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Growth of health maintenance organisations in Nigeria and the potential for a role in promoting universal coverage efforts

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ABSTRACT

There has been growing interest in the potential for private health insurance (PHI) and private organisations to contribute to universal health coverage (UHC). Yet evidence from low and middle income countries remains very thin. This paper examines the evolution of health maintenance organisations (HMOs) in Nigeria, the nature of the PHI plans and social health insurance (SHI) programmes and their performance, and the implications of their business practices for providing PHI and UHC-related SHI programmes. An embedded case study design was used with multiple subunits of analysis (individual HMOs and the HMO industry) and mixed (qualitative and quantitative) methods, and the study was guided by the structure-conduct-performance paradigm that has its roots in the neo-classical theory of the firm. Quantitative data collection and 35 in-depth interviews were carried out between October 2012 to July 2013. Although HMOs first emerged in Nigeria to supply PHI, their expansion was driven by their role as purchasers in the government's national health insurance scheme that finances SHI programmes, and facilitated by a weak accreditation system. HMOs' characteristics distinguish the market they operate in as monopolistically competitive, and HMOs as multiproduct firms operating multiple risk pools through parallel administrative systems. The considerable product differentiation and consequent risk selection by private insurers promote inefficiencies. Where HMOs and similar private organisations play roles in health financing systems, effective regulatory institutions and mandates must be established to guide their behaviours towards attainment of public health goals and to identify and control undesirable business practices. Lessons are drawn for policy makers and programme implementers especially in those low and middle-income countries considering the use of private organisations in their health financing systems.

KEY WORDS: Nigeria; universal health coverage; health maintenance organisations; national health insurance; private health insurance; private sector; case study

INTRODUCTION

Low and middle income countries (LMIC) setting a goal of universal health coverage (UHC) should have effective health financing strategies and organisations (WHO, 2010). Unfortunately, the public organisations which are critical to UHC are weak in many LMICs (including Nigeria), prompting an interest in private organisations (WHO, 2011). In many LMICs, private organisations provide private health insurance (PHI), especially to formal private sector employees (Bitran et al., 2008; Campbell et al., 2000; Drechsler & Jutting, 2007; Sekhri & Savedoff, 2005; Zigora, 1996). In some countries, they also support publicly-funded health financing programmes (Devadasan et al., 2013; IFC, 2007).

One way in which private firms provide PHI is by integrating the financing and provision functions through a set of affiliated and/or owned health providers, in order to enhance efficiency and effectiveness. Such systems, referred to as "managed care" systems or health plans, include Health Maintenance Organisations (HMOs), Preferred Provider Organizations (PPOs) and Point-of-Service Plans (MedlinePlus, 2010).

HMOs emerged in Nigeria in 1996 to provide PHI primarily to formal private sector employees, like their counterparts in the USA (Awosika, 2007; Onoka et al., 2014). Currently, these HMOs provide PHI, but the coverage is still quite limited (0.48 million people, 0.3% of the population) (Awosika, 2012). They also act as purchaser for the Social Health Insurance (SHI) programmes of the National Health Insurance Scheme (NHIS), including the Formal Sector SHI Program (FSSHIP) for public sector employees, and the Tertiary Institutions' SHI Program (TISHIP) for higher education students, which represent publicly-financed vehicles for expanding coverage in Nigeria. About 5 million Nigerians (3% of the population, mainly federal government employees and their dependants) are reportedly covered under the FSSHIP (Dutta & Hongoro, 2013; JLN, 2013), though the figure may be as low as 2.35 million (Onoka et al., 2014). Although private firms are allowed to enrol with the FSSHIP, they have continued to opt for the PHI plans of the HMOs. Having influenced the enactment of legislation that makes their enrolment in the FSSHIP voluntary, these private employers have greater

trust in HMOs to handle their funds (Onoka et al., 2014). TISHIP coverage is unknown. HMOs therefore have a central role in the plans for UHC in the country.

The aim of this paper is to understand the potential for HMOs to play a role in a national health financing system that seeks to progress to UHC, by reviewing the evolution of HMOs in Nigeria, the nature of their health plans and their performance. The paper then analyses from a public health perspective the implications of their business practices in providing PHI and UHC-related, publicly funded SHI programmes in Nigeria.

CONCEPTUAL FRAMEWORK

The analysis was guided by the structure-conduct-performance (SCP) paradigm that has its roots in the neoclassical theory of the firm (Bain, 1956; Mason, 1939), and which has been modified to indicate bidirectional relationships between the SCP elements (Scherer & Ross, 1990; Shepherd, 2004). As applied here, market structure considers the number of firms and their shares of the total products sold in the market (summarised as market concentration), how homogenous their products are, and the market entry conditions (Ferguson & Ferguson, 1994; Morris et al., 2007). The business conduct element includes the strategies adopted by HMOs in shaping their products and premiums. HMO performance was analysed in terms of profitability, functionality and efficiency (ILO, 2007). Functionality reflects the firm's ability to carry out the health insurance function and is assessed by member growth rates, premium collection rates and renewal rates. Administrative cost computed as a percentage of total expenditure and as a share of total revenue (Mathauer & Nicolle, 2011), and claims ratio (which indicates the ability to provide insurance with the funds generated) (ILO, 2007) serve as proxies for efficiency.

