

# Pharmaceutical Retail in Nigeria: Market Dynamics, Business Practices, Challenges and Opportunities in PPMV Practice

## Abstract

In many rural and urban areas in Sub-Saharan Africa such as Nigeria, medications and health care services are often provided by Patent and Proprietary Medicine Vendors (PPMVs). These are entrepreneurs with retail shops that sell drugs and potentially other household products and are patronized by all segments of the community.

PPMVs are effective in providing medications, irrespective of quality, to far reaching areas across the country. They are, importantly, also the first port of call for most Nigerians especially the poor with regards to healthcare, and their existence creates a platform that could be used to expand healthcare services to the poor.

This study was initiated to better understand the business practices of PPMVs in Nigeria, as most previous research have focused on the medical perspectives of their practice. The study was carried out in two large commercial areas in Nigeria- Lagos and Kano States; which is an indication of the significant amount of funds spent on these businesses. The Lagos PPMV market is estimated to be about \$71 million, which is about 30% of the approved Lagos State Health Budget; while that of Kano is about \$47 million and significantly larger than the Kano State Health Budget of about \$29 million. A total of 73 PPMVs were interviewed- 25 in Kano and 48 in Lagos. The study revealed that in addition to patent drugs, most PPMVs provide other services such as health education and sale of non-pharmaceutical products. Inadequate electricity and limited access to finance were indicated as significant business constraints.

However, opportunities for growth and service improvement exist such as improved credit availability, business training for PPMVs as well as brand development & improvement through commercial partnership.

It is important to note that this study is by no means a statistically representative sample, but a descriptive study to begin to understand the business approaches of PPMVs in Nigeria and possibly form the basis of a larger study in future. This project was funded by the Bill and Melinda Gates Foundation.

*Keywords: pharmaceutical, retail, business, patent medicine vendor, Nigeria*

## 1. Introduction

Nigeria is the most populous country in Africa, and accounts for 47% of West Africa's population. In 2013, her estimated population was 173.6 million (World Bank, 2014). With an annual growth rate of about 2.4%, the nation is estimated to be one of the fastest growing countries in the world (CIA, 2016). The country's increasing population is accompanied by a high burden of communicable disease and a growing

increase in prevalence of chronic conditions; Non-Communicable Diseases (NCDs) are estimated to account for 24% of total deaths (WHO, 2016). There is thus, a high demand for management of disease conditions including the need for medications & health commodities.

Nigeria accounts for 60% of health products consumed in the ECOWAS (Economic Community of West African States) sub region by volume (UNIDO, 2008). In 2011, the pharmaceutical market in Nigeria was estimated to be approximately 1.8 billion USD, with 13% annual growth rate (PMGMAN, 2016). The industry is large comprising different stakeholders such as manufacturers, importers, national regulators, wholesalers, retailers and others. The retail sector is extremely fragmented and dominated by small businesses and informal operators. According to the Pharmacists Council of Nigeria (PCN) in 2010, there were 724 drug distributors, 1,534 retail pharmacies and over 200,000 patent medicine vendors (UNIDO, 2008).

Patent medicine refers to drugs that are sold in pre-packaged form to the general public. Patent and Proprietary Medicine Vendors (PPMVs) in Nigeria are informal community-based drug shops that are primarily responsible for the retail of specified over-the-counter (OTC) medications. They are privately owned outlets, heavily concentrated in urban slums and rural communities and sell non-prescription drugs considered safe for public use (Corroon M. et al, 2016).

Trained manpower shortages have limited the number of pharmacies in sub-Saharan Africa, including Nigeria, consequently, licensed drug shops i.e. PPMVs are permitted to offer a limited range of medicines to increase access and coverage (Corroon M. et al, 2016). They were intended to act as for-profit medicine outlets, not health providers, originally expected to provide basic medication in areas where no pharmacists exist and refer individuals who require complex medications to pharmacies (UCSF Global Health Group, 2014). However, PPMVs are often the first line of healthcare providers for many Nigerians, particularly the poor who often patronize them for treatment and usually pay out-of-pocket (Anadach Group, 2014). According to the National Bureau of Statistics (NBS, 2013), over 200,000 PPMVs serve as the first port of call for about 39% of the population for health services and accounts for 68% of all pharmaceutical providers. The continued lack of well managed health care facilities responsive to consumer needs, has led to the proliferation of PPMVs who provide healthcare and medication to a significant share of the individuals at the bottom of the pyramid.

## **1.1 Rationale and Literature Review**

The objective of this study was to understand the business model of PPMVs in Nigeria. In their quest to improve access to quality medications for the poor, the Bill and Melinda Gates Foundation (BMGF) supported an in-depth review of the PPMV business perspectives in selected Nigerian States.

