Sustaining Health Market Innovations In Pakistan

**Financial Sustainability Strategies Health Market Innovations: Case Studies from Pakistan**

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IRD’s mission is to improve the well-being of vulnerable communities through innovation in research and health delivery. Now based out of the UAE, IRD operates in Bangladesh, Brazil, Democratic Republic of Congo, Ethiopia, Indonesia, Kenya, Malawi, Nepal, Pakistan, Peru, South Africa, Tajikistan, Uganda, Tanzania, and Zimbabwe. There are currently seven main program areas at IRD: Community Development, e-Health, Global Health Surgery, Infectious Diseases, Non Communicable Diseases, Technical Assistance and Vaccines.

The Center for Health Market Innovations (CHMI) profiles more than 80 TB control programs that engage the private sector in low and middle income countries (LMICs). CHMI profiles programs that incorporate health innovations to improve outreach for the less privileged. This brief focuses on illustrations of different revenue-generating models in the private healthcare sector.

Pakistanis spends 2.5 % of their public expenditure on health\(^1\). Whilst the government aims to provide health for all in principle, resource constraints make this target difficult to achieve. As a result, a private sector facility is the primary means for seeking healthcare for nearly 75% of the individuals in the country\(^2\). However, a large percentage of Pakistan’s population falls below the poverty line and cannot afford costly for-profit hospitals and clinics. Several not-for-profit organizations and charity operations have attempted to fill this gap by providing healthcare services for low-income groups. However, traditional models of charity or donation-based public health services face growing criticism. International donors increasingly perceive development-funding as investments for sustainable services rather than one-time donations. Local donors are similarly keen to support programs that could provide maximum utilization of their charitable contributions.

“Traditional charity-based models are increasingly challenged by donor preference for sustainable programs”.

**Key Messages**

- Donor agencies and charitable foundations are increasingly supportive of sustainable approaches in the development sector.
- Ensuring financial sustainability requires public health programs to adapt models used in the for-profit sector whilst also ensuring social gains.
- Cross subsidization requires sufficient high paying customers to offset costs by low-income clients and effective monitoring to prevent abuse.
- Social franchising requires economies of scale to become financially viable and repeated trainings and quality-control is needed for franchisees.
- Service subsidization may involve loss-leaders that fulfill public health impact whilst revenue generation takes place through other diagnostic and treatment services with higher margins.
- Open source developers in public health can generate revenue through services such as technology implementation, adaptation and maintenance.
Consequently, many poor-focused health organizations in Pakistan are developing interest in breaking away from the grant-based approaches and incorporating an income generation facet into their programs to achieve financial sustainability. Financial sustainability of an organization can be described as the “capacity to obtain revenues in response to a demand, in order to sustain productive processes at a steady or growing rate to produce results and to obtain a surplus⁵. Financial sustainability in the context of this document implies sufficient revenue generation through inherent operational processes to sustain services in the longer term. For public health programs sustainability may arise through a number of processes, several of which are adaptations of for-profit business models.

What is the right business model for a public health program to adopt? Are there successful examples of sustainable public health interventions in Pakistan? Despite growing interest in sustainability, very little literature is available on the types of sustainable business models used by public health programs. While government adoption and public-private partnerships have been explored, no particular work focuses specifically on income-generation strategies⁴.

This health brief aims to bridge the current knowledge gap by providing examples of innovative approaches towards financial sustainability used by public health programs in Pakistan.

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**Cross-Subsidization**

*Definition:* Cross-subsidization uses income generated from one consumer segment (usually the more affluent) to subsidize the cost of services in another consumer segment (the less affluent). These types of programs offer services to people with various income levels, charging them according to their ability to pay.