METHODS

This exploratory study of the HMO industry in Nigeria used an embedded case study design with multiple subunits of analysis (Yin, 2009) and mixed (qualitative and quantitative) methods to achieve a comprehensive understanding (Creswell, 2009). Case study designs have previously been used to study healthcare and health insurance markets (Denton et al., 2007; Doonan & Tull, 2010;

Harkreader & Imershein, 1999; Lee et al., 2001). At the primary level of analysis (industry), market structure elements were considered using quantitative data about HMOs' membership and qualitative information about entry conditions and accounts from interview respondents of HMOs' behaviours. The second level of analysis focussed on the reported business practices and performance of three HMOs (embedded sub-units of analysis) that were purposively selected following initial interactions with officials of the industry association, the Health and Managed Care Association of Nigeria (HMCAN), and policy makers. These HMOs had large membership, the needed quantitative data, and long-term experience. Information about their behaviours was gathered from self-reports and reports of the behaviour of other firms in the market. Financial information was obtained from interviews and from relevant documents, and is presented here in Naira and US$ at an average conversion rate of 1US$=₦157 over the period of data collection (October 2012 to July 2013). Table 1 shows the methods for data collection and analysis. Interviewees and HMOs gave informed consent and the study received ethics approval from the London School of Hygiene and Tropical Medicine (Ref: 6233), and the Federal Ministry of Health, Nigeria (NHREC/01/01/2007-26/09/2012).

FINDINGS

Growth and Structure of HMOs in Nigeria

The earliest HMO in Nigeria emerged in 1996 to supply PHI to private firms. Between 1996 and 1999, three more HMOs were established as interest in a proposed FSSHIP of the NHIS grew (Onoka et al., 2014). HMOs were required to register only with the Corporate Affairs Commission of Nigeria to operate as private entities. In 1999, a military decree that established the NHIS (NHIS, 2012) also recognised HMOs and legitimised the subsequent accreditation of 12 HMOs as operators of the FSSHIP in 2004 (Onoka et al., 2014). They were reportedly given this role because policy makers believed that as private organisations, HMOs would implement the SHI programme more efficiently and effectively than the existing weak public systems. To encourage their participation, a primary accreditation requirement of a share capital of 100million naira (US$ 0.64million) was waived.

However, the waiver also allowed the accreditation of HMOs that "*had no* (private) *products to sell but were developed because the NHIS had some lives to distribute*" (Policy maker), and whose interest was to *"acquire public lives"* (Policy maker). Subsequently, more HMOs were registered at the discretion of the NHIS, which in 2009 suspended further registration because it considered many of the existing HMOs *"weak"* (NHIS official).

In 2011, the NHIS introduced more stringent accreditation requirements for HMOs. Existing and new HMOs were required to demonstrate a share capital of 400 million (US$ 2.5 million), 200 million (US$ 1.27 million) and 100 million naira (US$ 0.64 million) to be categorised as a national, regional or state HMO, respectively (NHIS, 2012). They also had to establish offices, staffed with personnel having a prescribed set of competencies, in their operational areas. At the end of the accreditation process in 2013, additional HMOs had been registered bringing the number to 76. Mergers or acquisitions were not reported. Five HMOs were licensed as sub-national HMOs, while others were considered national HMOs (NHIS, 2013). Most of the interviewees believed that the requirements "*made way for people* (such as politicians) *who have money and not necessarily the technical expertise,*" (HMO manager) and those with undesirable business practices (such as copying of proposals, health plans and premiums, and predatory pricing) to enter or remain in the industry. To HMOs, the focus on share capital suggested a lack of technical capacity in the NHIS to effectively regulate the industry. This position was further corroborated by NHIS officials:

> *A more appropriate requirement should have been to ask for reserves amounting to the level of incurred but not yet reported claims that are in tandem with the size of the business, to take care of catastrophes if they occur within your enrolment population based on the size of their enrolee base, and not just saying 400million.* (HMO manager)

> *We have a very poor capacity to regulate private health insurance because virtually everyone here came from the background of social health financing.* (Senior NHIS official)

Overall, the number of HMOs increased from one in 1996 to 12 in 2004 and 62 in 2012, with a corresponding change in market concentration from a four-firm concentration ratio of 0.88 to 0.50 for the private plans, and HHI of 0.24 to 0.09 (Figure 1). By 2013, there were 76 HMOs (NHIS, 2013).

Nature of health plans and benefits packages

The leading HMOs in the industry started by supplying three well-defined private plans, distinguished by a progressively expanding set of health benefits, from which clients could choose. These are labelled here as standard (A), intermediate (B) and superior plan (C and C+ or deluxe). In order to *"protect the integrity and the reputation of the industry"* (HMCAN leader), HMO managers formed the HMCAN in 1998.

> *"When there were few of us, the opportunities were many, and we could to an extent tell one another that certain plans could not be sold at advertised low amounts without compromising quality or defaulting with provider payments."* (HMCAN official)

The establishment of the NHIS in 1999 encouraged more HMOs to be set up, which then attracted many trained employees of existing HMOs with offers of higher salaries or greater professional opportunities. Given the limited technical capacity in the industry and intellectual property standards enforcement, it appeared to HMO respondents that the migrating personnel developed healthcare plans mainly by slightly modifying the benefits content, premiums and names of existing plans using documents in their possession. Ultimately, many HMOs ended up with *"three to seven different* (private healthcare) *plans"* (HMO manager), with similar labels such as *"Gold", "Standard", "Platinum", "Classic"* and *"Titanium" that* identify them as having a common ancestry. [INSERT LINK TO ONLINE FILE 'supplementary material_HMO.docx']

> *"When we go for bids with other HMOs, we have seen in the past, which is very common, a new HMO and even existing HMOs will just doctor* (copy) *your own proposal* (including benefits) *and only change names* (labels) *of our plans."* (HMO marketing manager)

Such behaviours were reported to lead to distrust among HMOs such that a leading HMO withdrew from HMCAN to shield itself from predatory behaviours of competitors. When HMCAN undertook an actuarial analysis of the industry's healthcare plans in 2007, some HMOs were unwilling to submit data and others submitted inaccurate data. As noted by a HMCAN leader, the influence of HMCAN

was diminished by these events, and some HMOs subsequently failed to honour their financial obligations to it.

