

CASE STUDY: MAKING THE PHARMACEUTICAL MARKET WORK FOR THE POOR: A CASE STUDY FROM TANZANIA¹

By Prashant Yadav

George Walter, the health sector lead at the World Bank arrived in his office early that Monday. He was preparing his afternoon executive meeting with the Permanent Secretary of Health of Tanzania. George wanted to make the case for a better Policy and Enabling environment for private sector in essential medicines distribution to the PS.

Tanzania had achieved great progress in recent years in improving health of its population. Between 1995 and 2010 infant mortality has been cut almost in half, from 96 to 51 deaths per 1,000 births, the under-five mortality rate fell from 137 to 81 deaths per 1,000 live births. However, many challenges still remain and availability of medicines remained extremely low in government run health clinics. The PS had launched many new bold initiatives in the past few years and improving the availability of essential medicines was considered a high priority for him.

George had spent the past week reviewing data on treatment seeking behavior, availability and prices in the private sector, reports on ongoing challenges at the Medical Stores Department (MSD) and had identified 2-3 key areas of reform that would enable the private pharmaceutical distribution market to function better. As he prepared his meeting, several questions arose in his mind. Which enabling factors and mechanisms would be the most appropriate for the private market to serve the poor? Was he wrong in assuming that with the right incentives, supporting functions and rules, the private pharmaceutical market could serve the poor well? Would the PS view his ideas as radical privatization measures instead of cost effective mechanisms to serve the poor?

MEDICINE SUPPLY CHAIN IN TANZANIA

Public sector distribution

Like in many countries in sub-Saharan Africa the predominant form of medicine distribution in Tanzania is using a government run central medical store which distributes drugs to government clinics using a government-owned transport fleet. The Medical Stores Department (MSD) is an autonomous

¹ This case was written by Prof Prashant Yadav solely for pedagogical purposes and class discussion. Many details are fictitious or disguised and may not reflect the actual situation in Tanzania. It does not reflect the effective or ineffective handling of a situation or endorse any actions or strategies.

institution under the Ministry of Health & Social Welfare. It was established in 1993 by an Act of Parliament and started operations in 1994.

As a government-owned institution MSD confronts several constraints in achieving high operational performance. It is difficult for MSD to hire qualified people with business experience and skills because of poor wages and incentive systems. MSD also finds it difficult to remove incompetent workers. A bureaucratic tendering and procurement systems made it challenging for MSD to be agile and flexible in its sourcing. While MSD is now experimenting with new direct to clinic models, for most parts of the country it uses a three-tiered distribution system in which medicines flow from MSD warehouses to district stores and then to the clinics. With the lack of information flows in the distribution system the three-tier system leads to diffused accountability and frequent stockouts. The most challenging part of this distribution is making deliveries to small clinics and health centers that are remote and have poor road access ("last mile logistics"). With over 74 percent of mainland Tanzania's 42 million people living in rural areas, this is often cited as a significant challenge.

In the recent years increased financing from multilateral and bilateral donors for drug purchasing especially for HIV/AIDS, TB and Malaria has increased pressure on MSD to improve its delivery performance. Many initiatives have been started to improve the operational performance of MSD but gains have been either marginal or short-lived.

Private sector distribution

The private pharmaceutical sector in Tanzania is diverse and complex, comprising a wide range of actors and stakeholder groups. Many Tanzanians obtain medicines from private retail pharmacies and private drug shops. Studies have shown that more than half of medicines dispensed in Tanzania are obtained at private pharmacies and drug shops.

Retail pharmacies require a trained pharmacist and an approval from the Tanzania Food and Drug Authority (TFDA). In 2009 there were 146 such pharmacies in all of Tanzania and they were mostly concentrated in the urban areas of Dar-e-Salaam, Arusha, Mwanza, Dodoma and Mbeya.

