. This may influence the representativeness and generalizability of the study. Although this potential bias makes it difficult to generalize results to other PPPs, it does not make the lessons from these PPPs less relevant.

The interviews with the key stakeholders were subjective and may contribute to some degree of bias. However the external evaluations and published literature on both schemes provide triangulation to increase validity of the study.

Some limitations to the evaluations and literature on the case studies include: being non-randomized evaluations; relatively short longitudinal surveys and studies (less than 2 years); and hospital records that may not be robust enough for these evaluations.

The selection of PPPs that are open and concerned about measuring their own results means that they are likely to be good examples. However, analyzing PPPs who have independently evaluated their programs (applicable to this study) may have some level of bias, as these PPPs are usually well funded, and pioneers in terms of self-critique and commitment to self-improvement (Buse and Tanaka et.al, 2011).

2.7. Ethical Consideration

Ethical approval from the research committee of the home institution was not required prior to commencement of the thesis as there were only a few informal interviews with key stakeholders. However important considerations were addressed, such as clarifying the purpose of the study; gaining informed consent; ensuring anonymity of the key informant interviews; and the confidentiality of the obtained records.

Chapter 3

Findings

Chapters 3, 4 and 5, will present the findings on the two selected case studies, Kwara State Community Health Insurance Scheme (Kwara CHIS) and Obio Community Health Insurance Scheme (Obio CHIS).

Chapter 3 will describe the scope and structure of the case studies and illustrate how they contribute to strengthen the health systems in their target populations using the WHO health system framework for analysis. To illustrate the contributions on each building block of the health system; the schemes' annual reports and independent evaluations will be first presented, the findings will be summarized with the analysis from the conducted interviews and literature on other studies.

Chapter 4 will present the effect both case studies have on health and equity in their target populations; elaborate on the possible systems-wide effects on the health systems beyond these target populations and sustainability of the partnerships.

Chapter 5 will highlight the success drivers and challenges of the partnerships.

3.1. Scope and Structure

Kwara State Community Health Insurance Scheme (Kwara CHIS)

According to the scheme's reports which will inform the description throughout this section, Kwara CHIS is a Public-Private Partnership for delivery of community health insurance program to low-income groups in Nigeria launched in 2007. The partnership is between Health Insurance Fund/PharmAccess Foundation, Hygeia Limited (a private Health Maintenance Organization in Nigeria) and Kwara State Government Nigeria. The Hygeia Community Health Care (HCHC) is a non-profit arm of Hygeia Limited through which they channel their corporate social responsibilities (CSR) to local communities. *See Annex 4 for overview of the partners.*

Scope

The partnership is designed to address the gaps in the demand and supply sides of the healthcare system. It covers basic health care, including treatment of HIV/AIDS and tuberculosis. The insurance scheme targets farmers and their dependents, and is operational in three of the sixteen Local Governments Councils in the State. Currently over 80,000 people are actively enrolled, and are able to access healthcare at enlisted healthcare facilities closest to them. The scheme provides healthcare through a network of 30 public and private health facilities in the state.

On the demand side, the partnership provides subsidized health insurance (with 90% subsidies for the premium) for enrollees, who contribute the remaining 10% of the premium to stimulate risk pooling and solidarity. The premiums are subsidized by the state government and external donors through Health Insurance Fund.

On supply side, the scheme uses the premiums to provide a steady stream of income for the healthcare providers, allowing them to invest in improving the capacity of the facilities to provide quality services. The scheme collaborates with an investment fund, the Medical Credit Fund to provide loans for small scale healthcare providers for facility upgrade. There is also a two level quality improvement structure in the scheme, HCHC quality team and SafeCare Standards (HIF, 2011; 2012; 2013).

Structure

All the partners actively contribute to governance of the scheme through a steering committee tasked to provide oversight for the scheme. This committee consists of representatives from the Kwara State government, Hygeia Nigeria Limited, PharmAccess Foundation and community representatives. The roles of the different partners are ilustrated in Table 2 below.

Table 2 Structure of Kwara CHIS

Partner	Role
Health Insurance Fund/PharmAccess	Funding for subsidies, technical assistance and oversight
HCHC	Implementation
Kwara State Government	Enabling environment, Funding for Subsidies, Supervisory role, Staff salaries and support
Community representatives	Oversight and feedback

Obio Community Health Insurance Scheme (Obio CHIS)

From the scheme's reports, the Obio CHIS is a partnership between Shell Petroleum Development Company Nigeria, Rivers State Government, Obio Akpor Local Government Area (LGA) and Health Care International, a private Health Maintenance Organization (HMO) launched in 2010. The scheme was developed as a model to address the challenges of sustainability for the 27 health facilities which SPDC Nigeria supports in the Niger Delta. The community health department at SPDC Nigeria is the channel for their CSR to the local communities and also to drive business interests in managing environmental sustainability.

Scope

The Obio CHIS targets primarily local indigenes of the Obio Akpor LGA and also the non-indigenes in the communities. The target groups are people with low-income and in the informal sectors. The primary focus of the scheme is maternal and child health services. The target population (indigenes) is estimated at 8,000 while the non-indigenes are estimated to be four times the population of the indigenes. There were about 15,000 enrollees to the insurance scheme as of 2012 (SPDC, 2013).

The scheme focuses on both the demand and supply side of the health system. On the demand side, SPDC provides subsidized premiums (50% subsidies) for indigent enrollees in the health insurance scheme, the premiums for non-indigenes are not subsidized.

On the supply side, SPDC upgrades the Obio Cottage Hospital infrastructure, medical equipment, administrative services, human resources and renewable energy. Obio CHIS provides healthcare through the Obio Cottage Hospital and the network of referral hospitals. It also has a two level quality improvement structure, the internal quality team and SafeCare standards

Structure

All the partners also contribute actively to governance of the scheme through a steering committee that has representatives from SPDC, the Health Maintenance Organizations, the state and local government and the communities bound by a Global Memorandum of Understanding GMoU. The roles of the partners in the scheme are illustrated in Table 3 below.

Table 3 Structure of Obio CHIS

Partner	Role
SPDC	Funding for subsidies, upgrade of facilities, technical assistance and oversight of the scheme
Health Care International	Implementation
Obio Cottage Hospital	Implementation
Rivers State Government	Enabling environment, supervisory role, staff salaries and support
Community representatives	Oversight and feedback

3.2. Contributions of the case studies to the Health System Building Blocks

This section will briefly describe each building block of the WHO health system framework and use available evidence to demonstrate how the activities of the case studies contribute to strengthen the health system in the target population.

3.2.1. Service Delivery

Health service delivery is the provision of efficient, safe and quality health interventions in an equitable and cost effective way. The services should be universally available, accessible, acceptable and affordable to the populations (WHO, 2009).

Kwara CHIS	There was a steady increase in the number of enrollees from approximately 30,000 in 2007 to 80,000 in 2013 (HIF, 2013). There was also demonstrated a 70% increase in utilization of quality healthcare in the scheme (AIID, 2013). Quality of service delivery was measured through the lab diagnosis and accurate treatment of malaria; average number of Antenatal care (ANC) visits and skilled birth attendants in the health facilities (HIF, 2013). The target in 2011 to increase the percentage of clients receiving correct malaria treatment from below 30% in some locations to more than 50% across all locations, was met in 2012. A continuous improvement was maintained through 2013 (HIF, 2013). The reports demonstrated increased willingness to pay for healthcare in the target group as a result of the subsidized premiums and improvement in quality of service delivery. However costs for the treatment of chronic diseases remained a challenge as these attracted co-payment for the medications (HIF, 2013). Excess demand for quality service and long waiting times were also challenges at the health facilities (HIF, 2013).
Obio CHIS	According to the scheme's reports, there was a steady increase in enrollment from 8, 000 in 2010 to about 15, 000 in 2012. There was increase in the access, utilization and quality services, for instance, Nte et al. showed an average of 180 births per month when compared to 10 births per month before the launch of the scheme (Nte et al. 2013). The percentage of underweight children reduced by about 150% (Nte et al. 2013). HIV screening during antenatal visits rose from 141 in 2010 to 3,228 in 2012, PMTCT was at about 2% when compared to the national average of 29% and uptake of family planning rose by 50% (Nte et al. 2013; Ehigiegba et al. 2012; Fakunle et al. 2013). Although the services were affordable for most clients, co-payment for chronic illnesses also presented a challenge for the some of the enrollees (Ogbonna and Nwagagbo and Fakunle, 2012) Over 80% of the patients were satisfied with the service provided at the facility in their last visit, while over 75% of the enrollees felt there was improvement in the services provided since launch of the scheme (Ogbonna and Nwagagbo and Fakunle, 2012). Ekott also showed overall satisfaction with the services delivered at 94%. Reasons for the dissatisfaction include long waiting times and co-payment for chronic disease (Ekott et al. 2012; Ogbonna and Nwagagbo and Fakunle, 2012).

