FAST DENTAL HEALTH

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Abstract

In this paper I analyze business models serving customers at the bottom of the pyramid (BoP) in emerging economies. I analyze the case study of a chain of for-profit dental clinics that serve low-income clients in an emerging country: the clinics provide low-cost fixed-price treatment, free transportation, mobile clinics, and 24/7 services. I call this model Fast Dental Health (FDH). The core advantage of this business model is time-saving and a reduction in the information asymmetries of patients, as well as the intensive use of specialized labor (dentists), which not only reduces costs but also helps provide better services. The model provides new insights that can be used by managers not only in other countries but also in advanced economies.

Key words: Base of the Pyramid, business models, emerging economies.

INTRODUCTION

In this paper I analyze business models serving customers at the bottom of the pyramid (BoP) in emerging economies. There is a long tradition of health-care provision for the poor by charities and religious organizations using a non-for-profit model. With the emergence of the welfare state in developed countries in the twentieth century, it is the state who takes the role of provider, creating a framework for the purchase and provision of health services (see summaries in the Handbook edited by Pauly et al., 2012).

In this paper I study the innovations in business models created to solve the needs of the poor in developing countries. I analyze the case study of a chain of for-profit dental clinics that

serve low-income clients in an emerging country, providing low-cost, fixed-price treatment, free transportation, mobile clinics, and 24/7 services. I call this model Fast Dental Health (FDH).

BACKGROUND: INNOVATIONS FOR THE BOTTOM OF THE PYRAMID

Innovations for the BoP have emerged as an important topic in recent years. The literature highlighting the importance of the BoP commenced with the work of C.K. Prahalad, who emphasized the importance of the BoP in a series of articles and books and examined how companies which needed to create innovations and which operated within the constraints of the low level of income of the BoP, could benefit (Hammond and Prahalad, 2004; Prahalad and Hart, 2002; Prahalad, 2005). This idea was then taken up by others who analyzed specific innovations for the BoP (Hang, Cheng and Subramian, 2010), and who studied more generally the innovations implemented in developing countries (see papers in the special issue edited by Christensen et al., 2010). Most discussion relating to innovations for the BoP has focused on the creation of specific innovations and the processes that have enabled companies to make them, and also how these innovations emerge and then migrate to developed countries (see Immelt et al., 2009 or Prahalad and Mashelkar, 2010).

Poverty in emerging markets is a source of innovation for business models, not only in terms of products but in services and their distribution. The diffusion of innovations created to address the needs of the poor in developing countries was analyzed, prompted by the considerable interest in business models for the Base of the Pyramid (BoP -individuals that live on less than US$1500 a year). Despite their low income, this segment arguably presents companies with opportunities for profit as it comprises the majority of the world's population (Prahalad, 2004). To

benefit from this, companies need to create innovations that address the specific needs of people with very low income levels. Different ways of achieving these innovations for the bottom of the pyramid (Prahalad and Hart, 2002; Anderson and Markides, 2007; and Borger, et al., 2010) have been discussed in the literature.

With respect to the provision of services to the BoP, Chikweche y Fletcher (2013) show the importance of BoP markets and the way technology used in business contexts in developed countries is applicable to emerging markets. Acosta et al (2010) and Williams et al (2011) mix different business model approaches in order to sell in the BoP. Regarding health-care in emerging economies and the BoP, Govindarajan and Ramamurti (2013) discuss health-care innovations in India through the use of economies of scale in large hospitals, hospitals which, in addition, offer quality comparable to their US counterparts.

I follow this tradition of using case studies to understand the business model behind innovations for the BoP, but focus on a different health care segment: dental care. In emerging economies the state has failed to provide health services to the whole population, giving rise to different options for finding health solutions for the poor (Makinen et. al. 2000). On one hand, there is medical care for the poor provided by non-profit institutions (or charities) which obtain resources from grants and/or profits from other operations. These clinics or hospitals subsidize the services they offer to the poor (see Velayudhan et.al, 2011 or Fast Company 2012 for examples). Clearly however the geographic coverage offered by these non-profit clinics is insufficient, and large segments of the population effectively have no access to medical treatment. On the other hand, there are low-cost business models developed by companies serving the BoP which have widely geographically-dispersed operations and little or no formal business competition.