As HMOs increased in number, they also sought opportunities to supply additional private products. For instance, some HMOs developed informal sector plans, some of which were hugely subsidized by international donors or private organisations (Humphreys, 2010). Recognising that "*companies usually have different cadres of staff*" (HMO head), HMOs also developed varieties of health plans in response to employers' request to have basic health plans, which offered junior employees some *"opportunity to access quality medical services"* (HMO marketing head), and plans with more comprehensive benefits for senior staff. HMOs felt that the inclusion of highly expensive deluxe plans for owners and directors incentivised them to buy plans for their employees.

Growing competition also stimulated opportunistic behaviours among HMOs that sought to supply public plans. For instance, in 2004, a leading HMO sought the endorsement of policy makers to serve as the monopoly supplier of the proposed FSSHIP, but resistance from other HMOs led to a proposal for HMOs to compete for government agencies (Onoka et al., 2014). The subsequent observation that a new HMO had allegedly secured the endorsement of half of the targeted government agencies with promises of financial favours was felt to have been influential in leading policy makers to adopt a mechanism in which the NHIS allocated beneficiaries to HMOs on the basis of their financial and infrastructural endowments. Latterly, additional allocations were devoid of a defined mechanism. At some point, newer HMOs, demanding fairness, were reported to have (unsuccessfully) pressured the NHIS to redistribute beneficiaries of the FSSHIP.

> *"None of these HMOs is perfect; so why would all these people* (public agencies)*… overnight, decide that they were going along with one?"* (Policy maker)

> "*You know any 'allocation mechanism'* (emphasis) *has things that are behind it. What one can argue about is the fairness and equity in the allocation. What are the guidelines for*

allocation between A, B, C, D? There is none! I like you, I give you some." (Former NHIS official)

The integration of HMOs as key operators of the FSSHIP was felt to have positioned them to act as implementers of the TISHIP of the NHIS in 2009. Interested HMOs took advantage of the TISHIP guidelines that allowed them *"to prepare a customized benefit package if they so wish"* (NHIS guideline, 2012), to modify and supply health plans that were acceptable to university authorities. Premiums were paid by students as part of their school fees, and the university authorities transferred contributions to contracted HMOs.

Table 2 shows HMOs' health plans as at 2013, namely, the public (NHIS) healthcare plans (FSSHIP and TISHIP) and the private plans (for the formal and informal private sector), and the differences in providers, benefit entitlements and contract terms. Table 3 compares the benefit entitlements of their private plans, TISHIP and FSSHIP. The private plans (standard (A), intermediate (B) and superior plan (C and C+ or deluxe) relate to the three conventional health plans developed by the earliest HMOs. Informal sector plans represent slight modifications of HMOs' basic plans.

Benefits lists also include restrictions. For instance, dental care is included in various plans but the actual benefit may be limited to a few dental procedures. Similarly, though surgery is included in all plans, the benefit limit may be N100,000 (US$637) in a basic plan, but up to N300,000 (US$1,911) for a higher cost plan. Providers are also restricted.

"There are hospitals set up for the elites and they are not cheap; we always have the one you want based on your pocket" (HMO marketing manager).

Premiums for private health plans

Strategies for setting premiums

For a few earlier and leading HMOs (including one studied in-depth), premium setting involved actuarial analysis that considered actual fee-for-service expenditure, administrative cost and desired profits. This was reported to have been possible because these HMOs had invested in the data

management infrastructure required to analyse utilisation and expenditures, and had also recruited actuaries. Nonetheless, primary care cost data and capitation rates were imperfectly estimated because *"providers do not give us their utilisation records"* (HMCAN leader).

Recognising that actuaries were few and very expensive to hire, and that data management infrastructure was costly, it appeared that many HMOs relied on rates obtained from HMCAN's actuarial analysis, despite its inaccuracy. A HMO manager admitted using premiums of HMOs that carried out actuarial analysis as a gauge for the simple *"in-house actuarial analysis"* undertaken by managers without actuary training, who took into account their own administrative costs and assumptions about probability of illness.

> *"Few HMOs ever have brush with actuaries; some don't even know where actuaries exist but they are selling products."* (HMO unit manager)

> *"Doing actuarial analysis is not that complex right now. We don't have high deductible, low deductible, and all those variations are not there… it's mostly when it is individuals that are buying that we factor in risk."* (A HMO manager)

Interviewees noted that many newer HMOs, would simply set premiums lower than those of HMOs that undertake actuarial analysis, who they believe would have inflated their prices to account for profits and medical losses. Consequently, both "undercutting" (presenting lower premiums to firms for defined health plans already proposed by other HMOs) and "low-balling" (adoption of lower than appropriate prices for defined health plans) reportedly existed in the market. This situation was said to be responsible for HMOs' reluctance to share premium information in proposals and with the NHIS and academic researchers.

> *"Some HMOs take 3 or 4 rates and put them together, 'this one is 20,000* (Naira) *and this one is 17,000. Okay, let us put ours at 15,000.'"* (HMO manager)

"There is a lot of low-balling and under-cutting. In fact, there are some businesses that we lost like that even though you know that due to current realities, no one can provide that package at that price." (HMO owner/manager)

"We do competitor analysis. Sometimes, you have to find where to get the information (about proposals of others) *so as not to out-price yourself." (HMO marketing unit manager)*

Client-related considerations

As shown in Table 2, premiums for private plans exceeded those proposed in 2013 for individuals that wanted to join the NHIS programmes on a voluntary basis, despite the latter's more generous benefits (Table 2). Informants suggested that this apparent anomaly could be explained by a mix of higher expectations of efficient service from private employers and their lack of confidence in the NHIS administrative processes. HMOs offered discounts to purchasers of more expensive plans and bulk purchasers (Table 2), and excluded elderly dependents. Premiums for individual and family-based private plans were risk-rated. Individuals with hypertension, diabetes, sickle cell disease or kidney disease were either excluded or offered higher premiums. Higher premiums or long waiting periods were applied for immediate coverage for pregnancy-related and surgical care.

