Business Models for the Base of the Pyramid

Abstract

Provide insight about which are the factors that foster innovation in a business model within the service sector and how this innovation diffuse to other segments of the market. We choose the health industry in Mexico, between 1997 & 2011 because: there was a void in health services, important regulatory changes, the creation of a new institution and a pandemic occurs in this period. All this provide a unique framework to observe how the health industry adapt, innovate, and evolve. This case demonstrates that country-specific solutions to market failures can be regarded as innovations for the Bottom of the Pyramid.

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

1. Introduction

Provide insights about which are the factors that foster the emergence of an innovation in a business model within the service sectors and how this innovation diffuse to other segments of the market in the same country is the aim of this research.

Christensen et al. (2011) and Prahalad (2004) focused mostly on understanding the process of the creation of specific innovations that address the needs of bottom of the pyramid (BOP). 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 BOP have been discussed in the literature (Prahalad and Hart, 2002; Anderson and Markides, 2007; and Borger, et al., 2010). However, these innovations can be diffused to serve the needs of others. One diffusion process is reverse innovation, whereby innovations created in developing countries to address the needs of the poor may also eventually come to be used in advanced economies by multinational companies (Immelt, et al., 2009; Govindarajan and Ramamurti, 2011).

In this study, we focus in a specific kind of reverse innovation, instead of analyses the diffusion from a developing country to a developed country we center in diffusion from the BOP to middle and high-class within the same country. The innovation that we choose in the present study is the Pharmacy-Doctor business model: a low-cost, quick-service medical consultancy next to a low-cost generic drugs pharmacy, which emerged in Mexico at the end of the 1990s. However, when regulatory changes and a national health insurance scheme for the poor was implemented in Mexico, the business model did not disappear, it keep growing in the BOP. A new factor strength the survivor of the models, the value of the time, and the quickness of the service was most worthy that the monetary price of it. Additional, the prescription for buy drugs become mandatory in 2010, the model across income levels revealed that the initial innovation did not only solve the problem of lack of access to health care for the poor, but also the needs of time-poor richer people.

We work with a case study adding depth to the literature by defining a specific type of innovation model and discussing the mechanisms by which the innovation emerges and its diffusion happens. We choose the health industry in Mexico, in the 1997-2011 period, for several reason: there was a void in health services for the

population (in the BOP precisely), important regulatory changes, the creation of a new institution and a pandemic occurs in this period. All this together provide a unique framework to observe how the medical industry adapt, innovate, and evolve.

In contrast to other studies of innovation (see reviews in Hall, 2005; Karshenas and Stoneman, 1995; Rogers, 2003) that generally examine the diffusion of a technology or of a specific product or service in an industry, this study contributes with insights about how an innovation emerge in business models within in the service industry (medical services), form the BOP and how this innovation diffuse across market segments within the same country.

The diffusion of a business model is subject to different adoption determinants than that of technologies. There are limited networks, switching costs and uncertainties which present challenges to the diffusion of the business models as it is companies replicating the business model rather than consumers purchasing the product, which are the main drivers of diffusion (Hall, 2005). Moreover, the specific case that we analyze, medical services in Mexico, the diffusion of the model to a higher social segment, was performed by competitors rather than by the innovator, motivated by opportunities in market conditions and by a changes in legislation.

2. Background: the diffusion of 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 who needed to create innovations that 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 followed by others authors who analyzed specific innovations for the BOP (Hang, Cheng and Subramian, 2010), and who studied more generally innovations made in developing countries (see papers in the special issue edited by Christensen et al., 2010).

Most discussion related 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. For example, the creation of a low-cost portable scanner by the Chinese operating arm of the US conglomerate General Electric is reviewed by Immelt et al. (2009). The creation of product innovations such as

the most economically-priced car of the world the Tata Nano or the creation of business models such as the low-cost phone service firm Bharti Airtel were subsequently explained by Prahalad and Mashelkar (2010).

We focus in a specific kind of reverse innovation, instead of analyses the diffusion from a developing country to a developed country we center in diffusion from the BOP to middle and high-class within the same country. The novelty of this process is the diffusion across market segments and not across countries as has been done before. Govindarajan and Ramamurti (2013), Acharyulu and Shekhar (2012), and Fast Company (2012) among others explain some health care innovation in India.