Table 1: Pharmacies in Tanzania

| Types of pharmacy | Number (2009 data) |
|---|-----------------------|
| Pharmacy in a public clinic | 4185 |
| Private retail pharmacy | 661 |
| Pharmacy in a private health clinic or hospital | 659 |
| Faith based or NGO pharmacies | 1008 |

The number of retail pharmacies in rural areas and smaller towns such as Mpanda, Sumbuwanga, Mtwara, Lindi, Shinyanga, and Singida is quite low. In such places the population obtains medicines either from public health facilities or from retail drug shops. Historically, in Tanzania, retail drug shops commonly known as duka la dawa baridi (DLDB) were the most common source of medicines in places where retail pharmacies were sparse. TFDA estimated that there were over 6,800 DLDB.

There was wide variation in the quality and prices of medicines at the DLDBs with some drug shops having very poor quality and extremely high prices. This prompted the Ministry of Health and Social Welfare (MOHSW) and TFDA (with support from Management Sciences for Health's and the Bill & Melinda Gates Foundation) to transform the DLDBs into accredited drug dispensing outlets (ADDO)—Duka la Dawa Muhimu in Kiswahili. The accreditation process for ADDOs is carried out by TFDA with ongoing regulatory oversight is provided by district and ward level inspectors.

The pharmacy profession and registration of the pharmaceutical personnel is the responsibility of the Pharmacy Council. The Tanzania Food and Drugs Authority (TFDA) is responsible for the regulation of medicines and conducts inspections of the retail pharmacies and drugs outlets.

Challenges in private sector distribution in Tanzania

Fewer retail pharmacies in rural areas (“Cream Skimming”)

There are very few registered retail pharmacies in most rural areas in Tanzania. For example in the Rukwa region with a population of almost half that of Dar es salaam, there are less than 30 pharmacies as compared to the 600+ retail pharmacies in Dar es salaam. Lack of access to retail pharmacies in rural areas and unreliable supply at public health clinics forces rural consumers to seek treatment at drug shops or in some cases completely forego essential treatment. While the ADDOs serve this need in many rural areas, the lack of registered retail pharmacies decreases confidence in the private sector as a means to serve the poor. Critics view the private sector for medicines to be engaging in “cream skimming” by serving only high value profitable customers leaving the more expensive or harder to reach areas for the government distribution system.

High prices in the private sector

At private retail pharmacies and drug shops, retail prices for most medicines were found to be many times higher than then international reference price. Several studies had confirmed that prices charged by private pharmacies and drug shops were high and made essential medicines unaffordable to large segments of the Tanzanian population. High price of medicines in the private sector greatly limited the use of appropriate medicines and lead to increased use of substandard and ineffective medicines. Observers, media and the government used this argument to align the policy measures to focus more on improving the public-sector distribution system.

Questionable quality

Medicines sold at retail pharmacies and drug shops have “questionable quality” as there are fewer quality checks and the manufacturer from which private wholesalers that serve small retail pharmacies and drug shops are not always of high quality.

Sub-optimal assortment (fast moving vs essential medicines)

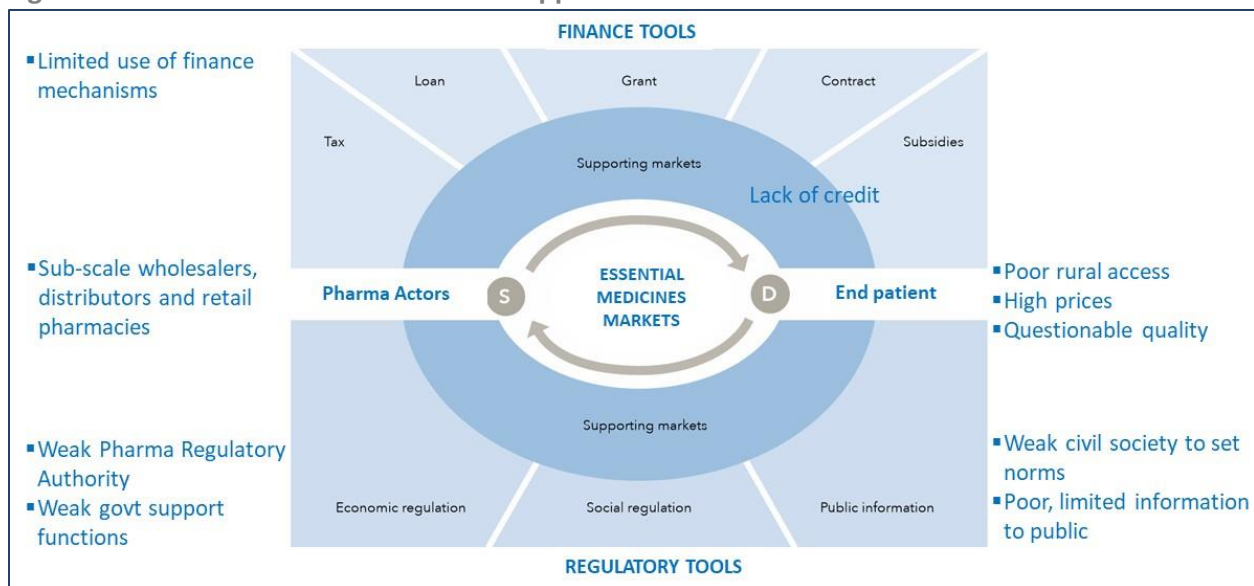
Retail pharmacies, drug shops and wholesalers do not always stock “essential medicines” but often only stock fast moving medicines. Slow moving medicines incur greater working capital costs than fast moving medicines.