RESEARCH DESIGN

To gain a better understanding of innovations in dental health services for the BoP the business model of a private, for-profit Mexican dental-clinic chain was analyzed. The company (La Zapopana in Guadalajara, Mexico) is a public health supplier. Primary data was drawn from publicly-available sources, interviews with the founder and company employees and participant observation. Secondary data was collected from public sources including industry publications and national and regional newspapers (e.g., Mural, Publico). As the company involved is not publicly traded, information was limited as the disclosure requirements which apply to publicly-traded firms do not apply to private entities.

A particular challenge when analyzing innovations in a developing country is the reluctance of company owners to reveal information on their sources of success, given the poor institutional infrastructure for protecting intellectual property rights (Khanna and Palepu, 2010).

During the course of the study over twenty clinics in Guadalajara, Mexico, were visited, and interactions with clients at the locations were observed. Both staff and physicians were interviewed in order to gain an understanding of day-to-day operations. In addition to the interviews carried out with dental clinics, clients from the BoP were also interviewed.

In order to analyze the case studies the recommendations of Yin (2004) and Eisenhardt (1999) were followed. In accordance with this data the specifics of the case studies were abstracted and links established to previous theories. Case study evidence and theoretical arguments were examined alternately to identify any new insights illuminated by the case studies undertaken.

THE EMERGENCE OF A FAST DENTAL-HEALTH BUSINESS MODEL IN MEXICO

La Zapopana is a dental clinic founded in 1983 in Zapopan, Mexico by Dentist Alfonso Mendoza. It started with challenges, like any other clinic, but Dr. Mendoza was able to learn from experience. After 11 years of operation Dr. Mendoza was asked in 1994 to either buy the premises or change the location of the clinic at the very moment when it was starting to expand, and also in during a period of significant price rises resulting from the Mexican financial crisis. One of the results of this was that Dr. Mendoza decided to change the paradigm of his business, which subsequently became what is now one the biggest chains of dental clinics in western Mexico.In 2013 it boasted 20 locations dedicated to serving people in the BoP. Figure 1 shows the location of those clinics and economic data relevant to where each clinic is based. The model was created to solve the lack of public provision of dental services for the BoP population living in the urban areas. Due to the failure of state institutions to provide adequate coverage, private companies have been able to step into the breach. Dental health is not prioritized by public health institutions, which only cover routine checkups or severe illnesses or accidents that require major surgery.

*** Insert Figure 1 about here ***

La Zapopana dental clinics are small dental clinics (1,000 to 3,000 sq. ft.) located in poor urban areas and also mobile dental clinics (adapted buses). La Zapopana is a low-cost dental health center, with prices 50% lower than those quoted by private independent dentists. In all branches prices are fixed, public and highly-visible. The clinic offers free transportation at night and/or for disabled patients and a 24/7 service in their larger, strategically located branches in BoP neighborhoods. This differs from other competitors; Table 1 summarizes the characteristics of competing dental-care providers in Mexico.

*** Insert Table 1 about here ***

Mexico has a population of over 110 million inhabitants. Nationally, the combined size of the BoP and middle-class is about 70 per cent of total population (INEGI, 2013) although public-sector dental health coverage only reaches about 25% of this group. Nationally there is little health-care prevention culture, particularly in the field of oral health. On average and depending on age, education and socio-economic status, each Mexican has two damaged teeth. The incidence of tooth decay is 85 per cent, and 90 per cent suffer from gingivitis (Salu180, 2013). Similarly, 65 per cent of the population in the country has periodontal disease. With advancing age, oral disease becomes more frequent (El Universal, 2008).

La Zapopana attracts clients successfully through using a range of strategies: flyers distributed in central and suburban areas, advertising through announcements on local radio, and publicity in businesses with many blue-collar workers (mainly electronic manufacturing plants). Unusually in the dental health sector, they do not rely significantly on word-of-mouth recommendation.

This business model appears to be a very convenient dental-care option for custumers as it is cheap and efficient. People in the BoP with dental ailments can visit the clinic at a convenient time without interfering with work or family obligations. Different studies show that time is one of the most valuable assets for those living in large cities irrespective of socio-economic status (Sauceda-Valenzuela et.al. 2010).