Information on PPMVs is largely limited, with previous research focused on medical perspectives and their role in healthcare provision particularly services for adult malaria (BMGF, 2016). Other studies provide data on a wide range of PPMV outcomes such as health knowledge, health practices, training, drug stocking and dispensing as well as client interaction and referral (Beyeler N. et al, 2016). Earlier PPMV

work funded by BMGF has also looked at caregiver health-seeking behavior, current treatment practices and quality of care for priority disease areas. However, further research is required to determine the business and financial incentives under which PPMVs operate, as well as to understand the range of products and services provided by PPMVs, including stocking behavior, sales volumes and profit margins across disease areas (Beyeler N. et al, 2016).

## **2. Market Research**

The study was conducted in the two major pharmaceutical hubs and most populous cities in Nigeria- Kano and Lagos (figure 1). The study provides an overview of the market size, competitive landscape and consumer & supplier dynamics. Diverse stakeholders- selected consumers, PPMVs, wholesalers, & regulators, in rural and urban Kano & Lagos were engaged. A total of 73 PPMVs were interviewed- 25 in Kano and 48 in Lagos. Data was collected via in-depth structured interviews and focus group discussions.

### **2.1 Overview of the Market**

Kano state is located in the North West of Nigeria with population of about 10 million with a growth rate of 3.3% (FHI 360, 2013). 38 of its 44 LGAs (Local Government Areas) are rural. It has a density of 0.2 pharmacists per 10,000 people. According to PCN, there are an estimated 3,000-5,000 PPMV in the state. 36 of the 38 rural LGAs in Kano have no private pharmacies. A state sponsored, youth educational empowerment programme (Lafia Jari) has trained approximately 2,700 PPMVs. The minimum requirement is the primary school certificate. There is no accredited pharmacy school and 1 accredited School for Health Technology (UNIDO, 2008) (IMS Health, 2012).

Figure 1: Study Locations: Lagos and Kano States

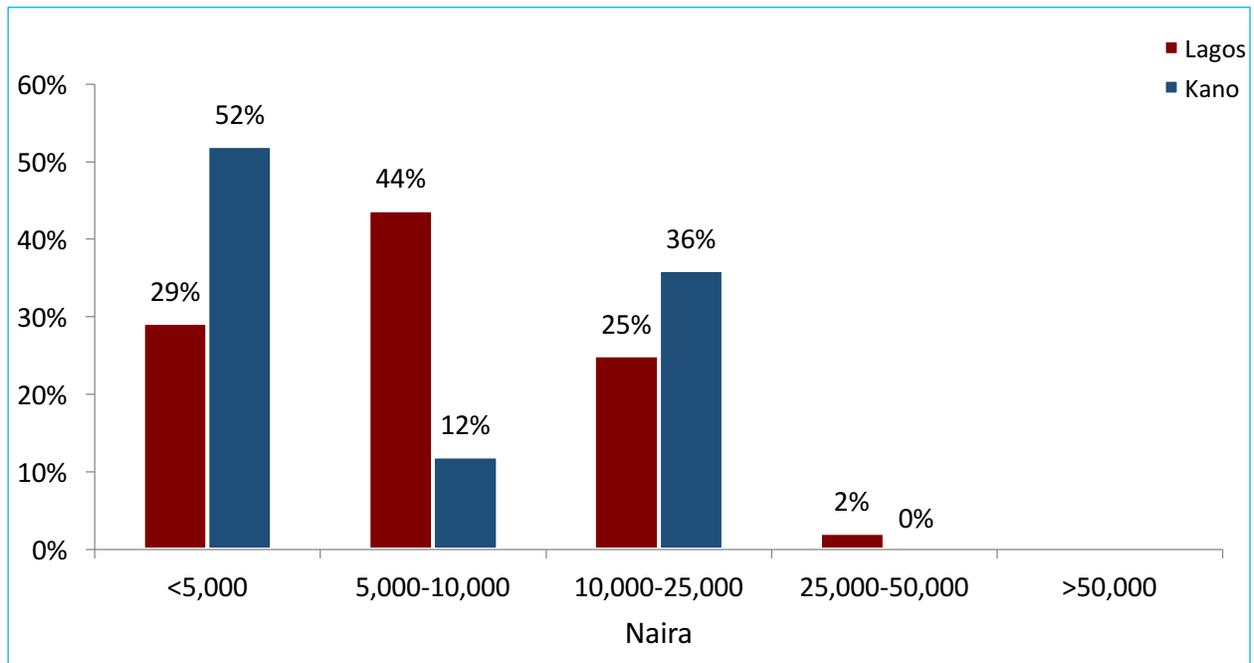


Source: [www.mapofworld.com](http://www.mapofworld.com)

Lagos state is located in the South West of Nigeria with an estimated population of over 21 million people with 8% growth rate. Four of its 20 LGAs are rural. There are estimated to be about 1-1.5 pharmacists per 10,000 people, and 424 of 1500+ private pharmacies are registered in Lagos. According to the Ministry of Health (MOH), there are 2700 registered PPMVs in Lagos with another 250 awaiting registration and at least about 2,500 unregistered PPMVs. The minimum requirement for PPMVs in Lagos is secondary school leaving certificate, and it is estimated about 20% have a health background. (UNIDO, 2008) (IMS Health, 2012).