Discounts were not available in informal sector plans. However, one HMO was able to offer lower premiums by restricting beneficiaries to a few focal health providers that agreed to receive lower capitation in return for large beneficiary clusters. According to its owner, the HMO used freelance staff, remunerated on a pay-for-performance basis, to promote its products, recruit members and collect premiums, and in so doing, to control expenditure.

HMOs' response to demands for price changes

Interviewees generally reported a tendency for HMOs to maintain constant premiums over periods of three to five years, despite rising operational expenditures or demands for higher payments by healthcare providers. It appeared that they were afraid of losing existing members to competitors mainly due to undercutting. While older and more established HMOs were said to occasionally take

the risk of raising their premiums because of their reputation among members, or due to external changes (especially in government policies), newer ones were reported to respond by adjusting benefits to match their clients' premium offers.

> *"We are faced with much heat of increasing providers' payments, but cannot readily translate that to the clients. That is one of the reasons our (medical) loss ratio is rising." (HMO head)*

> *"Many HMOs are willing to adjust the benefit package and give you something that you want; what your money can afford."* (HMO marketing unit head)

Non-price based strategies employed by HMOs for private plans

> *"The major determinant of success* (retention) *is the ability to render quality service specified in the benefit package… it is not just because premiums are higher that companies move* (to other HMOs)*."* (HMO medical unit manager)

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Premised on their owners' assumption that many Nigerians associate quality with availability of medical doctors, some HMOs (especially those owned/managed by medical doctors) appeared to be intentionally advertised as "medically-run", "medically-managed", "medically-driven" or "medically-focused" HMOs on their product documents and webpages. It was felt that this strategy would *"make people believe that since doctors know more about healthcare, they make sure that their providers deliver quality care."* (A HMO marketing manager). Secondly, to gain a reputation for effective service delivery systems, bigger HMOs also extensively advertised their investments in 24-hour electronic member support systems, data processing infrastructure, data management staff, and actuaries. Respondents believed that these enhanced systems would convince clients to overlook competitors that offered cheap premiums because they lacked utilisation data and would later compromise on service quality. Such HMOs also adopted a *"territorial marketing"* approach to

advertisement (HMO marketing unit head) that involved observing, revisiting and courting dissatisfied firms with testimonies and promises of better service quality. Thirdly, HMOs formed by banks advertised their link with a reputable bank "group" with a huge capital deposit, seemingly to attract clients that were concerned about the long-term safety of their contributions. Others displayed their membership of a group or consortium of insurance, oil and gas, and international managed care companies.

Performance of HMOs

The FSSHIP accounted for a larger population of HMOs' beneficiaries compared to private plans (Table 4). The considerable interest of HMOs in the FSSHIP appeared to stem from its potential profitability, which was felt to arise from beneficiaries' lack of information about its benefits, and sparing use of services. In addition, HMOs did not compete for FSSHIP members based on premiums, and the administrative and promotional expenditures were mainly borne by the NHIS.

Furthermore, HMOs appeared to see the FSSHIP capitation payments which they received regularly from the NHIS as *"guaranteed income"* (HMO manager). Interest earned from such funds deposited with banks could help compensate for vagaries in financial flows in their private plans. For the earlier HMOs that initially had only private plans, participation in the FSSHIP was reportedly *"life-saving"* (HMO manager/owner) and the growth of one such HMO was remarkably *"powered by the establishment of Nigeria's National Insurance Fund* (NHIS)*"* (IFC, 2007).

> *"If you look at the books of all HMOs today, you will note that they make their money from social health insurance. But if you ask them, they will give the impression that they make more money from private health plans, but it's a big lie."* (Policy maker)
>
> *"It took us 7 years to break even, during which we survived on bank interest from other savings."* (HMO owner).

Regarding TISHIP, the numbers of plans were inconsistently recorded. Despite its very competitive price, HMOs considered it potentially profitable and operated it because it targeted healthy students who used services sparingly. Additionally, considerable membership could be gained from a single contract with a university.

> *"People sell (TISHIP plans for) 1,600 naira and some even less. We made a decision not to go below 1,600 even though it is far more expensive. But you see, because of others* (competing HMOs) *you are forced to sell at 1600."* (HMO Manager)

The membership of HMOs private plans was small (Table 4). Additionally, companies occasionally dropped out or fell behind in their payments, and HMO managers were of the view that such behaviours existed because regulatory systems lacked explicit and implementable arbitration mechanisms and sanctions for defaulters. Nonetheless, the three HMOs studied still achieved renewal rates of about 80% and premium collection rates of 79% - 90% (Table 4).

Despite the more generous benefits and cheaper premium of the FSSHIP compared to HMOs' private plans, interviewees felt that private firms did not seem interested in the FSSHIP for three main reasons, largely related to HMOs' behaviours. First, many HMOs allowed some private firms that had cash flow challenges to delay premium payment or pay in instalments, was not the case with the FSSHIP. Secondly, beneficiaries of private plans seemingly considered HMOs more responsive and more focused on consumer satisfaction, compared to their behaviours towards FSSHIP beneficiaries. Thirdly, it appeared easy for private firms whose staff repeatedly to have problems with accessing and using healthcare services to opt for new HMOs, unlike what obtained in the FSSHIP.