The majority of the literature related to the topic has focused mainly on the dissemination of specific technologies within an industry (see Hall, 2005). The literature about the diffusion process of innovations created for the BOP, have focused on dissemination across countries. For example, Immelt et al. (2009) and Govindarajan and Ramamurti (2011) discuss in detail the process of reverse innovation, whereby innovations created for the poor in developing countries are brought to advanced economies by multinational companies. Hang, Cheng and Subramian (2010), discuss how the Indian wind turbine producer Suzlon, the Chinese appliance makers Galanz and Haier and the Chinese motorcycle manufacturer Yadea used innovations created for home markets to enter those abroad.

Therefore, in contrast to these studies, the diffusion of an innovation for the BOP within a specific country context is analyzed in this paper. Nationwide geographical diffusion, industry diffusion across competitors and cross-market diffusion across income levels is examined. Additionally, in contrast to most studies, the dissemination of a business model rather than of a specific technology or product is reviewed. Therefore, to gain a better understanding of the diffusion process a case study was carried out. This is in line with other studies of diffusion that have used case studies to better understand the process, such as the analysis of the dissemination of the QWERTY keyboard (David, 1985), the dissemination of hybrid corn seeds in the Midwest of the USA (Griliches, 1958), the automated telling machines by banks in the USA (Saloner and Shepard, 1995), or electronic switching in US telecommunication firms (Majumdar and Venkataraman, 1998).

Research design

To gain a better understanding of emerging innovation in the BOP and its diffusion process to the middle and high-class during 1997-2011 period in the health industry of Mexico, we focus in the pioneer providing medical services to the BOP, the Best Laboratories, founded in Mexico in 1953. In 1997, Best Laboratories creates Farmacias Similares (FS), in order to attend the necessities of the BOP.

This case is interesting, novel and appropriate for analyzing the topic of innovation for BOP and trickle up innovation because it blend the void of institutional services, important regulatory changes, an external shock (a pandemic, H1N1 flu virus). All this factors create a unique lab that allowed us to determine very clearly the influence, positive or negative, of each factor for the emergence and the diffusion of the innovation.

2.1. **Data sources**

The companies analyzed are the pioneer in the medical services for the BOP (Farmacias Similares), and the industry competitors (Farmacia GI, Farmacia de Guadalajara, Farmacia Benavides, Farmacias del Ahorro and Generix) and supermarket chains that provide medical services (Walmart Mexico, Chedraui, Soriana and Comercial Mexicana). According to National Drug Manufacturers (2011) these companies control over 80 percent of the retail pharmaceutical market in Mexico.

General statistics are national wide, but Guadalajara city was chosen as a representative community for the field study for the following reasons: it is the second most populous municipality in Mexico (1.5 million); the GDP per capita and economic behavior accurately reflects the national average; the social stratification is also very close to the national average. As a result, several retail companies in Mexico (Walmart, P&G, Comercial Mexicana, among others) carry out market research or test new products or services in Guadalajara as a first step to a national presence (see Harner, 2007; Nuño-Gutiérrez, et al., 2008; and Sanchez-Gutierrez, et al. 2012).

The data of this article come from multiple sources: (i) Participants observation and visit up to 50 pharmacies in Guadalajara's urban area. (ii) Retrieval of archival documents, web pages, companies reports and newspapers in order to see the historical tendency. (iii) In-depth interviews by one of the authors, and a survey to 52 respondents where applied over 2011 year; and (iv) Ten semi structured interviews, were conducted primarily at Pharmacy-Doctors sites in Guadalajara, Mexico, all the interviews were conducted in Spanish. Each interview lasted between 30 minutes and one hours, followed a standard protocol for capturing emerging themes in field, and was audio-recorded and later transcribed verbatim.

Primary data was drawn from publicly-available sources, interviews and participant observation. Secondary data was collected from public sources including industry publications (e.g., National Association of Manufacturers of Pharmacy Products and McKenzie), national and regional newspapers (e.g., Reforma, Expansion), teaching case studies (Chu y Garcia-Cuellar 2007), and company websites. Consultant Reports such as Euromonitor (2011), and

Keckley et al. (2011) were also checked. Since most of the companies involved are not publicly traded, information from these private firms was limited as the disclosure requirements which apply to publicly-traded firms do not apply to this private entities.