On average, the PPMV market in Lagos earned more than that in Kano (figure 2).

Figure 2: Average Sales Revenue (Per Day): Lagos vs. Kano

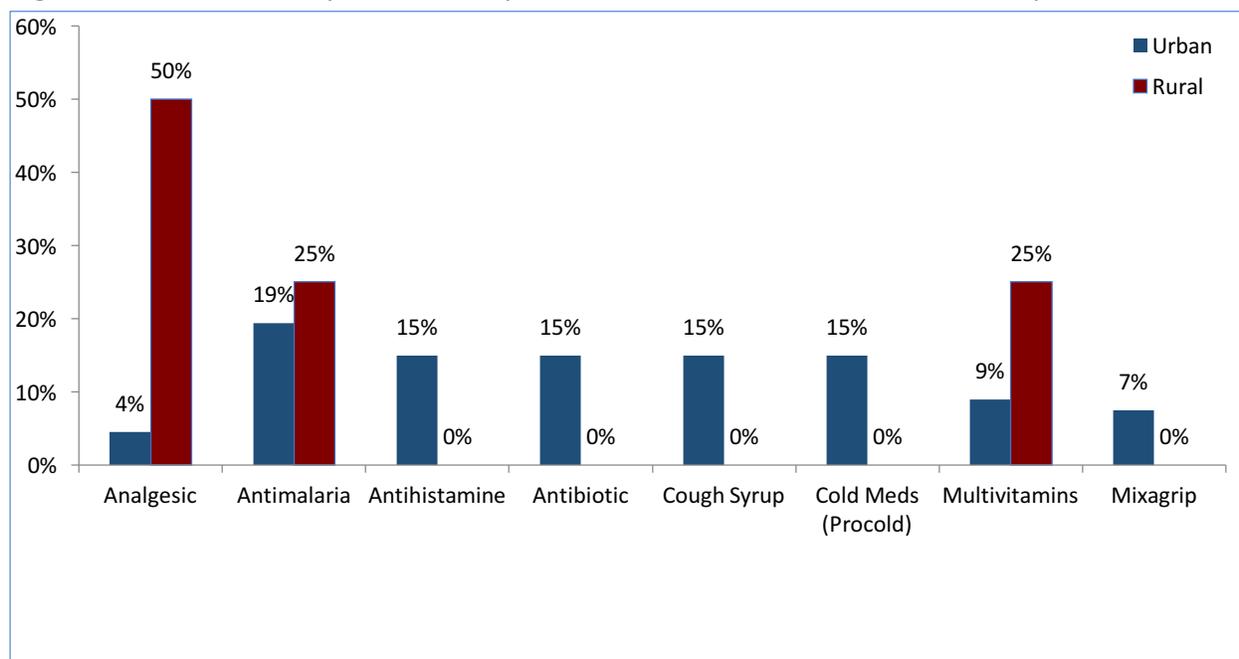


Source: Anadach Survey Analysis

## 2.2 Market dynamics – Customer dynamics

The customer base in both cities comprised mainly of low-earning workers, mostly traders. The most commonly purchased medications were identified as paracetamol and vitamin C. Other drugs purchased were cough syrup, anti-malarial, diarrhea and ulcer treatment (figure 3). However, family planning products were rarely bought from PPMVs. Aside from medications, commonly purchased items from PPMV include toiletries, biscuits, beverages and cosmetics. Over 60% of PPMVs have non-pharmaceutical products in their businesses (Anadach Group, 2014).

Figure 3: Customer Dynamics: Popular Medications from PPMV Perspective



Source: Anadach Survey Analysis

Low cost, easy accessibility and customer-centric service (i.e. retailer provides just what the customer wants) were the major reasons why people patronized PPMV over public/private health facilities. Other reasons include availability of drugs and close proximity of shops. 70% of respondents identified PPMVs as their preferred place of drug purchase (Anadach Group, 2014).

### 2.2.1 Market Dynamics- Supplier dynamics: PPMV role in drug supply chain

Drug distribution in Nigeria involves several different groups and stakeholders. In the private sector, manufacturers and importers have their own distribution channels and can sell to wholesalers, retailers and hospitals. The bulk of drugs sold in retail pharmacies and PPMVs are purchased from local manufacturers, importers and wholesalers, with the distribution channels similar to that of fast moving consumer goods which are often times not suited for the storage and distribution of pharmaceutical supplies (UCSF Global Health Group, 2014). PPMVs are key players in the pharmaceutical chain and are involved in both the formal and informal markets. They receive supplies both from formal and informal sources. Most common medications sold by wholesalers to PPMVs include antibiotics, anti-malarials, multivitamins and analgesics (Anadach Group, 2014). Some PPMVs operate as both wholesalers and retailers. As most people have to directly bear the cost of medication, Nigerians appear to be price sensitive and tend to seek the cheapest option, which unfortunately may not be the best.