For the managerial team, La Zapopana's key success factors are volume, a closed cycle of service, time, convenience, and cost. Prices are much lower than the competition, making La Zapopana appealing for people in the BoP who cannot afford to purchase treatment at other dental clinics. When the size of the BoP in Mexico is taken into account, it may seem clear where success

comes from; low prices for the statistical majority in the country that cannot access the services offered by other providers due to economic considerations. However, this is not the only consideration: dental services are usually expensive because of the cost of supplies and laboratory services. Dr. Mendoza has therefore increased profit by eliminating intermediaries in the supply-chain, and bulk-purchasing goods to supply to La Zapopana franchisees. Laboratory services are purchased in similar fashion and offer considerable cost savings as the chain's own supplies are used, eliminating the requirement for franchisees to seek the service anywhere else. Indeed, this is a contractual requirement for franchise owners: the contract states that products and services can only be purchased from La Zapopana. In addition patients of the clinics receive a 50 per cent discount and can access any service necessary, eliminating the requirement for them access different services from different providers. Not only do lower prices mean more patients, but the location of the clinics and the business-model they operate offers the opportunity for clients to make considerable time savings.

Patients fund treatment at La Zapopana through an external institution called SaludFÁCIL. This finance company requires only three official documents: an official ID, proof of address (a recent telephone or electricity bill) and the latest paycheck with a Social Security number. Credit history is not checked, nor is a guarantor necessary. SaludFÁCIL covers any treatment or surgery, and the loan includes hospitalization, medical fees and all materials. Payments are arranged prior to the treatment being carried out, and the patient pays the loan via paycheck discount. Fees are 10% annually and interest is payable only for the duration of the loan. Table 2 shows the Cavas Business Model for CDZ and summarizes the characteristics of competitors in Mexican dental-care provision.

*** Insert Table 2 about here ***

The success of La Zapopana has lead to a proposed goal of 40 clinics by 2015, and a proposal to establish sites in Mexico City. In addition, research is also being undertaken into how the business can be marketed under a different name to those in the higher socio-economic bracket. An initial trial, using the original name, is already taking place in this market segment, and primary indications are that it is enjoying the same success as clinics located in poorer areas.

DISCUSSION

I have decided to use the term Fast Dental Health (FDH) to describe this new business model which provides dental health services for the BoP. FDH is an innovation in the distribution process, not in the product or service. It is different from the traditional business model where the dentist has to invest a large sum of capital in machines and equipment as well as specialized education and then wait for clients through word-of-mouth recommendation. The model consists of four key elements (see Figure 2).

*** Insert Figure 2 about here ***

The first element is time. The traditional private dental-business model is very focused on investment, while the new business model (FDH) pays more attention to managing the most valuable asset: time. To reduce the costs of distribution, the business model uses resources intensively: locations, spaces, doctors, tools and long opening hours, and time is not wasted in price negotiation. FDH is convenient for customers because it maximizes use of their time. This business model prioritizes the value of patient-physician contact. Time-efficiency is one of the most important roles of the clinics.

The second element is intensive use of dentists. Specialization is important in the FDH business model because it plays a part in cost-reduction. Specialist dentists move between branches and their labor is used intensively. Dentists are not involved in areas that do not add value and in which they are not specialized. Instead they perform the same types of operation frequently in order to perfect their technique. One of the reasons that the low-cost model can be maintained is due to the large number of new dentists who graduate from Mexican schools. In 2010 Mexico had 151,622 dentists, with over 6000 new physicians graduating from 120 public and private schools (Novelo-Arana et al., 2013). The average monthly salary is 570 USD, 79.7% working in the private sector and 20.3% in the public sector (Employment Observatory, 2014).

The third element is product standardization. Services standardized throughout the brand in terms of quality and (fixed) price play an important role in the business model. FDH helps to decrease the cost of asymmetric information, which is not usually reduced sufficiently within the BoP sector. Table 3 summarizes the differences and similarities between the CDZ model and medical provision in India.

*** Insert Table 3 about here ***

The fourth element is economy of scale in terms of inputs. Wholesale purchase of medical supplies leads to economy of scale. But unlike in India (Govindarajan & Ramamurti, 2013) where innovation occurs due to the size of the hospitals and volume of patients, economies of scale do not occur in hospitals but in a network of small clinics.