*Background:* Subsidies refer to a sum of money granted by the state or a public body to help an industry keep the price of a commodity or service low. They are generally employed by the government to lower the price of essential commodities in order to make them more accessible without hurting suppliers' income. For-profit companies

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"Public health programs can use varying income elasticity to make customer segments"
in the private sector build upon this concept by utilizing the varying income elasticities for a product through differential pricing between income groups in order to maximize sales. Whilst this approach has been criticized by economists for causing welfare loss, it has potential for sustaining public health services delivery. Programs using cross-subsidization offer services to people who are at various income levels and the program sets the price according to the income-level of each group. For a cross-subsidization model to be sustainable, the income generated from the higher income customer groups should entirely cover the cost of treating lower income customer groups. Similar to for-profit concerns, by setting the price of a service according to the income elasticity of a patient (customer), public health programs can seek to maximize the number of clients that they can reach and sustain operations.

**Potential Pitfalls:**
For this type of model to succeed, the program has to ensure that it attracts a significant number of high paying customers to offset the costs of low-income groups. In Pakistan, wealthy individuals prefer large for-profit, private university hospitals and clinics due to high quality of services that these facilities offer. Organizations therefore need to build a reputation for high quality or set aside a marketing budget to compete with for-profit organizations. Since most organizations may not be able to market their services at the same scale as their for-profit counterparts, it might be best to leverage upon a unique selling point. UM Healthcare is able to attract high paying customers primarily for two reasons: a well-equipped laboratory and consultations with clinicians with professional specializations via telemedicine. Access to quality laboratory services as well as specialists was lacking in the areas surrounding Mardan which provided an investment opportunity to the donors to help make the program sustainable. However, the particular location has its drawbacks. Primarily a rural district, Mardan offers a small high-income clientele and the hospital primarily caters to low income groups who cannot afford the full cost of the treatment. UM Healthcare's cross-subsidization model has as a result not been completely successful and physician salaries are still supported from donations.

A second pitfall is in determining which patients can or cannot afford to pay in order to protect the system from fraudulent activities or abuse. As relying on self-reporting would mean that many would resort to taking advantage of the system, the organization has to turn to alternate sources for accessing household incomes of patients. UM Healthcare utilizes several such approaches with the patient's consent including connecting with the patient's place of employment, their community and accessing

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**Cross Subsidization**

- **Health-Market Challenge:** The poor can’t afford care; steep healthcare costs lead to impoverishment
- **Definition:** Utilize differential pricing to channel profits from high income groups to low income clientele
- **Intended Benefit:** The poor have purchasing power for health services
- **Potential Pitfalls:**
  - Problems attracting high paying customers to balance income differential
  - Problems determining client's ability to pay

**Case Study**

Umrana Mumtaz Healthcare Trust:
Operating since: 2006
Location: Mardan, Khyber-Pakhtunkhwa

Umrana Mumtaz (UM) Healthcare Trust is a hospital in rural Mardan with reputable doctors and nursing staff, a sophisticated Electronic Medical Records (EMR) system and telemedicine facilities. The hospital is built around a donation based model that is similar to other philanthropic organizations in Pakistan. However, it has effectively utilized the cross-subsidization method to cover a large portion of its costs. Patients are charged according to their ability to pay for services and referrals are provided to other local government hospitals when certain diagnostic or intervention services are unavailable at the hospital.
their government records. The income of the client is self-reported and then cross-checked with outreach program workers who visit the communities of the client to better ascertain their income and wealth status. This practice helps fend off corruption and deters clients from exploiting the payment system. The resolution of this pitfall is also based on UM Healthcare’s particular clientele and the location of its facility. Since it caters to small communities located in and around Mardan over a limited geographical area, it can afford to have health workers posted in the communities of most of their clientele.

Franchise-Based Model

**Definition:**
Franchising is a process where an operator (franchisee) uses a business model employed by another company (franchisor) and its brand, in return for a royalty (franchising fee). As part of this arrangement, the franchisor helps with marketing and operations and allows the franchisee to use its brand. Social franchise networks extend this concept with the difference that benefits are gauged from a social or developmental perspective rather than a commercial one.