Several factors diminished the potential profits from private plans and help explain HMOs' desperation to participate in the FSSHIP. The competitive strategies adopted in the HMO market appeared to limit their profits, and for HMO B, led to a rising claims ratio (see Table 4) as they were unable to raise premiums over a 5-year period despite increasing provider demands. HMO C reportedly raised its premiums to accommodate such changes but mainly retained clients for whom

it had a reputation for quality. The substantial costs of manually collecting and processing utilisation data from providers, verifying claims and paying multiple providers (numbering up to 200) monthly and separately (for private and public plans) using couriered bank drafts, were common to both public and private plans. However, HMO managers were of the view that private plans accounted for most of their administrative costs (Table 4) including the costs of marketing, advertising, setting premiums, negotiating and renegotiating reimbursement levels, maintaining beneficiary support systems, and litigation for debt recovery. Unfortunately, restricted access to, and limited disaggregation of expenditure data meant that the share of the cost elements and the differences across HMOs could not be examined to verify their reports.

Finally, HMOs' informal sector plans were abandoned because of their low profits, such that only four HMOs known to advertise such plans actually developed them. For instance, one HMO reported a claims ratio of 111% for its informal sector plan in 2011, owing to a high rate of caesarean sections. Nonetheless, the strategy of providing such plans was believed to promote the reputation of the HMO as *"…a major player in the industry"* (HMO head) with a wide business scale, the capacity to manage informal sector programmes or "community based insurance" for interested local and international organisations, and *"prestige"* (HMO owner/manager) that demonstrated corporate social responsibility.

DISCUSSION

This study is the first systematic analysis of the business practices of HMOs in LMICs. It has presented information on their evolution, structural characteristics, and business strategies that influence the number, benefits and premiums of their health plans and their performance. The findings provide a basis for characterising the HMO industry in Nigeria, and from a public health perspective, assessing their role and business practices in providing PHI and UHC-related SHI programmes in Nigeria.

Although HMOs first emerged in Nigeria to supply PHI, they grew because of a public policy that encouraged their use in the government's NHIS, and a weak accreditation system. By 2004, the four-firm market concentration ratio (CR4) was in excess of 40%, interpreted by Scherer and Ross (1990) as suggestive of oligopoly. However, the limited barriers to entry, the existence of differentiated health plans, and the subsequent decrease in HHI to levels corresponding to low concentration (USDOJ, 2010), distinguish the market as monopolistically competitive (Parkin et al., 2008; Varian, 2010).

The categories of HMOs' health plans, including public (FSSHIP and TISHIP) and a variety of private plans (for the formal and informal sectors) constitute multiple health insurance pools, which are common in health financing systems of LMICs (Mills & Ranson, 2005). The FSSHIP included a uniform, more comprehensive benefit package available to all beneficiaries for relatively lower premiums, and allowed greater provider choice compared with private plans. Conversely, private plans were intentionally differentiated, and constituted multiple pools that served segmented groups. In practice, the TISHIP represented a private product, except that its minimum price and benefit entitlements were fixed by the regulator. As providers of these four plans, HMOs in Nigeria are multiproduct private firms operating multiple pools through multiple administrative activities, and having the potential to behave differently in each pool (to increase their market shares and maximise profits) and to operate inefficiently.

In their provision of private plans, HMOs were characterised by poor information about costs and expensive business practices that promoted inefficiencies, including market segmentation, product differentiation, and non-price competition. Poor information coupled with the scarcity of actuarial analysts contributed to inaccurate premium estimation. From the firm's perspective, product differentiation strategies can be a profit maximising strategy. However, product differentiation and promotion are costly and encourage waste. There was some degree of price competition, but unfortunately this was premised on predatory pricing rather than actual cost information. The

evidence supports suggestions that competition could lead to adoption of pricing strategies that are detrimental to the economic stability of private insurers (Sekhri & Savedoff, 2006). Such behaviours, coupled with poor regulation, have the potential to undermine the stability of members' benefits.

Unsurprisingly, the outcome of competition in the private market included situations observed in other developing country settings (Awosika, 2007; Bitran et al., 2008; Campbell et al., 2000; Drechsler & Jutting, 2007; Sekhri & Savedoff, 2005; Zigora, 1996): PHI coverage is low and focuses on private formal sector employees, poorer groups are excluded, multiple pools exist, premiums are relatively high for benefits compared to the SHI programme, and insurer health care and administrative expenditures are high due to inefficient practices. Remarkably, private firms still prefer to take on PHI plans rather than the SHI programme, possibly because they trust them more. HMOs' private plans are also limited as instruments for mobilising prepayment contributions from the large informal sector workforce in Nigeria because they are unprofitable.

For the public plans, the uniform nature of the FSSHIP means that HMOs do not have to promote the products, which should make SHI more efficient than the private plans. In contrast, the TISHIP, though labelled a SHI programme has in practice become like the differentiated private plans of HMOs. As shown earlier, HMOs' private plans for poorer groups, junior firm employees and informal sector groups, excluded or restricted important benefits such as maternal healthcare while less healthy groups were either excluded or charged risk-rated premiums. To the extent that such business practices apply to the TISHIP, the targets are provided with differential benefits and premiums through multiple pools and in ways that encourage both inefficiencies and inequities.

The analysis here underscores the need to critically examine public-private partnerships that are emerging in healthcare financing systems in LMIC, about which little is known. Policy makers' interests in and use of HMOs was initially motivated by perceived weaknesses in the health system in the 1990s (Onoka et al., 2014), which continue today. HMOs have become a powerful interest group and having played a significant role in establishing the NHIS' programmes, have become

entrenched within the health financing system that seeks to progress to UHC. This partnership is supporting a policy design for TISHIP that makes it a private plan in practice rather than social health insurance as the name implies, and a regulatory system that fails to ensure that public funds are used to achieve desirable public goals of equity and efficiency. It also fails to control undesirable behaviours of HMOs in relation to their private plans.