The results show that the partnerships can contribute to universal coverage of quality healthcare. In both case studies, there were significant increase in enrollment into the schemes associated with increased access and utilization of quality services. All the key informants from the interviews conducted concurred that leveraging the management expertise of the private sector partners, focus on quality assured care and ability to demonstrate results were key factors for efficient service delivery. They had measurable goals that guided their activities which were both internally and externally evaluated, and some were published in peer reviewed journals.

Both schemes have also been presented as best practices in both international and local conferences for instance, Obio CHIS was presented at the 4th Annual Conference of the Society for Quality Healthcare in Nigeria in 2013 to demonstrate how 'quality service delivery' can serve as a marketing tool for healthcare investments. See Annex 5.

Cappellaro et al. (2011) demonstrated that adoption of private managerial processes and maintaining public governance values are key elements of PPPs that can improve the performance of health systems (Cappellaro et al. 2011). A systematic review on the effectiveness of PPPs for improving maternal and child health services in low and middle income countries also found that they had overall significant positive effects on increasing access and utilization of maternal health services (Zaidi et al. 2013).

These strategies adopted by the partnerships are in accordance with the recommendations by the Nigerian Strategic Health Development Plan (2010-2015) to strengthen service delivery (FMOH, 2010). However, costs of chronic care, long waiting times and excess demand for quality healthcare still need to be fully addressed.

Key partnerships actions*: establishing quality standards; demonstrating results; change mindset; alignment to State priority*

3.2.2. Health workforce

Health workforce include all medical, support and management staff. WHO notes that the most important part of an efficiently functional health system are the human resources (WHO, 2009). They should be available in sufficient numbers, responsive and efficient given the resources available to the health system (WHO, 2009).

Kwara CHIS	According to the reviewed reports, the scheme provides training sessions for health workers on quality management, laboratory practices, maternal and child care, and customer service. Training of healthcare workers is based on Train the Trainer

	approach, with the goal to promote ownership and sustainability of the programs. Here the PharmAccess group initially trains the HCHC staff on the health insurance program who then conduct the training for healthcare provider network (HIF, 2011; 2012). HCHC also trains medical personnel both within and outside the Hygeia Group, and this can contribute to the capacity development of health workers.
Obio CHIS	The scheme increased the staff strength of the Obio Cottage Hospital from 15 at the start of the partnership to 90 across all departments in the facility (Ogbonna and Nwagagbo and Fakunle, 2012). The specialist physicians seconded from tertiary facilities provide supportive supervision and mentorship roles to stimulate skills transfer to the medical staff in the scheme. There was also improvement in staff welfare, positive work environment, and job satisfaction (Ogbonna and Nwagagbo and Fakunle, 2012). The hospital operates a volunteer program which helps health personnel to improve their skills and gain work experience. This approach is used by the scheme to deliver cost-effective quality healthcare. There was a high demand for volunteer opportunities in the scheme, including highly skilled workers. The scheme also had financial benefits in the tune of 4 million Naira (about $27, 000) in 2012 (Ehigiegba et al. 2013). However there was an exponential increase in demand for services within a short period, increasing the pressure on health workers and affecting their capacity to adequately satisfy the increasing number of patients (Ogbonna and Nwagagbo and Fakunle, 2012).

The results show that partnerships can increase the quantity and quality of health personnel in the health system pool. Solutions such as contracting specialists on part-time basis to primary level facilities and the use of volunteer staff can have a positive effect on the distribution of skilled workforce and save costs in the health system.

The schemes focused on capacity building as a sustainability strategy, aligning with state priorities (FMOH, 2010). This was reflected in all the interviews conducted and captured in statements like:

'Capacity building is a key component of our program and we spent a lot of time on the people. We saw this program as a change management, and when you see something as a change management, you need to put people at the fore front'.

A study on engaging the private sector in human resource crisis in low-income countries (a review of 31 initiatives), also found that public-private engagements can create simple, cost-effective and innovative models to optimize health workforce in the health system (Global Health Workforce Alliance (GHWA), 2012).

The results presented shows diverse ways the partnerships can strengthen the health workforce, for example the evaluations and surveys on health workforce in the Obio Scheme highlights what works in the scheme, the gaps to be addressed and can inform strategies to address them. This correlates with the suggestions by the GHWA, that health workforce challenges can be addressed by developing 'health incubators' that would identify the health needs and priorities of communities, match those needs to health workforce innovations, and create enabling environments to scale-up (GHWA, 2012). The Private Health Sector Alliance of Nigeria their website emphasize on such 'innovation hubs' to develop targeted cost-effective health interventions (PHN, 2014).

***Key partnership actions**: priority to capacity building; resourcefulness; innovation; alignment to State priorities*

3.2.3. Health information

Health information systems include adequate data generation, storage, analysis, communication of reliable and timely information on determinants of health, indicators for health systems performance and status (WHO, 2009).

Kwara CHIS	According to the scheme reports, PharmAccess has a health intelligence department to manage and improve the health information systems of the Kwara CHIS, implemented locally by HCHC. This also facilitates information dissemination through websites, publications in journals and presentations in conferences (HIF, 2012; 2013). The scheme includes an operational research component to independently evaluate its performance. There were baseline assessments in 2008, with follow-up assessments in 2011, and 2013, an independent short-term evaluation in 2013 among other scientific studies. These generate data such as disease burden of the populations, healthcare utilization, costs of health services and impact of the scheme (HIF, 2012).
Obio CHIS	The Obio CHIS has a monitoring and control unit that generates information for quality assurance and continuous improvement

	in the program (Akwataghibe and Wolmarans and Vaughan, 2013). SPDC commissions evaluation studies on various themes concerning the scheme and carried out by independent researchers. These include the 1st, 2nd and 3rd evaluations studies, the Benefit Incidence Analysis, among other scientific studies. The information generated is communicated and shared with all stakeholders through publications in peer-reviewed journals and presentations in both local and international conferences.

From the study findings, the partnerships invests in information systems and operational research that informs the decisions at all stages of the schemes. Lessons learned can then be disseminated to relevant stakeholders. The importance of robust information systems was emphasized in all the key informant interviews captured in statements like:

'We deploy project management methodologies in the management of the scheme, and a key component of project management is monitoring and evaluation. You can't improve what you cannot measure…'

'On the supply side we provide training and quality control on data that is being reported into the DHIS platform that the government uses for data reporting. On the demand side, we convene steering committee meetings with the commissioners for health in the states, and demonstrate how they can use their own data to diagnose and identify system challenges in their own health systems.'

The partnerships with the government can thus strengthen coordination as information generated are integrated into the states' and national health information systems minimizing fragmentation.

The longitudinal assessments and evaluations can also provide in-depth knowledge of the target populations, their needs and priorities. From the UN Summit on MDGs (2010), one of the prominent challenges in stimulating inclusive business models by companies is limited knowledge on needs and priorities of poor and vulnerable groups, and their capacity to contribute to companies' value-chains (UN, 2010, Davies, 2011). Thus by generating this information, companies can develop more socially responsive business models that can include the poor and vulnerable groups in the value or supply chain (UN, 2010).

However there were challenges in managing the information systems as noted in the Obio CHIS. For instance in conducting the independent

evaluation studies on the scheme, the report noted limitations due to inadequate robust data from the hospital records for costing studies and distribution of the enrollee benefits. This was attributed to the fact that prior to the partnerships, the financial records were kept solely for basic accounting purposes without adequate records for wider evaluations studies (Ogbonna et al. 2012; Akwataghibe and Wolmarans and Vaughan, 2013). Identifying these gaps and developing strategies to address them, again highlights the contributions of the partnerships to the health systems.

An overview of evaluations, literature and conferences on both schemes can be found in the Annex 5.

***Key partnership actions**: investment in information systems and operational research; external evaluations; alignment with State priorities; dissemination of lessons learned.*

3.2.4. Medical technologies

Medical technologies include medicines, medical products, vaccines and technologies that are sound scientifically, assure quality, safety, efficacy and cost-effectiveness in their utilization (WHO, 2009).

Kwara CHIS	According to the reviewed records, Health Insurance Fund provides funds for comprehensive upgrading of the medical facilities in the provider network. There is also collaboration with the Medical Credit Fund to provide soft loans to the health facilities to improve their vaccine supply chains, drug procurement, laboratory and administrative services (HIF, 2012). See Annex 6 for overview.
Obio CHIS	SPDC upgrades the infrastructure and equipment of the Obio Cottage Hospital since the launch of the CHIS 2010 (Ogbonna and Nwagagbo and Fakunle, 2012). These include construction and equipping of the hospital theatre, provision of ultrasound and X-ray diagnostic equipment, provision of 24-Hour electricity and water supply using wind and solar powered energy sources. The partnerships also contribute to medicine and vaccine supply chain management (SPDC, 2013; Ogbonna and Nwagagbo and Fakunle, 2012).

This is an area where public-private partnerships and donors usually have more visible impacts. This is because the poor state of health infrastructure in the public health system provides opportunities for collaboration and results can easily be demonstrated (FMOH, 2005; 2010). Here the partnerships invest in the much needed upgrade of facility infrastructure,

medical equipment and supplies in health facilities in the target areas. SPDC also pioneers the use of renewable energy for sustainability in power generation for the health facilities, this is crucial as power shortages often cripples all aspects of the health systems in Nigeria. This is in line with the priorities identified in the NSPH 2010- 2015 to explore public-private partnerships for the maintenance of medical equipment and hospital infrastructure (FMOH, 2010).