CONCLUSION

There are several for-profit business models from companies serving the BoP where those companies have dispersed operations and no formal business competition. In this paper I analyzed innovations made in business models created to serve the needs of the poor in developing countries. I derived these insights from analyzing the business model for dental services. These dental services emerged recently in Mexico and consisted of small and sometimes mobile clinics, which were economically-priced and offered free transportation and a 24/7 service. The innovation, Fast Dental Health (FDH), is not a new product or service but is a new business model for the provision of dental health services for the BoP.

The research found that time-saving is important for BoP consumers, so the most effective solutions are those that offer this advantage. I also found that the brand may be more important than the dental physician's name and that price-certainty in service-provision is fundamental. Companies working in the BoP have to solve many such obstacles with small amounts of capital, and the FDH business model offers services standardized for quality and price through a new distribution model. The core advantage of this business model is time-saving and the reduction of patient information-asymmetries, as well as the intensive use of specialized labor (dentists), which not only reduces costs but also helps provide better services.

FDH have no particular market advantage and their methods can be easily replicated by possible competitors. However, they have created the system and the interactions that take place within it. In the case of clothing chains Inditex and H&M, there was a particular fashion-vending structure that was completely changed, as well as the production chain being reorganized. Therefore FDH seems to be in line with the literature showing that a good business model creates

virtuous cycles, and that over time these result in competitive advantage (Casadesus-Masanell and Ricart, 2011).

The model provides new insights that can be used by managers not only in other countries but also in advanced economies. As stated in the literature, (Porter and Lee, 2013) the new model of medical administration is patient- rather than physician-focused. The establishment of clinics open 24/7 and the provision of mobile clinics points in this direction. FDH falls into the ‘value-agenda’ category outlined by Porter and Teisberg (2006) in which value-based organizations will redefine health care.

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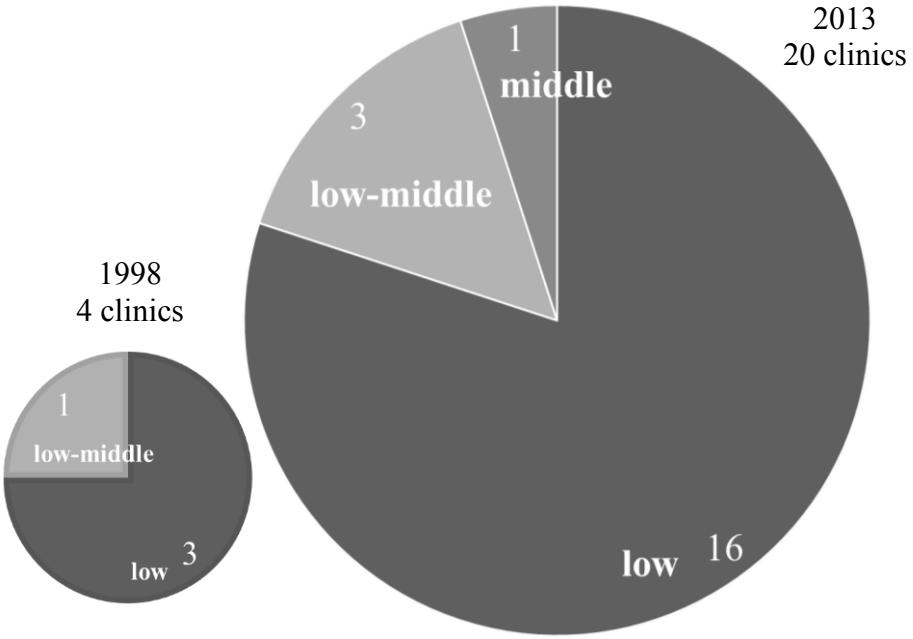
Figure 1. La Zapopana clinics & income level of the areas in which they are located