Where HMOs or other private financing organisations are being used for UHC-related health financing programmes in LMICs, the policy guiding the public-private arrangement should be structured to promote the use of their infrastructural, financial and technical capacity to promote public health goals. For example, the premiums and benefits of public programmes they supply should be wholly determined by a publicly-led purchaser at national or sub-national levels, as is done for the FSSHIP, rather than leaving HMOs to determine such features as in the TISHIP. Where they supply PHI, its role should be clearly defined so that its contribution or negative impact can be observed and controlled to preclude negative consequences on UHC. As in other settings, PHI can still provide substitute coverage to people in the private sector who are able to pay for it (Mossialos & Thomson, 2002; Pauly et al., 2006) provided they are effectively regulated (Sekhri & Savedoff, 2005, 2006). Policy makers can also learn from private sector innovations to reduce inefficiencies such as the strategy of purchasing services for a large pool of beneficiaries from a limited set of providers, which enabled one HMO to charge lower premiums for informal sector plans.

Achieving effective regulation will require the implementation of effective governance arrangements. Essentially, the NHIS needs explicit frameworks for regulation, which should be implemented by independent organisations, as suggested elsewhere (FMOH, 2003). Otherwise, the conflicts of interests that arise from the NHIS' multiple roles, of SHI organiser and regulator, and PHI and HMO regulator, and the fact that HMOs participated strongly in shaping the development of regulatory guidelines being implemented by the NHIS, will continue to impede regulation. A basic minimum benefit package can be prescribed for PHI plans by the government (as is the case for

medical aid schemes in South Africa), and only insurers that comply can be provided with operating licences. Government requirements that insurers display the prices and healthcare plans and provide information necessary to guide a consumers' choice of insurer, have potential to significantly control HMOs' prices if deployed in Nigeria. HMOs in the USA report their data (including administrative expenditures) to analysts (Sherlock, 2009). Such information enables the examination of organisational behaviours and performance (USDOJ, 2010), and can use the variations in behaviours within the industry to identify and control the HMOs with undesirable behaviours. HMOs' behaviours related to their private plans, which seem to limit the interest of private firms in the FSSHIP should be examined and addressed. For instance, the NHIS can ensure that HMOs extend positive behaviours such as consumer satisfaction strategies to FSSHIP beneficiaries. Regulation can also be enhanced if the NHIS gives greater recognition to the important role of HMCAN in encouraging positive behaviours amongst members.

Limitations and strengths of the study

Information was obtained on the entire industry. Data from multiple sources that included policy makers and the leaders of the umbrella association of HMOs (the HMCAN) were triangulated. However, the generalisability of the findings is limited nature of the evidence, which reflects interviewees perceptions, and the outcome of the interviewer's and interviewees interaction. For instance, In-depth analysis focused on three relatively large HMOs, whose views and experiences, and context might differ from those of smaller ones.

HMOs were generally averse to sharing information, with one HMO declining to participate, citing the risk of granting competitors access to business secrets in a poorly regulated business environment. Since the regulator did not collect information on the premiums of private plans, analysis of price competition using quantitative methods was impossible. The extent of cost-shifting among the different plans could not be examined due to lack of data. Nonetheless, the case study approach provided insights into actual business behaviours of individual firms, which contrasts with

cross-sectional neo-classical economic methods that provide aggregate information (Ferguson & Ferguson, 1994).

CONCLUSION

This analysis provides insight into the private HMOs industry in one large middle income country. These findings support the adoption of a critical position towards PHI in efforts to promote UHC in such settings, and the need to be careful with designing policies that hand roles to private organisations for publicly-funded UHC-related programmes. Where HMOs and similar private organisations play a role in health financing systems, effective regulatory institutions and mandates must be established to guide their behaviours towards attainment of public health goals, and to identify and reprimand those engaged in undesirable business behaviours. Given the evidence here on HMOs' PHI plans and their experiences, further research is needed to explore why private firms are still reluctant to embrace the more comprehensive SHI programme, a step that should generate a more inclusive and effective national SHI pool.

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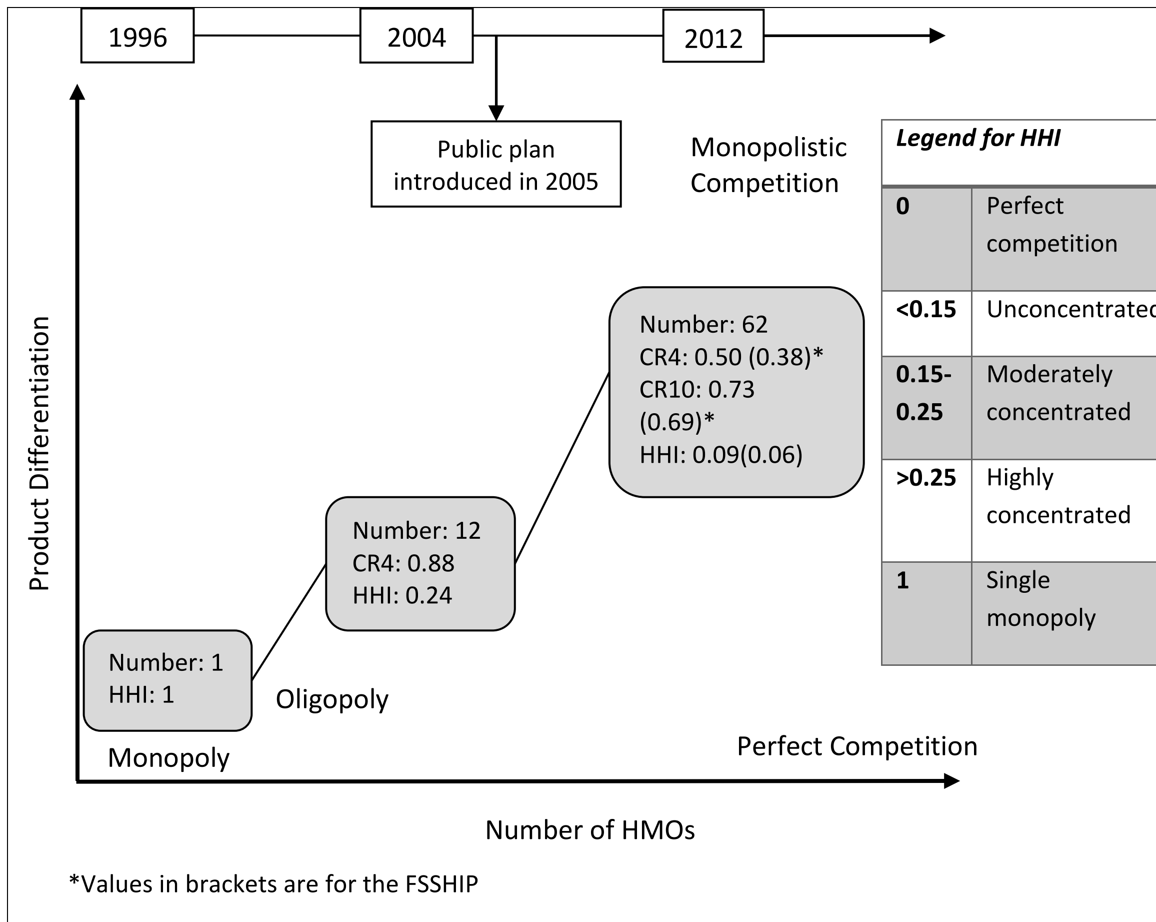