Many PPMVs, located both in urban and rural areas are most often the only medicine provider in some rural areas, and thus serve as a very important intermediary between the wholesalers and the patient/end

user in these places. Approximately 50% of the pharmaceutical outlets serving the rural areas are owned by PPMVs (Anadach Group, 2014).

## **2.3 Market Size: Methodology**

The market size was estimated through several approaches, based on surveys, focus discussions and expert interview outcomes:

- Customers – based on estimated annual number of visits to PPMVs, and amount spent per visit
- PPMVs– based on average annual revenue per PPMV, and estimated number of PPMVs per state
- Wholesalers – based on estimated number of wholesalers and estimate of what proportion of wholesale business.

### *Assumptions*

- *300 working days for PPMVs and Patients*
- *240 working days for Wholesalers*
- *20% of respective wholesale market goes to local Lagos and Kano PPMVs*
- *Average spent per visit in Lagos - N250, and average spent per visit in Kano - N150*
- *400 wholesalers in Lagos, and 300 wholesalers in Kano*

### **2.3.1 Market Size: Kano**

A rough estimate of the Kano PPMVs market puts it at about \$47 million; this is significantly larger than the Kano State Health Budget of about \$29 million. The state is estimated to have 5000 PPMVs, with more than half trained under the Lafia Jari Program. In Kano, the sampled group appeared to be quite well educated which may be related to the Lafia Jari Program especially in urban Kano, and may also reflect those PPMVs more willing to participate in the study. With only 8 LGAs having pharmacies in Kano, PPMVs provide majority of the pharmaceutical services and earn < \$30/day. On average, the rural PPMVs appeared to see up to 60 customers a day, compared to the urban PPMVs who saw about 30 customers per day.

However, given the lack of pharmacies outside Kano, the high number of patients seen by rural PPMVs may be realistic. If one assumes there are 5000 PPMVs in Kano State, who see an average of 30 people a day, it would imply that 150,000 people visit the PPMV daily. This would imply about 4.5 million visits annually in Kano (about 0.5 visit per person).

### 2.3.2 Market Size: Lagos State

The Lagos PPMV market is estimated to be about \$71 million, which is about 30% of the approved Lagos State Health Budget. Lagos state has 2,700 registered PPMVs (probably an underestimation) of which about 20% have healthcare background and three-quarters of them earn over \$30/day. On average, Lagos PPMVs appeared to see about 30 patients a day with patients spending about N2,000 on average (median). If one assumes there are 5000 PPMVs in Lagos State, who see on average 30 people a day, it would imply that 150,000 people visit PPMVs daily. This would imply about 4.5 million visits annually in Lagos (about 0.25 visits person) which may reflect the greater access to pharmacists especially in urban Lagos. This would compare with a health facility outpatient visit of 0.6- 0.8 per person/year in Lagos (figure 4).

Figure 4: Market Size: Lagos and Kano States

	<i>Lagos (US\$)</i>	<i>Kano (US\$)</i>
<b>PPMVs Revenues</b>	66,176,500	44,117,600
<b>Wholesalers Sales to PPMVs</b>	112,941,176	76,235,300
<b>Consumer Purchases from PPMVs</b>	158,823,500	79,411,800
<b>Average Market Size</b>	112,647,100	66,588,200
<b>2015 State Budget</b>	262,470,500	29,117,600
<b>Market Size/Budget</b>	0.4	2.3

**Notes:**

- *PPMV revenue and number of patients per day and average revenue per patient based on survey*
- *Wholesale revenues and PPMV purchased – based on surveys and interviews*
- *Estimated 5,000 PPMVs each in Lagos and Kano State (estimation based on various sources including Government, National Pharmaceutical Council, Relevant Associations of PPMVs)*
- *Exchange Rate of 170N to 1USD*
- *The market size of PPMVs appears to be significant compared to the State Health Budget*

## 2.4 Key Retail Competitors

The key formal retail competitors are the pharmacists and the physicians. There are 1,534 registered retail pharmacy stores in Nigeria. The growing middle class and rise of life style related diseases have led to the growth of independent pharmacy stores in urban areas (UNIDO, 2008). Pharmacists play an active role in “protecting” their profession by instituting stringent practice rules, for example, restricting the sole practice of pharmacy technicians. There is an under supply of pharmacists with less than 0.5 pharmacists per 10,000 compared to about 4 pharmacists per 10,000 for other lower –middle income countries. The shortage is particularly marked in the rural and less affluent areas. Pharmacy technicians make up less than 10% of the pharmacy workforce in Nigeria compared to about 49% for Africa (as a whole) (UNIDO, 2008).