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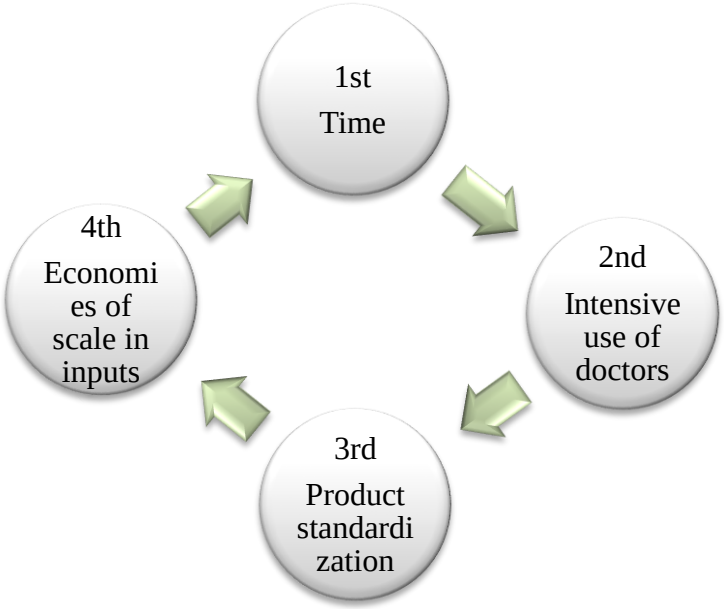
Economic Segment Description:
Middle: homes or apartments with two or three bedrooms and one or two bathrooms. One or two cars, one or two telephone lines, two television sets and 20% of this segment has a computer.
Low: homes or apartments with one or two bedrooms and one bathroom. No automobile, one or none telephone line, one radio and one television set.

Figure 2. Fast Dental Health Process



Source: Authors

Table 1. Competitive landscape for dental care for the bottom of the pyramid

Services comparison by type of provider						
	La Zapopana	**ISSSTE/IMSS***	**Seguro Popular**	**Private High Cost Services**	**Private Low Cost Services**	**University Welfare Services**
Consultation/Diagnosis	All Free	Included	Included	$400-$800mxn**	Variable price**	$20mxn
General dentistry	x	Limited	Limited	x	x	x
Children's dentistry	x	Limited	N/A	x	x	x
Emergencies	x	Limited	N/A	Limited/previous notice***	Limited/previous notice***	N/A
Prosthesis	x	N/A	N/A	x	x	x
Endodontics	x	Limited	N/A	x	x	x
Periodontics	Limited	N/A	N/A	x	x	x
Orthodontics	x	N/A	N/A	x	x	x
Maxifacial surgery	Limited	Limited	N/A	x	Limited	x
Other (Tattoos, diamonds...)	N/A	N/A	N/A	x	N/A	N/A

Limited: The service could be limited due to hours of operation, facilities and/or to specific basic treatments depending on the speciality required.

* Cosmetic dentistry is not offered by public providers such as ISSSTE and IMSS.

** Calling for previous notice when out of hours of operation, only if specialist is available.

Sources: CDZ: Mendoza, A. (2013, October 22). Personal interview.

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Table 2. Canvas Business Model Clinica Dental La Zapopana

Key Partners	Key Activities	Value Proposition	Client Relationships	Customer Segments
20 clinics by 2015, allowing la Zapopana to get customers through the brand and not through recommendation (as commonly happens in the dental health sector)	Dental services 24/7. They offer free transportation at night and/or for disabled patients.	Low cost health center, their prices are 50% less than a private independent dentist. Prices are fixed, public and highly-visible. This model allows for time-efficiency.	Clients are offered a 50 per cent discount on-site as well as all the services they need, making it unnecessary to look for different treatments in different places.	BoP plus middle class in Mexico; 70% of the population (110 million). Public-sector Mexican dental coverage is only at 25%.

Key elements	Distribution Channels
Time saving Intensive use of doctors Standardization of the product Economies of scale in inputs	Cutting-out of third parties in the supply chain and bulk purchase in order to adequately stock franchised clinics as well as sell to outsiders.

Sources: CDZ web page, Personal interviews and author visits

Table 3. Differences and similarities between the CDZ model and India.

	India	CDZ
Differences	Mostly focus on complex surgeries Specialized doctors in unusual areas Second hand equipment buying Sophisticated equipment only if necessary Urban hubs - spoke facilities Fixed salaries, no bonds	Focus on outpatient surgeries and treatments Dental specialties New equipment No sophisticated equipment Homogeneous clinics Salary based on bonds
Similarities	Established action protocols Professional development of doctors Focus on skills and tasks to accomplish Decor is irrelevant Shared spaces Full equipment in all locations Purchasing equipment in high volumes Procedure packages with fixed prices Grants / loans for treatments and surgeries	

Source: Govindarajan, V., & Ramamurti, R. (2013). Delivering World-Class Health Care, Affordably. HARVARD BUSINESS REVIEW, 91(11) and own sources.