A particular challenge to 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). We request interviews with owners, managers and pharmacy association presidents, but these requests were not granted. However, we conduct interviews with companies' consultants, and these provide useful insight into the operations of these companies. These interviews were undertaken on a non-disclosure basis and as a result it is not possible to provide quotations.

During the course of the study over twenty pharmacies in Guadalajara, Mexico, were visited, and interactions with clients both of the pharmacy and the in-store doctor were observed, as well as the layout of the stores being analyzed. 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 pharmacy clients from the BOP, middle and upper-class consumers were also interviewed on more than ten occasions outside the pharmacy and its environs. In addition, a survey was conducted with clients of the in-store doctor. This survey obtained fifty-two valid responses and was conducted with clients of ten different commercial pharmacy chains at different locations.

2.2. Data Analysis

In order to analyze the case studies, we follow the recommendations of Yin (2004) and Eisenhardt (1999). Initially the data for each company was collected and a temporal record of interaction was drawn up. In addition, the changes in legislation and the rolling-out of health care provision in the country was recorded in order to better understand the operational environment of the participating companies. Subsequently, changes in the environments, companies and business models were compared and contrasted with a view to understanding the motivational factors behind the actions taken and the resulting interactions. 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 that the case studies could provide.

Health industry in Mexico

In 1997 year the medical service industry is mainly composed by: the Public Health of Mexico (IMSS), founded in 1943 attend that 35 percent of the population; the Social Security for Bureaucracy Coverage (ISSSTE) founded in 1960 cover 5 percent of the population; Social Security other coverage (1940-1950), 1 percent. Mexico have in 1997, a total of 59 percent of the population without medical coverage, precisely this is the people that belong to the BOP. Additionally exist a private network of insurance companies, hospital, pharmacies and doctors that charges expensive fees for their medical services and medicines. These private network is used by the middle high, and high-class that can afford a private health insurance for cover it. This private network cover 19 percent of the population. This 19 percent are already included within the IMSS or ISSTE since they are employees and the Public services are mandatory for all employers, but they hire a private insurance for use the private network that is believed to be more efficient in his services that the IMSS or ISSTE, only in extreme cases they use this Public services.

Then, the BOP, has not Public medical services and privates are not affordable then they use mainly alternative medicines (homeopathy, herbal, sorcerer, etc.) that are economically available for them.

The private network of pharmacies sell only brand-name drugs manufactured by international laboratories, the public sector use mainly generic drugs manufactured by international and Mexican laboratories. Since IMSS has the main population coverage, it is a very strong competition for be an official supplier and many cases of corruption has been alleged along the years.

Other important characteristic of the medical industry, is that due to the excellent social recognition that doctors have, and excellent wages they earn in private hospitals or in his private consultancy. Universities every year graduate more doctors that big cities in Mexico need. There are scarcity of doctors in rural areas, but the majority prefer stay in the cities that move to the rural areas, where low-income people could not pay their services. Then excess of graduate doctors without job exist in the main cities doing temporaries jobs.

This was the general conditions that prevailed in the medical industry in Mexico in 1997.

3. The innovation emergence and diffusion of the pharmacy-doctor business model in Mexico

The Pharmacy-Doctor business model emerged in Mexico in 1997; by 2011 it had moved to middle and high-class and across the competitors. Adoption of the model by pharmacy and supermarket chains and changes in the legislature that affected the industry were tracked. These events appear summarized in Table 1.

Three phases in innovation life were analyzed: 1) emergence of the innovation, 2) diffusion of the innovation in the BOP, and 3) the diffusion of the innovation to upper market segments. At the end of every subsection ideas are summarized in a proposition.

INSERT TABLE 1 ABOUT HERE

3.1. Emergence of the innovation

Best Laboratories, founded in Mexico in 1953, totally owned Mexican firm, for more than four decades concentrated exclusively on producing generic drugs for sale to public health institutions in Mexico, mainly the IMSS. This model had a significant debility: a single client, a lot of competition and low profit margins.