Physicians are licensed to sell medications in their facilities which are usually priced higher than in retail pharmacies. They usually prescribe medications by brand so they drive and influence the brands of medications within the market Unlike the pharmacies that are able to source the medications at a lower price leveraging economies of scale, physicians usually source medications from pharmacists or wholesalers. During frequent doctors strike actions within the public sector however, patients often obtain medications from retail pharmacies and PPMVs (Anadach Group, 2014).

Other retail competitors include informal sector players- roadside hawkers and drug vendors in public vehicles. Many of them have other jobs outside of selling medication ranging from shoemaking, security and commercial motorcycle services. Analgesics, anti-malarial and multivitamins are some of the most popular drugs sold by this group of retailers. They are patronized mainly because their drugs are cheap and readily available (only a short distance away from most consumers) (Anadach, 2014).

## 3. Regulatory framework

Regulations on PPMVs are complex. Patent medicine stores can be owned by individuals with minimum qualifications- ability to read and write English, primary school certificate and evidence of good character. All PPMVs should be registered with PCN. The PCN is responsible for PPMV registration and licensing, stipulates licensing requirements, specifies eligibility criteria under which PPMVs operate and provides guidelines for eligible operators to follow. Upon submission of an application to PCN, an inspection of the environment is carried out to ensure that the shop meets PCN’s regulations, specifically regarding ventilation, cleanliness, size and distance from other PPMVs and pharmacy shops. PPMVs must renew their licenses annually as well as submit a current income tax clearance certificate (*Oyeyemi et al, 2014*).

The Ministry of Health (MoH) provides oversight and monitoring which varies by State depending on local relationships. PPMVs approved by Lagos state receive an orientation course, regular text messages and annual continuing education courses from the ministry.

National Agency for Food and Drug Administration and Control (NAFDAC) is responsible for drug administration and regulation. NAFDAC officials aim to ensure that all drugs sold are approved and meet NAFDAC guidelines - valid NAFDAC number, manufacturing date and expiration date (*Oyeyemi et al, 2014*).

PPMVs are organized in associations which operate at ward, LGA, State and Federal level. The National Association of Patent and Proprietary Medicine Dealers (NAPPMED) is the trade union that conducts monitoring visits, supports best practice and acts as an intermediary with PCN, NAFDAC and even the police. They ensure that PPMVs are not selling expired or counterfeit drugs or drugs that they are not legally allowed to sell, such as antibiotics & injectables, and that the approved drugs are priced fairly (*Oyeyemi et al, 2014*).

In reality, implementation of regulations on PPMV is variable, with actual oversight and monitoring differing from state to state depending on local relationships. In Kano, there are two independent umbrella organizations for PPMVs – NAPPMED and NAPPMV (National Association of Patent and Proprietary Medicine Vendors) that are recognized by the Kano MoH. In Lagos, there are two independent umbrella organizations for PPMVs – NAPPMED and LSMDA (Lagos State Medicine Dealers Association). The current legal tussle between PCN and NAPPMED vis-à-vis the role of the ministry of health, has led to weak oversight and many unregistered PPMVs (Anadach Group, 2014).

#### **4. Operating model**

PPMVs are usually owned by a single individual and operated in a rented facility. Many have shop assistants whom are usually recruited from family members (for urban PPMVs) or from the local community (for rural PPMVs). Air conditioned storage is largely lacking in most PPMV stores except if they sell other non-pharmaceutical products, for instance food. In terms of technology, use of computerized inventory is rare among PPMVs; however, mobile banking is quite common especially in rural areas. In terms of patient referrals, most PPMV indicated they referred their patients to Primary Health Centres (PHC). Conversely, PHC refer patients to PPMVs to obtain medications especially in rural areas due to lack of private pharmacies. Although PPMVs are licensed to sell basic OTC medication such as anti-malarials, they are increasingly selling and dispensing prescription medication (UCSF Global Health Group, 2014).

In Kano, rent is the top expense for PPMV, followed by generator fuel and supplies. 23% of the urban PPMVs indicated they spent N1, 000 per day compared to 25% of the rural PPMV who spent N200 per day (limited responses). Most PPMVs do not have off-site or air conditioned storage, except if they sell other products. 25% of urban PPMVs had branches. Rural PPMVs tended to see more customers (75% interviewed saw more than 60 per day) compared to most urban PPMVs who saw under 30. Most profitable products were multivitamins in rural areas and anti-malarials in urban areas. In Kano, 70% of the PPMVs had formal health training as pharmacy technicians, Community Health Extension Workers (CHEW) or graduates of School of Hygiene. 13% of the rural PPMVs underwent apprenticeship training while the majority (88%) reported career ambition as their reason and mode of entry into the business.