**Background:**
An inherent benefit of the franchising process is that time and resources required for the creation of a business idea or innovations are saved. The social franchising model leverages this concept to its advantage. Whilst several approaches are possible, in a typical health-related social franchise model, the franchisor sets up a network of healthcare providers who all operate under the same brand. The franchising organization approaches healthcare providers present in a community and provides them with training and resources required to attract patients. The franchisor is responsible for ensuring quality of services that helps to build trust in the brand. Whilst the franchisees independently manage their operations and control revenue, the franchisor aims to recover costs using franchising fees. Unlike traditional for-profit franchising activities, social franchisers tend to only seek recovery of costs of implementation and do not expect returns on their investments. The potential income-generating opportunity provided by coming under an umbrella brand incentivizes small-scale private healthcare providers to join the network. The franchisees can usually also take advantage of potential referral networks developed by the franchisor such as to other franchisees or specialist facilitates. They can save on marketing costs as the franchisor is responsible for brand creation and promotion. Franchisors benefit through economies of scale achieved through bulk purchase or leasing of equipment and joint-trainings. Such efficiencies in the market result in lowered costs that are ultimately reflected in the lower pricing of the health services for low income populations.

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Cross Subsidization

- **Health-Market Challenge:** Many fragmented and often informal providers. Low standards and little oversight
- **Definition:** A group of providers that operates under the same brand, but where outlets are operator-owned and services are standardized by a central franchisor
- **Intended Benefit:** Adequate Standards and oversight
- **Potential Pitfalls:**
  - Requires reaching a level of scale that would allow sustainability
  - Monitoring franchises successfully

**Case Study:**
Micro Health Franchising System - 2011- KPK
Operating since: 2006
Location: Khyber-Pakhtunkhwa

The social franchise model is utilized by the Micro-Health Franchising Systems\(^3\) (MHFS) based in the province of KPK. MHFS won its
seed grant in the Grand Challenge Saving Lives at Birth competition in year 2011 by developing a specialized app catering to midwives working in rural communities. The organization develops franchises that provide maternal health services. Franchisees are midwives already present in the community who are trained by MHFS. MHFS furnishes a room in the midwives’ home with basic antenatal care equipment that serves as the franchise site and is the main operating area for the midwives. The prices for these services are carefully determined, balancing the average low income client's ability to pay as well as the cost of the operation, while also ensuring a small profit for the franchisee. These charges provide an income-stream for the midwives whilst helping to cover the franchising fees to MHFS. Equipment for antenatal care such as delivery kits are purchased by MHFS in bulk and subsequently leased to the midwives, allowing them to equip several franchises at lower costs. Fees paid by several midwives over the span of several years help to recover the cost of the leased equipment and the development and maintenance costs the franchise network.

**Potential Pitfalls:**

A social franchise model is dependent on reaching economies of scale to make it commercially viable. The franchisor therefore needs a large initial investment to set up multiple franchises simultaneously rather than attempt to scale-up over time. Public health organizations generally lack the capital to seed initial investments and need to seek funding through grants and other donor mechanisms. Most banking institutions are reluctant to provide loans to novel and potentially low-return social business ventures. Charitable foundations are more likely to be interested in supporting programs that provide direct patient care rather than the comparatively high risk investments in setting up a social franchise. MHFS utilized grant opportunities that were specifically designed for social business ventures reflecting possible avenues for other programs to follow.

Another challenge that social franchisors face is program monitoring and ensuring standard of care within each franchise. A franchise operates on the basis of its brand and the assurance that all those treated under the same brand will be provide the same quality of care. While a program can ensure that all the franchisees go through the same initial training, it may be more difficult to keep track of their performance once the franchises have been set up. A franchisee may seek to reduce costs by cutting down time spent with each patient to increase volumes or provide substandard care. Such franchisee-driven measures can possibly harm the patient as well as affect the brand's reputation. In order to avoid reduction in quality, there should be clear communication and expectation-setting between the franchisee and the franchisor regarding the amount of profit to be made. The franchisor needs to ensure that the franchisee does not feel underpaid for their services and are actually benefiting from being a part of the enterprise. Patient feedback and reported results should also be encouraged in addition to detailed standard operating procedures for the franchisees. Frequent franchise visits, community sessions and decision-support using mobile phones for implementing operational procedures have supported the program-monitoring process for MHFS. However, their experience suggests that whilst it is possible for the franchisee to become self-sustaining, due to the high program monitoring costs, the franchisor is not fully able to achieve financial sustainability. Franchisors may turn towards adding alternative models over the longer-term such as organizing health-workers into cooperatives so that collective buying power is retained and an inherent desire to ensure quality across the providers in the network is built.
Service-Subsidization Model

Definition:
In the service subsidization, an organization offers certain services for free or at a lower-priced whereas other income-generating services are charged at higher or full prices. The income-generating components of the program cover the cost of the entire operation and offset the cost of the free and subsidized services offered.