FROM SYMPTOMS TO ROOT CAUSES

In the past week as George was struggling to understand what causes these market challenges and what policy fixes could be created, he remembered a session he had attended last summer at the World Bank Institute where a colleague, April Harding, had presented a framework for understanding why markets don't help achieve public health goals.

George started sketching it out on a sheet of paper and it provided him clarity of thought on how the different actors and organizations were contributing to the market challenges. It allowed him to move from the symptoms to the root causes of some of these challenges. He realized that many of these problems were the result of weak supporting functions such as lack of regulatory enforcement, lack of civil society and membership organizations to set and enforce pricing and availability.

Figure 1: Markets for Health Framework applied to the situation in Tanzania



He also realized that lack of investments and credit flow in the system was leading to sub-scale wholesalers. He found that there were over 300 TFDA registered pharmaceutical wholesalers in Tanzania while there were only 700 registered retail pharmacies. In most developed markets with hundreds of thousands of retail pharmacies only 3-4 national wholesalers control approximately 80% of the market. In Tanzania over 40 of the 300 registered wholesalers contributed to 80% of the market share. The excessive fragmentation in the wholesaling industry was leading to lack of capital investments in infrastructure. Sub-scale wholesalers and distributors cannot make investments in logistics, infrastructure and technology needed for national coverage. None of the 40 wholesalers had full national distribution coverage. Some did not have direct purchasing relationships with manufacturers but instead acted as secondary wholesalers. These deficiencies led the distribution channel structure in Tanzania to have a few additional intermediaries – such as the importer and the sub-wholesaler– which represented extra levels as compared to most developed countries. The sub scale wholesalers most engaged in a cash and carry model where retail pharmacies and rug shops from second tier towns had to travel to the wholesalers location to obtain stock (*See Exhibit*

1). Many retail pharmacies had to travel long distance to the wholesaler for re-supply (*See Exhibit 2*). Together these contributed to higher markups and higher retail prices. The presence of a large number of wholesalers was also contributing to challenges in regulatory enforcement.

Interviews and meetings he held with some of the wholesalers and retailers led to the recognition that many aspects of their businesses such as sourcing strategies, product mix, inventory turns, trade terms and margin expectations were sub-optimal because of the lack of industry norms, platforms for best practice sharing and most importantly lack of working capital credit at reasonable rates.

George remembered discussions with his colleagues who worked on the China health reform project. China did a stricter enforcement of GDP standards and government support of mergers and acquisitions. This decrease the number of wholesaler from 16000 to 7000 and slowly 3-4 larger players are emerging with national coverage. This has also eased distribution quality enforcement for CFDA.

Similarly, the lack of competition in retail pharmacies and ADDOs was another contributor to high retail prices. He examined data from a study his colleagues had done in Zambia to illustrate this to the PS if need be (*See Exhibit 3*).