Like Kano, most patent medicine shops are solely owned but Lagos PPMVs are more likely to own their premises. Lagos PPMVs have more assistants in the shop, with an average of approximately 2 assistants. Most PPMVs in Lagos entered this line of work through apprenticeship (85%).

Average daily expense in urban areas is about N2, 100 compared to N1, 700 in rural areas in Lagos. Main expenses are rent, fuel and salaries. Like Kano, rural PPMV in Lagos appear to be more motivated by profit compared to urban PPMVs. This is probably due to higher profit orientation & ownership. Rural PPMVs are more likely to have targets such as selling a set number of medicines per week. The urban PPMVs that give targets and incentives to encourage sales only do so when there are drugs close to their expiration dates. Most rural PPMVs reward their employees when targets are met.

PPMVs in Lagos appear to be more motivated by profit compared to Kano PPMVs (figure 5). In addition, Lagos PPMVs are more likely to offer other services than Kano PPMVs.

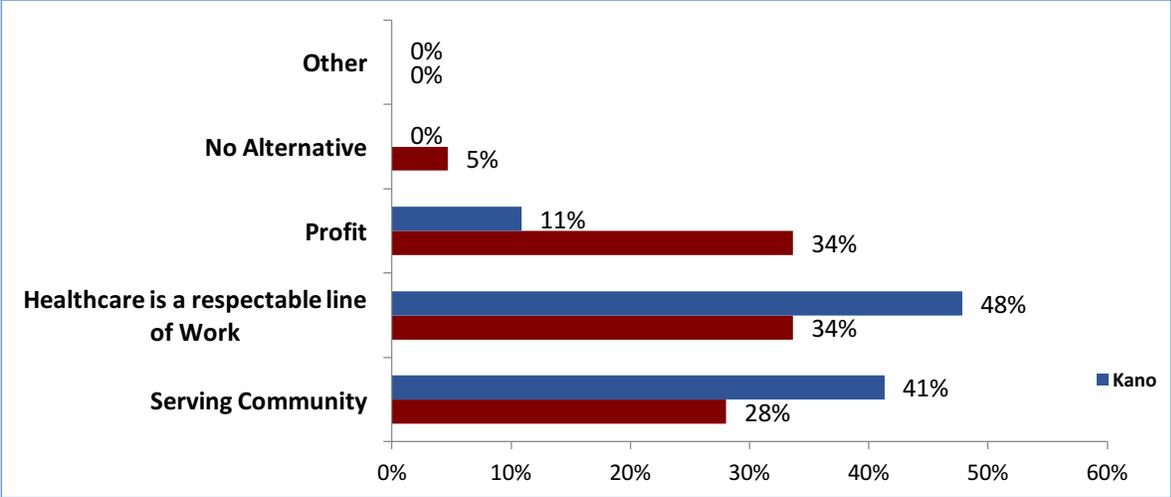
Perhaps because of profit orientation, Lagos PPMVs are more likely to invest in their shop compared to the PPMVs in Kano (figure 6). 66% of Lagos PPMVs invested in expansion or renovation compared to 0% in Kano.

## **5. Revenue**

50% of the Kano PPMVs sell less than N5000 (\$30/day) compared to less than 30% of the patent medicine shops in Lagos. In Kano, the revenue of the rural PPMVs tended to be higher but they also probably see more patients with no local pharmacies available. The rural PPMVs also tend to have higher profit margins in Kano.