Figure 1: Change in the market concentration 1996 - 2011

Table 1: Methods for data collection and analysis

Target	Method
General information about the HMO industry Quantitative data for assessing performance	Review of National Health Insurance Scheme Act, operational guidelines for NHIS programmes, NHIS publications related to HMOs, HMOs' advert documents, records and reports
In-depth information on existing healthcare plans, and HMOs' business strategies	35 In-depth interviews with officials of the NHIS and HMOs' association, and the heads, owners, managers and unit heads of three HMOs, and policy makers
Additional information about health plans and promotion strategies	Examination of existing websites of the NHIS and several including the following: www.clearlinehmo.com [Accessed 16/01/2014] www.healthcare-ng.com [Accessed 16/01/2014] www.hygeiagroup.com [Accessed 10/01/2014] www.ihmsnigeria.com [Accessed 10/01/2014] www.metrohealthhmo.com [Accessed 20/03/2014] www.nonsuchhmo.com [Accessed 06/05/2014] www.oceanichealthng.com [Accessed 02/03/2014] www.precioushealthcarehmo.com [Accessed 16/01/14] www.precioushealthcarehmo.com [Accessed 16/01/2014] www.premiumhealthltd.com [Accessed 16/01/2014] www.songhaihealthtrust.com [Accessed 02/03/2014] www.sterlinghealthmcs.com [Accessed 02/03/2014] www.totalhealthtrust.com [Accessed 10/01/2014] www.zenithmedicare.com [Accessed 16/01/2014]
Market concentration	Quantitative analysis of HMO and beneficiary numbers to determine concentration ratio (CR) that represents the sum of the market shares of the largest firms in the market, and the Hirschman-Herfindahl Index (HHI) that takes all firms into consideration (Morris et al., 2007).
Performance indicators	Estimation of Proportions and ratios
Data organisation and reduction	QSR NVivo 9 software
Data interpretation	Initial inductive reasoning to provide insight into accumulated data, and a complementary deductive approach to relate the data to themes in the conceptual framework, and enhance interpretive understanding of data (Fereday & Muir-Cochrane, 2006)
Data integration, description and interpretive analysis	Interactive and reflexive examination of data from all sources and triangulation to test validity of evidence Requests for additional data and interviews as required Review of report by selected interviewees

Table 2: Characteristics of the health plans supplied by HMOs

	PUBLIC		PRIVATE	
Name of plan	FSSHIP	TISHIP	FORMAL SECTOR	INFORMAL SECTOR
Initiator	NHIS	NHIS	HMOs	HMOs
Target beneficiaries	Public and private (formal) sector employees	Higher education students	Private sector employers and employees, individuals and families	Informal sector employees, urban and rural "communities"
Choice of HMO	Determined by NHIS	Determined by school administrators	Determined by firms, and individuals	Determined by target group
Benefit entitlements within HMO and across HMO	Homogenous	Differentiated	Differentiated	Differentiated across HMOs; Homogenous within groups but may be heterogeneous across groups
Nature of premiums	Employees should pay a fixed share of their salary and the employer pays twice the amount	Varies based on the additional entitlements; (Minimum yearly premium of 1600 naira (US$10.2) is recommended by the NHIS)	Flat rates within groups but variable across groups and HMOs	Flat rates within groups but variable across groups and HMOs
Discounts	None	None	Average premiums for staff strength ≥ 20 versus <20: - Individual plan - 62.7% (Plan A), 53.2% (Plan B), 71.3% (Plan C; - Family plan - 65.1% (Plan A), Plan B (61.0%), Plan C (69.8%)	None
Co-payment	10% of prescription charge	None	None	Variable
Revenue collection	Government transfers employee funds to NHIS; NHIS reallocates the funds to HMOs	Students pay premiums along with annual sessional fees; Institution then allots to HMOs	Firms allots staff premiums to HMO; Individuals and families pay directly to HMO	HMO collects directly from leaders of groups and individual members
Frequency of premium payment to HMO	Quarterly	Annually	Quarterly, but in practice, mostly monthly depending on the client	Monthly, and in some cases, weekly
Risk Pool	Single overall pool (NHIS)	Multiple	Multiple	Multiple
Choice of primary provider	Members choose from a generous range of NHIS accredited primary, secondary and tertiary facilities	Restricted to the medical centre of the School	Beneficiaries choose from a list of HMOs' preferred providers	Determined by HMO
Waiting times				