Faced with this challenges, in 1997, Laboratories Best grasp a huge opportunity: a government law change allowing the sale of generic medicine, directly to the population.

Generic medications are those sold under the name of the active ingredient incorporated brand-name are drugs manufactured worldwide by different pharmaceutical companies for brand-name owners. Generic drugs can have the same active ingredient to the same degree as the brand-name and can even have the same pharmaceutical form (National Association of Pharmacy Manufacturers, 2011).

First FS tried to sale the generic drugs through the private pharmacy chains. However, due to a discredit campaign to generic medicine, existing private pharmacy chains in Mexico refuse to sell generic drugs, and as a result the current distribution channel became useless for Best Laboratories. This situation push them to create their own distribution channel, to attend the BOP, with generic drugs inexpensive that the brand-name drugs that the current private pharmacy chains sale. Furthermore, majority of private doctors keep prescribing brand-name drugs and although the generic medicine was at lower prices, the private doctors have not affordable fees for the people in the BOP.

The refusal of the private network to use generic drugs, fifty nine percent of the population without medical services, excess of doctors, a low profit, a single client the government (IMSS, ISSTE), pushed Best Laboratories to create Farmacias Similares (FS) in 1997 with a new business model, the Pharmacy-Doctor model.

FS started with one pilot model in 1997, two in 1998, and then make a big jump to 144 in 1999. FS born with the objective of supplying generic medicines to the population in the BOP with no public health insurance (59 percent of the population in the year 1997; only employees in the formal economy were covered by the public health

insurance), and who could not afford private healthcare. At that time the Mexican population was growing at 2% per year, with the urban BOP population also continuing to expand. The FS model is comprised of a small medical clinic attached to the pharmacy where clients visit the doctor for a nominal fee (no more than two dollars) and receive a quick prescription. The consumer then purchases FS's generic drugs at low prices. Most drugs are 50 percent cheaper than their brand-name equivalents.

The FS medical service is composed by pharmacy and doctor office divided by a thin wall. The medical service was available for over for 12 hours daily. Some early users interviewed reported that the convenient location of the pharmacies, the low-cost medical service and the lack of the requirement for an appointment, together with the availability of generic medicine at affordable prices, made FS one of the best options for the treatment of illnesses not requiring hospitalization.

3.2. **Diffusion of the innovation in the BOP**

Competitors of FS (most multinational laboratories) criticized the quality of the similar drugs sold by FS. But a series of tests carried out by the authorities, as well as universities and multinational laboratories showed that FS' drugs were reliable (Anderson and Lopez, 2008). The business model innovation, Pharmacy-Doctor low cost services enjoyed rapid growth within the BOP in Mexico: in 1998 the company had two medical clinics in their pharmacies: this expanded to 1,215 in 2003, 3,630 in 2008 and 4,053 in 2011.

More than 5 million visits a month were recorded in 2011. The cost of the medical consultation was still approximately US$2. FS sells only generic drugs, and over 220 million generic units were sold in 2011, achieving a penetration of 60 percent of the units sold in market in that year (National Association of Manufacturers of Medicinal Products, 2011).

The Pharmacy-Doctor business model immediately began to spread within the industry. GI Pharmacies also began operations in 1999 with his first pilot test of Pharmacy-Doctor low cost model for the BOP population, purchasing generic drugs from several laboratories. GI is only a distributor and does not have dedicated laboratories and has no plans to integrate the entire process in the same manner as FS.

The successful business model of FS, Pharmacy-Doctor low-cost access for those without health insurance, was threatened by new legislation. At the beginning of 2003, the government launch the Seguro Popular (universal public health insurance) offering medical coverage to all Mexicans with no formal employment, and therefore with

no access to IMSS or ISSTE. Seguro Popular coverage grew rapidly, and by 2011 more than 49 million Mexicans were affiliated (43 percent of the population). As a result, when adding 52 million Social Security system users and users of other public health systems, the country's public health coverage today reaches over 89 percent of the population (Mexican Federal Government, 2011). The market segment of the BOP for FS was reduced from 59 percent in 1997 to 11 percent in 2011.