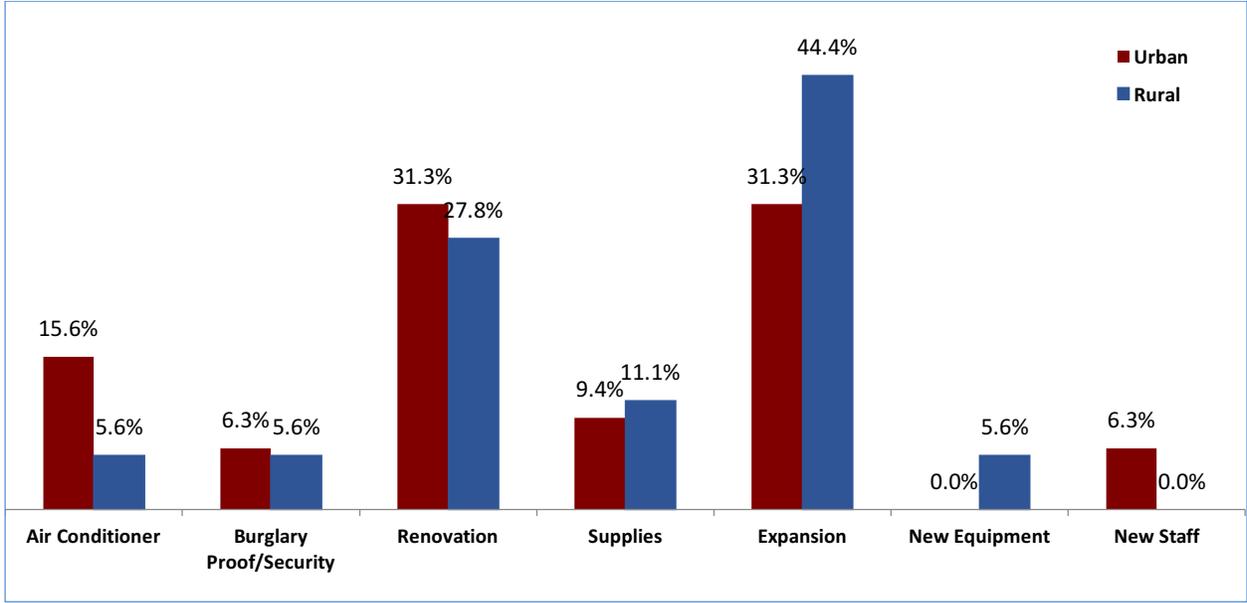
PPMVs in Lagos earned more than in Kano especially in urban areas, with both urban and rural PPMVs having similar numbers or fewer patients. There appeared to be more variability in Lagos price margins perhaps reflecting wider product ranges (figure 7).

Figure 5: Business Motivation: Lagos PPMVs more profit oriented than Kano PPMVs



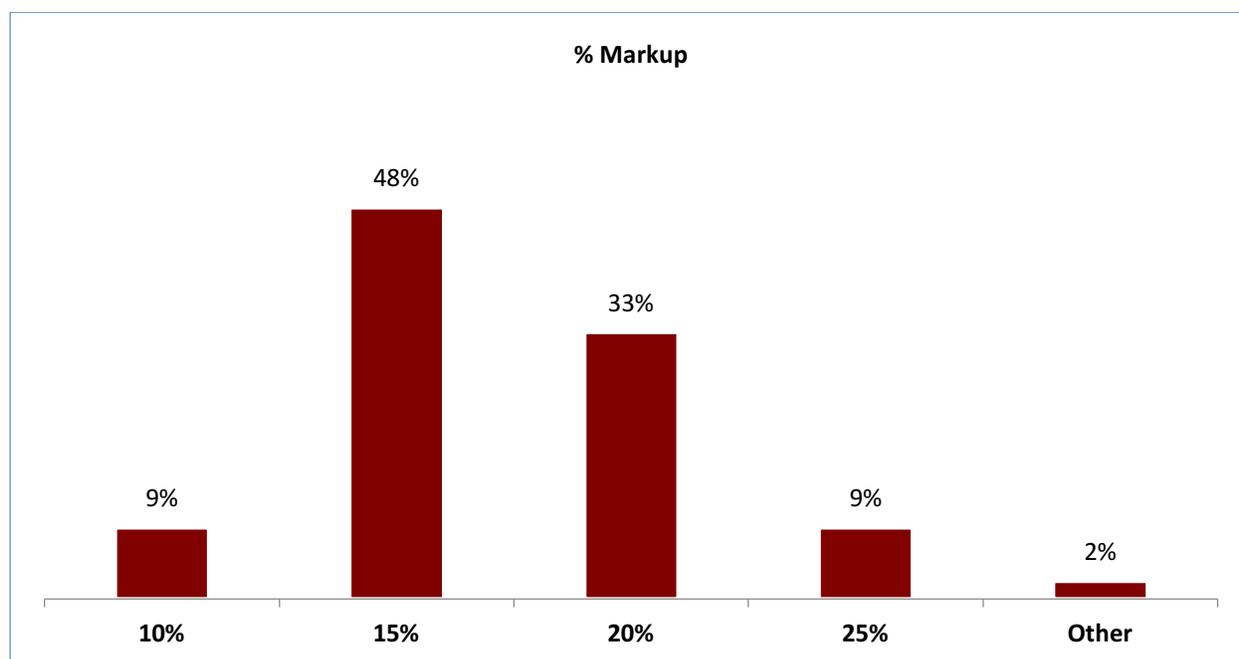
Source: Anadach Survey Analysis

Figure 6: Business Investment: Urban vs Rural



Source: Anadach Survey Analysis

Figure 7: Price Margin in Lagos



Source: Anadach Survey Analysis

## 6. Challenges and Possible Solutions

Like many other small businesses in Nigeria, PPMVs struggle with the numerous problems that abound in the business environment- lack of credit facilities, poor power supply, government regulations and policies, amongst others.