Ubiquity and uniformity as pre-requisites for confidence in the private distribution

For the private sector essential medicines distribution system to gain confidence as a means for improving affordability and accessibility to essential medicines it becomes important to have ubiquity and uniformity. This means that the wholesalers must deliver to retail pharmacies and drug shops everywhere in the country and at a uniform price irrespective of where the delivery location is. George started exploring case studies from other countries which have faced similar situations in the past and understanding the policy responses that have worked to achieve these objectives.

LESSONS FROM PHARMACEUTICAL DISTRIBUTION CHAIN IN DEVELOPED COUNTRIES

The pharmaceutical distribution chain everywhere is composed of manufacturers, distributors (wholesalers and importers), and retailers (public and private pharmacies, drugstores, online sellers, and dispensing doctors). However, in most developed countries, there is good regulation of quality and in some cases channel markups. The various stakeholders in the supply chain are also connected through information flows facilitates by third party agencies.

Even in developed markets mark-ups charged by wholesalers and retailers have the potential of significantly increasing the cost of medicines for the payers and insurers. Most EU member states implement margin controls to curb any excessive margins for wholesalers or retailers. Most wholesale margins in the EU range between 2% and 8% of the pharmacy retail price. Margin caps are usually as regressive (%margin decreases with price) or fixed (percentage or fee-based). This ensures that the wholesaler and the retail pharmacy do not have strong incentives to promote expensive medicines.

In the US, Canada and some EU countries, distribution and retail margins are not regulated but managed through careful negotiations. Retail/wholesale competition and payer pressure (monopsony) keeps these margins in check. The retail and wholesale margins in the US are thought to be lower, on aggregate, compared with margins in EU countries.

Manufacturers in many markets are also increasingly attempting to bypass wholesalers and distribute directly to pharmacies where possible, or only collaborate with a small number of wholesalers whose behavior they can monitor and influence more effectively (reduced wholesaler model).

Managing ubiquity in developed country pharmaceutical wholesale and retail

Most countries in developed countries have also dealt with the issue of ensuring that people in sparsely populated regions should be granted the same access to medicines as inhabitants in urban areas. Developed countries use a range of measures to create appropriate incentives for the distribution system to serve urban and rural pharmacies equally.

GEORGE'S DECISION DILEMMA

Upon reviewing the various policy options used to create a stronger pharmaceutical supply chains, George wonders what model should he recommend for Tanzania? While many of these policy options are non-exclusive, there is limited appetite for policy reform on this issue and picking too large a package of policy may derail the effort. He therefore has to pick 1-2 high impact items and make them his highest priority.

- Focus on improving the public-sector distribution system by leveraging private sector actors
- Wholesale and Retail markup regulation
- Further strengthening of TFDA
- Strengthening and Consolidation of the Wholesaler market
- Special Incentive programs for Rural Distribution and Rural Pharmacies
- Overall credit facilitation for pharmaceutical wholesalers and retailers

GREECE: Differential markup for rural pharmacies

Greece has one of the highest number of pharmacies per capita. For example, in 2005 there was one pharmacy per 1,250 persons in Greece compared to one pharmacy per 20,000 persons in Denmark.

A large portion of the pharmaceutical flow occurs through the five large wholesalers (Alapis SA, Sypfa Salonica, Stroumsas SA, Prosyfape and Syneterismos Peiraios). Approximately 15% of medicines bypass the wholesalers and are directly delivered to the pharmacies. The geographical peculiarities of the country (over 65% being mountainous and difficult to have easy road access; several thousand islands, many of which are inhabited with small populations) imply that not all retail pharmacies are profitable to serve at a constant wholesale margin.

The standard wholesaler markup is 8.43% and retail pharmacy markup is 35%. For pharmacies in rural towns and villages

that have population <5,000 a mandatory 4% discount is provided to wholesalers.

UK: Essential Small Pharmacies Scheme (ESPS) to help rural pharmacies

In the UK the Essential Small Pharmacies Scheme (ESPS) provides financial assistance to pharmacies that are not economically viable because of their location but are considered vital to the provision of pharmaceutical services to the local community. The scheme, therefore, aims to ensure the proper provision of pharmaceutical services in areas that would otherwise have difficulty in accessing them.