From the records reviewed, frequent stock-out of drugs was not a recurring challenge for the partnerships. However in some health facilities within the provider network of the Kwara CHIS where stock-outs were observed, the partnership work with MCF to provide soft-loans to enable these facilities increase their capacity to improve their supply-chain (HIF, 2013).

Key partnership actions*: funding; project management principles; innovation; alignment with State priorities*

3.2.5. Health financing

Health financing involves the generation of adequate funds, procurement of products and services in a cost effective way. This is to ensure that people can access healthcare without the risk of financial catastrophe and impoverishment associated with paying for the services (WHO 2009).

Kwara CHIS	On the supply side, the scheme provides a steady stream of finances for the provider facilities through pooled premiums and investment funds such as the MCF. The purchase of provider services is based on capitation and fee-for-service, and informed by performance (HIF, 2012; 2013). On the demand side, the insurance premium is subsidized by the HIF and the Kwara State Government which amounts to about 90% of the total premium while the enrollees contribute 10%. However co-payment for chronic illnesses which is still a major challenge as many members are not able to afford this extra payment (HIF, 2012; 2013). The Kwara state government is increasingly contributing funding for the scheme, from minimal contribution for the subsidies at the launch in 2007, to about 50% of the subsidy funding as at 2013. In 2013, the government signed a MoU with the partners committing the sum of $43 million of out the required $86 million to scale-up the program to 600, 000 enrollees (60% of the 1, 000, 000 of the estimated low-income residents) in all the 16 local governments in the state by 2018. The enrollees are expected to contribute $6 million while the HIF and other interested donors will make up the rest k(HIF, 2013).

Obio CHIS	On the supply side SPDC funds capital projects for the health facility for instance wind and solar power, infrastructure upgrade and other medical equipment. The purchase of provider services is based on capitation and fee-for-service, and also informed by performance. On the demand SPDC provides 50% subsidy for the premium as part of its corporate social responsibility to the community. Co-payment for chronic diseases was also a significant challenge for some enrollees (Ogbonna and Nwagagbo and Fakunle, 2012). In 2013, SPDC commissioned a 3rd evaluation of the scheme to access the economic viability by an independent researcher. The results show that Obio Cottage Hospital made a surplus, but the HMO made excess payment to the beneficiaries of the scheme over the 12 month review period. The enrollees contributed to 30% of the income generated in the hospital while 69.5% was generated from the non-enrollees (out-of-pocket users). The enrollees received 70% of the services provided at the hospital while the out-of-pocket users who generated more funds for the hospital received about 30% of the services. One of the report's conclusions was that the CHIS was not yet self-sustainable without the financial flows from the out-of-pocket users of services (Ajiboye, 2013).

The partnerships play important roles by combining resources to generate significant funding for the health systems. They address both the demand and supply side of the finance building block through risk pools; diverse reimbursement options; funding mechanisms such as Medical Credit Fund and cost-effective solutions such as the use of health volunteers (Ajiboye, 2013; HIF, 2013). These options were also identified in the NSPH 2010-2015 as evidenced based interventions to strengthen health systems in Nigeria (FMOH, 2010).

From the findings, reducing out-of-pocket expenditure will require a multidimensional approach. For instance, in the Obio CHIS scheme the out-of-pocket users (non-enrollees) made more expenditures on healthcare at the facility while using less amount of the services. Studies have also demonstrated the reluctance of people particularly in low-income settings to enroll in health insurance schemes. This can be attributed to poor understanding of the concept of pre-paid care, lack of trust in the system, among other factors (Parmer et al. 2013; Polonky et al. 2008; Poletti et al. 2007; Schellekens et al. 2007). Although the revenue generated from the out-of-pocket users contributed to sustainability of the scheme, the report noted that the primary goal was to reduce out-of-pocket expenditure. This

is again a pivotal point where 'innovation hubs' can be relevant, by developing strategies to enroll these group of clients. This remains an area for further research.

Financial sustainability of the schemes were key challenges particularly for chronic diseases. The introduction of co-payment for chronic diseases (medications) became imperative at various points for both schemes. Some clients could not accommodate extra fees leading to some degree of non-re-enrollment in both schemes (HIF, 2013; Ajiboye, 2013). This is a complex challenge that can feedback on itself and requires consistent action by all the partners. These challenges to financing the scheme were underscored in all the key informant interviews and also demonstrated in other studies (Polonky et al. 2008; Nelson, 2006).

From the interviews, five out of the seven key informants explicitly suggested that collaborating with diverse private partners to bring in their resources and expertise will significantly contribute to the sustainability of the schemes captured in statements like:

'We constantly explore opportunities to see what programs we can integrate with, so we can all pool resources together, benefit from mutual goals and achieve scale together.'

'Companies can bring their core competencies to apply to social programs such as ours. MTN for example can come and partner with us, and bring in their technology to help with mobile payment systems. A pharmaceutical company can sell drugs at a special rate to facilities that are participating in health insurance programs for example, that will bring down the premium, make it more affordable and more sustainable.'

***Key partnership actions**: Pooling resources; resourcefulness; innovation; costing studies and economic evaluations.*

3.2.6. Leadership and Governance

Governance of the health system involves a comprehensive understanding of all the building blocks of the health systems and how they are inter-related and interconnected. This is a prerequisite for efficient oversight, accountability, regulation and developing strategic policy frameworks (WHO, 2009).

Kwara CHIS	The partnership employs business models and project management principles to run the scheme. Based on the success

	of the scheme, Hygeia and HIF supported the Kwara State Government in the development of a 'community health insurance bill' which was passed into law by the state legislature. The bill gives priority to the provision of quality and affordable healthcare to low-income groups in the society through community health insurance (HIF, 2012). This bill catalyzed the commitment for increased public allocation to healthcare in Kwara State. The partnerships also play key advocacy roles through presentations in conferences, for instance they shared the lessons learned from the scheme at an expert meeting organized by the Dutch Ministry of Foreign Affairs in Netherlands. See Annex 5**.**
Obio CHIS	The scheme is based and managed with a commercial business model employing project management principles (SPDC, 2013). All the stakeholders including the private and public partners and the community stakeholders are represented in steering committee which monitors and oversees the functions of the scheme (Ogbonna and Nwagagbo and Fakunle, 2012). The aim is to increase accountability and transparency in the program, for instance the steering committee has a code, 'Zero Tolerance to Corruption'. The implementation of this code of conduct contributed to significant decline in client extortion by some healthcare workers at the start of the scheme (SPDC, 2013). The partnership presented the scheme at the Health Public Private Partnership Workshop organized by the FMOH Nigeria and the World Bank in 2014, to demonstrate how PPPs can play important roles in the health system.

The partnerships create opportunities to increase trust and accountability in the health system by promoting dialogue and communication between all stakeholders. The emphasis on good governance was highlighted in all the key informant interviews, captured in statements like:

'*We have a board made up of all stakeholders involved in the scheme and we all agreed that this was not going to be business as usual… there are standard operating procedures for managing incidents where staff are found wanting their responsibilities'.*

High level advocacy is a crucial role the PPPs can play in the governance of the health systems, as demonstrated by the 'community health insurance bill' in Kwara State. The scheme was also recommended by the FMOH in Nigeria as a model to be implemented country wide (FMOH, 2010).

External evaluation of the programs and dissemination of the results can contribute to trust building, accountability and transparency in governance

(WHO, 2009; Oxfam, 2013; 2014). However, there were no comprehensive measurements of intangibles such trust and the efficiency of the partnerships in both case studies**.** Buse and Takana also suggested that developing and measuring robust indicators for governance, accountability and trust in health related PPPs are too essential for the research community to ignore (Buse and Takana, 2011).

Key partnership actions*: transparency; accountability; external evaluations; business mode.*

3.2.7. People

The building blocks on their own do not constitute a health system, but it is the multiple interactions and relations among all the blocks, and the stakeholders that makes them a system (WHO, 2009). These stakeholders include the beneficiaries of the health services, the actors driving the system and also individuals, corporate organizations and civil societies influencing the health system (WHO, 2009).