Surprisingly an unknown contributing factor emerge: the time value of the BOP. Although, all IMSS, ISSSTE and Seguro Popular are totally free, the have a big waiting list for its services inclusive in emergencies. The people of the BOP mainly work in the informal sector, where if they loss time waiting for medical service, they lose his daily wage. Also when they are employees is difficult to obtain permission to attend the doctor office. The people in the BOP prefer pay an average of 7-10 dollars for doctor prescription and drugs, than lost they daily wage because are in the waiting line of the free Public Services.

Despite the increase in public health coverage, the new model Pharmacies-Doctors keep growing. The perception of poor-quality public health services (significant waiting time before being seen by a doctor, lack medicine in public health institutions) provided an opportunity for the consolidation of the new model. This has been noted as a ‘perception’ in the study due to the lack of consensus regarding statistics relating to the quality of public health services. According to the Directorate of Systems Evaluation of the Health of Mexico (Mexican Federal Government), in 2009, the percentage of prescriptions filled for patients in the public sector at the primary care level was 86 percent and the national average waiting time for an outpatient to be seen was 23 minutes. But, in an interview with a lower middle-class user of state-run medical services in the city of Guadalajara, the respondent stated that:

"even with an advance appointment, the waiting time for a consultation is about three hours."

The respondent further stated that visiting the doctor with no appointment involved an average wait of more than 5 hours, despite the average consultation not exceeding 10 minutes. Finally it was claimed that "in most cases, four out of five, the drug is not free".

Sauceda-Valenzuela et al. (2010) show that the waiting time in private institutions was 15 to 25 minutes less than in public or social security institutions. Furthermore, discussions on the quality of generic medicines and brand-name rights between FS and international laboratories yield positive results and collaboration start to take

place. For example, Sandoz de Mexico, the generic division of the Novartis Group, was working towards becoming the supplier for FS. (Anderson and Lopez 2008).

Regardless of the efficiency of implementation and the increasing coverage of the Seguro Popular, the Pharmacy-Doctor model of FS continue growing (See graphic 1).

INSERT GRAPHIC 1 ABOUT HERE

The emergence of the model and his diffusion in the BOP national wide by FS was a complete success.

3.3. The diffusion process of the innovation across income levels

Up to 2011 FS and GI keep working in the BOP with no plans to attend the middle or high-class in Mexico. Instead FS prefer attack the BOP of other countries with similar characteristics to Mexico like Guatemala, and Chile.

Again external event affects the dynamics of the model. In 2009, Mexico was affected by pandemic (the H1N1 flu) which lead to an increase in the regulation of drug sales, making a prescription mandatory for the sale of antibiotics (Mexican Federal Government, 2009). This become a strong contributing factor to the diffusion of the business model. The treatment of the H1N1 flu was complicated because the Mexican population was accustomed to self-medication without the necessity of a prescription. The lack of national regulation preventing the sale of antibiotics without prescription and the prevalence of self-medication led to the deaths of several people affected by H1N1. To address this, in 2010 the government issued tougher standards for the sale of drugs: it issued a decree changing the regulations governing the sale of antibiotics on May 5th which became law on August 25th. (Mexican Federal Government, 2011).This legislative changes, combined with an even more high value of the time for the middle and high-class foster the diffusion of the model in the high segments of the population.

In 2011 the majority of the national pharmacy chains (Guadalajara, Benavides, Del Ahorro and supermarkets, see Table 1) had adopted the Pharmacy-Doctor model in most of their branches, not just in areas populated by the BOP, but mainly in middle and upper-class neighborhoods. Initially it was a Pharmacy selling brand-name drugs, in 2011 they adapt the new model making within the pharmacy a space for a doctor office. Now they offer almost the same model: a physician with a reasonable waiting time (10 to 15 minutes) and a low price (between US$0 and $2.50) for the consultation, attached to a pharmacy offering brand-name drugs (normally-priced) and generic drugs (economically- priced).

Thus, the model initially conceived for the BOP in effect migrated upwards to serve middle and upper-income market segments. Just as with the BOP, the middle and upper classes also go to the pharmacy to consult a doctor in order to treat non serious diseases that do not require hospitalization. They are able to purchase not only generic drugs, but also brand-name drugs.