The ESPS program’s eligibility and structure have changed over time to reflect the rural pharmacy market dynamics since it was introduced the late-1970s

SWEDEN: Careful monitoring of rural pharmacies upon privatization

In 1971 all retail pharmacies in Sweden were nationalized and amalgamated into one national pharmacy corporation owned by the state (Apoteksbolaget, later Apoteket AB). State run Apoteket AB had a monopoly to sell pharmaceuticals. In 2009, Sweden opened the pharmacy market to competition again. The 900 or so state-owned pharmacies were auctioned in eight separate clusters. Some pharmacies were made available for purchase by self-employed entrepreneurs. The number of pharmacies rose from 900 to 1,268. Sweden also uses a single-channel wholesale model where each manufacturer sells through a single wholesaler (there are two main wholesalers Oriola and Tamro). Pharmacies were allowed to integrate vertically and build their own distribution and wholesaling operations which creates competition in the wholesale market.

The Medicine Agency and the Ministry of Health have been closely monitoring the opening of new pharmacies and closure of existing pharmacies to make sure that pharmacies in sparsely populated areas do not close and new pharmacies open so that there is a pharmacy in each county. This requires continuous information gathering using surveys and review of trends.

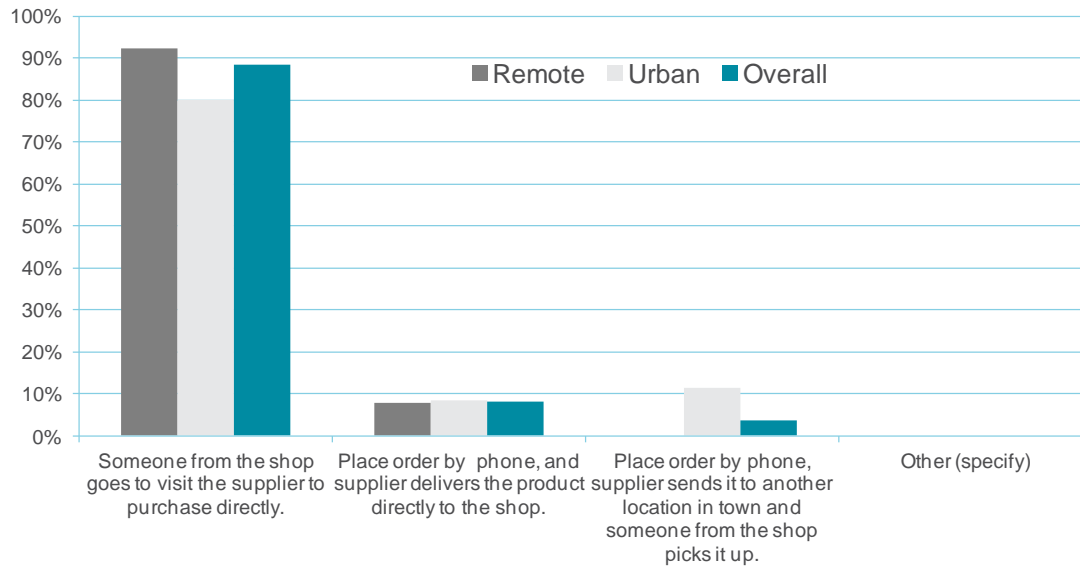
NORWAY: Public Private Partnership for sustaining rural pharmacies

In Norway the Ministry of Health and Care Services has an agreement with the three major private pharmacy chains that, if a pharmacy in a rural area (which was opened before 2001) is about to close, one of the pharmacy chains will take over this pharmacy or will establish a new pharmacy in the same area.