Major challenges for PPMVs in terms of drug supply were listed as inadequate credit facilities from suppliers, accurate and timely supply of medications and customer need for cheaper drugs. Other notable challenges include patient self-medication, competition from other PPMVs and security issues. PPMVs cited rent as their greatest expenditure, followed by expenses associated with inadequate electricity supply i.e. generators, fuel, etc.

From the PPMV's perspective, the registration process is challenging for several reasons-financial constraints, clarity on the process etc. There is limited health education training available to PPMVs who routinely provide health advice to customers. The approved drug list for PPMVs is rather restrictive and may not be practical e.g. ACT (Artemisinin –Combined Therapy) drugs for the treatment of malaria are not on the drug list. Also, limited access to affordable capital and high interest rates are also significant barriers to business investment and expansion.

In Kano, the major challenges were access to credit, cheaper drugs for customers (urban) and supply issues (rural). The lack of credit for urban PPMVs and challenging supplies to rural areas may be due to possible underlying security concerns. Despite requesting three business improvement options, the main suggestion was improving power supply in both urban and rural areas of Kano. Improved electricity (by over 75%) was top suggestion from PPMVs to improve business outcomes.

There was limited business diversification in Kano. None of the PPMVs interviewed had a wholesale portion to their business. There was very limited investment over the last few years – only 8% of interviewees had invested in medical equipment and, cosmetics and groceries. The 50% of the rural PPMVs with air conditioned offsite storage facilities also indicated 25% of their business included non-pharmaceuticals. This is in keeping with the profit-motive of rural PPMVs and the absence of other employment. Lack of capital is the sole reason given for the absence of branches in Kano.

In Lagos, there was a wide range of challenges including reliable electricity, low patronage, low income customers, finance, and small shop size. Like Kano, inadequate electricity supply in Lagos appears to also be a major issue particularly in rural areas. The top suggestion from Lagos PPMVs to improve business outcome was capital/financial support (68%).

### **6.1 Suggestions to overcome the challenges**

Cluster supervision of PPMVs by licensed pharmacists was recommended to expand the scope of PPMV services to meet a crying need at the grassroots rural level. A role in the 'Supervision Chain' may also be proposed for the Pharmacy Technician. With a creative task shifting arrangement, everyone's interests (including the pharmacist's) could be met.

A proposed Mega Drug Distribution System could also help reduce substandard drugs in circulation and ensure that drugs sold by the PPMV are wholesome.

Other suggestions from stakeholders interviewed include improve credit availability as well as business and health training for PPMV.

## **7. Discussion**

There is an increasing recognition of the important role played by PPMVs in health service provision in Nigeria. However, little is known of their business operations. Most of the previous research has focused on their role as major community health providers. This study highlights the business models of individual shops and estimates market size. It also reviews the dynamics and roles of the customer and suppliers.

Although originally patent drug sellers, PPMVs provide other services including sale of non-pharmaceutical products, essential products and health education information. They are usually located in urban and rural settings with primary focus on lower income groups. Customer attention/focus by PPMVs is relatively high which is necessary in order to remain in business.

PPMVV are a key part of the informal pharmaceutical market in Nigeria, which comprises unregistered distributors, vendors and sellers. The informal market is believed to be 2-3 times the size of the formal market, however, they are interconnected with the informal market supplied from leakages from the public and private sectors and illegal imports (UNIDO, 2008).

The PPMV model can be viewed as a form of domestic entrepreneurship in Nigeria, particularly within the context of Micro, Small and Medium Scale Enterprises. Many PPMVs are owner-operated retail shops that sell drugs as well as many other household products. Like the classic entrepreneur, they organize, manage and assume the risks of their business ventures (Metu A., Nwokoye E., 2014). They have little or no formal training in medicine or pharmacy as the existing licensure requirements do not include any formal training in medicine or pharmacy (UCSF Global Health Group, 2014). Many receive on-the-job training through apprenticeship with a more senior PPMV or medicine vendor/distributor. They employ traits and qualities such as resourcefulness, initiative, drive, ambition and courage which are valuable for entrepreneurship development, to identify business opportunities and make profit (Metu A., Nwokoye E., 2014). This form of pharmaceutical retail has thus led to employment generation for a significant number of people in the country, contributing to economic growth and development.

Although this study was carried out in Lagos and Kano, two major commercial centres in the country, it was not designed to be statistically representative of the entire country. It is hoped that this study will encourage more robust research in future.

## **8. Conclusion**

Though the PPMV model was essentially set up for businesses to widen access to basic medication, they are increasingly playing a key role as community health service providers in Nigeria. With meager capital and limited formal education, these medication traders are important stakeholders in the drug supply chain and pharmaceutical sector, as well as significant contributors to national economic growth and development. In spite of the numerous challenges and business constraints, the standard and quality of services provided by PPMV can be improved through strategic partnership, business and professional development and regulatory reform.

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