The great difference in the middle and high-class is that the reason why the go to the new Pharmacy-Doctor clinics, in not because they lack of public medical or private insurance (the majority have both) or for save the private doctor fees. The main reason is because they are poor-time people. The time is an asset so valuable in big cities for all people in general, that the quick service become the main success factor in the new model.

The answer of our survey show that quickness, 37 percent of respondents, is the main reason why people attend the Pharmacy-Doctor places, the second factor is the necessity of medical prescription 19 percent (formerly people self-prescribe drugs), the third contributing factor is the medicine geographical convenience (proximity to home 17 percent, proximity to work 15 percent), only 12 percent of the respondents claim that low price was a decision factor to attend the Pharmacies-doctor clinic.

The middle and upper classes believe there is a significant waste of time waiting to obtain an appointment, and even with appointment usually are delayed, to see a private medical consultations. Besides that the prices is around US$50 or more. Private health insurance in the country generally has a high deductible, usually more than US$300, so it is not used for common or minor ailments. Euromonitor International remarks

> *"(pharmacy and retail) companies can push the sale not only of prescribed antibiotics but the sale of other over-the-counter (OTC) products of their own."*

Pharmacies located in middle or high-class neighborhoods are spacious, comfortable (with parking and air conditioning) and boast a large range of medicines and related items. The first pharmacies to offer an onsite medical consultation service (Farmacias Similares) were small stores, with the doctor's office immediately adjacent to the pharmacy, being separated from it by a thin wall. Doctor's offices in Farmacias Guadalajara or Del Ahorro are generally larger in size overall and always have a street-door. In supermarkets (like Walmart) the consulting room is usually located inside the store and always next to the pharmacy.

In the beginning, the legislative change, making drugs prescription mandatory, negatively affected sales of medicines in drugstores that did not offer low-cost physician consultations. This in turn led to pharmacy chains for all social strata (BOP, medium and high) seeking to implement the Pharmacy-Doctor business model. As a result,

the model diffused upwards socially bringing the Pharmacy-Doctor pairing to those of middle and upper income. According to a report by Keckley et al. (2011), consumers are willing to pay out-of-pocket for Pharmacy-Doctor clinics to receive care more quickly. Many are willing to use a Pharmacy-Doctor clinic for a minor condition if it meant being seen immediately. Pharmacy chains that offer their products to wealthy social classes have thus adopted a model originally designed for the BOP, realizing that there was an opportunity to increase sales due to the fact that even the medium or high- income classes do not go to their private doctor for a prescription for minor ailments.

The geographic locations of the Pharmacy-Doctor model in the municipality of Guadalajara (Mexico's second city) in 2008 and 2012. In 2008 there were only 8 Pharmacy-Doctor stores (16.7% of the total) in middle and high-income areas (A/B and C+) of the municipality. In 2012 the diffusion process of the business model into wealthy areas was observable, with 37 Pharmacy-Doctor stores (37.4%). Interestingly, very few Pharmacy-Doctor stores in areas A/B and C+ are owned by the creator of the concept (FS) or their immediate imitator (GI). Most of the stores belong to chains serving the middle and upper -income population segment (Guadalajara, Benavides, Generix and Del Ahorro).

The results of the survey appear to support the diffusion process. Most users of Pharmacy-Doctor clinic use the service for the convenient location, the speed-of-service and the necessity for a prescription. The majority of people who consult the Pharmacy-Doctor buy medicine and will subsequently return. Eighty three percent of respondents indicated they were covered by a public social security scheme but still preferred to see a doctor at the pharmacy. Most respondents also have seen other doctors before consulting at the Pharmacy-Doctor clinic. For the middle and upper classes the Pharmacy-Doctor system is an attractive alternative to the public health system or private physicians.

One respondent, an FS user, indicated that when he had an eye infection:

> *"the wait was 10 minutes and the consultation was 15 minutes. The doctor's professional qualification was from a highly-regarded private school in the area; the attention was good and I paid $1.5 dollars for the consultation and $2 for the medicine. My ocular infection disappeared in two days."*

Other interviews revealed that the doctors consulting inside the pharmacies viewed this avenue as a useful way of obtaining experience after graduation and helping them decide on a specialization in the future.