Kwara CHIS	According to the scheme's reports, the Kwara CHIS conducts baseline surveys before rolling out any scheme to assess the local context, needs and priorities of the communities. The program highlights the roles local leaders and officials play in advocacy for the scheme (HIF, 2012). The consumers of the scheme are also involved in the development process of the health packages, member identification, premium collection and marketing (HIF, 2012). This is demonstrated as the scheme includes the target groups and policy stakeholders in the package review and development through the interactive sessions. These interactive sessions include budget rationing exercises with trade-offs to determine the most cost-effective and sustainable insurance packages (HIF, 2013).
Obio CHIS	According to the scheme's reports Obio CHIS brings together communities, local and state governments and Non-Governmental Organizations, to create decision making committees that agree on the priorities and how to allocate the resources from the partnership (SPDC, 2013). The scheme also has a client relations department to assess the needs of the clients, through cient interactive fora, client satisfaction surveys, periodic surveys (SPDC, 2013). The relevance of these interactive fora was captured in the 2nd evaluation study, where it was noted that some clients were not adequately informed when modifications were made in the

	scheme. This contributed to some level dissatisfaction in the scheme (Ajiboye, 2013). However, it also informed strategies to tackle such emerging challenges and strengthen the scheme (Ajiboye, 2013)

The key factor recurrent in the success of the PPPs lies in investing time and resources to first understand the needs and priorities of the communities. Then work together with them to develop solutions to address the identified needs (HIF, 2013; SPDC, 2013). This was confirmed from all the interviews conducted captured in statements such as *'there is also the 'Health on the Move' event, where clients are invited to a public interactive forum to openly air their grievances, appreciate and share their experiences with other people. Usually about 800 clients picked randomly for an interactive hospital client session to 'feel the pulse' of the customer in an open forum'*.

Community participation in designing and developing insurance packages and prices as highlighted in the Kwara CHIS is highly progressive and is underscored in the NSPH 2010-2015 as a key priority for health systems strengthening. Other literature have also demonstrated the positive effect this approach can have on sustainability and ownerships of health programs (Parmer et al. 2013; WHO, 2009).

Key partnership actions*: people focus; community engagement; longitudinal and evaluation studies; innovation*

Chapter 4

Impact on Health & Equity and System-wide Effects

This chapter will discuss the effects both case studies have on the health systems, with considerations to how they affect equity in healthcare delivery. However the health outcome indicators comparable to national statistics for both schemes were not elaborated due to limitations in available data. The second part of the chapter will examine the possible system-wide effects and the last section will focus on sustainability of the partnerships.

4.1. Impact on Health & Equity

Kwara CHIS	The independent evaluation of the short-term impact of the Kwara CHIS in 2013 had the objective to assess the impact on access and utilization of care; financial protection; and health status. This was a non-randomized control evaluation based on difference-in-differences and propensity score matching. The results showed that when compared with the control group, the treatment group had lower: socio-economic status; literacy rates; and per capita consumption. They had an average of 70% increase in healthcare utilization and demonstrated an improvement in the demand for quality service delivery (AIID, 2013). Another non-randomized control study in 2013, demonstrated significant improvement in the control of hypertension associated with increased access to quality healthcare provided by the Kwara CHIS (Hendricks et al. 2014).
Obio CHIS	From a benefit incidence analysis (BIA) conducted by independent evaluators in 2013 to determine the distribution of subsidies across the target population with respect to status as indigenes and non-indigenes, and ranked by socio-economic status. The results showed that the scheme targeted the poorest and most vulnerable groups. The highest number of enrollees to the scheme were unemployed (31.6%), followed by traders (27.7%). The general out-patient department was pro-poor while the ANC was pro-rich. It showed that the overall distribution of the benefits was skewed, for instance the poorest 40% of the sample population had 33% of the benefit while the richest 40% had 44% of the benefits.

	The total benefits showed that the indigenes consumed less than two thirds of the net benefits accruable to them. Based on the pattern of drug consumption for chronic illnesses, the poorest quintile may have the highest burden of chronic diseases such as hypertension and diabetes. The report suggested that this could explain the reason for the high utilization of out-patient services by this group because of the need for frequent follow-up visits. As the treatment for chronic illness attract about 50% co-payment, this may also have significant burden on the poor based on out-of-pocket expenditure reducing their financial benefits in the scheme (Akwataghibe and Wolmarans and Vaughan, 2013).

These results show that both partnerships were able to target the low-income and most vulnerable groups which were their primary objectives. This is important to consider as for-profit organizations partnering in healthcare are usually perceived to have negative impacts on health equity (Oxfam, 2006). However depending on the PPP objectives and structure, they can have significant positive effects on equity. In the case studies, the private partners in the PPPs were motivated by the corporate social responsibilities of the companies and specifically targeted towards the poor and vulnerable populations (HIF, 2013; SPDC, 2013).

From the reviewed documents, both partnerships demonstrated considerable reduction net in out-of-pocket expenditure attributable to enrollment and utilization of quality care in the schemes (HIF, 2013; Ajiboye, 2013).

There was demonstrable improvement in health outcomes in both case studies based on studies. Hendricks et.al, 2014 showed the positive effect the Kwara CHIS had on the management of hypertension associated with increased utilization of quality healthcare. This was also collaborated in two QUICK longitudinal studies on the Kwara CHIS from 2011 – 2013 on management of chronic diseases in the scheme (Hendricks et al. 2014). These can be attributed to partnerships' scope of addressing the supply and demand side of the health systems with a focus on quality in service delivery.

There are suggestions that health programs targeting chronic diseases can serve as a litmus test for health-systems as they require optimal functioning of all the components of the health systems (Samb et al. 2014). Applying this litmus test to the partnerships indicates that the health services provided by the schemes are functioning efficiently, although affordability will still need to be addressed.

The BIA shows that the poorest groups in the Obio CHIS received the least net-financial benefit that was possible for them in the scheme. This is comparable to results in other schemes designed to target the poor and most vulnerable people (Mtei et al. 2012; O'Donnell et al. 2007; Parmar et.al. 2013). Some of the reasons for this include: limited financial power; transportation costs; packages that do not include chronic diseases; health seeking beliefs and behaviors (Parmer et al, 2013; Polonky et al. 2008; Poletti et al. 2007). Community health insurance schemes on their own cannot address these complex barriers in healthcare. However this is a point where the PPPs can play crucial roles by catalyzing inclusive business models to accommodate the poorest and the most vulnerable supply or value chains (UN, 2010; Sayed et al. 2012; 2013).

Obikeze et.al. 2013 conducted a benefit incidence analysis of the NHIS for federal government workers in Enugu Nigeria. The results also showed that the lowest socio-economic groups in the scheme made the highest outpatient visits; and higher more out-of-pocket payments on outpatient-care than higher socio-economic groups (Obikeze et al. 2013).

This strongly correlates with the Obio CHIS BIA which demonstrated that poorest quintiles had highest outpatient visits that may be associated with higher levels of chronic diseases. Although Obikeze et.al. did not suggest the reason for their finding, WHO reports that in developing countries, the poorest groups usually carry the most burden of chronic diseases (WHO, 2005).

This indicates that targeting the poor and most vulnerable particularly for community health insurance schemes may not on its own be sufficient to ensure equity in the health systems. This is a critical point where the PPPs can play significant roles based on their capacity innovation and resourcefulness to develop strategies that include the poorest groups in health interventions (GHWA, 2012; UN, 2010). Such strategies for community health insurance schemes may include community-led payment exemptions for the poorest and packages that include chronic diseases (Polonsky et al. 2008; Poletti et al. 2007). Chronic disease management in health programs targeting low-income groups should also be an area for further research.

Table 4 in the next section will highlight on the effectiveness of the PPPs based on available evidence. This was adapted from protocols to measure this effectiveness commissioned by WHO.

Table 4 highlights research protocol to evaluate the effectiveness of Public–Private Partnerships as a means to improve health and welfare systems worldwide, commission by the WHO (Barr, 2007).

Measuring the Effectiveness of the Public–Private Partnership	Kwara CHIS	Obio SCHIS
What were the intended outcomes of the public–private partnership effort?	Reduce Out-of-Pocket expenditure	Reduce Out-of-Pocket expenditure
Did the effort target specific aspects of health and wellbeing for improvement?	√	√
Did the effort identify specific, measurable indicators of the intended outcomes?	√	√
Did the effort identify specific target levels to be attained for these indicators?	√	√
Are the methods used to measure the outcome indicators reliable and consistent over time?	√	√
Did the indicators change during the period of the effort under study? If so, in the desired direction? Did they attain the target levels?	Not enough data to assess	Not enough data to assess
Are there sufficient longitudinal or comparison data to support the conclusion that identified changes in the indicators were the result of the programs and activities under study?	Sufficient for short-term evaluations but not for long-term	Sufficient for short-term evaluations but not for long-term
Were there any outcomes from the effort (either beneficial or detrimental) that were not expected to occur?	Not enough data to assess	Not enough data to assess

Assessing issues of Equity	Obio CHIS	Kwara CHIS
Do target outcomes and indicators adequately reflect outcomes specific to vulnerable groups (e.g., maternal and child health for gender equity) as well as general population outcomes (e.g., mortality rates)?	Not enough data to assess	Not enough data to assess
In selecting target levels of outcome indicators, are group specific levels set so as to reduce previous inequities?	√	√
How did the public–private partnership effort affect the bottom 20% of the population, based on measures of socioeconomic status or health status, in comparison to the results for the population overall?	Not enough data to assess	Not enough data to assess
Was there a reduction in preexisting inequities coincident with the effort under study?	√	√

4.2. System-wide Effects

This section will discuss the effects that the case studies have on the wider health systems beyond their target population. From other literature partnerships for health interventions can have system-wide effects in policy regulations, distribution of human resources, finance allocations and duplication of services (WHO, 2009; USAID, 2005 and 2006; Oxfam, 2014).