DENMARK: Profit equalization scheme to help rural pharmacies

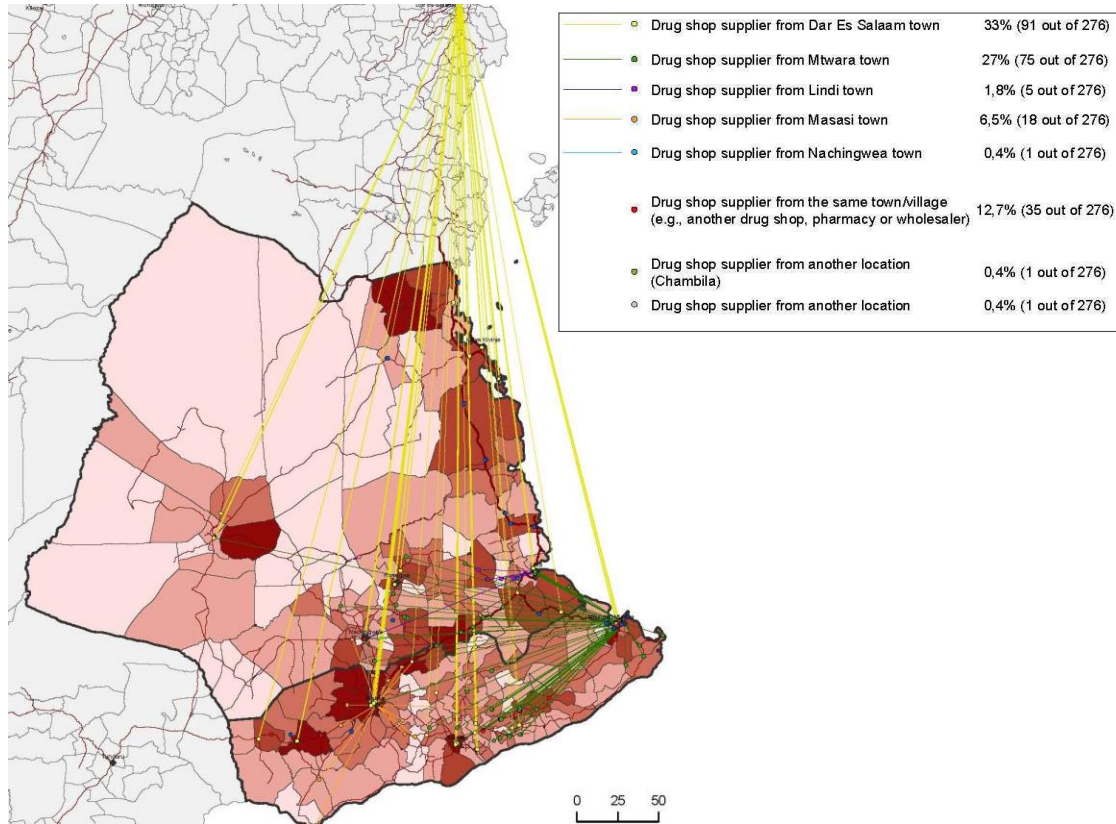
Denmark uses an equalization scheme to help rural pharmacies. Large pharmacies pay a sales tax, which is used to subsidise small scale pharmacies in rural areas. About 44 rural pharmacies were considered as not likely to be economically sustainable without the rural equalisation scheme. The subsidisation of these pharmacies, mostly situated in rural parts of North-Jutland, South-Jutland and South Zealand is therefore considered necessary to provide for an overall good and equal availability of medicine in Denmark (Danmarks Apotekerforening 2011c).

Exhibit 1: Cash and carry model creates distribution inefficiencies



Source: Yadav P, J. L Cohen, S. Alphas, J. Arkedis, P. L Larson, J. Massaga and O. Sabot. Trends in availability and prices of subsidized ACT over the first year of the AMFm: evidence from remote regions of Tanzania, *Malaria Journal* 2012, 11:299

Exhibit 2: Long distances for retail pharmacies and drug shops



Source: Yadav P, J. L Cohen, S. Alphas, J. Arkedis, P. L Larson, J. Massaga and O. Sabot. Trends in availability and prices of subsidized ACT over the first year of the AMFm: evidence from remote regions of Tanzania, *Malaria Journal* 2012, 11:299

Exhibit 3: Retail competition and price (Source: WB, CHAI and UNZA Study in Zambia)