Background:
Much like the cross subsidization model, the service subsidization model stems from the idea of government subsidies, albeit in a different way. In the service subsidization model, an organization uses income generated from one service to cover the cost of another service which may be priced at lower than market value or delivered free of cost. Commercial for-profit businesses often use this strategy when launching a new product or service in the market by deliberately lowering prices to attract customers. However, the difference between the commercial strategy and service subsidization model in public health is that while the former is temporary strategy, the latter is a permanent solution to allow an organization to provide a particular health service for a low cost.

A theme usually seen in these models is that very often the health service provided at low cost is often related to a disease or health problem that has a major public health burden and affects low income groups disproportionately, whereas the other services may either be more likely to affect high income groups or affect all groups equally.

“Service subsidization in public health is a permanent solution unlike similar commercial strategies.”
Case Study
Service-subsidization is utilized by Community Health Solutions, a social enterprise based in Karachi. The initiative received initial funding via the Stop TB Partnership and UNITAID to scale up tuberculosis case-detection and treatment in the private sector through mass-screening and testing via a molecular-based rapid TB diagnostics (GeneXpert MTB/Rif). Whilst GeneXpert testing takes place free of charge, the program rationalizes its consumption by first screening patients via a digital Xray that is provided at a low cost before conducting GeneXpert tests. This process is carried out at purpose-built health centers equipped with best practices for low-cost airborne infection control. Whilst TB diagnostic and testing are provided for free, the program recovers costs by charging for diagnostics and treatment for conditions associated with increased risk for development of TB including COPD, asthma and diabetes that are concurrently screened in the community.

Potential Pitfalls
Unlike cross-subsidization models, in service-subsidization there are no higher income customer segments to target with differential pricing and to recover revenue. Since organizations are focused towards diseases of public health significance, it is likely that they are primarily catering to low-income groups. Therefore, any costs associated with free services need to be offset by revenue generation through services for other diseases. A possible approach to help reduce costs utilized by CHS was to build upon its mass-screening intervention thereby creating a wide customer base and a developing a low-margin high volume model. By increasing the number of cases referred to the diagnostics centers through a team of community workers it was able to develop a low-margin, high volume business model. TB services serve as a loss-leader helping to expand customer base and providing credibility in the community. In addition, it was able to secure reduced pricing for tests and medication through bulk-purchases and advanced commitments as a result of the mass-screening system.

Setting appropriate pricing for a charged service may also be a challenge since both prices and income elasticity are likely to vary significantly between customer segments and type of disease. For example, treatment for asthma, a condition that may cause severe shortness of breath during exacerbations may have a relatively high demand compared to treatment for diabetes that is largely free of symptoms unless the patient develops complications. Determining appropriate pricing may consequently require extensive surveys. Programs can be constrained in terms of patient’s ability to pay for services especially when targeting low-income segments. The program has sought to overcome this challenge by developing marketing campaigns in order to increase awareness regarding the different diseases under management and engaging with private sector physicians to increase referrals to diagnostics centers.
Open Source Solutions

**Definition:**
Open source models are generally applied in the technology sector where organizations provide solutions, such as, medical software for free and charge fees for implementation rather than the product itself. Open source models are distinct from freeware models commonly seen in the commercial technology sector in that the “source code” is also provided and is not licensed, thus the solution can be modified, adapted and distributed by organizations that did not develop the initial product.

**Background:**
The benefit of open source products in public health is that programs do not have to spend resources on purchasing expensive software that instead can be directed towards patient care. Technological innovations over the past decade have significantly transformed health informatics however; their adoption has been largely restricted to well-equipped tertiary care centers in Pakistan. There is significant scope within public health programs to digitize data collection as well as reporting and analytic processes. Both the public sector as well as private sector led public health groups are looking towards technology solutions in Pakistan, in order to more effectively manage health programs and engage in research activities. By using existing open-source solutions, organizations can adapt software to suit their data collection requirements.