6. Discussion and conclusion

We present evidence of the existence of a diffusion process as a type of reverse innovation. Failures in the provision of public services by governments (or their traditional private substitutes) in emerging economies affect not only the BOP population, but also those belonging to higher social echelons. This has pushed companies to adopt and adapt process innovations originally designed for those at the BOP for middle or high-class populations.

Managers in developing countries commonly seek innovations from markets in developed countries. However, the case study shows that solutions to market failures can be found in innovations for the BOP of these developing countries. The innovation happens when some innovations for the BOP migrate to middle and upper-class populations within the country. The research related to those innovations are underdeveloped in the literature and can bring new insights to the study and analysis of innovation processes in emerging economies.

In emerging countries, in contrast to advanced economies, requirements for medical services and medicines for the BOP are not fully covered by the government and/or the quality of the services is not the adequate. The Mexican company FS offered a feasible solution to the unmet needs of the BOP, by having a Pharmacy-Doctor model offering a quick-service, and low-priced generic drugs. Later, changes in regulation governing the sale of drugs led to the diffusion of the business model to the middle and upper classes of the same country.

The literature has discussed different ways of achieving these innovations for the BOP (Prahalad and Hart, 2002; Anderson and Markides, 2007; and Borger, et al., 2010) and shows how innovations created in developing countries to address the needs of poor people may eventually be used in advanced economies as well (Immelt, et al., 2009 and Govindarajan and Ramamurti 2011). The literature has not yet shown innovation processes for the BOP in developing economies and how they migrate to the middle and high-class populations of these countries. We analyze the three phases in innovation life: emergence of the innovation, diffusion of the innovation in the BOP, and the upscale of the Innovation.

6.1 Emergence of the innovation

Innovation in the BOP emerge mainly for the void of services for them, and the opportunity of human resources, regulatory change. Whatever, the dominant logic and current participants normally oppose to the innovation.

Multiple studies have analyzed the emergence of innovation for the BOP (Hammond and Prahalad, 2004; Prahalad and Hart, 2002; Prahalad, 2005; Immelt et. al., 2009; Cheng and Subramian, 2010; and Prahalad and Mashelkar, 2010). The innovation in the health services offered by Farmacias Similares (FS) is a result of how managers respond to changes in their market. There has been a change in the dominant logic of executives (Prahalad and

Bettis, 1986) which has led to the creation of a new business model replacing the typical way in which (a) laboratories previously sold medicines to pharmacies and (b) pharmacies sold medicines to those customers who (c) have a prescription given by a doctor. The new model is the solution of a laboratory of generic drugs low-priced, to its distribution channel problem, creating a Pharmacy-Doctor model for directly achieve his target the BOP segment. The innovation offered a market for generic drugs produced by their own laboratory, a situation that had not previously existed in Mexico. This innovation is part of the changing perceptions around the recognition and use of medical brand-names worldwide, mainly due to the humanitarian problems presented by treating diseases such as AIDS and malaria in developing countries.

It is proposed that:

Proposition 1. Innovation for the BOP emerge as result of current business model crisis and the combination of contributing and the adverse factors not as a desire to improve.

6.2 Diffusion of the innovation in the BOP

Several research edited by Christensen et al. (2010) discuss the diffusion of innovation within a company. The literature on the diffusion of innovations has focused mostly on the diffusion of specific technologies within an industry (see Hall, 2005). Immelt, et al. (2009) and Govindarajan and Ramamurti (2011) discussed the diffusion of innovations for the BOP.

Despite the success of FS in the BOP, only one single chain competitor, GI, has entered the market offering the Pharmacy-Doctor model to the same segment of the BOP. The lack of emergence of competitors exemplifies the existence of a mental barrier within industry executives, due to their inability to visualize and grasp the opportunity, and who therefore continue to act as they have done previously. The rationale for this behavior is similar to that of executives who did not wish to work with the BOP in India. (Phahalad and Hart, 2002). As Bettis and Prahalad (1995) identify, executives need to accept the need for change in the dominant logic and diversify the company into similar businesses areas.