Table 5: System-wide effects

Possible System-wide effects	Possible causes	Primary building blocks affected
Community Health Insurance Bill in Kwara State	Success of the scheme and high level advocacy by the private partners	Governance and finance, with knock-on effects on all the other blocks
Scale-up of schemes	Political and policy support; community engagement; baseline assessments; interventions tailored to the target groups; dissemination through professional networks	Governance, people, with knock-on effects on other building blocks
Health workforce Strengthening	capacity building; volunteer health workers; networks	Health workforce, service delivery

Both schemes were designed as pilot programs but were able to scale-up to other local governments and states. For instance Kwara CHIS is currently in 3 LGAs with government commitment to state scale-up to all the LGAs in Kwara state by 2018.

Obio CHIS is currently being scaled-up to other 26 health facilities that SPDC supports in the Niger Delta. SPDC also contributed in the design of the Ogun State CHIS based on the Obio model.

The study explored any potential duplication in health systems, but the PPPs were able to align with state priorities on health contributed to coordination in the system. The Kwara CHIS also integrate into some HIV programs funded by the Global Fund in Nigeria (HIF, 2013). Both partnerships actively advocate for increased collaboration with other private partners to increase coordination and sustainability of the schemes.

4.3. Sustainability

The sustainability of the public-private partnerships remains difficult to interpret and address because of the complexities on health and development.

However in this study, the PPPs actively emphasize on innovative financing mechanisms and building human resource capacity as key strategies for long-term sustainability of their interventions. This was observed in statements like:

'We address sustainability it is two big forms, financial sustainability and then ownership by the people through investing in building local capacity.'

'We have 5 guiding principles or pillars of sustainability: co-ownership; capacity building; commercial mindset; zero tolerance for corruption; quality improvement program.'

This is collaborated with the CHIS bill signed into law in Kwara State, the scale-up of the schemes and investments in capacity building.

Corporate driven-PPPs can be sustainable instruments for health systems strengthening; especially when these companies are deeply invested in the countries' economy for long-term. For instance, UAC has been contributing to healthcare in Nigeria for more than a century (Scott-Emuakpor et al. 2010). The Royal tropical Institute (KIT) also evolved from corporate-driven PPPs. The institution was established in 1910, a precursor to SPDC (Oliemaatschappij) was of one the early private partners. The institute has been existing for over a 100 years (KIT, 2009; 2014).

The major challenge for the case studies is the sustainability of the community health insurance schemes. Oxfam suggested that while these schemes can play important roles in financial-risk protection, their potential to scale-up is limited based on low enrollment, small risk pools and limited ability to generate adequate revenues in long-term (Oxfam, 2013).

However, this study demonstrates significant potential of the PPPs to stimulate increased public spending on healthcare and capacity for scale-up. Although the schemes are not yet self-sustainable in a long-term perspective, they appear sustainable in medium-term.

Chapter 5

Success drivers and challenges

This chapter provides insight on the identified keys to the success and sustainability of the PPPs, illustrate the common challenges encountered in the PPPs and strategies employed to address them. From the conducted interviews, 5 success factors and 4 challenges that were the most frequently mentioned were extracted for discussion.

5.1. Keys to success and sustainability

The most recurrent success factors were having a strong team; government commitment; focus on quality; ability to demonstrate results and community participation.

Strong partnership team

Having a strong team in the partnership, people who understand and put into consideration the views and objectives of others is paramount to an efficiently functioning PPPs, captured in statements like *'I think that the first step is everybody when they walk into the room, needs to know that the right companies are around the table, the right institutions are around the table'.* This was also identified to be critical success factors in other studies (Nelson, 2006; Polonsky et al. 2009)

Government commitment

This is a key success driver and determines the sustainability of the partnerships in both partnerships. For instance, the commitment of the Kwara State Government to sign the community health insurance bill into law is a major step to scale-up and sustainability of the scheme.

Community Engagement

The importance of community participation has been highlighted in other literature (GHLI, 2011; Polonsky et al. 2009; WHO, 2009), and this was a key component to the success of both case studies. For instance, Obio CHIS emphasizes on the term 'Public Private People Partnership' and employs various strategies to increase community participation and ownership, like a stakeholder stated *'The first success factor is co-ownership, we talk about public private people partnership. So community health insurance can be defined as healthcare of the people for the people by the people'*. The steering committees of both schemes have procedures for inclusive representation of the communities in the governance of the schemes.

Focus on quality

The partnerships perceived quality as a key factor to building trust in the system, highlighted in statements like *'we see quality as a marketing strategy, when people come to where they get quality care and value for money, they are likely come back'*. Both partnerships employed two tier quality improvement structures in their schemes. Spector et al. (2012) also demonstrated that quality improvement systems using WHO Safe Childbirth Checklist Program led to significant improvement maternal and child health in target populations in India (Spector et al. 2012).

Focus on demonstrating results

The partnerships focused on demonstrating results of the scheme through operational research, as captured in statements like: *'We have been able to tell our story better than before, to let people know what we are doing. We have had a lot of local, national and international visitors to the site, to see what we are doing. We have also presented papers in conferences.'* Other studies have also suggested that this strategy is hugely effective but should be constantly evaluated to prevent discrete individual behaviors that may lead to short-term improvements that are not be sustainable in long-term (Oxman and Fretheim, 2009).

5.2. Challenges and strategies to manage them

The most frequently mentioned challenges were limited management capacity; poverty; overblown expectations; exponential increase in services.

Limited management capacity

The bureaucratic bottle necks in the public sector was a major challenge to the partnerships, for instance the length of time taken to make critical decisions captured in statements like:

'The bureaucratic process of the government in getting approvals, in getting them to make decisions take longer times. The private partners can make decisions in weeks but when it's over to the government it could take months, and if you are not careful it could even span over a year to make the same decision. So overcoming this, is the biggest challenge we face from the government angle'.

These challenges were addressed by formulating well-articulated and clear role descriptions in partnership agreements and promoting change mindset in the schemes.

Overblown expectations

These were prominent in the partnerships, for instance the community members expected that the scheme will cover all of their health needs as captured in statements like: *'People now expect us to provide more health services than we can but we can't be the government'*

'We are not interested in running the healthcare for the government, we just want to create a model that is scalable, replicable, and sustainable.'

From the schemes' reports and the conducted interviews, the partnerships manage expectations through continuous education and communication to the users of the scheme.

Exponential increase in demand for quality services

The sudden increase in demand for quality services and long waiting times placed significant pressure on the upgraded facilities and health workers. Literature elsewhere has also demonstrated this phenomenon of increase in demand by clients who previously had limited access to quality healthcare (Oxfam, 2014).

The Kwara CHIS developed an innovative approach by using health posts to decongest out-patients services and reduce waiting times in preferred providers. After an evaluation in 6 months, it was yet to have the intended impact but instead it succeeded in attracting more clients to the scheme (HIF Mid-term review, 2013). However this 'hub and spoke' approach combined with task shifting was found to be highly effective in service delivery in some settings in India (Govindarajan and Rumamurti, 2013).

Poverty

Poverty is a major challenge for both schemes, especially as the target populations are the poor with limited financial power. This becomes more pronounced taking into account that the poorest groups usually suffer more chronic illnesses and which attract a co-payment (WHO, 2005).

Although, addressing the scope of poverty is beyond this study, the use of local companies by the partnerships in the construction and upgrade of the health facilities may contribute to the local economies of these communities

(Oxfam, 2013), an observation which was also captured in the interview statements like *'we use local contractors in the communities to build and refurbish the health facilities, and everybody benefits as this helps us as a business and also helps the communities'.*

Chapter 6

Discussion, Conclusion and Recommendations

6.1. Discussion

The analysis presented in this thesis shows how the public-private partnerships contribute to strengthen the health systems; the interactions of the building blocks of the health systems; the impact on health and equity; the system-wide effects, sustainability and the success drivers for the partnerships.

The scope of the partnerships focused on low-income and vulnerable groups in the target populations, addressing both the supply and demand side of the health system through community health insurance schemes. The results demonstrate that they had considerable positive impact to health outcomes and equity in accordance with their objectives. The results are comparable to findings of similar health interventions in other settings suggesting that to achieve equity in healthcare, interventions must specifically address the needs of the poor and most vulnerable populations (WHO, 2006).

Key predictors to the success of both case studies were the strong structure and governance of the collaboration. Building robust teams and developing strong formal agreements to guide the partnerships with active involvement of all stakeholders and communities were paramount to the efficiency of the partnerships. The structure of partnership agreements is crucial to sustainability as demonstrated in the IFC driven PPP in Lesotho, where the ministry of health had to pay very high capitation fees to the implementing partners due to unexpected increase in utilization of healthcare at the newly refurbished hospital (Oxfam, 2014). From the interviews with key informants, the suggestions were that, though agreements should be solid, there should be room for some degree of flexibility and adaptation to evolving contexts.

The partnerships invested in robust information systems to conduct baseline assessments, capture the needs and priorities of the communities which informed the development of interventions tailored to the local context. This enabled the PPPs to align their objectives with the state priorities. These information systems aided the partnerships to perform as learning-organizations through continuous monitoring and evaluations. These are critical elements in the partnerships as collaborated by the systematic review of scale-up of reproductive health interventions that facilitate responsiveness and ownership of health programs (GHLI, 2011).

At the intersection point of human resources, finance and medical technology, the PPPs play crucial roles by leveraging the expertise of the private partners to deploy 'project management' principles that improve efficiency in the programs as captured in the interview from a key stakeholder in the public sector *'we have been able to imbibe the speed of work that is within the private sector which is not what we actually used to in the public sector'*. Studies have also demonstrated the diffusion of efficiency from private to public sectors in health related public-private partnerships (Sekhri et al. 2011).

The project management principles were also employed in the management of the scheme and health facilities, with emphasis on quality service delivery and the need to demonstrate results. This seems to support the hypothesis that improvements in the quality service of delivery can boost demand, increase financial pools and attract more investments to the health systems. However the need to constantly demonstrate value can feedback negatively into the system as a burden on the human resources (Oxman and Fretheim, 2009). Thus this approach needs further evaluation in long-term to ascertain their effects and best strategies to implement them.

From the reviewed evaluations, the partnerships indeed met their objectives to target the poor and vulnerable groups. They also increased access, utilization, acceptability of quality healthcare that were financial fair. Evidence that the poorest groups receive maximum benefits from the schemes remains to be fully established. However, ensuring equity in healthcare is complex and multifactorial, and community health insurance is just one step to address these concerns. But the commissioning of these evaluation shows commitment on the part of the PPPs to address health equity.

On the same note, the financial fairness appears to decline with the introduction of co-payments for chronic diseases. From the study this also contributed the poorest groups in the scheme receiving the least net financial benefits as co-payments for chronic diseases were significant costs some enrollees were not able to accommodate. Studies have demonstrated that user-fees in any form usually excludes the poorest from benefiting from healthcare (Parmer et al. 2013; Polonky et al. 2008; Poletti et al. 2007). Some argue that the schemes should exempt the poorest groups from any form of payments, they instead advocate for 'health equity funds' to cover the poorest groups (Polonky et al. 2008).

The community health insurance schemes developed by the partnerships had system-wide effects on the health systems, especially with the Kwara CHIS leading to the government to increase public spending, and commit to scale-up the scheme to the entire state. It is important to note that the private partners played crucial roles in high level advocacy to influence the development and signing of this bill by the government.

Both schemes started as pilot projects but they evolved to have significant effects on the wider health systems. They are currently being replicated in other areas, with Ogun State as a prominent example where SPDC played a significant role in the design of the scheme based on experiences from Obio CHIS. Another identified system-wide effect is in the capacity strengthening of health workforce, here structures in place to train health workers for both schemes are extended to train other health workers in the health system pool.

The study shows that multiple factors contribute to the success of these PPPs. Building and nurturing strong teams with a people focus was identified as a key factor for the success of the partnerships. These involve forming strategic alliances with strong agreements, clear goals and roles for the partners and building human resource capacity. This is strengthened by giving priority to a people centered approach with community participation at all levels of the program development. These approaches strengthen the governance structure, increase trust in the system and promote ownership of the schemes (WHO, 2006; 2009).

The partnerships both lay emphasis on quality standards of service delivery and the ability to demonstrate value as powerful success drivers. They put quality improvement structures in place and bring in management expertise to the collaborations. This also evident on the significant investments made in information systems and operational research, commissioning independent evaluations for their programs. This is key for the partnerships as it demonstrates results of the schemes and at the same time shows where there are gaps and room for improvement for the schemes. They thus can serve as 'content factories' to disseminate best practices and evidence based health interventions (GHWA, 2012).

The most notable challenges were long waiting times and pent-up demand. Again there are multiple factors influencing these challenges and they remain obstacles in most health systems, even in developed countries. Exponential increase demand and overblown expectations for quality services should be anticipated when rolling-out interventions especially to populations who have had limited access to quality healthcare. The potential

to identify and address key challenges are crucial as the partners demonstrate resourcefulness, leverage their skills and assets to develop solutions such innovative financing mechanisms and cost effective interventions. For instance the 'hub and spoke' model developed to address the long waiting times and congestions in the health facilities, can also contribute to addressing barriers to equitable distribution of net benefits of the scheme that arises from poor access and transportation costs to health facilities.

The principle for the collaborations was to combine the resources of both the private and public sectors to provide subsidized insurance premiums, develop risk pools, and invest in the upgrade of health facilities to improve the quality of healthcare delivery. (Schellekens et al. 2007; SPDC, 2013). Community health insurance schemes have been demonstrated to be successful in some settings such as in Armenia (Polonsky et al. 2008), however Oxfam following a review of multiple community health insurance schemes suggested that it is too expensive to sustain them in the long-term and requires heavy subsidies (Oxfam, 2013).

This study however demonstrates the ability of the PPPs to stimulate increased public health spending and capacity for scale-up. This potential becomes more pronounced when the schemes driven by the PPPs are compared with the NHIS community health insurance schemes launched in 2007, but which are yet to demonstrate evidence of successful roll-out. However, the capacity for these schemes to evolve into self-sustaining models such as the social insurance schemes are complex due to inefficient institutional capacity to mobilize adequate taxes, low GDP and large informal sector in developing countries, Although these challenges still remain, continued commitment to public-private partnerships is essential for health system strengthening.

6.2. Conclusion

This study has demonstrated that Public-Private Partnerships can serve as catalytic instruments for health system strengthening. It has also contributed to bridge the evidence gap on the effectiveness of health related PPPs in improving health outcomes. This is relevant because the increasing calls for public-private partnerships in healthcare delivery particularly in the developing countries have not been matched with corresponding amount of evidence to demonstrate the effectiveness of this approach.

The case studies were both corporate-driven partnerships with state governments and focused on low-income and vulnerable groups in the

target populations. There was a robust collaboration between all stakeholders and with strong community engagement at all levels of the schemes. The partnerships objectives aligned to state priorities and strategies for health.

From a systems perspective, the partnerships made significant input to all the building blocks of the health system as they addressed both the supply and demand side of the health system through community health insurance schemes. They leveraged on the combined financial resources and project management expertise of both sectors improve quality service delivery. They invested significantly in upgrading the health facility infrastructure and technology; capacity building for health workers and developing risk pools for users of the scheme. They developed quality improvement structures with a focus on the demonstration of value. The robust operational research and evaluation components of both scheme were crucial in this regard, as these provide real time information on successes achieved and system gaps to be addressed. This also contributes to increased transparency and trust in the system.

The study demonstrates that both PPPs met their primary objectives to target the poor and vulnerable groups. They also increased the access and utilization of quality healthcare services that were equity-driven, responsive and financially fair to a significant extent yet further evaluation is needed in the long term. Sustainability remains a key challenge for the partnerships and will also require long term solutions and innovative strategies.

The partnerships had positive system-wide effects on the broader health systems, for instance the high level advocacy that enabled the signing of the community health insurance bill in Kwara State. The scale-up of both schemes to more local governments in their respective states, and even further to states like Ogun State. There were also possible 'spill over' effects on capacity building for health workers from both schemes to the wider health systems in the country.

The success drivers for the program include building strong teams with people focus; a focus on quality; demonstration of results and operational research components. Prominent challenges were limited management capacity; financial sustainability; exponential increase in demand and overblown expectations by the users of the scheme; prolonged waiting times and poverty. However these have stimulated the partnerships to developed resourceful and innovative solutions to address the challenges.

From this study, the PPP driven community health insurance schemes demonstrate evidence of sustainability in short to medium term. However, this may be largely because of the significant funding and subsidization from the private partners and donors. Sustainability of the schemes in long-term remain to be fully established.

6.3. Recommendations

The timing of the thesis in appropriate at a time when there are renewed calls by both the global health community and national governments for more collaborations between the public and private sectors. This is stimulating platforms for collaborations such as the Private Health Sector Alliance (PHN), Save One Million Lives Initiatives and African Philanthropy Forum. This is also important as Infrastructure Concession Regulatory Commission (ICRC) which is the body responsible for concessions and PPPs in Nigeria is currently revising the guidelines for PPPs framework in the country.

Policy makers in both federal and state governments; multinational and indigenous companies, donors and NGOs may find these recommendations useful in designing appropriate strategies for public-private partnerships.

Policy

- The Infrastructure Concession Regulatory Commission is recommended to create an enabling environment for the independent evaluation of health-related PPPs in the country. They can commit the partnerships to the evaluate their health programs and provide checklists to guide these evluations. They can also provide incentives for PPPs that independently evaluate the social benefits of their programs, and creat platforms such as annual Public-Private Partnerships Fairs to disseminate best practices.

Interventions

- Health-related PPPs should develop strategies to ensure that the poorest groups and clients with chronic diseases receive the maximum benefits available from their health programs. Strategies such as 'Health Equity Funds' can be explored. The private partners including SPDC, Hygeia Limited and PharmAccess Foundation can play crucial roles in such funds by leveraging their respectable standing in the business and international communities to influence companies in their supply-chains to contribute to these equity funds.

- The Federal and State Ministries of Health in Nigeria should create databases on the health needs and priorities of communities in all the local governments in the country. The databases should include a comprehensive list of the companies operating in different sectors of the economy in the respective states. They can then provide guidance on reconciling the core competences of these companies with the identified health gaps in the health systems. The PHN, Corporate Affairs Commission and other corporate organizations can play important roles in this initiative.
- Health-related PPPs should clearly identify the indicators that they need to measure early on in the development process and strengthen the capacity for the health facilities to capture these indicators.

Research

- The global health research community should further explore strategies to manage the increase in demand for quality healthcare, prolonged waiting times in the schemes and the optimal distribution of net benefits of health programs. Strategies such as the 'hub and spoke' model are recommended and can be further evaluated through operational research.

- The global health research community are recommended to develop robust indicators that can measure the efficiency and processes of public-private partnerships. These indicators should be able to capture the effect of the partnerships on the private partners; on governance and trust; and on efficient administration of the partnerships.

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Annex 1 : Evolution of PPPs

PPPs are not new concepts in the international community but have evolved over time. This concept was introduced between 1919 and 1939 as new

instruments for governance due to the significant shifts in the political and economic landscapes influencing health policies in many countries (Loughlin and Berridge, 2002). However the State and League of Nations still held the responsibility for population health during this period (Loughlin and Berridge, 2002). Following the end of the world war two, the United Nations declared health to be a human right leaving the responsibility for healthcare provision primarily to the public sector (United Nations).

However by the 1980s, the total dependence on the public sector for health care provision was re-evaluated owing to the economic and political crisis at that time (Loughlin and Berridge, 2002). Policy makers advocated that more responsibility should be moved to the private sector, leading to an increase in the privatization of health services in many countries. For example the British National Health Service under Margaret Thatcher administration and that of the Mexican Health care system were restructured to free market forces (Barr, 2007). Most Sub Saharan African countries also left wider healthcare delivery to market forces when they adopted the Structural Adjustment Programs of the World Bank and International Monetary Fund (IMF) in the 1980s. This led to extensive reduction in the public sector spending on critical development sectors such as public health, education and agriculture (Barr, 2007).

An analysis of this market approach to health care delivery by Hsiao showed that not only where they unsuccessful, they also exacerbated the inefficiencies of the health system in most countries due to market failures inherent in health (Hsiao, 1994). Illustrating that neither complete reliance on the public sector nor the pure free market approach for health care delivery was optimal, he advocated for a collaborative approach by the public and private sectors for addressing the challenges of health systems in the developing countries (Hsiao, 1994). During this period, there was a general paradigm shift away from a model built purely around privatization to one which is built on establishing private-public partnerships for health service delivery as elaborated in other studies (Ahn et.al, 2000; Buse et.al, 2000). During the following years in the 1990s, many PPPs were created especially at the global level. Many of them were focused on a specific disease such as HIV, TB, and Malaria (Barr, 2007; WEF, 2007)

Annex 2 : Evolution of the Nigeria health system

The private sector has always played prominent roles in the health system in Nigeria. The first introduction of modern medical services was from the

early 19th century from the western explorers, merchants (United African Company (UAC), Royal Niger Company) and colonial governments to treat their staff and protect their commercial interest in the country. After more than 150 years, even the traditional and herbal medicines still remain a significant part of the complex health care system in Nigeria today (Chuke, 1988).

The missionaries established the first medical services for the indigenes, partly as a means to win converts into their various fellowships for instance catholic, Anglican and evangelicals (Schram, 1971). Consequently these services were mostly competitive instead of complementary (Schram, 1971). Due to this fragmented nature of the mission hospitals, the Colonial Office London took the responsibility to organize and develop policies for health care system in the 1950s, the first centralization of control health care system in West Africa (Scott-Emuakpor, et al. 2010; Buse, et al. 1986). The details of the administration of health services at this point will not be discussed further as they have been elaborated on elsewhere, but the health system was already complex, reflecting the political transformation of the country during this period (Buse, et al. 1986).

After Nigeria gained independence in 1960, the basic healthcare policy plan was based on the pre-independence Nigeria in 1954 'Policy for Medical and Health Services'. Twenty years after, there were still no significant achievements in the development of the health sector, as these development plans appeared focused on increasing the number of health facilities rather than the developing strategic health policy plans (Scott-Emuakpor et.al, 2010).The fourth National development plan for health (1981-1985), was based on the Primary Health Care Policy of Alma Ata, but in it was similar to the same 1954 'Policy for Medical and Health Services', and by the time the first five year Strategic Plan for Health was developed (2004-2008), the health system was very far from achieving the goals it set in 1954 (Scott-Emuakpor et.al, 2010).

This historical over view illustrates how the private sector; commercial enterprises such as the pre-colonial merchants UAC, Royal Niger Delta Company; NGOs such as missionaries, traditional medicine practitioners have always played significant roles in the healthcare system in Nigeria. If key historical aspects within this period are explored, lessons learned can aid in making better informed decisions on improving PPPs in health.

Annex 3: Profile of the stakeholders interviewed for the thesis.

The Regional Community Health Manager- Sub-Sahara Africa Shell Petroleum Development Company, Nigeria

The Program coordinator, Hygeia Community Health Care, Nigeria

The Executive Secretary, Kwara State Community Health Insurance Scheme

The Director, Advocacy & Resource Mobilization, Health Insurance Fund, PharmAccess, Amsterdam

The Senior Special Adviser to the Minister of Health Nigeria / Director, Save One Million Lives Initiative, Nigeria

The Project Leader, Global Health, World Economic Forum, Geneva

The Principal Operations Officer, IFC Public-Private Partnerships Transactions Advisory Services, Washington D.C

Annex 4: Descriptions of partners (culled from their websites)

Kwara CHIS

Kwara State is among the 36 states in Nigeria with a population of 2.5 million people. It has a multiculcultural and diverse population, with Christianity and Islam as the major religions. It has 16 local govenrment areas with the capital at Ilorin.

Kwara State Government is made up of the Executive, Legislative and Judiciary arms, independent of each other. The government largely has the autonomy to set industrial policies and attract investment. These policies are set within broader national policies and comply with federal laws.

Hygeia Nigeria Limited

Hygeia Nigeria Limited is a healthcare group, which has been active in Nigeria for over 27 years. Hygeia is the largest healthcare provider in Nigeria and provides access to healthcare through 4 distinct organizations; Lagoon Hospitals, Hygeia HMO, Hygeia Community Health Care and Hygeia Foundation. The HMO has an enrollee base of over 200,000 from over 250 corporate clients, a strong network of over 1200 providers nationwide. Hygeia Community Health Care (HCHC) is a wholly owned non-profit subsidiary of Hygeia Nigeria Limited.

PharmAccess Foundation

PharmAccess Foundation was created in 2000 to deliver HIV/AIDS antiretroviral therapy to sub-Saharan Africa. Initially, the organization partnered with multinational corporations like Heineken, which was the first multinational corporation to deliver ARV therapy to its employees and dependents. PharmAccess expanded its focus to include health system strengthening activities and began supporting public and private health facilities to upgrade their facilities, train clinical staff, and initiate quality improvement programs.

Health Insurance Fund

In 2006, the Health Insurance Fund was awarded a € 100 million grant from the Dutch Government to develop a new type of health insurance for low-income population groups. Partnering with private insurance companies in sub-Saharan Africa, HIF developed basic insurance packages with premiums that were subsidized with donor funds.

Medical Credit Fund

In 2007, the Medical Credit Fund was established to leverage donor funding and private equity investment to offer private health care facilities access to capital. The loans are in local currency, and managed by established regional banks in Africa, yet the financial risk is borne by MCF in the form of a loan-guarantee. Facilities that receive loans through the MCF program also receive business training and quality improvement consulting through SafeCare. In 2010 MCF was selected for a prestigious award at the G20 conference for their innovative health care financing model.

SafeCare

A new set of quality standards was introduced by SafeCare in 2011 to measure and improve quality at public and private healthcare facilities in low- and middle-income countries. The standards are designed specifically for the unique environmental conditions in basic and primary health facilities, taking into account limitations of infrastructure and setting the framework for continuous quality improvement in a step-wise approach. The SafeCare standards and the corresponding methodology for training SafeCare surveyors are both certified by the International Society for Quality in Health Care (ISQua).

Obio CHIS

Rivers State is an oil rich state in the Nige Delta of Nigeria with a population of 5 million people. It has a multiculcultural and diverse population, with Christianity as the major religion. It has 23 local govenrment areas with the capital at Ilorin.

Rivers State Government is made up of the Executive, Legislative and Judiciary arms. The government largely has the autonomy to set industrial policies and attract investment. These policies are set within broader national policies and comply with federal laws.

Shell Petroleum Development Company Nigeria

Shell has been active in Nigeria since 1937. The business activities in Nigeria are exploring and producing oil and gas onshore as well as offshore and gas sales and distribution. Shell also has an interest in Nigeria's largest liquefied natural gas plant (NLNG). The offices are based in Port Harcourt, Warri, Lagos, and Abuja. The Community Health Department responsible for the Obio CHIS, is strategy for its CSR commitments and business strategy in managing environmental sustainability.

Healthcare International(HCI)

The Health Care International is Health Maintenace Organization established in 1997 by a consortium of Insurance Companies. The company has over 450,000 enrollees on a network of about 3,000 hospitals in the managed care schemes.

Annex 5: Evalution and scientific studies; and conference presentation

Kwara CHIS

Study	Author	Year	Type
An Analysis of Nigeria's Health Sector by State: Recommendations for the Expansion of the Hygeia Community Health Plan in by	Emily Gustafsson-Wright et.al	2008	Gray Literature
Kwara I Impact Evaluation of HIF-supported Health Insurance projects in Nigeria: Baseline Report	AIID	2009	Gray Literature

Kwara II Impact Evaluation of HIF-supported Health Insurance projects in Nigeria: Baseline Report	AIID	2010	Gray Literature
Mid-term review of the Enhanced Community Based Care Project		2013	Gray Literature
Effect of Health Insurance and Facility Quality Improvement on Blood Pressure in Adults with Hypertension in Nigeria: A population based study by	Marleen Hendricks et.al	2014	Peer reviewed
Cardiovascular disease prevention in rural Nigeria in the context of community based health insurance scheme: Quality Improvement Cardiovascular care Kwara-I (QUICK-I)	Marleen Hendricks et.al	Forthcoming 08/2014	
Development and evaluation of a patient centered cardiovascular health education program for insured patients in rural Nigeria (QUICK-II)	Aina Olufemi Odusola et.al	Forthcoming 08/2014	
Achieving Universal Health Coverage in Nigeria One Sate at a Time	Emily Gustafsson-Wright	2013	Published
Intra-household allocations of micro health insurance: No adverse selection after all?	Berber Kramer	2014	Gray Literature
Short-Term Impact Evaluation of the Health Insurance Fund Program in Central Kwara State, Nigeria	AIID and AIGHD	2013	Gray Literature

Obio CHIS

Study	Author	Year	Type
Increasing access to child health services in resource limited settings: experiences with the Obio Community Health Insurance Scheme	Nte et.al.	2013	Published - Peer Reviewed
Utilization and perception of community health insurance scheme services by enrollees in Obio Cottage Hospital	Ogbonna et.al	2013	Published - Peer Reviewed

Community health insurance as a catalyst for uptake of family planning and reproductive health services: The Obio cottage hospital experience	Fakunle et.al	2014	Published - Peer Reviewed
Perception of pregnant women about antenatal care in a cottage hospital (OCH) in Port Harcourt	Ekott et.al	2012	Published - Peer Reviewed
1st Evaluation study of CHIS at Obio Cottage Hospital	Ogbonna et.al	2011	Gray Literaure
2nd Evaluation study of CHIS at Obio Cottage Hospital	Ogbonna et.al	2012	Gray Literaure
Volunteerism in a health care delivery system in Nigeria: A cottage hospital (OCH) experience	Ehigiegba et.al	2013	Forthcoming
Benefit Incidence Analysis	Akwataghibe et.al	2013	Gray Literaure
3rd Evaluation Study of the CHIS at Obio Cottage Hospital	Ayo Ayodeji	2013	Gray Literaure
Making Community and Clinic-Based PMTCT Services more Accessible:The Role of CHIS: A Nigerian Cottage Hospital Experience	Ehigiegba et.al	2012	Published - Peer Reviewed
Eliminating Mother-to-Child Transmission of HIV Infection in Resource-Limited Settings: The barriers in a Cottage Hospital in Nigeria	Fakunle et.al	2012	Published - Peer Reviewed

Conferences *(this list is not exhaustive)*

Kwara CHIS was showcased in these conferences

Conference	**Organizer**	**Location**
Scaling up Health Insurance and Financial Protection in Health	IFC, World Bank; WHO; USAID; PharmAccess	Washington D.C., USA
International Conference of Microinsurance Network	Munich Re	Indonesia
Finanacing Healthcare and Quality of Care	SOCAP	San Francisco, USA
Private Sector and Poverty Alliviation	World Bank; Gates Foundation	Washington D.C., USA
Expert meeting to disseminate lessons learned from the scheme	Dutch Ministry of Foriegn Affairs	Netherlands

Presidential Summit on Universal Coverage	Federal Ministry of Health	Abuja, Nigeria

Obio CHIS

Conference	**Organizer**	**Location**
4th Annual Conference of the Society for Quality Healthcare in Nigeria	Society for Quality Healthcare Nigeria	Nigeria
44th Annual General and Scientific Conference of the Paediatrics Association of Nigeria (PANCONF),	PAN	Nigeria
Health Public Private Partnership Workshop	Federal Ministry of Health, International Finance Corporation and Anadach Group	Abuja, Nigeria

Annex 6: Facility Upgrade

Kwara CHIS: Sample of upgraded infrastructure and medical equipment in some of the facilities

FOUNDATION CLINIC
Nets on all windows in the Hospitals
Bore hole with a 2500L over head tank
Creation of toilets and bathroom in female ward
Creation of toilets and bathroom in male ward
Construction of toilet in Doctors Consulting room, plumbing and completion 1 soak away
Roofing of 2 room building for Health Records and Data facility
Plastering of 2 room building and painting, 4 sliding glass windows and sliding doors
Laying of tiles in all wards and rooms in hospital
Interlocking tiles in the veranda and fencing around the relations waiting area & around the backyard.
Creation of a custom made Incinerator
Painting inside and outside the clinic
Generator to power the whole hospital
6 Toilets and wash hand basins
8 Bedsides lockers
Workbench in laboratory
Workbench in Pharmacy
Cupboard in pharmacy for drug storage
Cupboard in laboratory
Cupboard for storage of cleaning chemicals
4 High stools for Laboratory
2 High stools for Pharmacy

NEW ERA OSI
Generator to power whole hospital
Nets windows on 12 windows
Workbench in laboratory
Workbench in Pharmacy
1 tables and 2 chairs for second consulting room
10 long benches for reception
10 Bedside lockers
Cupboard for bed linen
Cupboard for pharmacy for drug storage
Cupboard in laboratory
Cupboard for storage of cleaning chemicals
4 High stools for Laboratory
2 High stools for Pharmacy

COTTAGE HOSPITAL ESIE
Painting whole building inside and outside
Nets on windows & door
Provision of 3 sets Tables 6 chairs
Provision of 5 long benches for the reception area
Workbench in laboratory
Workbench in Pharmacy
Provision of a Handwash basin in the Laboratory
Creation of a custom built Incinerator
4 High stools for Laboratory
2 High stools for Pharmacy
Repair/Replace of electrical sockets in treatment room and sterilizing units

SHALOM HOSPITAL & MATERNITY
Generator to power whole hospital
Pumping Machine to make well motorized
Workbench in laboratory
Over head car pool sheds as an extension of waiting room
Creation of extensions for toilets and bathrooms in 4 wards
Creation of a sterilizing room
Cupboard for pharmacy for drug storage
Cupboard in laboratory
Creation of laundry space
Cupboard for storage of cleaning chemicals
4 High stools for Laboratory
2 High stools for Pharmacy

HAUWA MEMORIAL CENTRE
Workbench in laboratory
Workbench in Pharmacy
Cupboard in pharmacy for drug storage
Cupboard in laboratory
Cupboard for storage of cleaning chemicals
Generator to power the hospital and equipment
Bore Hole and tank
Consulting table and chair
Nets on windows
Creation of laundry space
Craetion of sterilization unit
4 High stools for Laboratory
2 High stools for Pharmacy

Labor and delivery package				-			-
Ultrasound scan machine	2,872,800.00	1	0				-
Angle poise light	54,000.00	2	0	108,000.00	2	0	108,000.00
Bowl	7,020.00			-	2	0	14,040.00
Bowl holder [single bowl]	15,120.00			-	2	0	30,240.00
Delivery bed	58,320.00	1	0	58,320.00		0	-
Fetoscope (only if antenatal care)	43,200.00			-	2	0	86,400.00
Delivery equipments	16,740.00	8	0	133,920.00	6	0	100,440.00
Forceps [discecting/sponge forceps]	810.00	2	0	1,620.00	2	0	1,620.00
Partograph [+ paper]	-			-			-
Scissors	864.00			-	3	1	2,592.00
Vacuum extractor	21,600.00			-			-
Newborn package				-			-
Ambubag + mask [baby + newborn]	4,860.00	2	0	9,720.00	2	0	9,720.00
Angle poise light	54,000.00			-			-
Hospital bed [baby]	34,560.00	2	2	69,120.00	2	2	69,120.00
Incubator [baby]	702,000.00			-			-
Phototherapy Machine	375,000.00	1	0	375,000.00			-
Mattress [baby]	86,400.00	2	2	172,800.00	2	2	172,800.00
Suction machine	108,000.00	1	1	108,000.00	1	1	108,000.00
Weighing scale [baby]	32,400.00			-			-

Obio CHIS: After the facility upgrade