- ***Access to services***	90 days	Immediate	14 – 30 days	30 days
- ***Change of provider***	60 days	Not applicable	30 days	30 days
- ***Authorisation of secondary care***	24 hours	24 hours	24 hours	24 hours
Suspension of benefit following failure to pay	Not applicable because NHIS always pays though short delays may occur	No experience	Immediate, but in practice, variable depending on nature of, and previous experience with client	Immediate

Sources: Websites (Table 1) and publicity material of HMOs and NHIS

Table 3: Similarities and differences in the benefits packages and associated premiums of healthcare plans during 2012-2013 period

	FSSHIP	TISHIP BASIC†		PRIVATE	
			Standard†	Intermediate†	High†
Preventive care	Immunization as it applies in the National Programme on Immunization, and health and family planning education	Yes	Yes	Yes	Yes
	Annual medical checks unrelated to illness	No	No	No	Yes**
Primary care	Out-patient care, including necessary consumables as in NHIS standard treatment guidelines and referral protocol	Yes	Yes	Yes	Yes
	Prescribed drugs and diagnostic tests as contained in the NHIS Drugs List and NHIS Diagnostic Test Lists	Yes (generic prescriptions)	Yes	Yes (branded drugs allowed)	Yes (branded drugs allowed)
	Basic laboratory investigations (Haemoglobin estimation, urine and stool analysis, blood grouping, Fasting/random blood sugar)	Yes	Yes	Yes	Yes
	Accident and emergency care	Yes	Yes	Yes	Yes
Maternal & child health	Ante-natal, delivery and post-natal care (for mother and baby) for 4 pregnancies ending in live births and healthcare if still birth occurs	No	No	Variable	Yes
	Twelve-week post-natal care for preterm/premature babies of beneficiaries	No	No	Variable	Variable
	Treatment of basic gynaecological problems	Yes	Yes	Yes	Yes
	Caesarean sections	No	No	Yes*	Yes
Secondary & tertiary care	Consultation with specialists including physicians, paediatricians, obstetricians, gynaecologists, general and specialist surgeons, radiologists, psychiatrists, ophthalmologists, physiotherapists, etc.	Yes (diagnosis and treatment)	Yes (diagnosis only)	Yes (diagnosis and treatment)*	Yes (diagnosis and treatment)*
	Hospital care in a standard ward for a cumulative 21 days per year following referral	Yes	Standard ward*	Semi-private to private rooms*	Private rooms
	A range of prostheses (limited to prosthesis produced in Nigeria)	No	No	No	Variable
	Eye examination and care, the provision of low priced spectacles but excluding contact lenses.	Examination and care only	No	Variable	Yes
	Dental care (dental check, scaling and polishing, minor surgeries, replacement of ≤4 dentures)	Yes	No	Variable	Yes**
	Advanced laboratory investigations including HIV screening, Hepatitis, ≥2 Ultrasound scans	No	No	No	Yes
	Hospital stay for patients that had cerebrovascular accident (up to 12 cumulative weeks), orthopaedic cases (up to 6 cumulative weeks)	No	No	No	Variable

Exclusion	Occupational injuries, injuries from disasters, epidemics, extreme sports, cosmetic surgery, IVF, treatment of congenital abnormalities, family planning commodities, special dental procedures (e.g. crowns, bleaching), treatment of HIV/AIDS, cancer, transplants	Yes	Yes	Yes	Yes
	High technology investigations e.g. CT scan, MRI: the HMO would pay 50% of cost. Dialysis (maximum of 6 sessions)	Total exclusion	Total exclusion	Total exclusion	Variable
Expenditure limits	No	No	US$0-3000	US$0-6000	US$0-12000
Premium per person†	N15,000 for voluntary contributors	N1,600 (US$10.2) – N15,500 (US$98.7)	N13,500 (US$86.0)- <N30,000 (US$191.1)	N30,000 (US$191.1)– N50,000 (US$318.5)	>N50,000 (US$318.5)

Sources: Websites (Table 1) and publicity material of HMOs and NHIS

*Expenditure limits apply

**Additional benefits for deluxe plans but expenditure limits may apply

Yes (Included); No (Not included)

[†] See text for description of pricing behaviours in practice.

Table 4: Basic market performance indices of selected HMOs

	HMO A	HMO B	HMO C
Total number of members covered by FSSHIP (Dependents/Principal ratio)			
2009	169704 (2.1)	101509 (2.3)	164906 (1.9)
2010	170000 (2.2)	102751 (2.3)	158569 (1.9)
2011	163400 (1.9)	95131 (1.9)	165124 (1.8)
2012	177894 (1.9)	98511 (1.9)	167529 (1.8)
Total number of members covered by formal private plans (Dependents/Principal ratio)	36982 (0.87)	9086 (0.93)	36446 (0.86)
2009	53664 (0.89)	15546 (0.98)	55894 (0.86)
2010	61498 (0.83)	13875 (0.93)	63297 (0.93)
2011	72160 (0.93)	22678 (0.93)	62085 (0.94)
2012			
Renewal rates for private plans			
2011	81.3%	79.8%	81.6%
2012	78.3%	74.6%	80.2%
Premium collection rate (premiums collected as % of premium due)			
2009	81.5%	84.7%	79.6%
2010	87.8%	86.7%	82.1%
2011	83.2%	89.9%	80.1%
Administrative expenditure as % of total expenditure			
2009	25.2%	26.8%	29.1%
2010	27.7%	22.5%	34.2%
2011	29.4%	30.3%	28.8%
Administrative expenditure as % of premiums earned			
2009	20.7%	25.2%	20.0%
2010	24.1%	22.0%	21.5%
2011	30.8%	23.7%	25.4%
Claims ratio (total claims as a % of total premiums)			
2009	74.5%	68.7%	79.1%
2010	72.3%	75.7%	77.3%
2011	67.2%	75.3%	72.4%

Sources: calculated from administrative, enrolment and financial records