Prahalad and Hammond (2002) note that it is necessary to rethink management practices in order to work in emerging markets. In this case FS and GI agree on their target market: the mental model was designed to serve the BOP and not the middle or upper classes. The dominant logic allows executives to see that the lower classes shop at their stores for the low price but does not allow them to realize that the middle and upper classes might be interested in the Pharmacy-Doctor model in order to save time. It is therefore proposed that:

Proposition 2.

a) Companies that generate innovations for the BOP do not migrate to other segments of society they keep working in the BOP.
b) Executives in the BOP prefer to search opportunities abroad but in the same segment that change of segment in the same country.

6.3 The diffusion process of the innovation across income levels

In line with the literature analyzing mental models presented by Prahalad and Bettis (1986), we found that industry executives, acting on the dominant logic, do not adopt known, public, nationally-present models which are used successfully by competitors and easily transferable, because of their previous experience. Executives do not see the opportunities offered by the new model until an event beyond their control forces them to adopt and use it intensively. The emergence of an exogenous event (H1N1 flu and the consequent regulatory changes in the sale of pharmaceuticals) threatened to have a significant negative impact on sales of antibiotics in traditional pharmacy chains and a negative impact on the growing sales of pharmacies (FS and GI) that had adopted innovation and operated the Pharmacy-Doctor business model. These events accelerated the diffusion of innovation throughout the industry. Pharmacy chains intended for the middle and high-class also implemented the model for these segments. In the months following the exogenous event, most pharmacy chains installed at least one in-store medical consultancy. The mental model of the industry executive body is modified by external events. Formally, the other pharmacy chains already knew of the existence of the model, but mentally they had failed to grasp the opportunity for different social classes other than the BOP. On the other hand, this is also the dominant logic that prevents GI and FS focusing on the middle and upper social class strata.

Proposition 3. Companies working with middle and high-class refuse to adopt innovations designed for the BOP unless, it current business model is in survival risk.

6.4 Conclusion

Our research deepens in the contributing and adverse factors to the emergence of the innovation of the BOP. Our main surprise was when the government launch the Seguro Popular offering medical coverage to all Mexicans with no formal employment. This supposed to be a great threat to the FS model. But a new contributing factor appears: the value of time. In fact, our case study shows that until the government make mandatory the prescription of many drugs (2010), the innovation across the market segments appears. The value of time was the factor that push

the innovation to the middle and high-class. Scarcity of time, is what all social classes have in common, and the Pharmacy-Doctor model present a quickness, and geographical convenience (see diagram 3 and table 4).

Additional we find that the companies focus in a market segment and keep in it. FS and GI work in the BOP. The other chains (Farmacias Guadalajara, Benavides etc.) do not grasp the opportunity of the BOP even after several years of a great success of FS and GI. In the other side when Farmacias Guadalajara and other chains discover adapt the model successfully in the middle, high-class, FS and GI keep working in the BOP.

We consider an important avenue of future research understand why FS prefer to attend the BOP of other countries with similar characteristics, like Guatemala and Chile, that migrate to the middle high-class. Other research avenue is to understand the factors why companies choose a market segment and do not emigrate its successful model to other segment even more when competitor are replying it successfully.

Literature on mental models provides the framework for explaining how institutional changes break barriers to growth. Dominant-logic theory helps to explain why innovations do not quickly migrate between income sectors. Innovation is adopted by and originates in firms operating in different market segments despite these firms still working in their known markets. In conclusion, innovations come from different markets but do not change the main socio-economic market-focus of a company. As the literature indicates, the determinants of dominant logic come from within the organization's environment, and can act as a moderating variable of the organization's strategic behavior, affecting the innovative dimension (Prahalad, and Bettis, 1986).

The paper also contributes to managerial thinking. An effective way of working in an atmosphere of institutional change can be found in the practices of other unknown market segments. Poorer markets have more barriers related to institutions, infrastructure, access and legal frameworks, and companies working with the BOP have to solve many such obstacles. Managers should view the BOP market as a possible source of ideas and solutions to problems in all market segments.

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Graphic 1: Growth of the Pharmacy-Doctor model in BOP

1997-2011 period

Source: Autors.

Table 1. Evolution and diffusion of the Pharmacy-Doctor business model in Mexico

Source: Companies´s web pages, Phone interviews, Euromonitor (2011), Keckley et al. (2011), and Chu & Garcia-Cuellar (2007).