Whilst traditional software firms seek to maximize sales, organizations working on implementation of public health informatics may find themselves in a niche market since deployment of such systems requires technical expertise. Prior experience in engaging with public health programs and understanding programmatic requirements can offer a distinct competitive advantage compared to conventional software firms. Since public health programs may have similar reporting requirements, systems used in one country or location can be deployed in other areas with minimal adaption, saving programming costs. This process may facilitate standardization of reporting and improvement of data-quality in public health programs.
Case Study

OpenMRS, or the Open Medical Record System was created in 2004, as a nonprofit collaborative effort by Regenstreif Institute and Partners in Health, initially in response to supporting the scale-up of antiretroviral therapy in Africa. The platform provides adaptions to include the full range of medical treatments however the focus remains on diseases of public health significance such as tuberculosis, malaria and HIV. OpenMRS is based on a “concept dictionary” where clinical data is directly stored on a server so that new conditions can be added in a modular fashion without the need for modifying the original database structure.

In Pakistan, OpenMRS implementation has been carried out by Interactive Health Solutions (IHS). IHS works with public health programs to identify their programmatic requirements. In most instances, this involves reviewing paper-based registries and developing appropriate web or mobile-based forms with the same data-fields. Following this process, data servers are setup and reporting tools on the web interface are created. Their service package also includes training of health workers in data collection and program managers on reporting and troubleshooting. Clients have the option of utilizing IHS at a later stage for modification of existing software or for adding additional modules. This could include other open-source software such as Xpert SMS that allows direct integration of GeneXpert results on to OpenMRS and SMS notification of the results to patients and providers. Although registered as a for-profit concern, profit maximization is not the ultimate goal since all income earned during implementation is reinvested into the company.

Potential Pitfalls

A potential challenge with this type of model is attracting appropriate customers. Whilst the public sector in Pakistan is seeking to bring-in operational efficiencies through the use of technology, government contracts can be a protracted process and smaller organizations may struggle to bridge-finance activities in the interim period. Private-sector led health services groups may be too small-scale to use customizable open source software solutions. Since public health programs are grant-dependent, they may struggle to allocate resources towards health informatics, even if the benefits to the investments are apparent. IHS has sought to overcome this challenge by expanding its operations outside of Pakistan by targeting public health programs in South and Central Asia as well as East Africa. The OpenMRS brand and its familiarity within the global health community facilitates this process as other organizations are keen to promote the usage of a reputable platform in their service delivery.

A second more conventional challenge is competing with existing software and technology platforms developed either by similar public health focused group in the eHealth and mHealth space or by larger organizations for their internal requirements. Software developers and the donors funding their solutions prefer using their own products in public health programs. Implementation-focused organizations with existing technology solutions may be reluctant to utilize software that is developed externally since they are less familiar with its design or perceive it to offer lesser functionality. In such instances, detailed discussions may be needed that convey the merits provided by the solution being proposed and significant adaptions may eventually be required in order to fulfill programmatic functions. Since the software code is freely shared it may be sensible in some instances to work towards integration of technology platforms and harness benefits provided by each system rather than develop competing systems. IHS is currently collaborating with Ona, a firm based in the United States to integrate data reporting tools for large-scale implementation.

Conclusion:

A number of public health organization are leveraging knowledge and practices from the for-profit sector to develop sustainability into public health programs in Pakistan. However, examples of large-scale projects that have successfully transitioned off from donor-funding towards self-sustaining models are very limited. A variety of challenges that are common to serving bottom-of-the-pyramid clients as well as those that are unique to the health sector are constraints towards financial sustainability.
Ensuring sustainability of private-sector led programs can have significant impact on national programmatic and health indicators. Policymakers need to more actively engage with innovators in the country and work towards the development of a wider ecosystem that can help facilitate the growth of private-sector led services delivery in the country.

References:


