

Les entreprises multinationales au bas de la pyramide économique: un cadre d'analyse des stratégies

François Perrot

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THESE

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MULTINATIONAL CORPORATIONS AT THE BASE OF THE ECONOMIC PYRAMID: A STRATEGIC ANALYSIS FRAMEWORK

LES ENTREPRISES MULTINATIONALES AU BAS DE LA PYRAMIDE ECONOMIQUE: UN CADRE D'ANALYSE DES STRATEGIES

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A mes parents

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Résumé en français

Au cours des trente dernières années, le débat économique sur les solutions à apporter au problème de la pauvreté dans les pays émergents a laissé une place croissante au rôle des initiatives privées (ONG, microfinance, entrepreneurs sociaux, etc).

A la fin des années 1990, deux professeurs américains, C.K. Prahalad et Stuart Hart, ont avancé l'idée que les entreprises multinationales peuvent également contribuer à réduire la pauvreté. Ils introduisent alors le concept de « bas de la pyramide » (BOP), en référence aux 4 milliards de personnes vivant avec moins de 3 000 dollars par an, en parité de pouvoir d'achat. Ils défendent l'idée que si les entreprises multinationales développent des offres de produits et de services pour ces personnes à faibles revenus, elles peuvent à la fois générer de nouveaux revenus pour elles et contribuer à réduire la pauvreté. Cependant, bien que ce concept ait généré un intérêt fort au sein des entreprises et du monde académique, la réalité de la proposition reste controversée.

L'objet de la thèse est de mieux comprendre la validité de cette proposition et pour cela, de répondre à plusieurs questions : quels objectifs les firmes poursuivent-elles lorsqu'elles s'intéressent aux populations BOP ? quelles sont les stratégies mise en œuvre ? quelles sont les implications organisationnelles de chacune de ces approches ?

Pour répondre à ces questions, la thèse s'appuie une démarche de recherche-action conduite pendant trois ans avec le Groupe Lafarge, au siège social de l'entreprise et dans sa filiale en Indonésie, dans le cadre d'une collaboration avec la Chaire Business Economics de l'Ecole Polytechnique. Cette méthode de recherche, qui s'appuie sur une intégration du chercheur au sein de l'entreprise, a permis la mise en place de deux projets BOP en Indonésie conduisant à la construction et à l'amélioration de plus 800 logements de personnes à faibles revenus.

La thèse se compose de trois chapitres combinant des cadres théoriques issus de la littérature sur le développement économique, les stratégies des firmes dans les pays émergents, et le changement organisationnel. Ces chapitres ont fait l'objet de publications au sein de la Revue française de gestion, du *Journal of business research* et d'un ouvrage collectif.

La thèse propose une grille d'analyse des stratégies des firmes qui oppose deux formes d'approches du segment de marché BOP: une démarche, d'une part, visant à maintenir la légitimité des firmes (« licence-to-operate ») en réponse aux attentes des parties prenantes et notamment des Gouvernements, et, d'autre part, une démarche répondant à une stratégie de recherche de nouvelles opportunités commerciales.

La thèse montre comment Lafarge a évolué de la première à la seconde approche entre 2007 et 2010 et analyse les facteurs ayant contribué à ce changement.

La thèse distingue ensuite deux grandes formes de stratégies commerciales en opposant, d'une part, les stratégies de capture de marché, nécessitant une modification limitée des pratiques de l'entreprise et, d'autre part, une approche de création de marché à travers laquelle l'entreprise adapte son offre commerciale et son organisation afin de permettre l'émergence d'un nouveau marché. La thèse souligne l'importance des spécificités locales dans le choix de l'une ou l'autre de ces stratégies et montre comment une approche de création de marché questionne les frontières établies de la firme et le système de contrôle managérial.

La thèse propose alors le cadre d'analyse des stratégies suivant.

	Approche de légitimation (« licence-to-operate »)	**Approche commerciale**	
Système de pensée	BOP : problème philanthropique ou de relations publiques	BOP : une opportunité commerciale	
Système frontière	Ne faisant pas partie du « cœur de métier »	Frontière inflexible	Frontière flexible
Contrôle managérial	Non intégré dans le système de contrôle	Système diagnostic dominant	Système interactif dominant
Stratégie BOP	Programme isolé	Capture de marché	Création de marché

Enfin, la thèse analyse, dans le cadre de stratégies de création de marché, sous quelles conditions les partenariats entre entreprises et organisations non lucratives sont sources d'innovations et d'apprentissages pour la firme. Elle met en avant trois éléments clés : le partage d'une vision commune entre partenaires, la création conjointe des programmes et la mise en place de processus intentionnels d'apprentissage.

La thèse conclut en soulignant l'important de s'intéresser désormais à la mesure de la performance économique et des impacts sociaux des projets BOP et propose pour cela quelques pistes de réflexion.

Introduction

Poverty is the starting point of this dissertation. Poverty remains at an unacceptable level across the globe, with over 1.4 billion people living below the poverty line of 1.25 dollars per day in purchasing power parity (PPP) (Chen & Ravaillon 2008). From an historic standpoint, the situation has improved, since more than 1.9 billion people were living in poverty 25 years ago. However, China alone accounted for two thirds of these, as a result of an exceptional growth pattern. Inequalities in the face of poverty are rife: over the last 25 years, the poverty rate in East Asia has fallen from 80% to less than 20%, while in Sub-Saharan Africa it has remained at around 50% (Chen & Ravaillon 2008).

The way poverty is understood has profoundly changed to become a more multidimensional phenomenon, where issues of access to water, education or housing are now seen as part of the challenges to address, and this has impacted how solutions to poverty are perceived. Responses to poverty have recently given more room to market-based solutions, and new actors have entered the field of development, including international non-governmental organizations, private entrepreneurs and, more recently, multinational corporations (MNCs). The term “Base of the Pyramid” (BOP) was introduced by two management scholars, CK. Prahalad and Stuart Hart, to refer to the 4 billion people living with less than 3 000 dollars PPP per year. Their idea was that by developing a dedicated offer of products and services, large corporations can contribute to poverty alleviation by doing business with low-income consumers (Prahalad & Hart 2002). However, although this concept has generated much debate in the corporate world and in academia, the reality of the BOP proposal remains controversial (Karnani 2007, Crabtree 2007).

The goal of this dissertation, then, is to understand why and how firms get involved with the BOP and how much they need to change in order to address this segment. To answer these questions, the dissertation builds on a three-year action-research collaboration with Lafarge, a world leader in building materials, which took place at the head office and in the Indonesian subsidiary of the firm. As part of the research process, two programs addressing the housing needs of the BOP were implemented in Indonesia, contributing to the construction and improvement of more than 800 houses.

The dissertation introduces a strategic framework for firms' engagement with the BOP that pits two approaches of the BOP topic against each other – either as public-relations issue or a strategic business opportunity. The dissertation analyses two types of business strategies – the creation or the capture of the BOP market – and shows the importance of local market conditions in this choice. The dissertation then analyses how learning and innovation occurs in a strategy of market creation involving a cross-sector collaboration between a firm and a not-for-profit organization.

This introduction first outlines the changes that have taken place in the world of development over the last 30 years. It subsequently details the research questions and the methods used to address them. It concludes with a presentation of the main contributions of the dissertation.

1. The New Landscape of Development

Progress has been made on what poverty involves, and many changes have taken place with regard to the possible solutions to alleviate it across the globe.

1.1. Changes in the definitions of poverty: From a monetary to a development approach

Recently, the conception of poverty has changed from a rather monetary approach to a more multidimensional phenomenon. In the monetary approach, poverty is defined as a situation in which an individual's income cannot enable him/her to satisfy minimum consumption. Within this framework, poverty is understood in relation to a threshold of income, generally set at about 1 dollar per day in PPP. While this definition predominated until the 1980s, the work of a number of economists has contributed to transforming the way it is understood. The Nobel Prize in Economic Sciences winner, Amartya Sen, has enabled poverty to be understood as a multidimensional phenomenon. In his 1992 book, Sen extends the reflection on poverty to the importance of "real freedoms", which become "intrinsically important as the preeminent objective of development" (p37). In this view, the monetary approach of poverty alone cannot be used as a reliable indicator of freedom. Poverty is then a privation of "capabilities" for people to choose what they think is right for them (Dubois & Mahieu, 2002). Consequently, fighting against poverty leads to developing an individual's capacity

for action, i.e., his/her “ability to transform resources in effective functionings” (Sen 1992) and to reduce the gaps in the distribution of these capacities among a generation. In this conception, the issues of access to public services, education, health, as well as gender issues or property rights protection, are referred to as characteristics of poverty.

This shift toward a broader definition of poverty has set the stage for a more fine-grained analysis of the lives of the poor, and in particular how they make a living and spend their little money. Banerjee & Duflo (2006) show that they mostly occupy jobs with low skill requirements, leading to high competition among the poor. As they cannot accumulate durable goods, their productivity turns out to be very low. Banerjee & Duflo (ibid) also analyze how such populations spend their money, showing that consumption patterns differ widely between rural and urban areas and between countries. Luxury goods, such as alcohol and tobacco, as well as the organization of events such as festivals or weddings represent up to 8% of their budgets. They also question why the poor do not invest more in education, save more, or invest more in assets, and raise the frequently-cited issue of market failures.

More broadly, the imperfections of markets where the poor earn and spend their money have been extensively studied (Besley 1994, Stiglitz 1989). When visiting emerging countries, it can be surprising to find all the floor tiles retailers aligned in the same street or women selling the same product at the same place, which demonstrates that the poor also face cartels and monopolies. Market failures for a number of specific markets have been extensively analyzed. The credit market has been shown to play a vital role in development and the transition out of poverty. However, poor people are excluded from the mainstream banking credit market because of the lack of information about the borrower and his/her project (information asymmetries) and the absence of collateral (Armendariz & Murdoch 2005). The practice of microcredit – providing small loans to low-income people with limited collateral requirements – has received significant attention as a solution to the credit market failure. The same type of reasoning about the market roots of poverty has been applied to other sectors. In the case of housing, the economist de Soto (2000) analyzes how land issues are at the core of the development issue. The inexistence of land secure tenure in most of the countries impedes the poor from getting a value out of their house, securing their investment or getting access to services like water or electricity provision (de Soto 2000). Hernando de Soto has become famous by asserting that distributing land titles to the poor would be the most efficient measure to reduce global poverty. He estimates the current value of housing

stock owned by the poor without land titles, that he calls “dead capital”, at around 9.3 trillion dollars (ibid).

This shift in the analysis of poverty from a monetarist approach to a developmental issue linked with market-based considerations has also impacted the perception of the solutions to poverty.

1.2 Changes in the solutions to development: From philanthropic to market-based solutions

For decades, the debate on the solution to poverty has been formulated in reference to two sets of propositions, opposing aid development and market-based, liberal-inspired solutions to poverty (Banerjee & Duflo 2011). On the one hand, a school of economists with Jeffrey Sachs at the forefront, contends that if rich countries kept their promise to disburse 0.7% of their GDP for development aid, then poverty would be solved over one lifetime (Sachs 2005). On the other hand, other economists, including former World Bank experts such as William Easterly, highlight the intrinsic limits of development aid and conclude with the idea that only the market can solve poverty issues (Easterly 2006).

During the 1980s and up until the late 1990s, the Washington consensus, referring to the three US-based institutions, the Federal Reserve, the International Monetary Fund and the World Bank, favored market-friendly reforms of the economies of emerging countries, promoting economic deregulation and privatization. With the Mexican crisis in 1995 and the Asian crisis in 1997-1999, such policies were criticized for their negative effects on the development of benefiting countries (Stiglitz 2002). In the early 2000s, the World Bank started to alter its approach to development policies by searching for more pro-poor growth as a key priority, enabling local governments to take a leading role in the design of the development strategies (Narayan et al. 2000a, 200b, 2002).

In the same period, the idea that aid from private donors (NGOs) or public agencies significantly contributing to poverty alleviation has also changed (Clemens et al. 2004). Kharas (2007) shows that one third of each dollar attributed to aid is lost because of the lack of synchronization between the donors and the programs being implemented in the countries concerned. The need to better understand the effects of aid on development is at the core of the work conducted by many scholars affiliated to the MIT Poverty Action Lab, under the

leadership of Esther Duflo, with the objective of scientifically identifying the effects of aid programs on poor people.

Since the 1980s, market-based solutions to poverty have been implemented by a diverse set of actors, including NGOs and social entrepreneurs. Indeed, the role of NGOs over the second half of the 20th century predominantly focused on humanitarian aid in post-conflict or post-disaster situations (Austin 2000). More recently, NGOs have started to center on development assistance, placing the use of the market at the core of their objectives, with activities such as developing the business skills of farmers or helping entrepreneurs launch small business.

While the search for solutions to poverty has historically been the responsibility of governments and philanthropic organizations such as foundations and NGOs, a number of private actors are now emerging, who seek to resolve a social issue through a business venture. Under the term “social entrepreneurship”, a growing number of entrepreneurs who are launching initiatives aimed at contributing to solving a social issue through a sustainable business model now exist (Bornstein 2006, Santos 2009).

The largest sector in which such social entrepreneurship has been possible is in the access to finance. Indeed, the growth of microfinance illustrates how a market-based mechanism has been seized upon as a tool for poverty alleviation and in less than twenty years, a new sector has emerged around the practice of microcredit. Popularized by Professor Muhammad Yunus, who won the Nobel Peace Prize, and his organization, the Grameen Bank, the practice of microcredit has gained momentum and now serves more than 150 million borrowers through 10 000 microfinance institutions (Daley-Harris 2007). In Bangladesh, the two leading microfinance institutions, Grameen Bank and BRAC, serve 16 million customers or 10% of the country’s population. A new industry has emerged, with international consortiums, consulting services, rating agencies and specialized investment funds channeling funding to southern-based microfinance institutions (Reille & Forster 2008). While in some areas of India, microfinance has suffered from a growth crisis, and the reporting on the effects of microfinance is still questionable, this practice is still perceived both in northern and southern countries as a powerful tool for poverty alleviation.

1.3 Changes in the role of the private sector: From "base of the pyramid" strategies to social responsibility issues

Over the last 10 years, the perception of the role of corporations with regard to development issues and the reason why they should, indeed, care have evolved from considerations related to firm's licence-to-operate to business reasons.

With the idea that development issues can become opportunities, Prahalad and Hart (2002) introduce the concept of "Base of the Pyramid" and argue that market-based solutions can serve to alleviate poverty. While organizations dealing with poverty had previously been embedding a social mission (NGOs, cooperatives or mutual firms, for instance), the authors contend that multinational and profit-driven corporations can also contribute to poverty alleviation. To do so, they need to develop a range of products and services dedicated to meeting the needs of low-income consumers, referred to as the "base of the pyramid". In turn, this market segment could represent a significant growth opportunity for MNCs.

The justification of why firms should care about the development of the countries is rooted in the debate on the social responsibility of firms. Referring to a firm's actions towards the achievement of sustainable development, the notion of corporate social responsibility (CSR) has penetrated both the corporate world and academia. There has been a long debate both in academia and the corporate world about what CSR is about and why firms should engage in these voluntary actions. Now the term encompasses highly-diversified actions, including environmental preoccupations such as the improvement of the environmental performance of plants and the reduction of products' footprint. It also groups social considerations referring to a firm's employees – safety improvement programs and diversity promotions, for instance, and economic development programs aimed at the local communities surrounding plants.

Three types of arguments have emerged about why firms should engage in CSR (Arjaliès et al. 2011, Capron et al 2006). The first stream of arguments also called "business ethics" emphasizes the moral imperatives of firms towards society. In this approach, firms' priority is to respect existing regulations and for their managers to ensure the firm is profitable, and by doing so, contributes to society welfare (Goodpaster 1983). The second stream approaches, "business in society", the possible discrepancies between the achievement of firm's and society's interests are acknowledged, and thus CSR is a way for the firm to counterbalance the negative social and environmental impacts of its operations on its stakeholders. The interest for firm is that in doing so it preserves its "licence-to-operate". The third stream in

the CSR literature discusses how engaging in those voluntary actions can contribute to enhance firm's performance, defending the idea that there is a business case for CSR (Vogel 2005).

Over the last ten years, the justification on why firms should care about local development has moved from the "licence-to-operate" set of arguments to the business case" rationale, and this change is echoed in the various articles published over the past 10 years by the management gurus, Michael Porter and Michael Kramer. In 2002, Porter and Kramer published a first article on this topic, in which they demonstrated how "corporations can use their charitable efforts to improve their competitive context". The first reason to care about local development was, then, good philanthropy. In 2006, they showed how selective and well-designed initiatives in a firm's value chain can enhance the efficiency of the firm. In this framework, the response to poverty has moved from the question of charity – somewhat contingent and external to the firm – to a topic directly linked to the firm's value chain and performance. As an illustration of this shift, in 2005, the NGO, Oxfam, measured with Unilever the impact of the firm's activities in Indonesia on the value chain. This study showed how the firm's activities generated economic activities for approximately 300 000 people throughout the country (Clay 2005). Porter and Kramer's 2011 publication constitutes another important shift. They highlight how capitalism has been seen as a cause of social problems, and argue that firms need to find ways of simultaneously advancing the economic and social conditions in the communities in which they operate by creating "shared value" (Porter & Kramer 2011). Caring about development is then not just a complement to the firms' core business, but an imperative that they should embed in their operations for the benefits of both the companies and society. While Prahalad's argument for the BOP proposal focuses on the business interest (Prahalad 2004), Hart (2007) extends the justification of the firm's engagement at the BOP to integrate a sustainability standpoint: poverty represents a major threat for society at large, and for multinational corporations in particular, in emerging countries. Thus, corporations should find ways to contribute more to local development through their core business.

Fifteen years ago, Mahieu (1996) asserted that development was becoming a market in which different actors (donors, public development agencies and international institutions) competed in proposing solutions to poverty. CK. Prahalad and Stuart Hart's BOP proposal directly posits the company as another development actor. Reacting to the entry of MNCs in

this arena, Banerjee & Duflo (2011) state: “the traditional strategies of public action are being supplemented by private actions, often taken by some of the leaders of the corporate world, directed at helping the poor realize their true potential as entrepreneurs.”

The underlying motivation of this dissertation is, then, to contribute to a better understanding of the extent to which MNCs can be counted among those actors who contribute to an improvement in the lives of the world’s poorest. The next section provides more details on the research question addressed in this dissertation.

2 Multinational Corporations at the Base of the Pyramid

Since Prahalad and Hart’s 2002 article, the term BOP has become a buzzword, both in academia and in the corporate world. Since its inception, a new industry has emerged. Many firms such as Danone, Essilor, EDF, GDF-Suez, Schneider Electric, Unilever or Vodafone have launched corporate initiatives to address this market. NGOs have also started advising firms or partnering with them in their search for success at the BOP. Business schools have launched programs teaching students how to build business models. However, in spite of this enthusiastic movement, the reality of success at the BOP remains questionable, both in terms of financial achievements and social impacts on the lives of low-income people.

2.1. The promises and challenges of the BOP proposal

Referring to the four billion people living with less than $3 000 PPP per year, the BOP concept builds on an appealing financial proposition. According to Prahalad and Hart, the aggregated purchasing power of these low-income people can represent a huge market opportunity for MNCs – estimated at $13 trillion PPP. While top-tier consumer markets are already saturated in emerging countries, with local and international firms competing to attract western-style consumers, the low-income consumer segment remains unexplored. The individual purchasing power of low-income people, provided that the firm manages to significantly attract and assemble demand, constitutes a large market segment (Prahalad & Hart 2002, Prahalad 2004)

The BOP concept conveys the idea that provided firms act innovatively in the development of a new product and service offering, there is an alignment between doing business and doing well at the BOP: by purchasing the MNC's products, the poor could escape from poverty. However to date, there has not been any clear demonstration of the twofold performance, i.e. social and financial, of MNCs-led BOP programs (Crabtree 2007). Since the early articles, the BOP proposal has yielded significant questions about this pitfall in the demonstration.

First, that there is a lack of successful cases available to demonstrate the validity of the market opportunity. A rapid overview of the literature demonstrates that the MNC cases mentioned are frequently repeated and are based on the list of examples provided by Prahalad in his 2004 book. Moreover, as Karnani (2007) points out, these cases are often "romanticized", with the objective of attracting the interest of managers. The objectives of the cases mentioned in the literature are also very diverse, from charitable activities programs to business projects (Crabtree 2007). Given this, there is a lack of available cases to study which render it possible to understand the reality of the market opportunity.

Second, there has been no clear demonstration of the effects of BOP programs on the lives of the poor. The demonstration of how BOP programs participate in the improvement of their lives has mostly been conducted through narratives and there is a lack of thorough demonstration that would pinpoint the positive and negatives effects (Crabtree 2007). Given this, there is a need to better understand the "depth" of the social impact of BOP programs.

Third, there has been no demonstration of the "breadth" of the impact, i.e., whether it has been possible to replicate BOP programs. The initial BOP literature builds on the hypothesis that MNCs need first to identify solutions that work for the BOP, and then "naturally" – given their profit-driven attitude and global presence – they seek to replicate the successful business cases, thus achieving a large scale effect on poverty. So far, there is no case that would demonstrate this ability for BOP programs to go mainstream.

2.2 Understanding the reality of the BOP proposal

The starting point of this research was to generate the cases that would allow me to contribute to answering the question of the business rationale for firms to get involved at the BOP and the impacts of the programs on low-income people. For that purpose, I decided to use a

research method which mostly built on action-research (described in more detail in the next section). This approach enables the researcher to become involved in an organization, in order to generate the phenomenon intended to be analyzed.

This dissertation was conducted within the framework of a CIFRE[1] convention, which in the French research setting allows a doctoral student to be hired by a company and work on a doctoral thesis conjointly designed between all parties. Headquartered in Paris, Lafarge is a global leader in the building materials industry, with cement, aggregates, concrete and gypsum production operations in 78 countries.

The collaboration with Lafarge focused on the challenge of access to housing for low-income people. Over one third of the urban population, i.e., more than one billion people, lives in life and health-threatening dwellings and it is forecasted that over two billion people will live in urban slums by 2030 (UN Habitat 2008). The issue of access to decent housing represents a major development challenge since a house is not only a shelter but also a productive asset for low-income people where they can develop a business activity. It is also the basis for social status and self-confidence.

As the issue of the evaluation of BOP programs first requires the existence of ventures having reached a significant scale, this dissertation focuses on initiation of programs, thereby analyzing the why and how of firms' involvement in BOP programs:

- Why do firms get involved in Base of the Pyramid programs?
- What are the different strategies at work?
- What are the implications of each strategy on the organization of firms?

Building on the main contributions of this dissertation, some suggestions on how to address the evaluation of BOP programs are provided in the fifth part of this introduction.

[1] CIFRE: "Convention Industrielle de Formation par la Recherche", which can be translated as an "Industrial Convention for Training through Research".

3 Research Context and Method

This section introduces the research context which contributed to this dissertation and provides details on the action-research method which has been used throughout the collaboration with Lafarge.

3.1. Research context

With the objective of completing a PhD on CSR-related issues, I joined Lafarge in 2006 after graduating from ESSEC Business School. Prior to that, I had began researching CSR issues, such as development of firms' local community' development and stakeholder management. During a first position in Lafarge that I held until mid-2007, I had the opportunity to identify what the company was doing in the field of the BOP, and to test through interviews with functional directors how the company perceived this topic. It rapidly appeared that the company had had some unfortunate experiences in building BOP ventures. Programs (presented in more detail in the dissertation) were begun in China, India and South Africa, but most were considered failures. At the same time, a program launched by Cemex (one of Lafarge's main competitors) addressing the BOP segment was gaining in popularity. Called Patrimonio Hoy, this initiative consisted in providing access to microcredit to low-income consumers who can then purchase materials and build their house progressively. Started in 1998, this initiative had reached 30 000 customers per year in 2006 and was said to have generated approximately 10 million dollars of sales for Cemex (Sagel & al. 2006).

In this context, I proposed the idea of building a doctoral collaboration on the topic of the BOP to the Vice President of Strategy and Development. The CIFRE collaboration with Lafarge began in September 2007 and ended in late 2010. The research question was then formulated as follows: "Evaluate the business potential of the BOP segment for Lafarge and gain a better understanding of the business models at work: what makes these projects successful or not, and to what extent can they be scaled up and duplicated?"

The CIFRE contract was signed with the Department of Economics of the Ecole Polytechnique. Joining the Econometrics Laboratory, the research unit of the Ecole Polytechnique Department of Economics enabled me to gain access to an exceptional pool of

over 15 permanent and invited researchers who actively work and publish on CSR-related issues.

This doctoral research started in the context of the 2007 launch of the Chair for Business Economics, under the leadership of Jean-Pierre Ponssard. This Chair, whose corporate partners include Dupont, GDF-Suez, Unilever and Lafarge, provided an outstanding research setting to support the action-research work on the BOP with Lafarge and enrich the research with access to other companies. The two other Chairs also launched by Jean-Pierre Ponssard contributed to this research setting, with the Chair for Sustainable Development supported by EDF, and the Chair Finance Durable & Investissement Responsable (FDIR), led by Patricia Crifo and supported by a consortium of banks and investment funds.

Opportunities to share perspectives on CSR and the BOP between scholars and practitioners have been constant throughout this research activity. The Chairs and the Econometrics Laboratory organized several research workshops which enabled me to present research papers and obtain feedback both from scholars and professionals. In particular, three workshops directly addressed the issues of CSR and the BOP. In 2007, a research workshop on the challenges of access to energy in Africa was organized with EDF. In 2009, another workshop was organized on Corporate Social Responsibility where several companies such as Danone, Unilever and Dupont presented their perspectives and actions on sustainability issues, including the BOP. This research cumulated in the writing of a collective book, directed by Jean-Pierre Ponssard and Patricia Crifo, entitled "CSR: from compliance to opportunity?" in which one chapter of this dissertation is included. In 2011, as part of a joint initiative between the Ecole Polytechnique Chairs in Business Economics and the Chair FDIR, along with the Social Business Chair at HEC and Institute for Social Entrepreneurship and Innovation at ESSEC, I organized a research conference focused on the BOP and the two issues of sustainability of business models and programs' social impacts on low-income people. Gathering more than 150 participants, both from the corporate world and academia, this conference featured eight academic speakers, including Stuart Hart, and corporate respondents.

This research context was a key factor to enrich the content of this dissertation with multiple cases and access a wide community of scholars from different countries and with various academic backgrounds. It directly contributed to avoiding the risk of confining the reflection

on the BOP to the Lafarge case, and balancing the relationship with Lafarge teams with exposure to academic audiences and practitioners from various sectors.

The overarching research method used in this dissertation is action-research (AR), which led to the writing of the Chapter 2 of this dissertation. Chapter 1 (along with an updated version in French provided in the Appendix) and Chapter 3 of this dissertation build on the results of interactions with managers from corporations involved in BOP programs, particularly EDF, GDF-Suez, Essilor, Danone, and Unilever. For these interviews, a common methodology of case studies was used (Yin 1994), based on semi-direct interviews of company managers and interview grids were designed and completed with secondary data (publications, websites, etc.). Further details are provided in the Chapter 1 and 3. The next section presents the principles and the implementation of the action-research collaboration with Lafarge.

3.2 Principles of action-research

The methodology used in this dissertation draws on the principles of action-research, in which the researcher adopts a hands-on approach to contributing to the solution of a social issue through his/her research. The most frequent definition of action-research is given by Rapoport (1970): “Action-research aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of science by joint collaboration within a mutually acceptable framework” (p. 499).

The term “action-research” was coined by Kurt Lewin in 1946, in reaction to the lack of interest in the fact that traditional science was not helping to resolve social issues such as minority problems, anti-Semitism, fascism and poverty. The concept became popular in the 1970s when it was presented as an alternative research method to “correct the deficiencies of positivist science” (Aguinis 1973). Susman & Evered (1978) posit: “there is a crisis in the field of organizational science. The principal symptom of this crisis is that as our research methods and techniques have become sophisticated, they have also become increasingly less useful for solving practical problems that members of organizations face.” Action-research then built on the idea that it should be future-oriented, meaning that the researcher would contribute to bringing about change in the direction of a “more desirable future” (ibid).

Action-research methodologies build on two core principles. First, in the process of AR, hypothesis and data are not only obtained but also created through collaboration between the researcher and the organization's members: "AR is the process of systematically collecting data about a system relative to some goal or need of the system" (Aguinis 1973). Central to the process of AR is the creation of a "client system". Throughout the research collaboration, the researcher takes part in a "social system in which the members face problems to be solved by action research" (Susman & Evered 1978) A client system represents, then, the set of actors with whom the researcher interacts throughout the process. The second characteristic of AR is that this knowledge is fed back into the system, with the objective of transferring lessons learned to the client system and generating more change.

Ultimately, the methods used to conduct an AR program remain very diverse and primarily depend on the background of the researcher (Susman & Evered 1978). When AR is used in the context of management and economic studies, methods of data collection include questionnaires, in-depth interviewing, reading of reports, etc. For others, AR also involves the use of participatory and deliberative processes, generally well-defined and structured, to generate knowledge with practitioners.

Though there are diverse methods of data collection in AR cases, Susman & Evered (1978) identify a common pattern of action-research collaboration. In their view, the first phase consists of *diagnosing*, i.e., building between the research and the organization a common understanding of the problem to solve through research. The second phase is about *action planning*, i.e., developing the conditions of the experiments with the organization testing new solutions to the proposed problem. The *action taking* phase commences with the implementation of one of the desirable solutions. The cycle ends with the *evaluation* of the consequences of these actions on the organization and the *specification of learning*. The lessons learned are then fed back into the organization.

3.3 Implementation of the action-research approach with Lafarge

The next paragraphs provide more details on the action-research collaboration which took place at the Indonesian business unit (BU) level and the head office of Lafarge. It involved two *client systems* with different actors and different progress at the BU and head office level, thus the next paragraphs present the AR collaborations developed at both levels.

Action-research at the business unit level

The collaboration with the business unit started at the very beginning of the research contract. In total, nine one-month periods were spent in Indonesia between 2007 and 2010. As part of this AR collaboration, two pilot programs were developed to address the needs of low-income people in two different cities, and are comprehensively analyzed in the dissertation. These programs enabled the construction of 820 36 sqm-houses and the provision of 40 microcredits for home improvements and repairs.

Based on Susman & Evered's (1978) scheme, the AR collaboration went through the following steps:

- *Diagnosing*. In September 2007, the general manager of Lafarge's business unit in Indonesia asked for support from Lafarge's Strategy department to identify how business models could be developed to address what was then called "low-cost housing". A first visit to the field was organized in December 2007. Two markets were proposed for study: one in the northernmost part of Indonesia (Banda Aceh), and the other in the capital of north Sumatra (Medan). Interviews were conducted with approximately 30 key respondents on each market, including homeowners, commercial banks, microfinance institutions, masons, building material retailers, local and international NGOs, as well as village leaders and local ministry representatives. Internal interviews were also conducted with the people in the head office of the BU, in charge of sales and logistics, communication and CSR, and also at the plant with the plant manager, production manager and general affairs officer.
- *Action planning*. In 2008, the business unit's management decided that both areas should continue being investigated. Four months were spent in the field in Indonesia to conduct complementary interviews and develop the business models. In Banda Aceh, workshops involving microfinance institutions and NGOs were organized to design a business model that could be tested in partnership with some of the participants. In Medan, further interviews were carried out with real estate developers to understand what was impeding them from building houses for low-income people.
- *Action taking*. In 2009, the program was launched in Aceh and involved five microfinance institutions, an international NGO and its private arm. The program consisted of providing microloans to low-income people willing to extend or renovate their house. In Medan, the interviews with developers cumulated in a proposed

partnership with their professional association and the local government, which was signed at the end of 2009.

- *Evaluating*. In 2010, the focus was put on the analysis of the first sales generated by both programs which led to the recruitment of a full-time manager. In Aceh, a method to measure the social impact of the program on the lives of borrowers was also designed in collaboration with the NGO.
- *Specifying learning.* The final mission in late 2010 consisted of identifying the success factors and limitations of the program in Aceh and preparing a note describing the achievements in Medan and the next steps.

Action-research at the parent company level

The AR collaboration at the parent company level entailed evaluating the opportunity for Lafarge to address the BOP more systematically in different countries. The interest of Lafarge's top management for this topic dramatically changed over the research period. The dissertation provides an analysis of this change and studies, in particular, how the AR contributed to it.

Based on Susman & Evered's (1978) scheme, the AR collaboration concluded in the "action taking phase", illustrated by the launch of BOP initiatives seeking to address the BOP segment as a business in various countries.

- *Diagnosing*. In 2007 and 2008, the AR work involved analyzing case studies external to the firm, interviewing managers of Lafarge's previous BOP projects and interrogating external managers of other BOP programs (Danone, Essilor, EDF). Interviews were also conducted internally with executive and top managers of the firm. Several notes were prepared to present the identified opportunities in Indonesia, but they had no impact regarding the involvement of Lafarge with the BOP.
- *Action Planning*. In late 2009, a consulting mission was commissioned to benchmark the "societal engagement" of other CAC 40 companies and to interview internal top managers to understand their perception of such an approach by Lafarge. In February 2010, a note was prepared about what Lafarge could do to "reinforce its societal engagement", presenting a complete framework for building on a proposal of a social mission for the firm. The note built on the first results of the two programs in Indonesia,

which were starting to attract the attention of managers at head office. The note received positive feedback from the CEO, who requested a more detailed proposal. In early 2010, the executive committee decided to launch a dedicated project called "Affordable Housing" to better assess the size of the BOP market opportunity and propose how the firm should get organized to address it on a large scale. Presentations were made to the executive committee showing different market segments and the market opportunity.

- *Action taking*. As part of the Affordable Housing project, new projects were launched in 2010. Project managers were appointed in Honduras and India to initiate new schemes, and in Indonesia to extend the two pilot projects.

Figure 1 provides an overview of the action-research process with Lafarge, following Susman & Evered's scheme.

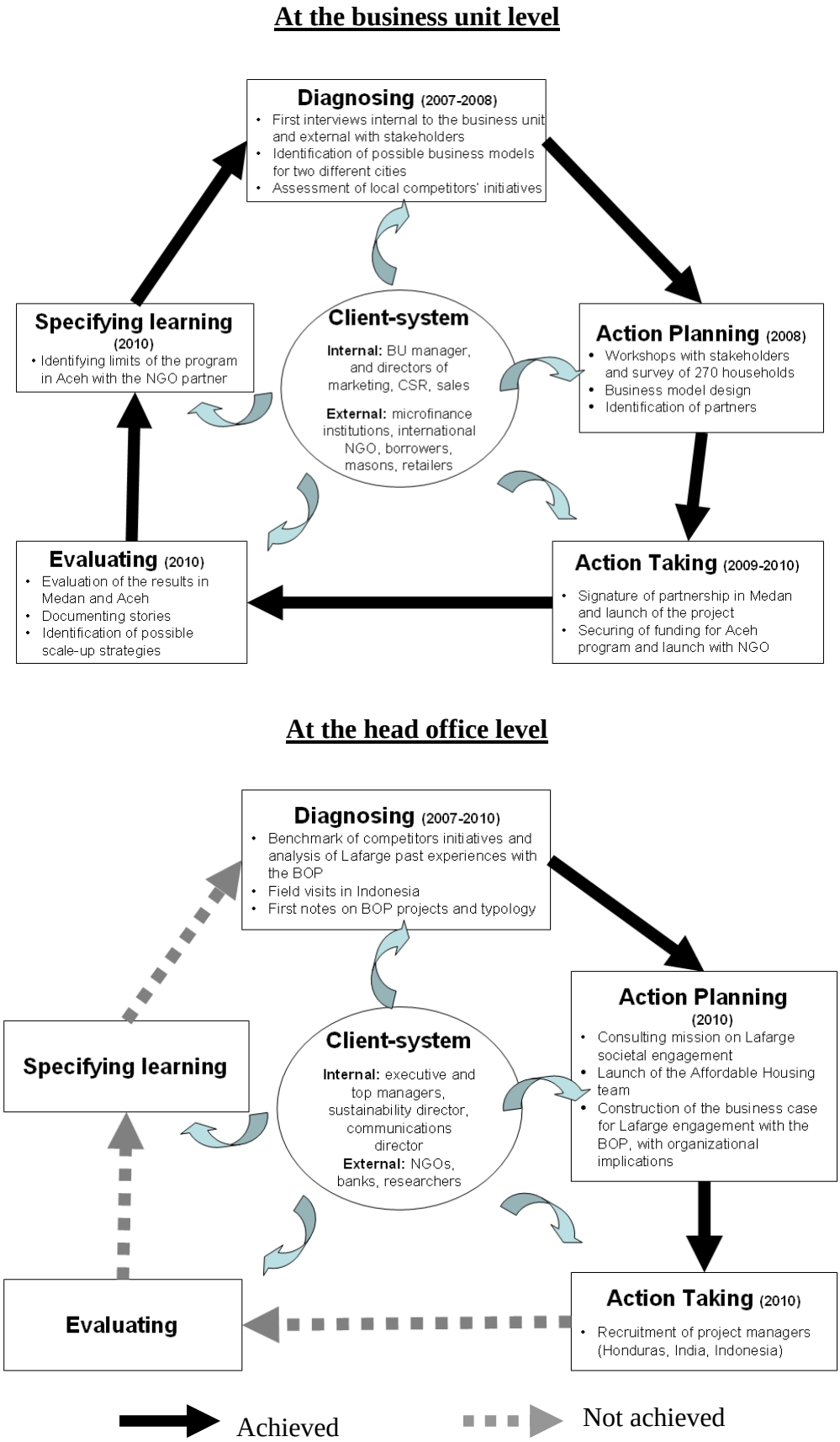
3.4 Advantages of action-research

The first benefit of the action-research conducted with Lafarge relates to the generation of two concrete and empirical cases of BOP programs. With an average of four people living in the houses built or improved, this means that over 3 000 people "benefited" from the projects: these achievements have been key drivers and motivators throughout the research process.

Generating cases to better understand implementation challenges

The creation of the two programs in Indonesia contribute to going beyond the basic statement that "there is a market at the BOP", and provide descriptions of the various options offered to the local unit in the development of the projects. While case studies of BOP programs generally present programs as they ended up being developed by managers, the AR enables us to analyze why certain options are rejected, thus contributing to a better understanding of the choices made by managers in the development of BOP programs. This AR with Lafarge, and the significant time spent in Indonesia, thus enabled the "black box" of program development to be opened.

Figure 1: Overview of the action-research conducted with Lafarge, based on Susman & Evered's (1978) scheme



Generating cases to trigger change in the organization

The interaction between the two levels of action-research contributed to the change taking place at the head office level in terms of perception of the BOP. Using the scheme presented above, the "action taking" phase at the Indonesian level, i.e., the launch of the two pilot programs, contributed to convincing executive top managers from the head office that the BOP was something strategic and that the firm should address it as a business. Working at the two levels enabled a broader description of the challenges in embedding a BOP approach in an organization. Without the empirical demonstrations, the dissertation would have built on strategic reflections, skipping the identification of local difficulties in building programs. By integrating the two levels of study, this dissertation provides an analysis that more realistically recounts the internal challenges for firms. The relatively long timeframe of the AR framework also allows parties to overcome the difficulties that appear in short-term assignments, notably in the understanding of their expectations. At the beginning of the research collaboration, resistance arose – mostly at the head office level. In the case of a short-term assignment, such resistance would have put an end to the collaboration. In the case of AR, however, it directly contributed to the analysis provided in the dissertation.

Integrating research insights in practice

The most frequently-cited benefit of AR is the provision of accurate empirical insight in the crafting of research. Indeed, it is true that this AR enabled me to build intimacy with internal actors, and as a consequence, I gained access to internal documents and the opportunity to conduct interviews and gather comments which I could not have done otherwise. However, the "way back" in this relationship, i.e. how research feeds action, is too often neglected in the analysis of the benefits of AR, yet this dimension particularly contributed to the work conducted with Lafarge. The dissertation provides several examples of how research notes and academic presentations have contributed to Lafarge's internal documents and discussions.

3.5 Challenges of action-research

Any attempt to conduct action-research also raises specific challenges which need to be acknowledged and analyzed. These challenges are mostly related to the position of the researcher within the organization and to the social change he/she is trying to generate.

"Action-research is not value free"

Since the researcher becomes involved in the organization to generate the change the intended social change, he/she is said to have an underlying social, economic or even ideological motivation which does not render the research "value free" (Aguinis 1993; Susman & Evered 1978; Brydon-Miller et al. 2003). The consequence of this is that the interpretation of data may be biased in order to provide a demonstration supporting the underlying agenda. As previously mentioned in this introduction, this thesis embeds the desire to generate programs that enable a better understanding of the validity of the BOP proposal, so there is an evident risk of losing the ability to examine the research object with sufficient objectivity. To mitigate the risk of biasing conclusions based on personal motives, the "governance" of the thesis writing process is crucial. In particular, I tried to keep this risk "under control", by generating the necessary "reality checks", through a constant relationship with the research community and by producing, throughout the thesis process, conference presentations, notes and articles, not only covering the action-research setting, but also other research questions (cf. list in the appendix of Chapter 2).

"The results of action-research are not generalizable"

Since the cases studied were generated by the researcher along with the client system, it is particularly difficult in action-research to identify the variables which contribute to the action under review (Susman & Evered 1978), and thus to establish a "general law" governing the type of actions under study (this concern has also been raised about case study method in social inquiry in general). To overcome this oft-debated challenge, this dissertation has built on several articles which use different cases and methods of analysis. Indeed, Chapters 1 and 3 were written based on data collected through case studies while Chapter 2 focuses only on the results of the action-research. The interest of diversifying the methods is that it contributes to the complementarity of chapters in the overall demonstration and thus to the generalization of results. The topics addressed in Chapter 1 and 3, and the interviews with external companies, were influenced by the issues I was facing in the context of Lafarge. For

example, Chapter 1 provides a typology of strategies which was intended to help me explain to people in Lafarge that there were different ways to address the BOP segment as a business. Reciprocally, the analysis of the AR in Chapter 2 benefits from the typology of strategies identified in the first chapter and brings the debate on the analysis of this typology a step further, by integrating organizational issues.

4. Thesis Contributions

This section presents the structure of the dissertation and the main contributions of the thesis. As the chapters were written and published separately, this section proposes an overview of the answers to the research question and the thesis structure, as well as a synthesis of the different chapters following three different axes which highlight the main insights and the complementarities in the demonstration.

4.1 Summary

To answer the question of why firms get involved in Base of the Pyramid programs, the thesis proposes a strategic framework which opposes two types of approaches: a licence-to-operate approach, and a business opportunity-seeking approach. In the first stage, the firm launches programs to answer stakeholders' expectations and maintain good relationship in particular with governments. In the second stage, the firm is approaching the BOP segment as a new business opportunity. The thesis shows how Lafarge moved from the former to the latter approach between 2007 and 2010. It analyzes the factors which enabled that change and in particular the role of two Indonesian pilot programs of access to housing which contributed to the construction of more than 800 houses. and highlights the importance of local specificities in the choice between the two.

To answer the questions on the strategies at work, the thesis opposes two forms of market approaches with, on the one hand, a market capture strategy consisting in slightly adapting firm's practices to enter an existing market, and, on the other, a market creation strategy which is about adapting firm's products and practices to create a new market at the BOP.

To answer the third question on the implications of each type of approach on the firm's organization, the thesis shows that, contrary to a market capture approach, a market creation strategy questions the firm's « boundary » and requires flexible management systems. Finally, the thesis analyzes, with regard to market creation strategies, under which conditions partnerships between for-profit and not-for-profit organizations are sources of innovation and learning for the firm. It raises three key success factors: sharing a common vision between partners, co-creating programs, and implementing intentional learning processes.

4.2 Thesis structure

The dissertation builds on three chapters, organized as follows:

- The first chapter is entitled "Corporate Strategies and the Construction of Markets at the Base of the Pyramid" and consists of studies of the engagement of three firms (EDF, Unilever and Danone) with the BOP. It identifies a typology of business strategies to address the BOP market. This chapter was published in the collective book "Corporate Social Responsibility: from Compliance to Opportunity?", edited by Jean-Pierre Ponssard and Patricia Crifo (Ponssard & Crifo 2010). A French and completed version of this chapter, published in the "Revue Française de Gestion", goes further in the analysis of the managerial and funding implications of both approaches. This version features in the Appendix of the dissertation.
- The second chapter, "A Long Road to the BOP: Organizational Change and the Search for Success at the Base of the Pyramid. The Case of Lafarge", provides the results of the action-research collaboration with Lafarge. It analyzes how Lafarge moved from a licence-to-operate approach to a business approach of the BOP segment. The chapter shows how the two Indonesian BOP programs contributed to a change in Lafarge's approach.
- The third chapter, entitled "Relational Capacity for Social Innovation in Cross-Sector Partnerships", focuses on BOP ventures which follow a market creation approach through alliances of corporations and not-for-profit organizations. It identifies the specific processes of innovation and knowledge acquisition in the implementation of BOP programs. This chapter, co-written with Matthew Murphy (ESADE) and Miguel Rivera-

Santos (Babson College), has been accepted for publication in a 2011 special issue of the "Journal of Business Research".

4.3 The main contribution: A strategic framework of the firm's engagement with the BOP

Based on the experience with Lafarge, and building on the conceptual framework of strategy design proposed by Simons (1995), the second chapter of the dissertation provides an analysis framework of the firm's engagement with the BOP, which distinguishes two situations[2]:

- A licence-to-operate approach, through which the BOP segment is considered as a non business issue. Projects are launched to comply with external pressures and remain perceived as falling out of the firm's core activities. Consequently, they are not integrated in management processes and receive no specific support.
- A business approach to the BOP segment that the firm seeks to address through market strategies. The dissertation distinguishes market creation and market capture strategies.

Each approach is detailed in terms of the underlying belief system (i.e., how the topic of the BOP is perceived by management), boundary system (i.e., whether the topic falls within or outside the scope of the firm) and management control systems (i.e., how performance is defined and monitored) which can be either diagnostic (driven by tangible reporting on performance indicators defined top-down) or interactive (a flexible approach with bottom-up objectives).

The table below summarizes the two approaches based on Simons' levers of control.

[2] The idea of using Simons' grid to analyze the shift in Lafarge's perception of the BOP topic owes much to Jean-Pierre Ponssard's remarks that incorporated the grid, and to Diane-Laure Arjaliès and Cécile Goubet, who analyzed the shift in firms' strategies from compliance to opportunity-seeking, with regard to CO2 emissions (Arjaliès et al. 2011).

Table 1: A strategic framework of firms' engagement at the BOP

	STAGE 1 **Licence-to-operate approach**	**STAGE 2** **Business approach**	
Belief system	BOP as a philanthropic and public-relations issue	BOP as a potential business	
Boundary system	Not part of the company's core business (no support)	Inflexible boundary	Flexible boundary
Management control	Not aligned with control systems	Dominant diagnostic system	Dominant interactive system
BOP strategy	Isolated programs with no support	Market capture strategy	Market creation strategy

Trigger factors in the change from a licence-to-operate to a business approach

In the second chapter, the dissertation identifies the trigger factors which contributed to Lafarge moving from the first to the second type of engagement with the BOP segment. Three key factors contributed to the change in the belief system regarding the BOP segment at head office:

- *Raising awareness about the market and social opportunities at the BOP*. The period 2007-2009 mostly consisted of raising the awareness about the market opportunity of the BOP segment. As part of the action-research, an analysis of cases was provided to Lafarge's top management, showing how competitors and peer companies were managing to leverage the BOP segment as a market opportunity.
- *Experimenting BOP programs on a small scale*. A first step in the change of belief systems was the launch of the two programs in Indonesia. These pilots demonstrated how they contributed to the lives of low-income people, while at the same time generating cement sales without discount.
- *Building the business case for a wider engagement*. The second step in the change occurred with the launch of the Affordable Housing team in 2010. Within this team, the two projects contributed to justifying the assumption used to calculate the business opportunity at the BOP and provide more convincing estimates of the market.

Business strategies to address the BOP segment: *market creation* versus *market capture*

The dissertation provides a typology of strategies implemented by firms seeking to address the BOP as a business opportunity (Chapter 1). These strategies are then illustrated and discussed based on the experience with Lafarge (Chapter 2).

Based on the review of some successful cases, the dissertation highlights that BOP markets are in different stages of development and contends that, while needs are great, most markets at the BOP do not exist, but need to be *built*. It distinguishes two broad types of corporate strategies responding to the situations of whether the market exists or not: 1) defensive strategies that aim to capture existing markets; and 2) more innovative strategies that seek to create new markets at the BOP and develop firms' capabilities. The two strategies also have implications on how projects are managed and funded. In the case of market capture strategies, firms leverage their existing organization with projects fully integrated in the mainstream business and funded with the firm's capital. In the case of market creation strategies, that build more on innovation capabilities, firms set up ad hoc structures intended to manage the projects separately from the mainstream organization. Funding, as in the case of Danone, can be supported with a dedicated vehicle.

The action-research allowed me to check the empirical validity of the typology of market capture and market creation, with the two experiments launched in Indonesia.

- The project in Aceh – based on microfinance – illustrates a market creation strategy: through a series of efforts (building a network of microfinance institutions, developing their capabilities, training masons, channeling the funding and following the impacts), the company intends to create a new market around house improvement and extension.
- In Medan, where a project with developers has been implemented, the approach refers more to a market capture strategy: a developer was willing to build houses for low-income people and the company developed the appropriate offer through its existing capabilities to capture it.

The influence of local market characteristics in the choice of business strategy

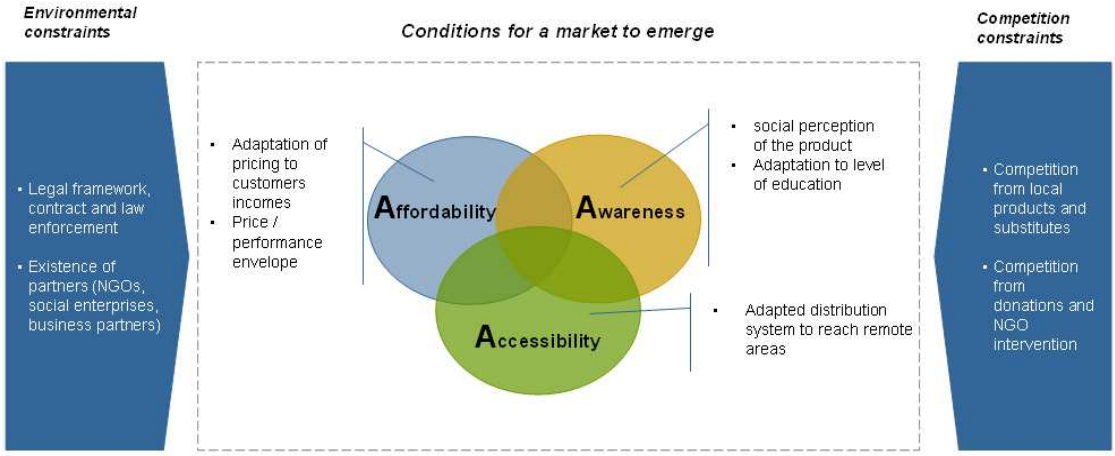
As discussed in Chapter 1, Hart & Simanis (2008) argue that firms who try to capture markets ("BOP1.0" strategies) through low innovative programs are bound to develop lousy

responsible and unsustainable programs. In their view, firms need to create the markets by partnering with multiple stakeholders, including the poor themselves, to develop very innovative solutions ("BOP2.0"). They suggest that the "1.0 approach" does not embed the social considerations of the "2.0 approach".

This dissertation takes a more precautious approach regarding the differences in the impacts of these two types of strategies and highlights the importance of local contingencies in the choice between the two.

- It identifies three types of market conditions firms need to address to create the market: affordability (the adaptation of pricing to customer incomes), awareness (social acceptability of the product) and physical accessibility of products.
- Two institutional factors also appear as contingencies (and are often neglected in the analysis of BOP programs): environmental constraints (legal framework, contract enforcement, existence of partners) and competition of local products and substitutes (including donations).

Figure 2: Barriers on the road to the BOP consumer



As detailed in Chapter 2, the experiments with Lafarge in Indonesia show that the choice between these two approaches was strongly influenced by the conditions of the local markets facing the firm. Indeed, the story of the construction of the two projects demonstrates that the choice of business model was strongly influenced by the local market conditions prevailing in each city. For example, in Aceh, free houses given by NGOs impeded the use of the business model that had been developed in Medan with real estate developers building individual

houses for low-income people. The selected program of microfinance for housing built on the distribution of land titles by NGOs after the tsunami which were used as collateral.

4.4 Challenges of embedding a business approach of the BOP in the organization

The action-research with Lafarge described in the second chapter enables the identification of the challenges related to the capacity of a firm to embed BOP programs, depending on whether these programs follow a market creation or capture strategy.

BOP market strategies and systems of performance measurement

The experiments with Lafarge show how a market capture strategy, as an answer to an existing market paying-off in the short term, can be integrated in a dominant diagnostic system. As a consequence, local business units are keener on finding these opportunities which fit with the performance indicators and top-down reporting in a diagnostic system.

In a predominantly diagnostic approach, market creation programs are unlikely to be developed by business units, as they may downgrade performance indicators in the short term. Indeed, when the market at the BOP does not exist, but requires efforts to be built and, consequently, flexibility in performance reporting, then a dominant interactive system is more favorable to market creation strategies.

Market-creating BOP ventures question the firm's "boundary"

BOP programs raise the question of the extent to which a company should change its capabilities to address this segment. While market capture programs rely on the firm's set of capabilities, market-creating BOP programs test the "boundary" that the firm delineates between the activities that it accepts to undertake and those that it rejects. For example, the microfinance program developed in Aceh raised the question of whether Lafarge should enter the credit activity which was something new for the firm. In contrast, market capture strategies, such as the program in Medan, are compliant with the delineated frontiers and are then favored when the firm's boundary is strictly unbreakable.

In the course of the research, Lafarge started testing its boundary by creating two corporate projects, one dealing with "Affordable Housing", as mentioned before, and one focusing on

"Sustainable Construction". Both programs allowed the generation of empirical projects intended to show the opportunities and risks of integrating new dimensions in the core activity – prescribing construction systems favoring Lafarge products and answering green construction constraints, in the case of sustainable construction, or developing new business models to address the low-income segment.

Essilor, whose program is described in Chapter 3, also confronted the issue with its project in India. While the few vans going through the rural areas to sell spectacles were successful, Essilor rejected the idea of multiplying the number of vans. This would have sent a signal that Essilor was going down the value chain and taking over the role of the distributor, which would have ultimately jeopardized its mainstream urban business.

Through market creation BOP programs, the firm generates a number of learning opportunities to test the capabilities that it should acquire in order to improve its performance. In this sense, market creation approaches facilitate organizational learning and change.

4.5 Market creation strategies and knowledge acquisition in cross-sector collaborations: Three key success factors

By analyzing the case of Danone and Essilor, engaged for several years in a BOP market creation approach, the thesis provides examples of how their projects contribute to generating new knowledge. Chapter 3 identifies the success factors that enable firms to learn from market creation programs developed in partnerships with not-for-profit organizations. Building on Todorova and Durisin's (2007) model of knowledge acquisition in business-to-business (B2B) partnerships, this chapter provides a new model, entitled "Relational Capacity for Social Innovation" which is better suited to the analysis of learning and innovation in the context of cross sector partnerships.

Three key dimensions appear as particularly crucial in cross-sector partnerships. Before starting the collaboration, partners in cross-sector partnerships need to *envision the contribution* they seek to achieve through the program. While B2B partnerships are driven by the business objective, the objective of partners may be diverse, including the social impact they want to achieve. To be able to generate and acquire new knowledge, partners in cross-sector alliances need to go beyond the assembling of their capabilities and *cocreate* the

program they seek to launch. Contrary to B2B partnerships, the acquisition of knowledge by the corporate partner depends on the implementation of *intentional processes*, such as knowledge-sharing meetings that seek to capture the knowledge generated by the partnership.

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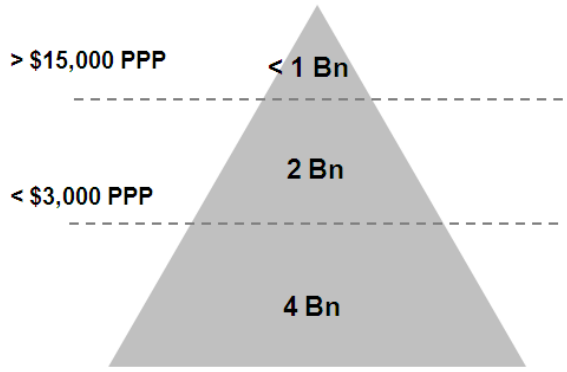
I. Corporate Strategies and the Construction of Markets at the Base of the Pyramid

How can multinational corporations' (MNCs') interest for the Base of the Pyramid (BOP) be explained and what are the strategies at work? Early articles relating to BOP have asserted that MNCs can "make a fortune" by doing business with underprivileged populations and lifting them out of poverty. In contrast to the initial literature, this article contends that most markets at the BOP do not yet exist, but need to be built. The rationale for a firm's involvement at the BOP goes beyond short-term business opportunities and has more to do with the preparation of MNCs for the upcoming economic landscape in emerging countries, as well as the new imperatives regarding corporate social responsibility. Building on three case studies, this article identifies two broad types of corporate strategies: defensive strategies that aim to capture existing markets, and more innovative, stakeholder-oriented strategies that seek to create new markets at the BOP and develop firms' capabilities. The article then discusses the issue of the costs of building new markets at the BOP and the consequences on the business models and the involvement of financial partners in the venture.

Referring to the four billion people living with a few dollars a day in emerging countries, the concept of "Bottom (or Base) of the Pyramid" (BOP) has gained significant interest, both in the academic and practitioner worlds. Coined by Prahalad and Hart (2002), the BOP concept introduces the idea that multinational companies (MNC) can develop a profitable business by targeting low-income market segments and simultaneously helping these populations escape from poverty.

Prahalad and Hart's appealing proposition builds on three main assertions: 1) MNCs can correct the market failures facing the poor in the informal economy by providing them with more affordable products and services; 2) their individual purchasing power constitutes a large market for MNCs, provided that they develop specifically-designed product offers; and 3) recognizing the poor as valuable consumers and business partners contributes to improving their wellbeing and self-esteem (Prahalad & Hart 2002, Prahalad 2005).

Figure 3: The "Base" of the Pyramid



PPP: Purchasing Power Parity, (Source: Prahalad 2004)

Since the publication of the first articles, a new "industry" has emerged around the concept of BOP. More companies, including Danone, Dupont, Lafarge, Essilor, Total and GDF-Suez, have launched initiatives. A third of France's 40 largest companies mention the existence of a BOP project on their website. Compilations of case studies have been published (e.g., WRI 2006, UNDP 2008). Consulting firms (e.g., Monitor, AT Kearney) have started to advise companies on how to engage at the BOP. Business schools and universities (e.g., ESSEC, HEC, University of Michigan, and Cornell University) now offer courses in which they teach students how to build BOP business models in emerging countries. NGOs (e.g., Care) have also started collaborating with companies on this topic. Think Tanks (e.g., CSR Europe, IMS

Entreprendre pour la Cité, the World Business Council for Sustainable Development) have been active in building working groups that investigate the BOP and lobby other organizations (European Union, funding agencies) about the mainstreaming of BOP practices. Information produced by companies about their BOP projects now piques the interest of managers of socially responsible investment funds.

In spite of this growing interest, the ability of BOP ventures as growth vehicles for MNCs has been questioned. Indeed, a rapid glance at the number of customers served by MNC-led BOP ventures reveals that this number is rather limited. For example, Cemex's Patrimonio Hoy program, cited in numerous articles and books as a leading example of a BOP project (Prahalad 2004; Vermeulen et al 2008; Jaiswal 2007; Karnani 2007a, 2007b), has only served around 30 thousand customers per year since it broke even in 2004. Additionally, the program only represents 1% of Cemex's total sales on its home market.

There is now a growing consensus that making a fortune at the BOP is unlikely to be achievable in the short-term. Some authors argue that markets at the BOP do not actually exist (Simanis et al 2008; Simanis 2009) and that firms should *create* these markets by developing business intimacy with the poor – by involving them in the drafting of the business model and product design, for example. The idea of creating markets has been mainly justified from a social standpoint and certainly constitutes a new step in BOP literature. However, this notion of market creation has barely been addressed through a business lens. Consequently, the goal of this article is to fill this gap by analyzing why market creation at the BOP has a business rationale and constitutes a possible strategic behavior for firms.

The first section demonstrates the limitations of the initial idea that there are huge markets there for the taking and argues that markets need to be created. The second section analyzes why BOP ventures remain strategic opportunities in the context of the new competitive landscape in emerging countries, as well as the new imperatives for sustainable development facing MNCs. The last section builds on three case studies to illustrate different strategies in the construction of markets at the BOP, and discusses the differences in and the implications on business models.

1. Where we Stand in the BOP Debate

Prahalad (2004) emphasizes the business opportunity that exists at the BOP and that companies can capture by setting up new business models. Optimistically, he highlights the huge impact that BOP approaches can have, and states, “I have no doubt that the elimination of poverty and deprivation is possible by 2020.” While the interest for the concept has been constantly growing, the BOP proposal has also yielded significant criticism, mainly expressed by Karnani, one of Prahalad’s colleagues at the University of Michigan. Two broad types of criticism have emerged, one referring to the failures of business ventures in delivering profits and social impact, and the other to the very existence of untapped markets at the BOP.

1.1 Limited success stories

Karnani (2007a) states that the BOP concept is “too good to be true” and “that there is neither glory nor fortune at the bottom of the pyramid”. He contests Prahalad’s demonstration of fortune at the BOP which relies on a dozen case studies: these have become the most cited examples in the literature and include Aravind Eye, Cemex and Hindustan Unilever Ltd., among others. He purports that most of the case studies fail to provide evidence of how BOP ventures deliver on the twofold promise to reduce poverty and generate profit. In the same vein, Crabtree (2007) conducts a fine-grained analysis of the same case studies based on two criteria that derivate from Prahalad’s minimum BOP thesis: sustainability and income and poverty reduction. In only two cases out of 12, business models have proven to be sustainable but none has demonstrated an impact on income poverty for consumers. Crabtree (2007: 7) writes, “On the basis of 12 case studies, which do not corroborate his thesis, he makes the universal claim that poverty can be eradicated through profits. This is clearly untenable, that is, the minimum thesis is not validated.” Jaiswal (2008: 8) reports comments from a manager of one of Prahalad’s case studies saying that Prahalad’s judgment on the mutual effects of the BOP project on the firm and the poor were “misplaced”.

Over the years, numerous case studies have been collected (e.g., UNDP 2008). A closer look illustrates that while available practices are extraordinarily diverse in their nature and results, they are, interestingly, concentrated in just a few sectors and in the Asian region. Cases featuring in the UNDP 2008 report on growing inclusive markets cover a large range of practices, from purely philanthropic projects to market-based examples. Some have benefitted a few thousand people, others up to million. A more detailed analysis of the sectors

of the business ventures also demonstrates that the number of available illustrations is not equally distributed across all sectors: out of the 50 cases featuring in the UNDP report, only two refer to housing, while six times more refer to food-related business projects. Table 1 compares the achievements of the most-cited examples, in terms of the number of customers served. In some sectors, such as food, financial services and telecommunications, the number of low-income customers served daily by certain business ventures can exceed one million. In other sectors, such as housing and energy, the most successful initiatives serve one or two hundred thousand customers. Another point to note is the extraordinary concentration of the case studies in certain countries. Indeed, most of the best-known, such as those cited in Table 1, are located in Asia – India and Bangladesh, particularly. While close to 90 % of Africans live at the BOP (WRI 2006), the African continent is under-represented in reports covering BOP ventures.

Table 2: Number of customers served per sector

Categories of needs	**Case**	**Country**	**Year**	**Number of customers served** *Italic*: estimates
Food and nutrition	HUL Annapurna (Unilever)	India	2000	*1 million daily*
	Danone Grameen	Bangladesh	2005	*30 000 daily*
Energy	EDF	Mali, South Africa, Morocco, Senegal	1994	37 400 customers / 245 000 beneficiaries
Housing	Cemex Patrimonio Hoy	Mexico	1998	230 000 customers since the beginning
	Holcim Mi Casa	Mexico	2000	250 000 customers since the beginning
Health service	Aravind Eye Care	India	1976	2.4 million customers since the beginning
Financial, banking and insurance	Grameen Bank	Bangladesh	1983	8 million customers
	SEWA	India	1972	1 million customers
Information technology	E-choupal	India	1999	*4 million*
	Grameen Phone	Bangladesh	1997	20 million

1.2 BOP markets do not (yet) exist

Attempts to evaluate markets at the BOP have provided some controversy. Prahalad (2004) cites $13 trillion in purchasing power parity (PPP) terms, without explaining how this figure is calculated. Indicating that "profits are repatriated at financial market exchange rates, not at PPP rates", Karnani (2007a) brings back Prahalad's estimation of $13 trillion BOP market to only $0.3 trillion in real dollars. Over the years, estimates of BOP markets have been more finely-tuned. The most frequently-cited estimation is provided by the World Resource Institute (2006). It evaluates the value of transactions in BOP markets at around 5 trillion dollars (PPP) in total.

Table 3: BOP market value

$5 trillion market	
Food	2.895 bn
Energy	433 bn
Housing	332 bn
Transportation	179 bn
ICT	51 bn

(World Resource Institute 2006)

Although they have enabled the BOP concept to gain momentum, such estimates can be misleading, in three ways.

Firstly, they convey the idea that markets are untapped and latent. However, the figures are purely estimates, in monetary terms, of transactions that are neither registered through accounting systems nor conducted in actual currency ("in-kind" exchanges).

Secondly, the figures mostly represent the value of informal transactions and build on the idea that the formalization of such transactions would benefit the poor. However, research on the informal economy has shown that these types of transactions have their own rationale and efficiency. Armandariz de Aghion & Morduch (2005) show in one specific sector – financial credit – that money lending is wrongly perceived as a form of abuse. They argue that it does have its own rationale and that it can also serve the poor.

Last but not least, such estimations lead to confusion between needs and demand: needs at the BOP are doubtless huge – the population's need to access electricity, water, food and

education in many countries cannot be denied. However, needs do not constitute demand. BOP ventures that currently exist confirm this view: while needs are huge, there may not be any demand for a product that *in abstracto* seems to be answering a specific poverty issue. Procter & Gamble, the world leader in healthcare consumer goods, interestingly faced this challenge. The company introduced in several countries a new powder sachet intended to purify water instantly and convert muddy water into drinking water. After several attempts to adapt the product and marketing strategy to local customers, the company faced the issue of explaining to people why they should pay for water, while this "product", seen in some cultures as a gift from God, has always been at their disposal for free.

Recent work in BOP literature has started to recognize that such markets are not merely there for the taking, but are markets that could emerge under specific conditions. Simanis (2009) argues that markets do not exist and that firms have to "create" them. He (2009) says, "the Base of the Pyramid is not actually a market (…). They [low-income populations] haven't been conditioned to think that the products being offered are something one would even buy. And they haven't adapted their behaviors and budgets to fit the products into their lives." He argues that companies have to create the markets for the products they introduce by helping the consumer understand the benefits of doing something in a different way (ibid).

1.3 Conditions for a market to exist

The question of the emergence of new markets has been analyzed mainly through three different lenses: an institutional perspective, an anthropological perspective and, more recently, corporate-centered (marketing) analysis.

Historically speaking, the institutional perspective was the first to appear: this perceives market emergence as a result of the performance of institutional arrangements. Markets in emerging countries are characterized by the institutional voids that prevail and which determine the ability to do business in a given country (Khanna et al 2005). Such voids cover the lack and inefficiency of judicial systems, the difficulty to enforce contract compliance and protect property rights, and the existence of corruption and bribery. Such voids are even more apparent in low-income markets in emerging countries where impoverished populations carry out transactions. Under such conditions, markets are primarily based on non-registered transactions. For companies, this entails the possible existence of informal products and services that directly compete with the new BOP venture the firm is trying to implement. For

instance, the introduction of water pipelines in slum areas faces direct competition of water distribution through buckets or tanks often managed by a form of local cartel or mafia.

A more anthropological approach to market creation has mainly focused on the social processes that drive the emergence of new transactions. In the BOP realm, some researchers have revived the work of rural development economists, such as Robert Chambers, or economy anthropologists, such as Stephen Gudeman, to propose a process for market creation (Simanis et al 2006, 2008; Simanis & Hart 2009). Known as "BOP protocol", this process is intended to guide companies in their partnership with communities and bring them to a stage of co-creation of solutions.

Marketing research on markets at the BOP has identified three major types of challenges that firms face in selling products to the impoverished populations. In order to meet demand, products or services have to be affordable and accessible to customers who are aware of the benefits of the purchasing decision (Prahalad 2004, Vachiani and Smith 2008).

- *Affordability*: This refers to the adaptation of the product's pricing to the income characteristics of the consumer in terms of size and variability in time.

- *Accessibility:* This has to do with the way products and services are delivered to customers. The lack of suitable infrastructure (roads, ports, bridges, etc.) renders the distribution of products to those living in rural areas or densely populated cities complex. This notion also refers to the difficulty for customers to fully benefit from the product's features because of their limited knowledge or education about how to use it.

- *Awareness:* Enabling the customer to perceive the use value of a specific product is a key condition for a market to exist, as illustrated by the Procter & Gamble example. This thus refers to the desirability of the product from the viewpoint of the BOP customer.

Strategic perspective on market creation

The idea that markets at the BOP do not yet exist but require investment to emerge profoundly changes the economic rationale of such ventures. When faced with the cost of market creation, firms may be more willing to let competitors or public authorities build the market and enter it once developed.

This question of the interest for the firm to enter developing countries' markets has been addressed in international business. Prahalad and Lieberthal (1998) give the example of Kellogg who invested in mass advertising campaigns to persuade Indian consumers to eat cereals. In the end, local competitors bypassed Kellogg and built on customers' willingness to consume locally-flavored cereals. Consequently, there is a risk in creating a market for the product, since it can be captured by competing firms if the incumbent company has not gained a dominant position.

This leads to the question of why firms accept to participate and cover the risks and costs of building markets, and how this fits into their development strategy. To explain this, the next section provides an analysis of what is at stake with the development of BOP practices.

2. Why Multinational Companies get involved at the BOP

The impressive GDP growth rates experienced by emerging economies in the last decades have attracted firms to these markets. Forecasts indicate that the growth difference between the E7 countries (the seven largest emerging markets, namely Brazil, Russia, India, China, Indonesia, Turkey and Mexico) and the most industrialized countries will accentuate in the future (Hawksworth & Cookson 2008). The 2008-2010 economic crises has reinforced the interest for local demand within developing economies. Relatively speaking, these countries are becoming the biggest markets (Raman 2009).

However, the way MNCs can capture part of the future growth is challenged by three broad factors that provide an incentive for firms to get involved at the BOP: 1) demographic change leading to the emergence of new consumers, 2) a change in competition with stronger local players and diminishing competitive advantages on mature market segments, and 3) new imperatives regarding multinational corporations' license to operate.

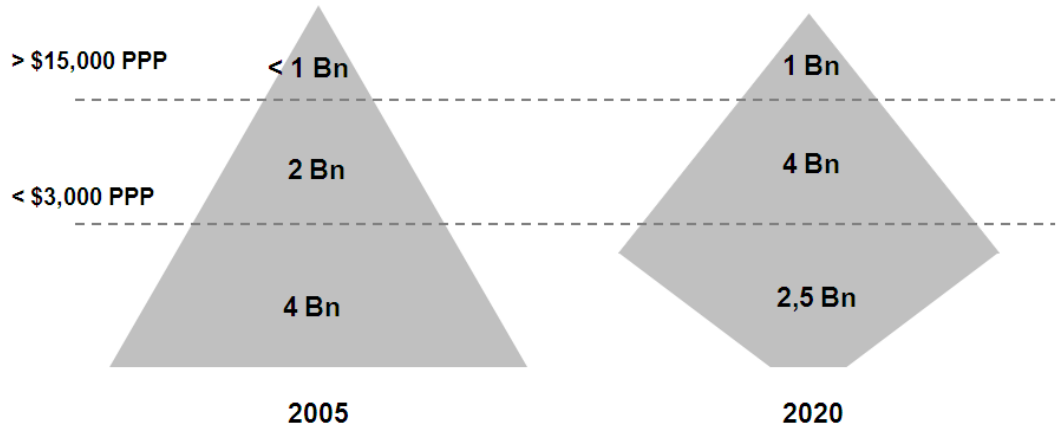
2.1 Change in consumer demographics

While the E7's growth has thus far been fueled by investment in industry and capital accumulation, the nature of the future growth of these countries will be somewhat different. It will stem from the demand of emerging countries' domestic markets and a change in the

model from “Made in China” to “Sold in China” (Farell et al. 2006). Recent announcements by the Republic of China to move away from an investment to a more customer-centric economy is an illustration of the new development model under construction (Lardy 2006). Capturing domestic consumption then becomes central to the development of firms in emerging countries. Consumer demographics show that this growth in consumption will come from the new “middle classes[3]“ at the “middle” of the pyramid.

Demographic growth, combined with the sustained economic boom experienced by certain developing countries, has led to the emergence of a new and growing middle class segment. Consumers are moving up from the very bottom to the middle of the pyramid (Figure 2). Citigroup’s estimates (2008) indicate that between 2000 and 2015, over 1.7 billion people will have joined the middle classes. As a comparison, between 1980 and 2000, around 600 million people, two thirds of whom were in China, escaped from poverty (Chen & Ravaillon 2004). Thus, the continual growth of the middle classes represents four times China’ growth since the 1980s, which triggered the investment of MNCs there. While the majority of the world’s population currently lives below $3,000 PPP, the pyramid of consumption for 2020 will progressively take a diamond shape (Citigroup 2008).

Figure 4: Change in consumer demographics between 2000 and 2020



(Source: adjusted from Citigroup 2008 and Jaiswal 2008, using United Nations’ population estimates)

[3] The definition of what, precisely, constitutes “middle class” has always been controversial (Jaffrelot & van der Veer 2008). For clarity of purpose, and to allow comparisons with income categories used in BOP literature, the term “middle class” refers in this article to people with an annual income between $1,500 PPP and $15,000 PPP.

Consumption patterns of this burgeoning middle class are expected to change and lead to the emergence of a new consumer. This consumer will have desires that mainly mirror the consumption behaviors of higher income classes, in spite of a very limited income.

First, consumption brackets will shift away from basic necessities (food, beverages) to discretionary items (Beinhocker et al 2007), such as education, recreation services, transportation, healthcare products and services. While representing around 42% of contemporary middle class consumption, food and beverages will only represent 25% of the consumption bracket in 2025 (ibid).

Another dimension is the predominantly urban localization of this new class. By 2050, the number of city dwellers will be multiplied by two in Asia and four in Africa (UN Habitat 2008a). This phenomenon will go hand-in-hand with the massive development of slum areas: while one billion people currently live in areas that are detrimental to their health and wellbeing, this figure will rise to two billion before 2030. Cities will be home to a number of social and environmental challenges: spatial inequalities, climate change and environmental risks (UN Habitat 2008a, 2008b). By 2025, the Indian middle class will dominate the cities. About three-quarters of India's city dwellers will have joined the middle class, compared with just over one-tenth today (Beinhocket et al 2007).

While the focus on the BOP has been on those living below the poverty line, some authors now argue the rationale for getting involved at the BOP by referring to the middle of the pyramid under construction (Jaiswal 2008). In this way, a firm's involvement at the BOP reflects the preparation of product offerings to meet the new demand emerging from the middle class.

2.2 MNCs' competitive advantages under threat

Until the 1990s, the predominant model of MNC was the export model: firms were benefiting from abundant resources (low wage labor, raw materials) to produce goods that were exported to northern countries.

The interest of the domestic market has progressively become more important than export strategies, and commercial strategies to respond to the needs of local customers have been

implemented. However, the very nature of MNCs poses a number of specific challenges to address this burgeoning market. The development model of MNCs in emerging countries has mainly been based on exploiting the competitive advantages developed in MNC's home countries: advances in technology, research and innovation capabilities, financial resources and access to capital markets, coherent brand portfolio, management methods and proven production processes. The development of production and distribution for domestic markets has relied on the existence of scale effects for MNCs: they manage large brands, which they extend to these countries, maintaining the same quality / value combination and produced in accordance with the same production techniques and standards (Dawar & Frost 1999). Consequently, products manufactured for domestic markets are by nature positioned for tier 1 consumers in the revenue ladder. These consumers resemble the prototypical western consumer that MNCs traditionally serve in their home countries (Prahalad & Lieberthal 1998) - brand-sensitive consumers who purchase products via western-style distribution channels. The concentration on this segment has also been reinforced by the composition of MNCs' local teams; they tend to be sourced from this segment and accompanied by expatriates whose knowledge of the middle and low-income segments is limited, and who cannot access information about them (Khanna et al 2005; Prahalad & Lieberthal 1998). Entering the BOP requires a shift in the mindset of managers towards emerging markets.

Local firms have traditionally focused on market niches from which they can benefit because of their competitive advantages, i.e., their solid understanding of local tastes, efficient segmentation of markets, their mastering of distribution networks and links with local authorities and governments (Dawar & Frost 1999). Local firms are also more reactive to consumer demand and changes therein, as they are flexible in terms of brand portfolio: MNCs, on the other hand, have to maintain coherence in their brands' positioning across the globe (ibid). Easier access to capital, combined with the development of highly-skilled managers, has resulted in certain domestic firms being able to expand and confront MNCs on their home markets. This is the case for the Indian communications network giant, Infosys, or the Chinese HaierGroup (small appliances). Such leaders have also been successful in capturing demand from other developing countries. For example, half of Chinese exports are aimed at markets from other developing economies. Building on their success abroad and at home, domestic firms have been able to develop brands and products capable of competing with those of MNCs in developing countries.

2.3 New imperatives regarding firms' social responsibility

Hart's book, "Capitalism at the Crossroads" (2007), features a different justification of why and how firms should envision the BOP market, and refers to the influence of corporate social responsibility (CSR) expectations towards firms. In his view, the development of BOP projects has to be conducted under the constraint of sustainable development. Hart emphasizes that current consumption patterns are unsustainable if they have to be adopted by those living at the BOP and aspiring for better living conditions. While Prahalad's 2004 book builds on an optimistic argument about the existence of a market opportunity at the BOP, Hart anchors his perception of the BOP in the analysis of the risk that today's development models bear regarding environment and social sustainability. To address poverty, as part of the broader sustainability challenge, the capabilities of multinational companies should be re-examined. As Prahalad suggests, MNCs have access to the innovation and technology that can enable improvements in the quality of products and the environmental footprint, or the introduction of radically new and more sustainable products. However, for Hart, companies are unequipped to understand the needs of BOP consumers and should thus acquire such knowledge through trust-based collaborations between companies and unfamiliar organizations, including NGOs, citizen sector organizations, and the communities themselves.

Questioning the business model of MNCs goes hand-in-hand with a discussion on what is expected of multinationals. MNCs have been the target of much criticism at the global level, by becoming the symbol of irresponsible globalization in terms of the possibility of human rights abuse, environment deprivation and unfair wealth distribution between northern and southern countries. In particular, because of the relative significance of their size and revenues in emerging economies, MNCs have been the recipient of many expectations, such as road and infrastructure building, teaching children, promoting vocational training, etc. These requests, expressed by local constituencies, generally encompass responsibilities that are often assumed by governments in northern countries (Jenkins 2005).

The rise in expectations towards MNCs – which grew during the late 1990s – mainly, concerns two factors: the acknowledgement of the limits of public development aid and the new imperatives related to sustainable development faced by firms today.

The 1960s and 1970s saw the strong involvement of developing countries' governments in creating the conditions for economies to take off, particularly by welcoming heavy capital investments. However, the ability of governments to succeed has been very limited, notably due to the high level of corruption, the instability of political systems and the lack of tax revenues that limited public funding. In the 1980s, under the influence of neoclassical thinking spread notably by the actors of the Washington consensus (the International Monetary Fund, the World Bank, and other northern-based development institutions), there was a shift away from state intervention in both developed and developing economies. A few years later, the failure of development policies, with the particular example of the Mexican crisis in the mid-1990s, put an end to economic growth-centered policies. This paradigm shift has opened the way to a more collaborative approach of poverty alleviation that embraces the poor themselves, as well as other stakeholders, including firms.

Growth of concerns regarding CSR in developing countries

In the 1990s, MNCs started to attract criticism of their global environmental and labor practices, mainly from activists based in northern countries (development NGOs, human rights organizations). Concerns began focusing on environmental and working conditions and addressed the effect of the presence of MNCs on the broader development of countries. CSR was perceived in negative terms, rather than as a vehicle to bring positive outcomes in regard to development (ibid).

In this context, the development of CSR practices by northern MNCs started to generate some interest regarding the role of multinationals as development agents. At the same time, market-based mechanisms began to regain some interest as potential vehicles for a more inclusive economy. Microcredit, in particular, whose origins lie in the first experiments of Muhammad Yunus in the late seventies in Bangladesh, has gained momentum and become, in two decades, a well-developed practice around the globe. This phenomenon has contributed to viewing market mechanisms as potential ways to alleviate poverty.

The role of MNCs in development has also been influenced by the recognition of the advantages that they have in managing these issues. Sharma et al (1994) show that most MNCs operate in developing countries with a long-term perspective, by developing local management skills and resources appropriate for guiding development policies. For the author, they should act as "strategic bridgers" that connect all the stakeholders affected by the

development issue (international agencies, governments, NGOs, etc.) and maintain their involvement.

Ultimately, the question of the role of firms in development takes two forms: one, framed in negative terms, regarding the responsibility of firms in respect to their environmental and social practices and wealth distribution; and the second, more positively formulated, regarding the role that firms can play in managing development issues.

The debate on the responsibility of firms regarding poverty issues has progressively moved closer to companies' core activities, along with the idea that CSR can contribute to the profitability of firms. Kolk and Tudler (2006) show how poverty alleviation can become a business strategy, especially for MNCs that have sales, production and sourcing activities both in developed (scrutiny of activists) and developing countries.

Consequently, the BOP proposal is nurtured by this twofold phenomenon: 1) the necessary questioning of MNCs' business models in developing countries, due to the emergence of a new competitive landscape, and 2) a change in expectations toward MNCs regarding their contribution to poverty alleviation, in particular through their core activities.

The next section seeks to identify how these new forms of justifications can be illustrated through case studies and uses the following analysis framework:

- What is the business rationale of the firm engaging at the BOP? What is the company expecting from the venture? How does it manage it and evaluate performance?
- What is the marketing strategy to address the BOP? Is the firm penetrating an existing market or contributing to the construction of a new one? If so, how is the investment in market creation carried out?

3 Strategies for the Construction of Markets at the BOP: Case Studies

3.1 Data collection and sample

The case study methodology involved collecting data on BOP projects from companies that have participated in the activities of the Ecole Polytechnique Chair in Business Economics. For this article, our sample includes three multinational companies from different sectors and with operations in different regions: Electricité de France (EDF) in Africa, Danone in Bangladesh, and Unilever in India. We started by collecting data for each company separately, before comparing the results and identifying differences and similarities in their strategies. This mainly consisted of primary data (interviews with managers), and secondary sources (presentations to conferences, reports, CSR reports). Different types of data were collected depending on the company. For Danone and Unilever, we reviewed public documents, reports, and websites, and completed this data collection with interviews with managers. Regarding EDF, results are based on a two-year research partnership that consisted of regular meetings and discussions with project managers, as well as the supervision of interns conducting fieldwork for the company.

An overview of the three companies is provided in table below.

Table 4: Overview of the companies

	Unilever	**EDF**	**Danone**
Headquarters	Rotterdam, Netherlands	Paris, France	Paris, France
Revenue (2008)	40.5 billion €	64.2 billion €	15.2 billion €
Employees	174 000	158 000	80 000
Sector	Healthcare, food and beverage	Electricity	Food and beverage

3.2 Hindustan Unilever Ltd: Capturing an existing demand

Hindustan Unilever Ltd (HUL) is the Indian subsidiary of the huge Dutch consumer goods multinational, Unilever. It has been operating in India since 1931.

In 2000, HUL asked consultants to identify drivers for new growth. Among the dozen projects that emerged from the survey, one received particular attention. Named Project Shakti (translated as “force”), the proposed venture concerned a sales and distribution initiative seeking to leverage the value from the Indian rural market.

The strategic approach taken by Unilever relies on the sales of personal care products (shampoo, soap, detergent) in single unit servings (sachets). The sales force is composed of a network of underprivileged rural women, known as Shakti Amma (“entrepreneurs”), who are selected from those rural communities in which they have to sell the products. These women are recruited among the participants of village saving and loans organizations (women-led cooperatives) that were initiated by NGOs and the Indian government to empower rural women.

Project Shakti comes as a response to the rapid change in HUL’s competitive landscape. Nirma, a local Indian leader, was establishing itself as the most powerful on the rural market; a market in which it has been operating since the mid-1980s. Nirma’s development strategy focused on selling low-cost detergent products to low-income urban and rural customers. Selling goods at just one fifth of the price of HUL’s, Nirma’s growing market share forced HUL to react.

Project Shakti is accompanied by two other initiatives seeking to reinforce HUL’s development: The company has also launched Project “i.Shakti” that entails the installation of small kiosks in rural villages to provide villagers with information about animal husbandry, vocational training, etc., and has strengthened its efforts to encourage healthy habits amongst local populations (hand washing, proper house cleaning, etc.).

Through the project, the company had already doubled its direct coverage in rural India (Singh 2004) in 2004. There are now over 45 000 Shakti women covering 135 000 villages across 15 Indian states (Jaiswal 2008). Unilever, the parent company of HUL, announced in February 2009 that it would take Project Shakti global, with new ventures in Sri Lanka and Vietnam.

From an economic standpoint, HUL has been successful in capturing value from the rural market. Although the strategy is combined with educating customers about the benefits of good healthcare, HUL entered a market with pre-existing demand: Nirma was becoming increasingly strong and customers were used to purchasing soaps and shampoo. Furthermore,

selling products in small sachets is something that has existed for decades in emerging economies where people, with limited income, buy goods for immediate consumption. In this sense, what makes this project interesting has little to do with the market creation dimension but rather with the idea that a multinational corporation is putting itself in the shoes of a local player and capturing an existing demand.

However, Project Shakti has attracted some criticism about its limited effects on income improvement for the women who earn their living from it. At almost 15$ per month, income from the project remains limited when considered on a daily basis. Suffering from a high turnover rate, HUL has still to improve the salaries of the Shakti women to keep them onboard (Hart & Simanis 2008, Simanis & Hart 2009, Gupta & Rajshekhar 2005). Authors recommend that HUL consider local manufacturing by the Shakti ladies, using HUL products, rather than merely supplying them with the final product. This would both increase the women's salaries and reduce recruitment costs for HUL (Simanis & Hart 2009), although it would represent a larger shift in the business model.

3.3 EDF: Building a new market through public partnership

With over 1 billion people lacking access to energy, providing electricity in rural areas in Africa is a huge challenge that has received attention from international agencies, governments, NGOs and the private sector.

EDF, formerly a French state-owned company, is the largest electricity production and sales company in the world. The firm has more than 15 years of experience in addressing the issue of access to energy amongst underprivileged populations.

The objective of EDF's "Access to Energy" program is to bring energy to those living in certain rural areas in Africa (Heuraux, 2009). In the 1990s, the program was managed with a philanthropic goal and entailed the provision of solar panels and wind farms to a number of impoverished villages in rural Africa. Later, in the early 2000s, EDF took a different stance by deciding to build local electricity companies, in which EDF, along with other firms and international agencies, would invest, to install individual electricity infrastructure and manage customer relations.

This led to the creation of seven local companies (in Mali, South Africa, Morocco, and Senegal) operating under local law, and run by local staff. EDF, along with other companies, is a shareholder for a 15 to 20 year period. Thereafter, the company will be transferred to local owners. The role of local companies is to sell electricity in rural areas through different technical solutions (diesel, photovoltaic, or a mix). All projects are conducted in partnership with authorities at the local and national level. Eighty percent of the initial investment (installation of the infrastructure) is provided by subsidies from international agencies and channeled by national and local governments to recipients. Customers only pay around 10% of the investment, as an incentive to properly maintain the equipment. Energy consumption, as well as equipment maintenance and replacement, is paid in full by customers to the local company.

At present, two projects have been handed over to local partners. At the end of 2008, 37 400 households had benefited from the program, which represents more than 240 000 beneficiaries.

EDF conducted an assessment of its business model to evaluate the impact on poverty and development. The survey showed that social progress is evident for customers but also for non-customers in the communities supplied. For those who receive solar panels, the project enables them to shift their consumption from traditional fuels (candles) to renewable energy. Energy consumption in the consumption basket of these customers stays stable but there is no increase in revenues because of electricity. The development of small home-based businesses is only noticeable when the electricity is distributed by grid or produced through diesel engines.

Contrary to expectations, however, EDF also found that the scheme has not encouraged the launch of small businesses related to electricity equipment maintenance.

By targeting rural areas in Africa, EDF has had to address several challenges: the absence of the habits of local populations in regard to electricity usage, the lack of education on how to use energy and the trade-off between the cost of the equipment and its potential usage for small businesses. In developing its business model, EDF has sought to address the demand and the supply side of market creation. Regarding supply, EDF has attempted to build the whole value chain, through the development of local companies, and the involvement of local and international institutions. While the demand for the installation of more infrastructure did

exist, this demand was limited by the institutional challenges related to the project (subsidizing of the installation by national and local governments). However, EDF has tried to respond to people's aspiration for greater comfort through modern energy.

3.4 Danone: Co-building a new market

Danone is a global food products company with a leadership position in the manufacture of bottled water, dairy products, baby food, and beverages. The company has a long-standing tradition of social responsibility, as the historical "double economic and social mission" of the company recalls.

In 2005, following an initial meeting between Danone's CEO, Franck Riboud, and Grameen Bank's founder, Muhammad Yunus, Danone decided to launch a joint venture – "Grameen Danone Limited Food" – with the bank, in Bangladesh. The goal of this venture was to address the problem of malnutrition through the development of access to low-cost yogurts for poor Bangladeshis.

Danone devised and built its first yogurt production plant in Bogra. The plant was designed to be as low-cost as possible (representing an investment of around 0.7 m € – just one tenth of the cost of a typical Danone production plant) and tailored to be operated by local, low-skilled workers. Danone also developed a new type of yogurt, adapted to local milk production, and reinforced with nutrients.

On its side, Grameen Bank was responsible for the upstream and downstream element of the business model, by building a network of dairy farmers, and setting up groups of door-to-door saleswomen.

More than 500 women are now involved in the distribution of cups. Around 40 000 cups are sold every day. Around 10% of the sales are given to the women, who earn, on average, 30 dollars per month.

In 2008, Danone finalized its strategy with the launch of a fund, known as "Danone.Communities", which attracts investment from employees, shareholders, and the general public. So far, almost 70 million euro have been collected. Ninety percent of this amount is placed on socially-responsible markets, while the remaining 10% is allocated to

capital investment in small business ventures in emerging countries. It is also intended that the fund be used to replicate the Bogra pilot in other areas, both in Bangladesh and abroad.

The Danone case illustrates how the company is trying to develop a complete business ecosystem that includes both suppliers and distributors. Building a milk supply chain from scratch in areas where milk is not processed but consumed fresh, represents a rather extensive accumulation of challenges: identifying milk producers, installing incentive schemes to have them supply the plant and breeding livestock to keep with market growth.

The partnership between Danone and Grameen enables each partner to remain focused on the activity for which it has the most appropriate resources: Danone has developed a new, low-cost plant, invests in R&D to come up with the nutritive yogurt and brings its expertise in operational management. Grameen concentrates on managing loans, developing the skills of farmers and training the Shakti ladies who distribute the yogurts door-to-door.

4. Discussion on MNCs' Market Strategies at the BoP

The three case studies illustrate the diversity of the market strategies that exist at the BOP. In the case of Unilever, the company has tried to penetrate an existing market (rural shampoo and soap distribution), already occupied by a competitor. To enter this market, the company has changed its marketing and distribution approaches, but slightly adapted the product for distribution to low-income consumers. The Danone Grameen case illustrates the creation of a market, by both creating the demand for a new product that did not exist in the area, and by developing an innovative and responsible supply and distribution value chain. As for EDF, the company has introduced a new product in the given areas – modern energy – to replace traditional energy sources. In this sense, EDF builds on the existing demand for energy, and seeks to replace the product offer.

The next paragraphs provide key findings based on the comparison between the three case studies; first between Danone and HUL and then between these two companies and EDF.

From market capture to market creation

The comparison between Unilever and Danone is relevant as both companies operate in the fast-moving consumer goods industry. Each company has placed strong emphasis on improving their products' affordability by producing low-cost and single-serving items. They both use networks of women to distribute these products in remote areas, thus reinforcing accessibility for rural populations. Additionally, in both cases, the firms benefit from the existence of local institutions that contribute to the projects' success. Danone relies on Grameen Bank's expertise and networks to develop the skills of new farmers and to organize the distribution system. HUL benefits from a more informal institution - the existence of dense networks of entrepreneurial women across India.

However, significant differences exist between the HUL and Danone-Grameen business models, that illustrate two broad types of BOP market strategies: a defensive strategy, in the case of HUL, that aims to capture existing markets on the one hand; and a more "pro-poor" strategy, with Danone, that seeks to create new markets and develop the capabilities of new firms on the other. These two strategies respond to different market situations, and differ in terms of underlying assumptions, business model formulation, and management.

The Unilever case demonstrates a BOP project based on a defensive reaction to a competitive threat, in which a firm builds on its existing product range and brand goodwill. The firm benefits from the existing demand for soap and shampoo, with customers used to buying products in sachets. Although this venture also carries an undeniable social dimension, contributing to the standard of living of thousands of impoverished women, the pro-social innovations of the business model concern a rather limited part of the value chain (distribution). Criticism expressed about the social impact of the HUL venture converges with this idea of extending the spectrum of beneficiaries (Hart & Simanis 2008). In contrast, the Danone-Grameen venture represents an interesting illustration of a project designed to create a wide range of impacts and one which brings innovation along the business's entire value chain: product design and manufacturing, distribution via the network of Grameen women, as well as milk supply. Through this new business model, Danone builds a new market in which customers do not have specific awareness about the product. The company seeks to understand how to create a market from scratch, introduce the need for a new product and simultaneously build the whole value chain.

The outcomes of the two business ventures are also different in nature. HUL's goal is to counteract the expansion of a growing competitor. Criteria of success are then linked to this goal: the firm attempts to fine-tune the business model, gain market share and replicate it elsewhere. For its part, Danone has not launched the joint venture pilot in a country in which it already operates, but has created a "demilitarized area" where both partners innovate based on shared rules. For Danone, the objective of reinvesting profits in the venture – required by Grameen – has been accepted as a starting principle. Lessons learned are the central objective of the venture. For instance, Danone has learnt how to produce low-cost items and sell them the same day without refrigerated storage. This, for instance, could benefit Danone's activities in more typical markets, or be reused in the expansion in developing countries. Ultimately, Danone has learnt how to extend its customer base and build a leading position on these markets.

Differences in terms of strategic objectives have consequences on how the project is embedded in the organization. The Danone project is voluntarily managed by a separate entity and in a country in which the company has not previously operated. The specific ownership structure (joint venture between a social enterprise and an MNC) also allows for a lower return on investment than Danone alone would expect. Danone made clear from the beginning that it was not expecting financial returns. From a financial standpoint, the development of Danone-Grameen does not burden the Danone group's financial results. Indeed, the Danone Communities Fund for the Danone group is a way to let investors, who agree on below-market returns, fund the project's development. Ultimately, the Danone case demonstrates how a firm can acquire new knowledge to create BOP markets and introduce organizational innovation (venture fund, social committee). In this sense, Danone is both preparing the creation of new markets and changing business models by exploiting the partnership with Grameen as a change management lever.

Table 5 provides a synthesis of the two broad types of BOP strategies.

Table 5: Types of BOP strategies

	Market capture (E.g.,: HUL)	**Market creation** (E.g.,: Danone-Grameen)
Market situation	Existing markets to capture	Markets to be created
Underlying assumptions	Poor as consumers	Poor as consumers and business partners
	Solving poverty issues	Preparing sustainable products for tomorrow's markets
Business model	Limited adaptation in business model	Partnership to combine capabilities
	Search for a "one size fits all" approach	Local adaptation and experiments are key
Management	Managed as part of the organization	Special project with separate team and budgets
	Assessment based on mainstream financial criteria	Lessons learned to provide strategic flexibility

Costs of market construction

In focusing on rural areas, EDF has targeted one of the most difficult and unexplored segments in the electricity market for the BOP. A recent report illustrates that many ventures have offered solutions in terms of access to clean and cheap energy, but that these ventures mainly address the needs of urban BOP populations, who use electricity for comfort purposes (Hystra, 2009). On these markets, existing firms have been able to concentrate the atomized demand, provide electricity through grids and expand.

The business situation of EDF brings challenges in the three dimensions of market creation: awareness, accessibility, and affordability. Local electricity companies have to convince rural populations to use modern energy solutions, teach them how to use them, maintain their infrastructure and channel the subsidies to reduce equipment costs for consumers.

In contrast with the two other cases, EDF's venture raises two types of issues with both the extent of financial investment needed to create the market, and the identification of who pays such subsidies. In developed countries, governments used to pay the initial costs of market creation by building public electricity firms and setting up the infrastructure. In developing countries, where institutions are weaker and the collection of taxes more limited, governments lack resources to develop electricity market infrastructure.

To address the initial cost of market creation, EDF has built a consortium of funding agencies and channeling bodies to reduce the cost of infrastructure. In doing so, the company faces challenges in the provision of subsidies to end consumers, which ultimately limits the growth of the customer base. The role of public authorities is central to identifying clients and channeling subsidies, and their default jeopardizes the sustainability of the ventures. Although difficult partners, public authorities – local, national, or international bodies – are necessary intermediaries in the provision of electricity to the poor. The idea of pure market-based responses to the provision of utilities in rural areas is highly challenged by this example.

The question of the cost of market creation differentiates the three case studies. HUL has very limited costs to cover to reach the BOP market, as the demand and the distribution system already exist. The construction of markets is addressed in the Danone case directly by the firm, through some private funding via Danone.Communities. The comparison between EDF and Danone shows two strategies of market development – one bringing public authorities, and the other private bodies, only. In the EDF case, where the market also needs to be created, the company enters partnerships with public and international organizations. While such partnerships are necessary to lower the cost of creating the market ecosystem, they also bring new risks to the project, in terms of coordination failure and disagreements between partners.

These three case studies lead to the distinction of different types of markets:

- Fast-growing markets that can be tapped directly by firms and that do not require extensive social strategies, as illustrated by HUL.
- Growing markets resulting from a business investment to create them, as illustrated by Danone-Grameen.
- Challenging markets that require huge investment and the involvement of international agencies and philanthropists to build the market, as illustrated by EDF.

Financial vehicles – whether public or private – to develop BOP programs are still very limited, although this sector is growing (IMS 2009). The Agence Française de Développement, for example, has launched a new fund, “AFD Avenir Durable”, in partnership with Crédit Agricole Asset Management, which is entitled to finance the growth

of development projects in developing countries. Some private funds, such as the Belgian company BlueOrchard, invest in microfinance organizations that strengthen the network of possible partners for MNCs. The Swiss fund, ResponsAbility, is now also starting to directly invest in BOP projects.

While private companies have thus far been the main or even sole contributors to the funding of BOP ventures, a number of innovations in funding mechanisms are emerging, with the development of more interlinked public and private solutions. The case of the Mexican cement producer, Cemex, provides an illustration of possible new funding arrangements, where partners concentrate on their core competencies. Since the late 1990s, Cemex has self financed a BOP program, “Patrimonio Hoy”, that provides microcredit to low-income populations who want to extend their house. Recently, the company has launched a new initiative, known as Mejora tu Calle (“Improve your Street”), that seeks to provide microcredit to groups of neighbors who want to enhance their surroundings. Interestingly, Cemex has joined up with the Inter-American Development Bank to finance this BOP venture. The company concentrates on managing the initiative, working on the distribution and product issues, while the bank provides the funds and part of the financial guarantee.

Conclusion

The tempting idea that huge business opportunities are there for the taking at the BOP has enabled managers and executives to consider poverty in a positive manner. Our case studies illustrate, however, that markets at the BOP do not necessarily exist – rather they are at different stages of development. A number of markets, such as basic consumption goods (shampoo, soap, etc.), do already exist, while others (rural electrification and dairy products) need to be created.

Consequently, the challenge for firms is all about distinguishing the segments that are already mature from those that are not, and implementing the strategies that fit with the segment’s level of maturity. This article has outlined two types of strategies, depending on whether the market exists or needs to be built. In line with the idea that some markets have to be created, further research should be conducted on how private companies, financial institutions and public authorities can collaborate to achieve the emergence of markets that serve the poor.

The idea of constructing markets shifts the way firms' involvement at the BOP should be envisioned. Rather than a short-term strategic move to capture new demand, engaging in the process of building markets is a long-term effort. However, the question of how this market creation process also constitutes a learning opportunity to develop innovative and responsible solutions for mass markets, such as middle class markets, should be better analyzed[4].

[4] The chapter 3 seeks to answer that question by analyzing under which conditions market creation strategies are sources of innovation and learning for the firm.

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II. A Long Road to the "BOP". Organizational Change and the Search for Success at the Base of the Pyramid: The Case of Lafarge

To what extent and how does a multinational corporation (MNC) adapt its strategies and organizational capabilities in order to address markets at the Base of the Pyramid (BOP)? In an attempt to answer this question, this paper builds on the results of a three-year action-research program conducted with Lafarge, a global building materials company. Building on an analytical framework proposed by Simons (1995), the chapter thesis proposes a strategic framework which opposes two types of approaches: a licence-to-operate approach, and a business opportunity-seeking approach. The thesis shows how Lafarge moved from the first to the second approach between 2007 and 2010. It analyzes the factors which enabled this change and, in particular, the role of two Indonesian pilot programs of access to housing which contributed to the construction of more than 800 houses. These programs illustrate two forms of business strategies with market capture and market creation and enable us to highlight the importance of local specificities in the choice of strategies, as well as the organizational implications of each approach.

To what extent and how does a multinational corporation (MNC) adapt its organizational capabilities in order to address Base of the Pyramid (BOP) markets? Early articles relating to the concept of "Base of the Pyramid" have emphasized the idea that MNCs own the necessary capabilities to address low-income markets and contribute to poverty alleviation (Prahalad and Hammond 2002, Prahalad and Hart 2002, Prahalad 2004). However, a second generation of articles has begun to highlight the need for MNCs to dramatically change their business model and develop new capabilities, i.e., new ways of assembling their resources and competences (Barney 1991), in order to address this market segment successfully (Hart 2005, Hart and Christensen 2002, Hart and Simanis 2008, Vermeulen et al. 2008). While most of these articles have emphasized the need for MNCs to adapt their capabilities and strategies, there is a lack of documented cases which illustrate over a long period why a company changes its market approach to address this segment and how it gets organized.

To address these questions, the paper builds on the results of a three-year action-research program conducted by the author when employed as a researcher by Lafarge, a global building materials company. The article analyzes the change that took place within Lafarge over the research period (2007-2010) with regard to the firm's approach to the BOP. While at the beginning of the research period, most top executive managers doubted the idea that the BOP segment was a business opportunity, comforted in their opinion by a number of failures that the firm faced in developing BOP programs, three years later there was a growing consensus among them that "the market opportunity at the BOP is big". Several BOP programs had been launched in different countries; in particular, two projects launched as part of the action-research collaboration in Indonesia, impacting more than 800 low-income families. At the end of the research period, the company had set up a dedicated organization to systematically address this segment in 12 countries.

To analyze the organizational change which took place in Lafarge over the research period, the paper draws on an analytical framework proposed by Simons (1995), which distinguishes four types of levers of control which shape the elaboration and implementation of a business strategy. Through these lenses, change within the organization at the business unit and head office level is analyzed, and particular attention is paid to how the action-research contributed to this change.

The paper is structured as follows. The first section reviews articles related to organizational change in the implementation of BOP strategies, and introduces Simons' analytical

framework. The second section presents the action-research setting, as well as the context at the beginning of the research collaboration and after. The third section summarizes the development of two pilot programs in Indonesia. The fourth section analyzes the change in Lafarge's perception of the BOP between 2007 and 2010 and the role of the action-research collaboration, both in Indonesia and at head office, to achieve this. The fifth section identifies the challenges in embedding BOP market strategies in the organization. The article concludes with a model of the firm's engagement with the BOP, showing how this engagement is transcribed in the belief, boundary and management control levers.

1. Organizational Change in the Implementation of Base of the Pyramid Strategies: A Theoretical Framework

Organization change can take many different forms – from the broadest, more conceptual level, such as a change in mindset, culture or strategy, to the most concrete, such as change in organizational charts or job activities (Mintzberg & Westley 1992). While most of the literature has focused on the "concrete" change in activities that is required to address the BOP, this section proposes a more integrative framework for understanding organizational change, both in terms of mindset and capabilities in the implementation of BOP strategies.

1.1 Adapting or not to reach the BOP

Building on the Resource Based View of the firm's framework, the literature on the BOP has focused on the concrete change in the capabilities of firms starting to address the BOP (London and Hart 2004, Seelos 2008, Vermeulen 2009). This management theory explains that each firm is a collection of unique resources and capabilities that form the basis of its strategy and financial performance (Barney 1991). The capacity of deploying resources (such as knowledge, human resources, networks, etc.) to perform an activity in an efficient way is referred to as a "capability" (ibid). When facing a situation in which the current set of capabilities does not allow the firm to perform on a market, it can choose to acquire new capabilities through joint ventures or company acquisitions, or to develop them through R&D, for example (Sirmon, Hitt and Ireland 2007).

The literature on the BOP has defined two broad ways of managing capabilities when entering markets at the BOP.

- One form of strategy consists of leveraging existing capabilities by slightly modifying the MNCs' mainstream business model to deliver products or services in new geographical areas (Seelos 2008, Hart & Simanis 2008). As shown in the first chapter, this approach is more related to a market capture strategy of existing BOP markets.
- Rather than redeploying, the second option is for a firm to develop new capabilities which fit market conditions. To do so, firms need to acquire the knowledge and resources that enable them to overcome the challenges in targeting the BOP. London & Hart (2004) demonstrate that strategies targeting the BOP require firms to develop a new capability that they call "social embeddedness" and which they define as "the ability to create advantage based on a deep understanding of integration with the local environment". Hart & Simanis (2008) show the limits of market capture strategies in terms of impacts on low-income consumers and argue that market creation strategies are preferable over market capture strategies and should be built on tailor-made solutions developed at the local level, by involving low-income people. In the same vein as Hart and Simanis' articles, most of the literature emphasizes the need for firms to develop new capabilities by innovating for this new market segment (Prahalad 2004, Hart 2005, Hart & Christensen 2002, Simanis 2008).

However, while the literature emphasizes the importance of adapting organizational capabilities to reach the BOP, the case for change suffers from two limitations: first, the identification of triggering factors that set off the change and, second, the magnitude of the change and its impact on the MNCs' competitive advantages on this market.

Why does change take place?

The literature on the BOP has emphasized the challenges firms face in trying to address the BOP as a market opportunity. A recent study by Olsen & Boxenbaum (2009) identifies types of organizational barriers in the implementation of BOP programs. They highlight that in the implementation of programs, conflicting mindsets appear between local units and headquarters. For example, while managers at the local level understand BOP programs in a "trade-off mindset", the magnitude of the benefits for low-income customers and the profitability of the program, managers from headquarters, mostly in Sustainability departments, only see "win-win" situations in BOP programs. The implementation of BOP programs also implies radical changes to routines in order to implement new business

models. Incentive structures for local managers, as well as performance indicators which manage to capture the social and business dimension of the ventures, are either lacking or inadequate.

While this literature does highlight the challenges involved in change, no article exists that describes how a firm's management begins to become convinced that the BOP market is, in fact, worth overcoming these challenges. In particular, the literature generally takes it for granted that managers perceive the BOP as a business opportunity, and as Olsen & Boxenbaum (2009) suggest, there is a need to understand the change in the mindset and the culture with regard to the BOP.

How much change is needed?

The literature on the BOP contends that MNCs need to develop local solutions to create markets that serve the poor. However, the development of local solutions on each market is somehow at odds with the competitive advantage of MNCs which derive from their capacity to develop global knowledge, transfer it across countries, replicate solutions (Winter and Szulanzki 2001) and achieve global scale efficiencies (Bartlett and Ghoshal 1989). The question of to what extent a firm needs to adapt its capabilities to systematically address the BOP is then central to understanding the possibility for MNCs to address such markets on a large scale.

This question echoes a central and longstanding theme in the literature on organizational change and learning, namely the need for firms to either exploit current resources or explore new opportunities. To confront a new environment, should a firm explore new capabilities to adapt its business model and enter a new market, or should it exploit its existing capabilities by slightly adapting them? This tradeoff between *exploitation* and *exploration* has received significant attention since this conceptual distinction was first introduced by March (1991). Exploration refers to the search for innovative ideas, flexibility and discovery. In contrast, exploitation is defined as "the focus on core competencies and existing resources" (ibid). The subsequent literature on exploration and exploitation has emphasized the risks of focusing too heavily on either alternative. Exploration shifts the company away from its core competences. This can be destructive, with search and change "leading to failure, which leads to even more search, and so on" (Levinthal and March 1993). This risk exists for MNCs, who may get lost on the road to the BOP by repeatedly inventing products and solutions disconnected from their core business, thus with the difficulty of embedding the solution within the portfolio of

products and the mainstream organization. Conversely, the focus on the exploitation of existing capabilities leads to core rigidities that render the firm unable to adapt to the environment (Leonard-Barton 1992). In the case of BOP programs for MNCs, such rigidity is illustrated by projects insufficiently innovative to meet BOP consumer needs.

Strategic management researchers have attempted to find solutions on how to combine sufficient exploration to ensure the organization adapts to its new environment and sufficient exploitation to ensure the needed performance. It has now become a tautology to say that firms need to be *ambidextrous*, meaning being able to combine exploration and exploitation activities in order to change successfully (Gupta et al. 2006; O'Reilly & Tushman 2004).

1.2 Understanding organizational change through Simons' control systems

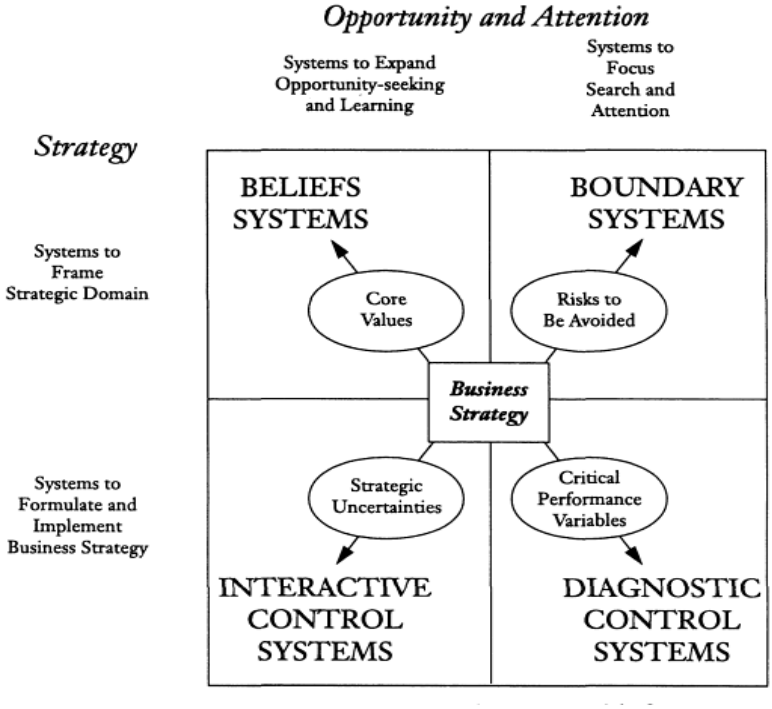
To understand the triggering factors to change ("why?") and the magnitude of change ("how much?"), it is then important not only to focus on the concrete change in the organization but also on the mindset aspects which are often neglected in organizational change studies. To do so, Robert Simons' levers of control provide an interesting framework for analysis. In his 1995 seminal book, Simons defines an analytical grid of a firm's strategy which describes both the cognitive framework (mindset, culture) which leads to the formulation of a strategy and the organizational capabilities which are leveraged and controlled for the implementation of this strategy. Altogether, the "belief", "boundary" and "management control" systems of Simons provide a comprehensive framework for analyzing a change in strategy (Arjaliès & Ponssard 2010, Simons 2010).

First, Simons' grid captures how an organization ensures through *management control systems* that managers comply with the implementation of an intended strategy. *Diagnostic control systems* exist in order to get the job done by measuring how managers' actions contribute to the implementation of the strategic plan. This takes the form of reporting tools, key performance indicators (KPIs) and incentive schemes to reduce the uncertainty related to the alignment of daily practices with top management decisions. In March's (1991) terminology, these systems ensure that the organization exploits its existing capabilities (Simons 2010). In contrast, Simons (1995) labels *interactive control systems* the processes and decisions that give managers sufficient flexibility to envision a new positioning of the firm, which in turn may result in the emergence of new strategies. This can be illustrated by the self evaluation of objectives, or by the allocation of specific budgets or reward schemes

dedicated to “out of the box” thinking. This approach to management control is there to ensure that the organization explores new capabilities (Simons 2010).

The particular interest of Simon’s grid is that is also capture two other dimensions related to the “soft” dimension of change, the mindset, putting management control systems in a wider analytical framework. These two systems, the *boundary* and *belief* systems, contribute to framing the strategic domain of the firm by creating the cognitive framework within which actions are permitted or not. *Boundary systems* set the “rules of the competition for the company, by the core area on which managers have to focus search and attention” (p.157). The positioning of the firm within its industry chain and how it defines its core business is an example of a boundary system. Finally, *belief systems* encapsulate the core values of the firm and “empower and expand opportunity seeking” (ibid). The idea that innovation is key to the development of a firm, or that safety is a core value, are examples of belief systems.

Figure 5: Business strategy and Simons’ levers of controls (Simons, 1995:157)



Through the lens of Simons’ four levers of control, the article analyzes the change in Lafarge’s approach to the BOP and its triggering factors.

- What are the changes in the boundary and belief systems needed to engage at the BOP? How does this happen?
- Does a diagnostic control system (resp. interactive) impede (resp. favor) the development of BOP programs?

2. Lafarge and the BOP: Research Context and Method

Lafarge is a leading global company in the building materials industry, with cement, aggregates, concrete and gypsum production operations in 78 countries. The company has been cited and awarded many times for the interest it pays to sustainable development issues (Acquier 2007). As far as social aspects are concerned, the company has also been involved in housing projects for underprivileged people both in northern and southern countries. For example, the company had a partnership agreement with nongovernmental organizations (NGOs), including Habitat for Humanity, with whom it worked to build houses in Poland, Romania and the US. In many countries (e.g., Nigeria, Cameroon, Morocco, India), as part of its Corporate Social Responsibility practices, the company provides housing to families living close to its production sites. The company provides materials free of charge and some of its employees also volunteer in the construction process.

Up until 2007, Lafarge had a certain amount of experience in developing projects targeting low-income consumers in China, India and South Africa, but none of these projects had become a major opportunity for the firm. Two of them even had to be terminated. At the same time, a program was launched by Cemex, one of Lafarge's main competitors, and addressing the BOP segment was gaining in popularity. Known as Patrimonio Hoy, this initiative consisted of providing access to microcredit to low-income consumers who can then purchase materials and build their house progressively (a description of this program is provided in the appendix). Started in 1998, this initiative has reached 30 000 customers per year and is said to have generated approximately 10 million dollars of sales for Cemex (Segel & al. 2006).

In this context, I proposed the idea of building a doctoral collaboration on the topic of the BOP to the Vice President of Strategy and Development. The research question was then formulated as follows in the Ph.D. research project description: "Evaluate the business potential of the BOP segment for Lafarge and gain a better understanding of the business models at work: what makes these projects successful or not, and to what extent can they be scaled up and duplicated?" I was then placed under the responsibility of this person.

2.1 Lafarge's long road to the BOP consumer

According to UN Habitat (2008), over one third of the urban population lives in a dwelling that poses a risk for life and health. For those on low incomes, a house is more than a shelter

– it is a productive asset in which home-based enterprises can be developed to contribute to the family's revenues. A house can also be used for collateral and can constitute an intangible asset giving the family social status in the community and a base for self-confidence.

While access to housing is a key dimension of poverty, the role of a building materials producer is less evident. Lafarge' business model (as for most large cement manufacturers) is focused on the production of materials (cement and concrete), and the company mainly sells to local distributors on the "door step" of its production sites, without entering the distribution chain itself. The notion of "customer" for a building materials company is then applied to contractors or distributors who purchase large quantities from the plant, or to the masons who buy the product from retailers stores. Thus, the BOP end-user, who lives nearby remote retail stores and who buys in small quantities for progressive home improvement or extension, generally remains outside the scope of firms' marketing studies.

Based on the table introduced in Chapter 1, three types of challenges can be identified in the access to the low-income customer for a building materials company: institutional challenges, competition challenges and product challenges (affordability, accessibility and awareness).

- *Institutional challenges* in the emergence of BOP housing markets are major and their importance varies strongly, depending on location. Housing economists, mainly those from the World Bank, have shown, for example, how the inefficiency and inaccessibility of mortgage finance for the poor impedes house acquisition and improvement (CITER). The lack of land available, as well as speculation in some areas, also constitute major factors that contribute to the housing issue. Other economists, such as de Soto (2000), explain that the inexistence of land secure tenure in most countries impedes the poor from getting value out of their house, accumulating assets and lifting themselves out of poverty. These institutional dimensions may seem difficult to address for a materials producer.

- *Competition-linked challenges* also deter building materials companies from addressing on a large scale the low-income segment. Indeed, most emerging countries offer huge market opportunities for the top-tier of consumers, with the construction of luxury compounds or high rise buildings, for example. Thus, the incentive to look for alternative markets at the BOP may be very limited in situations where production is sold out.

However, building materials producers are often criticized by NGOs and governments of some emerging countries for the high cement prices charged to the end-user. In most developing countries, building material producers remain the only private and (often) foreign company involved in the construction value chain, thus concentrating the attention. The response to these criticisms that tends to highlight the difficulty for a building materials company to contribute to a major and stable reduction of construction cost turns out to be challenging for at least two reasons. First, cement is sold through distributors who transport and store it before selling it to the end-user. Thus, the ability for the firm to influence price strongly depends on the intermediaries in the value chain. Second, cement is only one material among others, representing only up to 15% of the total cost of construction. Consequently, any change in cost of cement would have no effect on the cost of construction.

Taken together, these challenges contribute to framing the "belief system" about this topic, as an external constraint linked to the firm's licence-to-operate.

2.2 Lafarge and the BOP prior to the research intervention

Prior to the research intervention, the BOP issue was mostly perceived as a social issue that the firm tried to address in some areas by implementing programs intended to satisfying local expectations.

In 2005, the South African subsidiary entered into a partnership agreement with the government to provide cement and concrete for government housing projects (a full description of the case is provided in the Appendix). The government pledged to deliver over two million houses for those on low incomes by 2010. Lafarge's role was to supply cement at a fixed price and to provide a number of additional services (on-site construction manager, safety and HIV training, etc.). The company also worked with the South African government to develop new housing construction systems which would speed up the construction process, the new systems requiring more value-added products. Through this partnership with developers and the government, Lafarge supplied materials for the construction of approximately 8 000 houses between 2007 and 2010. This achievement was perceived by management as satisfactory in the way it improved relationships with government authorities, but the ability to grow the number of projects and to convert them into a major business opportunity was judged low. Indeed, because of bureaucracy, government authorities were very slow to pay contractors, causing delays in the delivery of housing.

Prior to the intervention, two projects were launched by Lafarge business units and involved going beyond the mere provision of materials, by entering the construction design itself. However, these two initiatives received no support, and when faced with initial difficulties, were stopped.

In 2006, the various business units operating in China launched a joint project focusing on the construction of a rural, collective house. At that time, the Chinese government had introduced a reform to keep as many people as possible in rural areas to reduce the migration to cities. To achieve this objective, the government promoted the construction of collective houses in semi-rural areas. Lafarge erected a two-storey show house for this market. However, upon completion, the project had to be abandoned because the construction system proposed by Lafarge did not appear to comply with local regulations.

In 2007, the Indian subsidiary of Lafarge launched a housing solution intended for sale to people living in rural India. This bricks and mortar house was designed to be very low-cost. The house's design was straightforward so that it could be built by rural masons lacking the necessary skills to build more complex houses. However, a few months after the launch, the first customers began complaining about cracks appearing on the walls. As a result, the business unit had to repair and rebuild a number of houses. The failure in India brought home to business unit managers and group executives why Lafarge should not go downstream and set up as a constructor to promote low-income housing, and should instead consider the BOP as a corporate social responsibility (CSR) imperative.

In the terminology of Simon's levers of control, the "belief system", i.e., how the BOP segment was perceived, relied on the idea that it was a constraint external to the firm's business model. Responses which were accepted were then public-relation programs, in the countries were the firm wanted to particularly demonstrate its sense of citizenship. However, as these programs were perceived as reducing margins, they were not expected to become a mainstream practice. Moreover, in 2006, Lafarge's top management placed strong emphasis on the core activities of cement and concrete production, as the company had recently sold its specialty materials as roofing divisions. As a consequence, when attempts to address the BOP as a business that went beyond the "boundary" of the firm were launched, i.e., the core set of activities, business units received no support.

2.3 Situation after the research intervention

At the end of the research period, the perception of the BOP had dramatically altered. Demonstrating a change in the "belief system", the term "affordable housing" was now used to refer to the business opportunity with low-income people – perceived as very large, both in northern and southern countries. Top management strongly supported these initiatives when visiting countries identified as being in line with the new strategic priority that the firm was putting on new business development. In turn, several businesses started to launch affordable housing programs as part of their marketing or sales activities in India, Honduras, France and Algeria.

The two contrasting situations are summarized in table below using Simons' four levers.

Table 7: Lafarge's perception of the BOP in 2007 and 2010

	2007 **"Not a business opportunity"**	**2010** **"A business opportunity"**
Belief system	BOP is part of CSR activities	"Affordable Housing" as a business opportunity
Boundary system	Focus on core business and cost reduction	Aligned with new strategic focus on new business development
Management control system	BOP programs downgrade key performance indicators	Becoming more interactive: Innovative programs in some countries Top management support and dedicated organization Leveraging R&D capabilities

The next sections seek to explain how the company moved from stage 1 to stage 2 and how this change was triggered and reflected by the action-research collaboration.

2.4 Method of action-research and deliverables

Action-research (AR) is a research method which aims to "contribute both to the practical concerns of people in an immediate problematic situation and to the goals of science by joint collaboration within a mutually acceptable framework" (Rapoport 1970: 499). This means that the researcher is embedded in the organization and contributes to generating the phenomena that are intended to be analyzed though his/her research activities. Under this methodological paradigm, hypothesis and data are then not only obtained but also created through collaboration between the researcher and organization's members (Aguinis 1973, Susman & Evered 1978).

The action-research collaboration started in 2007 and the research contract terminated at the end of 2010 – the period focused on here (although I continued working for Lafarge beyond this period).

The method of data collection in AR consists of generating data directly with the members of the organization. Thus, during the course of the AR period, due to the number of interactions with colleagues and external parties, interviews were not recorded. To overcome this difficulty, a strong emphasis was placed on written documents in order to analyze people's reactions and to more easily identify the change taking place in the perception of the topic.

The content of the main documents and their impact on the organization is presented in the appendix of this chapter. Two types of documents can be identified and are listed in the Appendix:

- Lafarge internal documents (notes, presentations, excel sheets)
- Research documents (scientific articles, notes, conference presentations).

For each document, an indication is provided about how it was used in the research activities and/or in the actions taken by the company.

The action-research collaboration took place at two different levels:

- At the headquarters of Lafarge, with daily interactions with top managers and executive managers
- At the business unit level in Indonesia, with nine one-month periods in the field from 2007 to 2010.

3. Action-Research in Indonesia and the Construction of two BOP Programs

In September 2007, the general manager of Lafarge's business unit in Indonesia asked for support from Lafarge's Strategy department to identify how business models could be developed to address what was then called "low-cost housing". The initial meetings confirmed that the idea was to develop projects to address the needs of low-income families and help them improve their standard of living. While the business unit was experiencing troubles with the communities surrounding its plant, it was made clear that the goal of the program was not to address CSR issues.

A first visit to the field was organized in December 2007. Two markets were proposed for study: one in the northernmost part of Indonesia (Banda Aceh), and the other in the capital of North Sumatra (Medan). Prior to the market assessment in the two areas, a method of market assessment was defined, which built on the results of a consulting mission undertaken by Ashoka. This protocol proposed several dimensions that should be covered to gain the full picture of the housing issue and possible solutions in the area: land and property rights, distribution and marketing, construction techniques and financing (Ashoka, 2006). Questions were prepared to obtain pieces of information for each of these dimensions. In the field, interviews were conducted with approximately 30 key respondents on each market, including homeowners, commercial banks, microfinance institutions, masons, building material retailers, local and international NGOs, as well as village leaders and local ministry representatives. Internal interviews were also conducted with the people at the headquarters of the BU in charge of sales and logistics, communication and CSR, and also at the plant with the plant manager, production manager and general affairs officer. After this first period of market assessment, the business unit's management decided that both areas should continue being investigated. A member of the marketing staff was appointed to further investigate opportunities in the Medan area.

The next paragraphs describe the two programs that were developed in the business unit. For the program in Medan, my role consisted of accompanying and challenging the local resources, once the first visits were conducted. Regarding the program in Aceh, I was responsible for its development and implementation from the beginning up to the handover in late 2010.

3.1 Case 1: Social housing in Medan

Medan is the capital city of the northern part of Sumatra Island and home to the headquarters of Lafarge Cement Indonesia.

In late 2007, the Sales department set up interviews in the city with developers operating in the area. Developers explained that they were reluctant to build houses for low-income people since in order to receive subsidies, they had to build houses at a maximum price of about US$ 5 000. As they were unable to produce a large quantity of houses at this price, they used only to construct a few houses between major construction projects – periods in which their contractors and masons were unoccupied. The idea that emerged from preliminary meetings with developers was to jointly design a low-cost house which could be built faster, reduce wasted time and save products. Ultimately, this should improve margins and maintain the price below the maximum amount set by the government. One of Lafarge's sales staff proposed the idea of a new kind of concrete block designed to facilitate construction. The blocks would connect like Lego, with a special connection in the corners enabling the fast pouring of concrete. Although this idea grabbed the attention of the developers, it was finally rejected, as neither Lafarge Indonesia nor the developers had the necessary resources to devote to its development. Additionally, neither wanted to assume the responsibility associated with a new construction technique.

In March 2008, a second phase of interviews was conducted with building material retailers. The objective was to assess the feasibility of replicating what one of Lafarge Indonesia's main competitors, Holcim Indonesia, had implemented in Central Java to help certain retailers enter the business of selling predesigned low-cost houses. The retailer – considered a franchisee of Holcim for this operation – introduced a new sales point in its store where people could come and design their house with a salesperson, receive a housing loan estimate and be given a list of items they could buy from the same store. After one year of operations, sales were disappointing, but the idea of designing simple houses and partnering with retailers had caught the attention of Lafarge Indonesia. To test the feasibility on Lafarge markets, interviews were conducted with a number of retailers in the mountain city of Berastagi. Retailers expressed their interest in extending their business beyond material distribution by proposing a number of predesigned houses. However, due to the area's topography, no simple design could be modeled and plot specificities would have to be taken into account for each house. Interviews were also conducted in the city of Medan, but local

retailers showed very little interest, being sufficiently occupied with their current customer base.

Finally a third round of interviews ended with better results in July 2008. Under the initiative of the marketing staff, meetings were organized with Real Estate Indonesia – a professional association of developers. Negotiations ended with the signature of a Memorandum of Understanding in late 2009 between the association, the Indonesian government, the local municipality and Lafarge Indonesia. The agreement involved securing the construction of 5000 houses for the province of North Sumatra where Lafarge is the market leader. Under this agreement, Lafarge accepted to guarantee the supply of cement and no special discount was granted to the developer. Throughout the year 2010, 820 houses were built, generating approximately half a million dollars of cement sales for the company.

In late 2010, the visit of the construction sites showed that houses delivered through this program were considered by Lafarge sales team as being good quality, but some were already starting to show cracks in the walls before the handover. Photos of the houses are provided in the appendix.

3.2 Case 2: Microfinance for housing in Banda Aceh

The second market study took place in Banda Aceh, the northernmost city on Sumatra Island. This area had been affected by the tsunami that hit Indonesia and other countries in December 2004. In the aftermath, the international community initiated an unprecedented humanitarian effort, with more than six billion dollars dedicated to the economic and social recovery of Aceh. This led to NGOs reconstructing over 120 000 houses. When the survey started in December 2007, many NGOs were still occupied with the last housing constructions in the area.

In December 2007, a first round of interviews was conducted to evaluate the initial idea proposed by the business unit management of a “low-cost house” solution. It appeared that local developers were already fully occupied by their work with NGOs and were not looking to new house designs or technical innovations. Moreover, interviews with a series of homeowners and village leaders indicated that people were not searching for new houses, as the NGOs were still offering their services to build additional houses.

In March 2008, a second round of interviews with homeowners showed that people were looking to improve their house, most houses having been received free of charge after the tsunami. Post-tsunami dwellings measured approximately 36 square meters, on average, and were initially designed to shelter a family of two to three people. Since the tsunami, families had grown, and houses were occupied by an average of 4.5 people. Initial houses were composed of a main room, a bedroom, an outdoor kitchen attached to the house, and in most cases, a latrine. Beneficiaries of certain NGO housing criticized the quality of construction: thin, unresisting plywood walls and poor quality ceilings. They also complained about the absence of a sanitation system, contributing to the contamination of water sources and paddy fields. At the time, the local bureau for reconstruction (a government agency) estimated that around 15% of the houses built by NGOs were unoccupied, mostly because of quality issues. Moreover, 85% of house renovation objectives had not been achieved three years after the tsunami. Renovation and the extension of houses rapidly emerged as a major issue.

Microcredit has frequently been cited as a solution to enable impoverished populations to extend and improve housing. Microcredit, i.e., the provision of small amounts of money with limited or no guarantee, has mainly been used to enable poor people to develop small businesses and increase their income. Over 100 million households have benefited from microcredit for small businesses (working capital, small machines, etc.). Some innovative microfinance institutions (MFIs) have started to propose microcredit for financing home extensions and renovation “one room at a time”. Such loans are larger in size (up to $1 500) and with a longer tenure (up to three years), compared with the business loans habitually offered by MFIs (normally $500 over six months). Customers generally use the loans to purchase construction materials and occasionally pay labor costs. This system has already been introduced by one of Lafarge’s competitors in the cement industry, Cemex, in Mexico, with a program entitled “Patrimonio Hoy”. In ten years, the company has opened about 100 offices providing microcredit to low-income families for home extensions. Customers can also receive advice on design and construction techniques (a detailed description of the case is provided in the appendix).

Program design

To test the idea of implementing a similar program and to evaluate the feasibility of and interest in such a solution, a third series of interviews was organized in July 2008. These took the form of an open workshop with more than 60 stakeholders, including homeowners, international and local NGOs, commercial banks, microfinance institutions and development experts. Two types of possible partnerships emerged and were proposed to the business unit in the second half of 2008. One option was to work with commercial banks (e.g., Bank Rakyat Indonesia, Bank Bukopin, BTN, ATN, etc.) who could go down to the market and expand microfinance activity. Since these banks already counted amongst Lafarge's financial partners, partnerships would have been relatively easy to negotiate, thanks to cultural proximity and business interests. However, since they mostly collect savings, with lending activity being limited to bankable people (civil servants, and formally employed people), the main challenge was to encourage their interest in doing business with poor people, as they were still reluctant to propose microloans. The second option was to work with smaller banks more closely connected with the poor, both in urban and rural areas. These banks mostly work with customers who are non-bankable for commercial banks, and offer microcredit to individual entrepreneurs for the development of small businesses. However, these MFIs rely on customer savings and lack the further financial resources necessary to diversify credit products and introduce housing microcredit.

A company called Bisma was also invited to participate in the workshop. Founded and owned by Care Indonesia, a subsidiary of the internationally-reputed NGO, the company's activity mainly entails investing in MFIs and helping the poor. Bisma was created to manage the donations received by Care Indonesia for the development of microfinance, as a professional and private arm dealing with microfinance institutions.

To further develop the microfinance mechanism, a survey was developed with Bisma's assistance, aimed at better understanding the housing needs of low-income families, their difficulties in implementing construction projects and their interest for microfinance for a housing product. The survey took the form of a questionnaire (face-to-face interviews) and was administered by a number of MFIs who had participated in the workshop to both customers and non-customers. It showed interesting results. Out of the 280 respondents, 84% had an income under $3 000 per year and 80% had a construction project in mind which they wanted to implement in the months to come, but could not do so because of a lack of savings.

The survey also highlighted that 80% of respondents could afford a loan of $1 500. In addition, it appeared that 86% would prefer to build their extension using masons. In brief, the survey supported the idea that microfinance could work on this market.

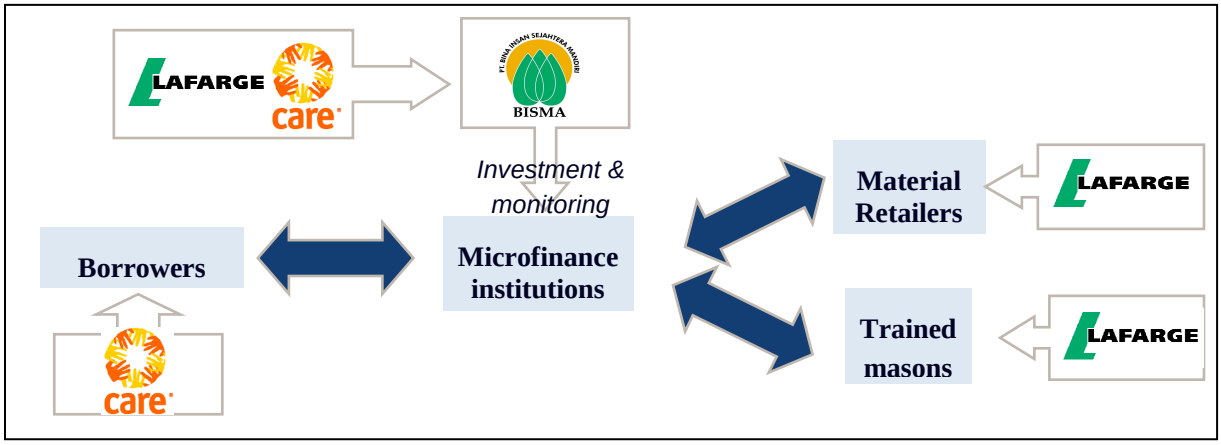
Program implementation

In spring 2009, a partnership agreement was signed between the parent company Lafarge and Care France, the French subsidiary of the international NGO. Part of the partnership agreement was to develop projects targeting the BOP. As a first joint project, a request was made to the Fondation de France, the French public entity in charge of hosting philanthropic funds, to obtain funding for the pilot in Banda Aceh. The granted fund of 200 000 euro was actually the remaining capital of the solidarity fund that Lafarge had created in 2005 to finance NGOs' intervention in the aftermath of the tsunami.

Along with a representative of Care France, a final assignment was organized in July 2009 to clarify the details of the program. The social ambition of the program was discussed by the NGO and Lafarge: it was agreed that priority for microcredit should be given to those customers who wanted to either build a room for their small business or build rooms with a health-related impact (kitchen, bathroom, sanitation). It was also decided that MFIs would prioritize people living in NGO-donated houses.

The sharing of roles was outlined as follows: Bisma would receive the provided capital and manage it as a revolving fund by investing in MFIs. To do so, Bisma would evaluate the MFIs applying to be part of the program, train them and provide the funding progressively, as the MFIs grant the housing loans. Lafarge Indonesia would train masons to whom borrowers would have access for home improvements. The MFIs would identify borrowers, evaluate their profile and manage microcredit payments and disbursement. Care Indonesia would evaluate over the next three years the impact of the program on the lives of the borrowers and masons, following an impact assessment methodology.

Figure 6: Microcredit for Housing program mechanism



Results

By the fall of 2009, five microfinance institutions had applied for the first investment. After assessment, they received monies enabling them to propose housing microcredit to their customers. The first microcredit loans were granted in January 2010. An assessment in March 2010 showed that MFIs were granting loans very slowly: in three months, just 12 had been accepted. It appeared that no communication tool had been developed by the MFIs, which limited customer awareness about the program. The following months were dedicated to reinforcing their marketing skills, with training and documentation provided by Bisma. In September 2010, a second assessment showed that 50 applicants had made a request for a loan to fund home improvements and that 40 loans had finally been accepted (examples of projects are provided in the appendix). A close look at the microcredits indicated that their intended purpose had been respected: a quarter of the projects were having a direct impact on people's incomes and the average daily income of borrowers was about two dollars per day. The other lesson learned was that 20 to 30% of the loans had been used for the purchase of cement. From a business standpoint, it was then clear that the system could have a commercial interest by generating new cement sales. To turn this into a profitable business, the main challenge was to reduce Lafarge's share in the total invested capital, and also to accelerate the disbursement pace of the MFIs. The program had thus far been managed overseas. However, in fall 2010, a new person was recruited as part of Lafarge Indonesia to manage the program locally and oversee its implementation.

4. Action-Research at the Head office and the Change in the Perception of the BOP

The perception of the BOP topic within Lafarge before and after the research period has dramatically changed. At the beginning and following the field visit in Indonesia, the concept that could be developed in Aceh was proposed to certain top executives. The feedback at the time was that "the idea was interesting", but the program was too small in terms of sales potential to warrant devoting time to its implementation. The main question regularly asked by executive managers was, "is it social or business?", meaning whether the BOP segment should be addressed through philanthropic programs or through business programs. Two years later, there was a consensus that the "BOP opportunity is big" and strategic.

The following paragraphs identify the change in Simons' levers of control and the triggering factors which contributed to that change.

Three phases can be identified in the change which occurred at Lafarge with regard to the perception of the opportunity at the BOP.

4.1 2007-2009: Raising awareness about the market and social opportunity

Benchmarks of a number of initiatives carried out by competitors or peer companies were produced as part of the action-research to get the attention of the management on the BOP topic. The first note produced in February 2008 illustrated how Cemex had implemented a successful program.

In June 2009, an article was prepared for a scientific publication to introduce the differences in the strategies of firms with regard to the BOP segment[5]. The goal of the article was to help managers, through a typology of engagement with the BOP, overcome confusion about whether the BOP was a philanthropic/public relations issue or a business opportunity. The research work involved analyzing case studies external to the firm, interviewing managers of Lafarge's previous BOP projects and interrogating external managers of other BOP programs (Danone, Essilor, EDF).

Based on the lessons learned in these case studies, and building on further research conducted on the Cemex case, a memo was prepared in February 2009 presenting how a project such as

the one being developed in Aceh could be implemented on a larger scale through the construction of a special financing vehicle. The document had no impact regarding the involvement of Lafarge with the BOP, but the meeting concluded with the idea that "there was no opposition to the launch of the project in Aceh".

In September 2009, a meeting was organized between several of Lafarge's executive managers and the Vice President of Danone, in charge of their "social business" project with Grameen in Bangladesh. During this meeting, the VP explained how Danone was seeking to address a social mission through its business, and how this social mission was embedded within the organization. A discussion occurred about the role of Lafarge's products in alleviating poverty, showing that Lafarge managers were not convinced that the company's products could contribute to such "a big goal".

In December 2009, the VP of Strategy & Development commissioned a consulting mission to benchmark the "societal engagement" of other CAC 40 companies and to interview internal top managers to understand their perception of such an approach by Lafarge. In this framework, interviews were conducted with 20 top executives, including all members of the executive committee, several regional managers and functional directors. At first, it appeared that the interviewees had no idea of successful approaches to the BOP segment that had been undertaken by competitors (such as Cemex Patrimonio Hoy). The notion of engaging with the BOP was associated with certain philanthropic activities that the firm had previously implemented and to the projects in China and India which had failed.

However, it also appeared that a possible approach to the BOP market, building on the experience of competitors and peer companies, was welcomed by most interviewees. This was reflected in the responses to the closed questions about the reasons why Lafarge should consider reinforcing its "social approach", which were asked at the end of the first or second interview with each participant. In order, high-scoring answers included, "the need to strengthen the loyalty and pride of Lafarge employees", "the opportunity to learn from new business models" and, "the market opportunity at the BOP". The reason ranked the lowest was, "the pressure from NGOs". Interviewees also highlighted how approaching the BOP was aligned with the humanist values of the firm.

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[5] This article comprises Chapter 1 of this dissertation.

Following this consulting mission, a note was prepared about what Lafarge could do to "reinforce its societal engagement". This document presented a complete framework for building on a proposal of a social mission for the firm, and the activities that could be launched to implement this vision. It articulated, in particular, how other companies managed to develop programs embedding a social and economic mission and how addressing the housing needs of the BOP could be the equivalent in the case of Lafarge. The note received positive feedback from the CEO, who requested a more detailed proposal so he could take a decision within a few months.

In 2010, to sensitize parties to the topic of housing, an initiative was launched by one of the top managers in cooperation with a business school that supported the development of "social business" in France. As part of this initiative, a team of directors from the French cement business unit of Lafarge and several top managers from head office was formed with the goal of identifying what "access to housing" would mean for Lafarge in France. Visits to slums located in the vicinity of Paris and meetings with NGOs and social entrepreneurs trying to solve the housing issue were organized and contributed to sensitizing parties to the topic.

4.2 2009-2010: Experimenting BOP programs on a small scale

The two programs launched in Indonesia in 2009 contributed to the sensitization of top managers at head office. For this, the ability to work at the two levels – head office and the business unit – was strategic. The culture of the company particularly values the voice of local managers who deal with the day-to-day business. At some point in their career, all top managers must have gained experience of local operations management, and understand the value of being grass-rooted. Thus, in this culture which favors the say of local managers, being able to demonstrate in the field what a BOP approach means is something that is particularly important for influencing the perception of top management.

The ability to launch the project in Aceh was key to successfully demonstrating on a small scale what the BOP approach means, and two main factors were useful to achieve this. The first was related to the action-research context. In the framework of the CIFRE contract, the company is tied to investigating the topic over a definite period of three years and this gives the necessary timeframe to progressively convince management about the opportunity of launching the test on a small scale. The other factor which enabled the project's launch was

the opportunity to present it in the wider framework of the CSR partnership with the NGO, Care France. The support of the NGO to push this project through, along with their comments in Lafarge's sustainable development reports asking for more action in the BOP area, convinced head office managers in charge of CSR-related topics, internally. As the program had demonstrated a successful initial collaboration between the two parties, it became integrated in the partnership's action plan. In this context, funding was accepted. The ability to present it as a societal experiment, while also contributing to the understanding of a core business question, contributed to the approval of the project launch.

In 2010, the first results of the two programs launched in Indonesia contributed to the change in the perception of the BOP, by concretely illustrating the impact on the lives of low-income populations and by illustrating on a small scale the profitability of the underlying business models.

Once the project was launched, visits of top managers were organized so they could meet with people benefiting from microcredit in Aceh or visit the construction site in Medan. Photos and stories about the microcredit illustrated how the projects were contributing to changing the lives of the participants. While in 2009 there had been a number of reactions about "how cement can contribute to well-being" (September 2009), comments from top managers at head office had changed.

For both projects, cement was sold without any special discount to retailers in Aceh and distributors in Medan. This dimension mattered to illustrate that the BOP approach for Lafarge was not related to product downgrading or price reductions (as embedded in the notion of "low-cost housing"), but was linked to a change in the group of partners and the business model. This change was also reflected in the terms employed to talk about low-income consumers. At the beginning of the research period, the most frequently used term was "low-cost housing", which focused attention on the assumed necessity for the firm to reduce its product price to grasp the market. The phrase, "base of the pyramid", then began to be increasingly used between the researcher and the client systems and the term was immediately picked up by local staff in the business unit. At head office, although a number of people considered the term too pejorative, the "BOP" concept positively framed the idea of a market opportunity. Thereafter, the term "affordable housing" started to be used in 2010, integrating the needs of those in emerging countries, for which the term BOP had been coined, and low-income people in developed countries

4.3 2010: Building the business case for a wider engagement

The arguments covering the BOP opportunity have been widely publicized, but exact figures about what it means for a company to engage with low-income customers remain hard to evaluate. The first documents produced in the action-research were based on the same type of broad arguments (and were mostly based on the WRI report). The first step towards a finer analysis was the identification of market segments based on the results of the initial empirical inquiries in Indonesia. Following this, a method of calculation was developed, building on the hypothesis tested in the pilots in Indonesia (consumption of cement per microcredit, etc.).

The launch of a dedicated "Affordable Housing" team in 2010 enabled Lafarge to better assess the size of the BOP market opportunity, propose how it should get organized, and initiate a number of projects in various countries. The goal of this project, placed under the responsibility of the VP of Strategy & Development, was to identify the potential financial value of addressing the BOP in a more systematic way, and make recommendations to the executive committee on how to address such a market. Presentations were made to the executive committee in March and June 2010 showing different market segments and the market opportunity. In particular, the project enabled a more precise formulation of the size of the market (a figure of 2 billion euro), and framed the demonstration of the opportunity in a way similar to other business opportunities: market size, expected volumes of sales, internal rate of return, etc. The results of the two pilots, although limited in size, contributed to showing that there were opportunities for additional sales by developing supplementary services.

In November 2010, a new note was prepared detailing the possibility to scale up the project in Aceh by developing the financing vehicle already mentioned in the February 2009 note. This time, the document built on the results of the research papers prepared on the challenges of mainstreaming microfinance and the role of socially responsible investment. The note also integrated illustrations of the microcredits generated by the pilot in Aceh and showed both the potential sales that would generate the promotion of housing microfinance and the number of people potentially impacted. It also received strong, positive feedback from the CEO, which led to a further investigation of the issue in the context of the new strategic plan.

In late 2010, there was a growing consensus among top executives that "the market opportunity at the BOP is big". At that time, top management also decided to launch a corporate program whose goal would be to develop the Group's revenues through unusual

approaches. The affordable housing topic then became part of the projects identified for their potential contribution to this program in preparation.

5. Organizational Challenges in Embedding BOP Strategies

The organizational change in Lafarge took the form of a shift in the "belief system" surrounding the BOP segment. However, the two Indonesian cases provide illustrations of the challenges in embedding BOP programs in the organization, depending on the market strategy. This allows an appreciation of the difficulties involved in transforming BOP programs into more generalized programs.

5.1 The influence of local market characteristics on the choice of BOP market strategy

The two programs in Indonesia illustrate a different approach to the BOP market. The project in Aceh, based on microfinance, illustrates a market creation strategy: by a series of efforts (building a network of MFIs, developing their capabilities, training masons, channelling the funding and following the impact) the company intends to create the market. In the case of the program in Medan, where a project with developers had been implemented, the approach refers more to a market capture strategy: a developer was willing to build houses for low-income people and the company developed the appropriate offer through its existing capabilities to capture the market.

The experiments with Lafarge in Indonesia show that the choice between these two approaches was strongly influenced by the conditions of the local markets facing the firm. Indeed, the story of the construction of the two projects demonstrates that the choice of business model was strongly influenced by the local market conditions prevailing in each city. For example, in Aceh, free houses given by NGOs impeded the use of the business model that had been developed in Medan with real estate developers building individual houses for low-income people. The selected program of microfinance for housing built on the distribution of land titles by NGOs after the tsunami which were used as collateral.

The table below provides an overview of the local specificities and the contingencies in the two markets in Aceh and Medan. The text in italic refers to existing conditions prior to the

project launch and which favored the emergence of the market, and the text in normal font to the firm's attempt to overcome the challenge.

Table 8: Challenges in the emergence of housing markets in Lafarge's BOP programs in Indonesia

Type of challenge		**Responses to housing challenges or *existing conditions***	
		in Medan	**in Aceh**
Product challenges	Affordability	• *Long tenure loan from large banks* • *State subsidies to decrease customer price*	• Building "one room at time" using microcredit for housing
	Accessibility	• *Road access available for products* • *Transport system available for end users*	• Microcredit product channeled to customer through network of local banks
	Awareness	• Communication campaign organized by developer to promote the product	• Not sufficiently addressed, as banks do not advertise the program
Institutional environment		• *Municipality support* • *State subsidies* • *Land availability*	• *Land titles already owned by Acehnese people* • *Use of Islamic-finance framing microcredit contracts*
Competition		• *Top-tier housing market already very competitive*	• *Free houses donated by NGOs reduced the market for single house construction*
		⬇	⬇
		Market capture strategy	Market creation strategy

5.2 The influence of management systems on the choice of BOP market strategy

With regard to performance objectives, the two programs in Aceh and Medan differ in their capacity to generate revenues for the local unit over a short-term period. The time for the microcredit program to pay off in terms of new cement sales for the company is longer than with social housing: while 800 houses had been built in a one year timeframe of the partnership, generating approximately half a million dollars of cement sales, fewer than 40 microcredit loans had been granted, accounting for approximately 20 thousand dollars of sales.

Market capture programs are more easily integrated in diagnostic management control. Indeed, the program with developers in Medan which involved limited change in the business model was aligned with the local managers' performance objectives of short-term financial results. As a consequence, integrating this approach in a local marketing strategy was highly feasible for local managers, as it was compliant with their performance measurement system (diagnostic system). The program was fully integrated within the existing organization with the signature of the partnership by the communications department and sales follow up by the logistics and sales departments.

The program in Aceh and the difficulty to get it integrated in the BU action plan shows how a very innovative program with a long-term pay off does not fit in a diagnostic management control. The program ended up being managed from overseas by me with limited interaction with the marketing and sales staff of the business unit up until the last year of the research period.

At the beginning of the research period, the management control that prevailed in Lafarge was mostly diagnostic, with a clear focus on the KPIs related to the strategic focus on cement and cost reduction. Consequently, Lafarge's local management was driven by the achievement of short-term objectives transcribed in the organization through the different KPIs and financial reporting. Bonus schemes and business performance indicators were also designed in the direction of these financial objectives. At head office, too, the comments on the first note in mid-2008 were mostly about "how many tons of cement sales" the pilot project in Aceh would generate.

At the end of the research period, no change had occured in the management systems, but the customer innovation program was allowing local managers to propose and implement more innovative initiatives. The microcredit program in Aceh thus began to attract the attention of local managers. When head office started to show support for this type of approach by sharing the cost of a local manager for the Aceh program, the initiative became integrated in the marketing plan of the business unit a few months later.

These two cases show that in a predominantly diagnostic approach, market creation programs are unlikely to be developed by business units, as they may be perceived as downgrading performance indicators in the short term. In contrast, market capture programs fit well with the expected performance captured by a diagnostic system, and find their place more easily in such a context. In a predominantly interactive approach, market creation programs are encouraged.

5.3 BOP market strategy and the firm's boundary

The development of the two BOP programs in Indonesia raised questions about the extent to which the company should change its core activities in order to address BOP markets – questions which formed part of the reactions to the notes produced from 2008 to 2010.

The program in Aceh was examined to determine whether Lafarge should adapt its business by entering the credit market through the provision of microcredit to low-income families. However, the reaction, "Lafarge is not a bank", was frequently heard. In the case of Medan, the principal issue was about going downstream in the value chain to partner with developers and take more responsibility with regard to the construction deliverable. The failure in the attempt to propose a new construction mode is meaningful. Indeed, the development of a new construction mode by a cement company is perceived as shifting the distribution of responsibility in the value chain: while a cement manufacturer is primarily responsible for cement consistency in the delivery, the house design is part of the developer's responsibility. Having a cement manufacturer proposing and promoting a new design raises the question of who holds the responsibility of the construction modes in case of cracks or collapse. In Medan, the program implemented with developers ended up being more focused on supply assistance than on the construction itself, so that the business unit could stick to its core activities, and avoid undertaking new responsibilities.

The development of the two BOP programs questions the boundary that the organization has set up to delimitate what falls within or outside its scope. At the beginning of the research period, the strategic focus of Lafarge was put on cement production and cost reduction, which clearly delineated the boundary on the core business. However, during the research period, two major moves were undertaken by the head office to test the prevailing "boundaries". First, the launch of the Sustainable Construction projects (and the Affordable Housing project at the corporate level) was intended to promote the prescription of products to avoid substitution effects in the shift towards green construction solutions. As with the Affordable Housing project, this initiative was another testing of the firm's boundaries in order to grasp new business opportunities.

In initiating this testing of the boundaries, the role of the head office is determinant. As illustrated with the programs initiated in China in 2006 and India in 2007, a business unit has limited ability to endeavor a change in the set of accepted activities. This issue was

summarized by a general manager of a cement business unit in another country to whom the idea of developing a microcredit program was proposed: “It is a new job. Lafarge wants to go in that direction, so I expect to receive a message from the CEO saying I must do so, too.” The launch in the second semester of 2010 of the customer orientation program sent a signal to the business units that innovation in their operations is better accepted and that is should create new business opportunities. The interest that the CEO expressed several times for this topic, and in particular when visiting business units, also started to provide top management support to local managers. This contributed to initiating a change in the “boundaries” within which local managers were expected to work, allowing them to innovate, not only with their traditional customers (distributors, developers, etc.) but also with the end users, including low-income people.

Through market creation BOP programs, the firm thus creates a number of learning opportunities to determine the capabilities that it should acquire in order to improve its performance. In this sense, market creation approaches facilitate organizational learning and change. However, the possibility for these market creation programs to exist is strongly linked with the performance system at work in the company.

Conclusion

The action-research brought about change at Lafarge with regard to the BOP – it moved from a philanthropic to a business issue. The two cases developed also demonstrate how this shift in perception constitutes a first step in organizational change. Indeed, while perception matters, the boundaries set up and the management control systems in place also have a strong influence on the type of BOP strategy that can be implemented. When the boundaries are strictly defined, and when performance is measured against inflexible and top-down-defined KPIs, market capture strategies are more likely to occur. On the other hand, when boundaries can be trespassed in order to test new a strategic positioning for the firm, and when performance systems provide enough flexibility to managers, BOP market creation programs are feasible.

Table 9: A strategic framework of a firm's engagement with the BOP

	STAGE 1 **Licence-to-operate approach**	**STAGE 2** **Business approach**	
Belief system	BOP as a philanthropic and public-relations issue	BOP is as a possible business	
Boundary system	Not in the company core business (no support)	Inflexible boundary	Flexible boundary
Management control	Not aligned with control systems	Dominant diagnostic system	Dominant interactive system
BOP strategy	Isolated programs with no support	Market capture strategy	Market creation strategy

The thesis also illustrates that in the choice between the two approaches, local market characteristics have a strong influence. This means that the type of program that should be designed by a company in order to address the BOP market is not defined in advance, but should result from the analysis of the local market.

Two strategic options are then possible: the firm can decide to focus only on one type of approach, and adapt its organization accordingly. However, adopting market creation approaches only poses a risk for the firm in that motivation can disappear as the programs do not deliver short and medium-term pay-offs. Conversely, adopting market capture strategies only can lock the firm within its set of capabilities, leading it to miss the opportunities of organizational change that BOP market creation approaches enable.

The literature on organizational change raises the question of *ambidexterity* in developing programs that sufficiently exploit the capabilities of firms to guarantee sustainability, and adequately explore new capabilities to ensure that the programs contribute to adaptation. Given this, the question of ambidexterity applied to the BOP context deserves more attention. Both the programs in Aceh and Medan would benefit from a more ambidextrous approach. The program in Medan would benefit from the introduction of the innovative construction systems starting to be developed at head office, that would contribute to improving quality and reducing the environmental footprint of houses. On the other hand, the innovative program in Aceh could leverage the existing relationship that Lafarge has at head

office to connect it with funding from investors, and reach a larger scale. In this analysis of ambidexterity, particular attention should be paid to the relationship between business units and head office in the implementation of BOP programs: this is a key dimension addressed by this action-research program.

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Appendix 1: Overview of the Main Documents prepared through the Action-Research

- **Main Lafarge internal documents**

Legend: PowerPoint presentations are noted (P), Word documents (W), and Excel sheets (X).

Date	Document	Description	Use in Lafarge	Use in research
December 2007	BOP assessment mission – Final presentation (P)	Conclusions of the first mission in Indonesia presenting two possible BOP business models, one suited for Aceh and the other for Medan	• Presented to the manager of the Indonesian business unit • It is decided that the two options be further investigated	• Initiate research on microfinance and housing issues
February 2008	Developing Lafarge BOP capabilities (P)	Overview of Lafarge's portfolio of BOP programs, feedback on the two opportunities identified in Indonesia, benchmark of competitors initiatives, proposal of "Social Housing Global Committee"	• Presented to VP Strategy and VP Sustainability • No impact	• Cases reused to produce a draft of the article intituled "Challenges in the Expansion of BOP Ventures", presented to a conference in Nov 2009
March 2008	Memo on Holcim Indonesia BOP project (W)	Description of an existing BOP program launched by one of Lafarge's competitors in Indonesia, following the visit that was made during a field trip	• Presented to VP Strategy • Presented to another executive committee member, no impact	• No direct use.

September 2008	Access to housing initiatives (P)	Description of a business model for a project in Banda Aceh using microfinance. Typology of existing projects in housing	• Presented to VP Strategy and VP Communications. • No impact. Request for a more fine-grained business model	• Results of research on housing issues included in the document
November 2008	BOP initiatives (P) and Aceh business model calculation (X)	Presentation of a possible partnership with an international NGO facilitating projects in microfinance Presentation of detailed business model including sales projections and presenting funding options	• Presented to VP Strategy and VP Communications • Approval of a first mission consisting of a finer market assessment of the market in Aceh	• Initiate research on the funding of microfinance and Socially Responsible Investment, leading to presentation at a conference in June 2010
January 2009	BOP Program in Aceh (P)	Presentation of the possible project in Aceh and the role that would be given to Care	• Presented to Director of Social Relations Accepts to integrate the BOP topic in the partnership with Care	• Enabled the continuation of action-research at the business unit level
March 2009	Housing microfinance program in Aceh (P)	Detailed presentation of the proposed program in Aceh	• Presented to representatives of Care France and Care Indonesia • Interest to support the program and integration of modifications of the model	• Allowed the launch of the action-research program in Aceh
March 2009	Memo on the BOP project (W)	Estimates of the demand for cement from BOP people, presentation of the rationale for	• Presented to VP Strategy , a member of the executive committee and thesis directors • Approval of project launch	• Demand estimates based on research articles on the BOP • Case studies based on research interviews

		using microcredit, lessons learned from Danone and competitors, proposal to create a special funding vehicle	in Aceh with the philanthropic funding identified	
April 2009	Concrete distribution in slums (P)	Proposal for a project to launch in India about the distribution of concrete in slums, prepared with a Director of R&D	• Presented to VP Sustainable development • Risks related to property rights are highlighted. No next step	• Initiated a research note on property rights issues (De Soto), used in draft of article presented in Nov. 09
June 2009	Housing for All (P)	Presentation of the BOP concept, existing initiatives (internal or external to Lafarge), and areas for which R&D would be needed	• Presented to researchers from Lafarge R&D centre	• Integrated elements of the research note on the definition of poverty
June 2009	Note d'avancement sur le BoP ("note on the progress on the BOP") (W)	Typology of BOP markets distinguishing government projects, developers' projects and self construction. Proposal of next steps with consulting firms	• Presented to the VP Strategy • Sent to the members of the executive committee. No other impact	• No direct use
July 2009	Strategic Lab Scenarii (P)	Analysis of data about two trends that can affect Lafarge's business models: densification of middle classes and	• Prepared for an internal "brainstorming" meeting gathering country managers	• Used in an article published in June 2010 about firms strategies at the BOP

		urbanization		
September 2009	Compte-rendu rencontre Danone	Minutes of the meeting organized with the Vice President of Danone who initiated their BOP program	• Document shared with executive committee members • Content of the meeting generating internal discussions	• Used to complete the case studies on Danone featuring in Chapters 1 and 3 of the thesis
February 2010	Renforcer l'engagement societal de Lafarge ("Reinforce the social engagement of Lafarge") (W)	Note co-written with a top manager on how other companies managed to develop programs embedding a social and economic mission and what could be the equivalent in the case of Lafarge	• Received positive feedback from the CEO	• Initiated further research on investment issues related to the BOP
March 2010	Logement abordable (Affordable Housing) (P)	Presentation prepared with the new team on Affordable Housing presenting a definition, a typology of segments, lessons learned from our projects and next steps	• Presented to the executive committee	• Lessons learned from the program in Aceh are used in Chapter 2
June 2010	BOP housing business opportunity and societal engagement	Estimates of the market potential, the market segments and draft of organization	• Shared with executive committee members • No reaction on the proposed organization	• No direct use
November 2010	Creating a fund to develop	Note prepared detailing the possibility to scale up the	• Unlike the March 2009 note proposing the same idea, this note received positive	• Integrating results from the program in Aceh • Document based on the

	housing microfinance (W)	project in Aceh by developing the financing vehicle	feedback	June 2010 research note on the funding of BOP programs and microfinance
December 2010	Affordable Housing program in Medan (W)	Analysis of the achievements of the social housing program in Medan and next steps	• Presented as a reason to address "affordable housing" needs	• Lessons learned from this program are used in Chapter 2

- **Main research documents**

Date	Document	Description	Use in Lafarge	Use in research
November 2007	Definition of poverty and economic development (W)	Presentation of the change in the definitions of poverty and the new role given to market-based mechanisms	• No direct use	• Presented to thesis directors • Used for the introduction of the dissertation
January 2008	BOP: Typology of strategies, key success factors and limits (P)	Comparison of the main programs existing in 2008, building a typology of strategies, and showing two limits (analysis of social impacts, and performance)	• Typology of strategy used in the note presented in March 2009	• Presented during a research seminar, generating first research questions for the thesis • Typology improved several times, leading to an article published in June 2010 entitled

				"Corporate strategies and the construction of markets at the Base of the Pyramid"
June 2008	BOP and Corporate Social Responsibility (P)	Value chain analysis of the BOP programs (Unilever India, Unilever Indonesia, Danone) and their impacts on low-income people	• Used in note prepared in February 2010 on "Lafarge's social engagement" about the importance of job creation in the value chain	• Used to complete the typology of BOP programs published in the June 2010 article
October 2008	Ph.D. progress and next steps (W)	Summary of the note on poverty and development, completed with research on housing-related poverty	• Presented to VP Strategy & Development. • Main feedback is the lack of economic analysis of the opportunity at the BOP	• Based on feedback received, more research is conducted on housing issues and microfinance
November 2009	"Challenges in Expanding the Scale of Business Ventures at the Base of the Pyramid" (W)	Paper comparing Lafarge's program in South Africa and Cemex's Patrimonio Hoy	• Limits of Cemex's programs mentioned in notes of March 2009 and November 2010	• First feedback on a Lafarge case. Comments suggest to further investigate resource-based view issues
February 2010	Housing issues and solutions for low income people (W)	Note presenting specificities of low-income housing markets, and main lessons learned about existing housing microfinance and social housing programs	• Used to define key criteria in the impact assessment method in Indonesia • Typology of programs and solutions used in the March 2010 presentation to executive committee	• Accentuates research on institutional challenges related to access to products, captured in October 2010 research article

June 2010	Mainstreaming of microfinance, Socially Responsible Investment and the role of non-financial companies (P)	Presentation given to a group of CSR managers from main banks and funds, stating the advantage of industrial firms in connecting needs in the economic south and funding available in the north	• Content and feedback received during presentation introduced in November 2010 note	• Illustrating research opportunities in the dissertation introduction
October 2010	Vers la construction de marchés au bas de la pyramide : implications sur la gestion et le financement des projets (W)	Article introducing specific challenges of funding BOP programs based on EDF and Danone cases	• Main conclusions presented in the note of November 2010 on microfinance funding	• Included in the appendix of the dissertation • Illustrating research opportunities in the dissertation introduction

Appendix 2: Photos of the Indonesian Programs

The Social Housing Program, Medan, Indonesia





During the construction phase (early 2010)









Some houses a few weeks before handover (late 2010)

The Microcredit for House Extensions Program, Banda Aceh, Indonesia



Renovation of a small store



Construction of a fence



Construction of a car washing area



Extension of a 36 sqm house



Renovation of the floor of a store



Progressive construction of a house



Construction of a gas station



Progressive construction of a house

Appendix 3: Cemex Patrimonio Hoy (Case Study)

During the economic crisis of the mid-1990s, Cemex realized that while the rest of the market had suffered from a 50% decline in sales, the impact on the social housing segment was softer (a 20% drop, only). The market for building materials is generally highly cyclical and seasonal. Emphasizing this segment could help the company reduce its reliance on the cyclical construction industry. In 1998, Cemex's management sent a team of consultants and employees to a poor community close to Guadalajara, Mexico. They observed that these very low-income populations were spending their weekends extending or improving their homes, progressively building one room at a time, and that they were unhappy with building material sellers. Low-quality products were being sold to them at a high price and were inefficiently used in construction. Consequently, Cemex launched the Patrimonio Hoy ("Assets Now") program (hereafter referred to as "PH"), targeting the do-it-yourself market. From its inception, the program has been managed by a separate division within Cemex to allow more flexibility in salaries and corporate culture (ibid). PH's breakthrough is about innovative business processes, rather than technology-based products (Ashoka 2006). Its business model is a microfinancing program for low-income families who wish to build or improve their homes. "Promotores", mainly women, are recruited among communities to promote the program door-to-door and enrol customers. Customers, also mainly women, are gathered in groups of three to form "tendas", types of socio groups that have been part of the Mexican culture for years.

The program is divided into cycles of ten weeks: during the first two weeks, consumers save money, then distributors deliver the raw materials, valued at their ten weeks' worth of collections. During the eight following weeks, the program members reimburse the loan to the "promotores". Customers are visited by technical advisors who, for a small fee, give advice on how to lay out the building or how much material is required. After an average number of seven cycles of ten weeks, people are able to finish their housing project. Distributors who participate in the program receive a smaller margin – 12% in some cases – compared with the 15% average in the business.

In 2009, the company announced that over 235 000 families had benefited from the PH program since its launch in 1998. PH has 85 beneficiary care centres in 44 cities throughout the country. The business model has been replicated in other countries, including Colombia,

Costa Rica and Nicaragua, with 20 centres operating in those countries[6]. According to the company[7], PH enables families to reduce the time needed for construction by more than 60 per cent and generates savings of up to 35 per cent for the beneficiaries of the program. The program in Mexico reached breakeven point in 2004. Since then, a stable number of 30 000 house extension projects are financed every year, impacting around 100 000 people. Thirty to forty percent of the loan amount (loans total around $900, on average) is used for the purchase of cement bags. Cement sales related to the consumption of the borrowers represent 65 000 tons per year[8], totalling a net income of approximately US$ 2 million in 2008 figures.

[6] Press release published on http://www.cemex.com, accessed on June 28th 2009
[7] Press release published on http://www.cemex.com, accessed on June 28th 2009
[8] Author's calculation is based on the following sources: (Cemex 2007, Segel el al. 2006, Ashoka 2006, Cemex website). Results may differ on the magnitude of profits, but all sources confirm the program's profitability.

Appendix 4: The Lafarge Partnership in South Africa (Case Study)

Since 2005, the Republic of South Africa has committed itself to providing up to two million affordable houses by 2010 for those on low incomes, including those living in slum areas. To conduct the construction project, the government entered into a partnership with two kinds of parties: construction developers in charge of delivering the houses, and cement companies in charge of supplying the project with materials. Availability of cement was at the time of the project launch a crucial factor that could have postponed the delivery of houses. In this public-private partnership, the government is responsible for the house design. Subsidies are channeled to the beneficiaries through local authorities. The total budget allocated for the public-private partnership in Cosmo City is around US$ 450 million. Three kinds of houses are designed: fully-subsidized, partially-subsidized and non-subsidized. The first houses (known as "breaking new grounds") have been offered free of charge to families from two slum areas (Zevenfontein and River Band). Initial market value is around US$ 5 000 for a house measuring 32 m² (plus a small plot of land). Partially-subsidized houses are twice as large as fully-subsidized ones and are dedicated to families with monthly revenues inferior to US$ 900. The 3 000 houses are sold by real estate companies on the market. The last segment is composed of 3 300 premium houses of around 120 m² which are sold on the market without any subsidy.

Lafarge's role in this partnership is to provide effective technical solutions for affordable housing construction. While it mainly concentrates on selling cement or concrete to developers or cement distributors, Lafarge is also responsible for driving construction progress on site and training construction workers on safety and AIDS prevention. In addition, the group provides a fully-staffed concrete batching plant with a dedicated supervisor and containers to provide secure storage. During the project, Lafarge also assists developers in making the best use of time and advises on cost-efficient construction techniques. The company advocates the use of concrete walls rather than bricks and mortar, in order to speed up construction and save money. The introduction of such construction techniques enables Lafarge to promote the use of a number of new concrete formulations that it is introducing on the market. In June 2008, the company had contributed to the construction of 4 600 of the 12 300 housing units.

From a business standpoint, the project has a number of positive impacts, as well as limitations. First, the project has enabled the company to develop a good relationship with

government authorities and to improve its image of a responsible company on the South African market. The partnership has also been a good way to promote its products and new usage to developers. However, from a financial standpoint, the Cosmo City project barely breaks even. Since the launch of the project, new, similar projects have begun, with the same partnership with public authorities. However, Lafarge continues to consider this approach proof of its “corporate responsibility”, rather than a profitable business. The primary reason for limited profits is the incapacity to speed up the construction process of houses and reach a more important volume. This can be explained by the delay in the payment of government subsidiaries and the coordination with the local authorities. Although demand exists and developers are ready to build more houses, public coordination in the partnership is the main bottleneck for the development of the project.

Very limited information on the project’s impact has been documented. Oral comments and articles in the press show that house beneficiaries are relatively satisfied regarding their new settlement. However, the main issues that persist are the development of income-generating activities within the communities and the subsequent criminality of the area.

III. Relational Capacity for Social Innovation

Strategies intended to create new markets at the BOP through collaborations with not-for profit partners are supposed to provide firms' with learning and new knowledge opportunities. This study seeks to identify the patterns and key success factors in achieving this. To do so, it explores whether the concept of absorptive capacity, which has been extensively used in the alliance literature to explain the dynamics of inter-partner learning, can be directly transposed to cross-sector alliances with aims of social innovation. The results of the analysis suggest that, due to important differences between alliance partners and goals in cross-sector alliances, as well as the aims of business innovation relative to social innovation, models of absorptive capacity only imperfectly reflect the learning and innovation dynamics characteristic of cross-sector alliances, due to differences in alliance partners and goals and differences in type of innovation. This article introduces the concept of "Relational Capacity for Social Innovation", a model better suited to the analysis of learning and innovation in the context of cross-sector alliances, and highlights three key success factors: sharing a common vision between partners, co-creating programs, and implementing intentional learning processes.

This chapter is based on a paper co-written with Matthew Murphy (ESADE) and Miguel Rivera-Santos (Babson College).

Absorptive Capacity (ACAP), a concept developed by Cohen and Levinthal (1989; 1990) to explain why some firms learn and innovate more than others, is defined as the "ability to recognize the value of new, external information, assimilate it, and apply it to commercial ends" (1990, p. 128). In particular, the alliance literature has extensively applied this concept to explain inter-partner learning dynamics (e.g.,, Bayona Saez, Garcia Marco, and Huerta Arribas, 2001; Chen, 2004; Koza and Lewin, 1998; Lane and Lubatkin, 1998; Lane, Salk, and Lyles, 2001; Makri, 1999; Malhotra, Gosain, and El Sawy, 2005; Mowery, Oxley, and Silverman, 1996; Simonin, 2004).

While ACAP provides important insights to the business-to-business (B2B) alliance literature, no study has directly considered whether the concept applies to cross-sector alliances (henceforth B2N alliances), defined as collaborations between for-profit businesses and non-profit organizations (NPOs). Yet, the literature on B2N alliances suggests that many partners enter these alliances with aims of learning and innovation (London, Rondinelli, and O'Neill, 2005; Selsky and Parker, 2005; Teegen, Doh, and Vachani, 2004; Waddell, 1999). In particular, the Base-of-the-Pyramid (BOP) and subsistence marketplace literatures suggest that learning from and innovating with non-traditional partners is a necessity in markets characterized by poverty, leading some scholars to argue that BpP innovations are inter-partner co-creations (Sánchez, Ricart, and Rodríguez, 2006; Simanis and Hart, 2008).

At the same time, there are significant differences between B2B and B2N alliances, which are likely to impact ACAP. First, partners in cross-sector alliances are fundamentally different, with different goals, dominant logics, and governance structures (Austin, 2000; Berger, Cunningham, and Drumwright, 2004; Doh and Teegen, 2003; Hardy, Lawrence, and Phillips, 2006; Kanter, 1999; LeBer and Branzei, 2010; Rondinelli and London, 2003; Waddell and Brown, 1997). Second, the objectives of B2N alliances are distinct from those of B2B alliances, as cross-sector alliances typically prioritize the creation of social value over economic value (Alvord, Brown, & Letts, 2004; Berger et al., 2004; LeBer and Branzei, 2010; Nelson and Zadek, 2000; Teegen, et al., 2004; Waddell and Brown, 1997; Waddock, 1991). This is particularly true at the BOP, where business models tend to explicitly combine social and economic goals (London, Anupindi, and Sheth, 2010; Prahalad, 2005; Simanis and Hart, 2008).

The goal of this paper is to explore whether the concept of ACAP, previously applied in the context of B2B alliances, is directly applicable in B2N alliances, or whether it needs to be

adapted to the specificities of these alliances. In other terms, the purpose of this research is to answer the following question: *In what ways (if any) does ACAP differ in the context of B2N alliances?* The results of this analysis suggest that the models of ACAP developed for B2B alliances only imperfectly reflect the learning and innovation dynamics characteristic of cross-sector alliances. Therefore, this article introduces the concept of Relational Capacity for Social Innovation (RCSI), a model better suited to the analysis of learning and innovation in the context of cross-sector alliances, especially at the BOP. The contributions of this work are threefold. First, the article contributes to the cross-sector partnership literature by proposing a construct that helps explain inter-partner learning and innovation in B2N alliances. Second, this work contributes to the BOP and subsistence marketplace literatures by providing a framework to better understand the process of co-creation and co-innovation in markets characterized by poverty. Third, this article contributes to the broader inter-partner learning and innovation literatures by analyzing the impact of the type of partners and of the overall goal of the alliance on learning and innovation.

The sections that follow review the concept of ACAP, before exploring the differences between B2B and B2N alliances. The paper then develops propositions regarding how these differences impact various dimensions of ACAP in the context of B2N alliances, and proposes an alternative model of ACAP, called Relational Capacity for Social Innovation (RCSI), better suited for these contexts. Two B2N alliances at the BOP, Groupe Danone's collaboration with the Grameen Group in Bangladesh, and Essilor's collaboration with two Indian eye hospitals, Aravind and Sankara Nethralaya, provide illustrations of RCSI in BOP contexts. The final section concludes by discussing the implications and limitations of this research for scholars and practitioners.

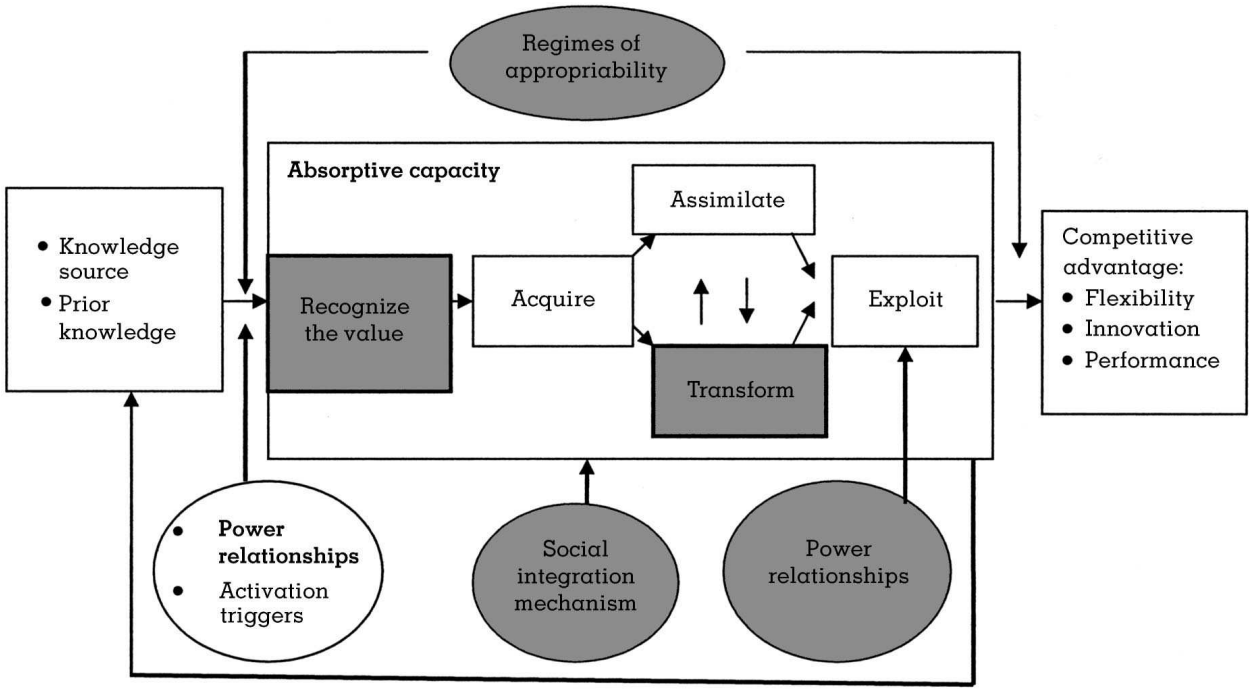
1. Absorptive Capacity

Absorptive capacity (ACAP), now viewed as the major determinant of learning and innovation, has become one of the most important concepts in organizational research (Lane, Koka, and Pathak, 2006). Developed by Cohen and Levinthal in two seminal articles (Cohen and Levinthal, 1989, 1990), ACAP refers to a firm's ability to learn from its external environment and to leverage new knowledge to improve performance. Linking individual and organizational levels, the concept of ACAP emphasizes the cumulative and path-dependent nature of learning, and highlights the processes, policies, and procedures that enable learning

in an organization. In Cohen and Levinthal's original model, ACAP incorporates three distinct, although related, facets: the firm's ability to recognize the value of new information, its ability assimilate it into its own knowledge base, and the ability to apply it to commercial ends.

Following these foundational studies, numerous scholars have applied the concept of ACAP, especially in the alliance literature. However, as established by a recent literature review on the topic (Lane et al., 2006), few studies attempt to extend or refine the construct (e.g., Dyer and Singh, 1998; Lane and Lubatkin, 1998; Van den Bosch, Volberda, and De Boer, 1999; Zahra and George, 2002). Lane and Lubatkin (1998), for instance, highlight the difference between a firm's absolute ACAP, which allows the firm to learn from its external environment as a whole, and its relative ACAP in a given alliance, which allows it to learn from a specific partner. Similarly, Zahra and George (2002) draw a distinction between potential ACAP – the external knowledge that a firm *could* acquire and utilize – and realized ACAP – the external knowledge a firm *has* acquired and utilized.

Figure 7: A refined model of Absorptive Capacity (Todorova and Durisin, 2007)



Building on these studies, Todorova and Durisin (2007) propose a model that describes the different components and processes comprising a firm's ACAP (Fig. 1). The model places the abilities to recognize the value of external knowledge, acquire that knowledge, and

assimilate, transform, and exploit that knowledge at the core of ACAP. The model further recognizes the importance of the type and source of knowledge as antecedents of ACAP. Finally, power relationships, social integration mechanisms, and regimes of appropriability, are introduced as contingent factors and moderators of the relationship between knowledge, ACAP, and performance. As such, it provides one of the most detailed and comprehensive models to date of the processes that build a firm's ACAP.

Before exploring whether ACAP, as modeled by Todorova and Durisin (2007), can be applied to the context of B2N alliances, the section that follows analyzes the differences between B2B alliances – in which the concept of ACAP has been successfully applied in the literature – and B2N alliances.

2. Cross-Sector Alliances and Social Innovation

B2N alliances are alliances involving partners from both the for-profit and not-for-profit sectors. Previous studies describe such alliances as ranging along a continuum from those which entail little collaboration to others which involve considerable collaboration (e.g., Austin, 2000; Gray, 1989; Murphy and Arenas, in press; Reed and Reed, 2009; Seitanidi and Ryan, 2007). The most collaborative type of B2N alliances, identified as integrative alliances, are characterized as alliances combining the partners' competencies and resources in a process of systematic learning (Austin, 2000) and tend to prioritize objectives of creating social value (Hess, Rogovsky and Dunfee, 2002; Waddock, 1989). References to cross-sector or B2N alliances made throughout the remainder of this paper relate to integrative alliances as opposed to those of a conflict resolving, philanthropic, or transactional nature. Cross-sector partnerships at the Base of the Pyramid (BOP) and in subsistence marketplaces, defined as marketplaces in which consumers barely have sufficient resources for day-to-day living (Viswanathan, Sridharan, and Ritchie, 2010), typically require innovations combining both social and economic goals. Two major related aspects thus characterize cross-sector partnerships, especially at the BOP: the combination of for-profit and not-for-profit partners, and the combination of social and economic goals in the partnership.

The cross-sector nature of partners has important implications for B2N alliances. Most importantly, partners in B2N alliances have much less in common than partners in B2B alliances. Cross-sector partners tend to share less in terms of organizational culture (Austin, 2000; Berger et al., 2004; Waddell and Brown, 1997), missions (Kanter, 1999; Rondinelli and

London, 2003; Waddell and Brown, 1997), views about what constitutes performance and social value (Hardy et al., 2006; LeBer and Branzei, 2010), mindsets and professional language (Austin, 2000; Lucea, 2007), compensation practices (Preston, 1989; Weisbrod, 1983), organizational structures (Berger et al., 2004), governance structures (Doh and Teegen, 2003; Leete, 2000; Rondinelli and London, 2003), and, most importantly, organizational goals (Anheier and Ben-Ner, 2003). As a consequence, B2N alliances exhibit significantly different governance structures and pursue different objectives than B2B alliances both in developed countries (Rivera-Santos and Rufín, In press) and at the BOP (Rivera-Santos and Rufín, 2010).

The combination of social and economic goals is the second major aspect differentiating B2N from B2B alliances. While B2B alliances typically have objectives related to creating greater economic value for their partners (Lane and Lubatkin, 1998), cross-sector alliances tend to have objectives prioritizing the creation of social value through social innovation (Berger et al., 2004; LeBer and Branzei, 2010; Nelson and Zadek, 2000; Waddell and Brown, 1997; Waddock, 1991). Social innovation is "a novel solution to a social problem that is more effective, efficient, sustainable than existing solutions and for which the value created accrues primarily to society as a whole rather than to private individuals" (Phills, Deiglmeier, and Miller, 2008: 36). Social innovations thus contrast with business innovations, which are the multi-stage process whereby organizations transform ideas into new/improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace (Baregheh, Rowley, and Sambrook, 2009). While social innovations place priority on bringing benefits to society, business innovation places priority on improving the competitive position of the organization. This has important implications not only in terms of goals and beneficiaries, but also in terms of inputs and where these inputs originate (see Table 1).

This has important implications for ACAP, as not only the nature of the partners but also the nature of the innovation in B2N alliances contrast sharply with their equivalents in B2B contexts. The section that follows examines each component in the model of ACAP proposed by Todorova and Durisin (2007) and explores how they are impacted by these two main differences.

3. Absorptive Capacity in Cross-Sector Alliances

Analysis of the specificities of cross-sector alliances in the previous section suggests that many of the components of the ACAP model, as proposed by Todorova and Durisin (2007), are impacted in cross-sector contexts. This section explores how each component may be impacted by the different nature of partners and innovations in cross-sector alliances. A summary of the differences between B2B and B2N alliances for each component of ACAP is found in Table 2.

External knowledge and the ability to recognize its value

Todorova and Durisin's (2007) ACAP model connects the firm's ability to recognize the value of external knowledge to antecedents of sources of external knowledge and the extent of overlap between the learning firm's prior knowledge and the knowledge to be acquired. Sharing basic knowledge (i.e., the traditions and techniques upon which knowledge is based) with the source of external knowledge helps the learning firm understand and value this external knowledge (Cohen and Levinthal, 1990).

In B2N alliances, the learning firm's source of external knowledge is the NPO. As a consequence, the basic knowledge and the organization structure in which it is embedded is significantly different with that of a for-profit firm, making it more difficult for the firm to recognize valuable knowledge. Furthermore, the type of knowledge possessed by an NPO tends to be different from knowledge possessed by firms, as NPOs typically provide public goods, rather than private goods and, as a consequence, possess different sets of resources (Doh and Teegen, 2003). In other terms, both the source and the type of knowledge are likely to make it more difficult for firms to recognize the value of external knowledge in cross-sector alliances. This difficulty is compounded in BOP contexts, where knowledge is highly localized (Johnson, 2007; Simanis and Hart, 2008). As a consequence, if a firm wants to acquire knowledge from a partnership with an NPO, it will need to bridge these knowledge gaps by emphasizing relationship building as a way to better understand its NPO-partner and its knowledge (Rivera-Santos and Rufín, In press). This reasoning leads to the following proposition:

Proposition 1: *Compared to B2B alliances, recognizing the value of external knowledge will be less likely in B2N alliances, leading to a greater need for inter-partner relationship building.*

Acquisition, assimilation, and transformation of external knowledge

After the value of external knowledge is recognized, it may be acquired (Cohen and Levinthal, 1990; Todorova and Durisin, 2007). Acquisition refers to the act of learning itself, that is, bringing external knowledge into the knowledge base of the firm.

As mentioned above, firms and NPOs have different overall goals, governance structures, organizational decision making processes, and compensations practices, creating a wider gap between firms and NPOs than between two firms (Rivera-Santos and Rufín, In press). This results in a lower ability to acquire external knowledge in B2N relative to B2B alliances. Also, due to differences in organizational culture, professional languages, and missions, misunderstandings will be more common in B2N alliances compared to B2B alliances (LeBer and Branzei, 2010). Thus, relationship building with a view to overcoming these wide differences is also imperative to knowledge acquisition in cross-sector alliances. This reasoning leads to the following proposition:

Proposition 2a: *Compared to B2B alliances, the acquisition of external knowledge will be less likely in B2N alliances, leading to a greater need for inter-partner relationship building.*

Todorova and Durisin (2007) go on to argue that, after the firm acquires external knowledge, it can assimilate it, with little alteration if the new knowledge fits well with existing cognitive schemas, or with significant transformation of both the knowledge and cognitive schema if it doesn't. This rationale implies a higher ability to internalize new external knowledge when inter-partner overlap in terms of knowledge bases and knowledge processing systems is higher (Lane and Lubatkin, 1998).

A firm's ability to internalize new external knowledge is greater when its knowledge processing systems, in the form of organizational structures and related compensation practices, are similar to its partner's (Lane and Lubatkin, 1998). As mentioned above, organizational structures and compensation practices of NPOs differ significantly from those of for-profit firms. As a consequence, the degree of transformation the knowledge will need to undergo before the firm's cognitive schema can incorporate it is likely to be important.

Furthermore, cross-sector alliances combine social with economic goals, meaning that combinations of knowledge that are new to both partners are likely to be necessary to achieve the goals of the alliance, adding to the importance of adaptation of knowledge. Finally, the complex nature of the societal dilemmas that cross-sector alliances seek to address (Phills et al., 2008) compounds the hurdles related to the combination and assimilation of knowledge within the alliance. This is particularly true of BOP environments, in which highly localized and complex solutions are typically needed (Christensen, Craig, & Hart, 2001; Johnson, 2007; Rivera-Santos and Rufín, 2010; Simanis and Hart, 2008). This reasoning suggests that the degree of adaptation and transformation necessary for the assimilation of new knowledge in cross-sector alliances is likely to be particularly high. This is in line with some authors' claims that cross-sector alliances require co-creation, rather than simple innovation, especially at the BOP (London, 2007; Simanis and Hart, 2008; Webb, Kistruck, Ireland, and Ketchen, 2010). These arguments lead to the following proposition:

Proposition 2b: *Compared to B2B alliances, the degree of knowledge adaptation and transformation will be higher in B2N alliances, leading to situations of co-creation of knowledge.*

Exploiting external knowledge / outcomes

The final step in Todorova and Durisin's (2007) model of ACAP is the exploitation of new knowledge for commercial purposes. A firm's dominant logic (Prahalad and Bettis, 1986) determines how it applies knowledge for commercial ends (Lane and Lubatkin, 1998). The degree to which this logic overlaps with that of its partner will determine its ability to commercially apply new knowledge. Similarly, the more experience partners have in solving similar types of problems, the easier it will be for them to find commercial applications for newly assimilated knowledge and derive improved performance implications from this new knowledge (Lane and Lubatkin, 1998).

In the case of B2N alliances, the fundamental missions and goals of both partners will be different (Kanter, 1999; Rondinelli and London, 2003; Waddell and Brown, 1997). The two partners' intents in regard to who will be the primary beneficiary of learning and subsequent innovation processes will lead to different applications and outcomes of new knowledge. Due to these differences, partners in cross-sector alliances will tend to have less experience solving similar types of problems compared to partners in B2B alliances. In other terms, the commercial application of new knowledge will be more challenging in B2N alliances relative

to B2B alliances, and competitive advantages in the form of increased flexibility, performance, and business innovation, which are typical of B2B alliances (Cohen and Levinthal, 1990; Zahra and George, 2002), will be more elusive in B2N alliances. By contrast, social innovations originating from B2N alliances will emphasize the creation of social value, in combination with economic goals (Berger, et al., 2004; LeBer and Branzei, 2010; Nelson and Zadek, 2000; Waddock, 1991; Waddell and Brown 1997), and the outcomes will accrue primarily to society rather than the firm. This reasoning leads to the following propositions:

Proposition 3a: *Compared to B2B alliances, commercial application of new knowledge will be more difficult in B2N alliances.*

Proposition 3b: *Relative to B2B alliances, the benefits or outcomes from learning in B2N alliances are more likely to accrue to society rather than to the firm.*

Moderators and contingent factors

The moderators that influence all other components of ACAP in Todorova and Durisin's (2007) model include activation triggers, defined as events that encourage a firm to respond to specific stimuli, and social integration mechanisms, defined as processes facilitating effective sharing and integration of knowledge.

To varying degrees, new knowledge gained from engaging in B2N alliances will become part of a contributing organization's knowledge base via social integration mechanisms. Yet, because of wide differences in the basic knowledge and objectives of for-profit and non-profit organizations, social integration mechanisms will be more important to the integration of external knowledge for firms participating in B2N alliances. This reasoning leads to the following proposition:

Proposition 4a: *Relative to B2B alliances, the integration of external knowledge from B2N alliances will rely more on the existence of processes designed to integrate new knowledge throughout the organization.*

In addition to activation triggers and social integration mechanisms, Todorova and Durisin (2007) emphasize the important contingent factor of power relationships, that is, external and internal relationships that involve the use of power and other resources by an actor to obtain his or her preferred outcomes.

An organization's identity, or the way in which its members perceive its central, enduring and distinctive attributes (Albert and Whetten, 1985), is likely to determine how it responds to activation triggers. Businesses which see themselves as offering enough to society by maximizing shareholder value are unlikely to engage in B2N alliances with aims of social innovation. By contrast, firms which perceive their role as serving society more broadly will be more likely to engage in such alliances and emphasize the need for alternative success metrics (Johnson, 2007; London et al., 2010; Simanis and Hart, 2008), as they will consider the type of social innovation stemming from these alliances as part of their broader mission. This is aptly illustrated in the fact that many firms engaging in cross-sector alliances at the BOP argue that traditional profit-based performance indicators for the BOP initiative do not correctly capture the value of such initiatives for the firm (Johnson, 2007; London et al., 2010; Simanis & Hart, 2008). This leads to the following proposition:

Proposition 4b: *Firms viewing the creation of societal value as part of their mission are more likely to form B2N alliances in the pursuit of social innovations than firms viewing the creation of value for shareholders as their sole mission.*

Finally, Todorova and Durisin's (2007) model of ACAP acknowledges the positive or negative moderating effect of regimes of appropriability, which refer to the extent to which property rights protect the advantages gained via new products or processes. Because B2N alliances tend to be formed for social innovation, especially at the BOP, regimes of appropriability are likely to be less relevant in this context. This reasoning leads to the following proposition:

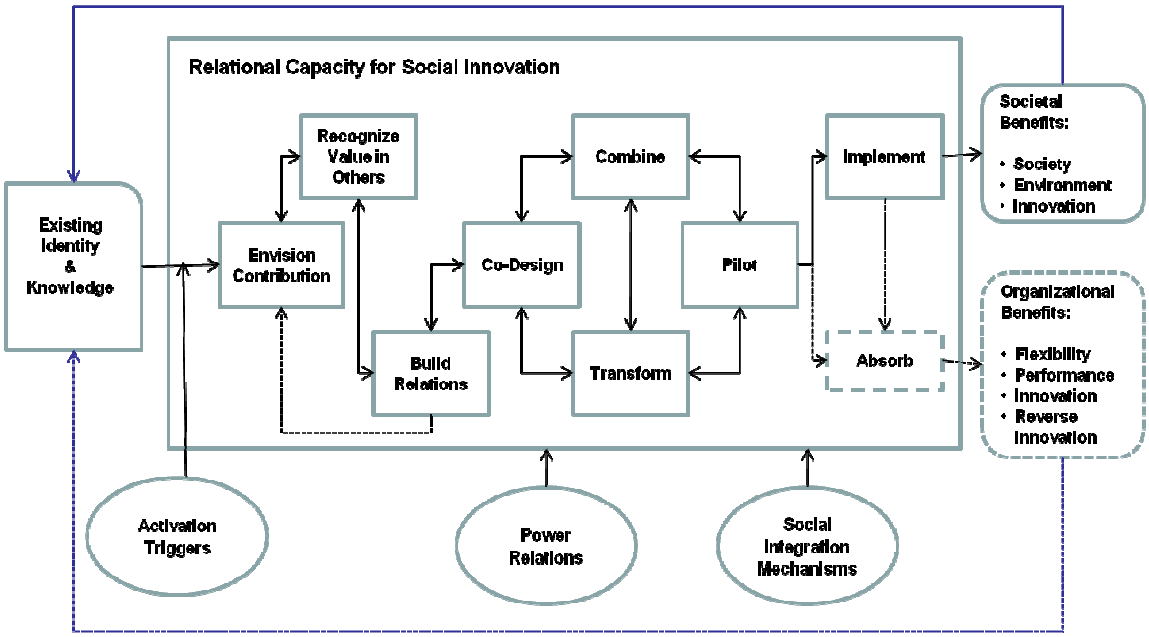
Proposition 5: *Compared to B2B alliances, regimes of appropriability will have a minimal moderating effect on B2N alliances.*

This analysis suggests that existing models of ACAP developed in the context of for-profit firms cannot be directly transposed to cross-sector alliances, due to differences in the partners and in the overall goal of such alliances. The section that follows introduces the concept of Relational Capacity for Social Innovation, a model adapted from ACAP and better suited to the analysis of learning and innovation in the context of cross-sector alliances, especially at the BOP.

4. Relational Capacity for Social Innovation in Cross-Sector Alliances: Two Illustrations

The analysis and propositions above suggest that the concept of ACAP does not adequately explain learning in B2N alliances. Moreover, extant literature on social innovation and B2N alliances (e.g., LeBer and Branzei, 2010; Mulgan et al., 2007; Phills et al., 2008), as well as the cases used for illustration in this article, reveal that models of ACAP do not address other factors important to understanding learning and innovation in the context of B2N alliances. Therefore, this paper introduces a new concept, building on ACAP, explaining a firm's Relational Capacity for Social Innovation (RCSI) in cross-sector alliance. Figure 2 provides a graphical representation of the construct.

Figure 8: Model of relational capacity for social innovation



Two cases of firms collaborating with NPOs in the context of BOP projects, based on semi-structured interviews with top managers conducted in 2010, secondary sources, and archival data, serve to illustrate this model (see Table 2). First, Groupe Danone's B2N alliance with the Grameen Group in Bangladesh aims to reduce both malnutrition, providing poor consumers with affordable and nutritious yogurt, and poverty, leveraging local resources, creating employment throughout the value chain, and emphasizing co-creation and co-innovation. Second, Essilor's collaboration with two renowned Indian eye hospitals, Aravind

and Sankara Nethralaya, addresses the lack of access to eye-care for people in rural areas of India by combining knowledge and resources to offer free sight tests and affordable glasses to the poor, with fewer innovations and very limited learning for the partners, thus providing a contrast to the Danone-Grameen case in which both partners emphasize learning (see Appendix 1 for case summaries).

Many authors consider the BOP an extreme environment in which cross-sector collaborations are necessary for social innovation (e.g.,, London and Hart, 2004; London, 2007; Simanis and Hart, 2008). Extreme cases are useful because they serve to highlight aspects of phenomena which might not be so apparent in other cases (Eisenhardt, 1989; Stake, 1995). By using two cases, contrasting patterns in the data become more noticeable (Eisenhardt and Graebner, 2007), thus facilitating the illustration of important aspects of the proposed model of RCSI. Table 3 provides a summary of the application of the RCSI model to both cases.

Antecedents and activation triggers: Envisioning a contribution

As with ACAP, the model of RCSI recognizes the antecedents of prior knowledge, both internal and external. However, the role identity plays in shaping an organization's response to activation triggers, leading to its incorporation in RCSI. In the case of Danone, whose stated mission is to bring health through food to as many as possible, the firm's identity is closely associated with the pursuit of a dual mission combining economic and social objectives.

Based on the expectation that the identity of an organization, together with its prior knowledge, influences how an organization responds to an activation trigger, the model of RCSI differs from extant models of ACAP by emphasizing the act of envisioning a contribution to society as an essential component of learning in pursuit of social innovation. In turn, when an organization recognizes how its knowledge base might be useful for addressing a societal issue, it helps it recognize the value in the knowledge of potential partners such as NPOs. In the case of Danone, the company clearly sees how its expertise in the production of healthy foods can contribute to the alleviation of malnutrition. However, with little experience serving markets where malnutrition is rife, Danone recognized the need to establish relations with an organization such as Grameen, which has vast experience developing business models in subsistence marketplaces. Likewise, in the case of Essilor, the firm understands that its expertise in the production of lenses may help to address the need for better vision in regions where the extremely poor rarely receive eye care. Yet, with

limited experience in serving customers in India, a country where millions are in need of basic eye care (Garrette, Benkirane, and Roger-Machart, 2008), Essilor sought the collaboration of Aravind and Sankara Nethralaya (SN), NPOs embedded in the Indian marketplace that share Essilor's mission of providing affordable vision to the masses.

External knowledge and the ability to recognize its value: Building relations

As with ACAP, an ability to recognize the value of external knowledge is a crucial component of the learning process in the model of RCSI. However, learning in B2N alliances is more challenging because partners share little basic knowledge.

Propositions 1 and 2a suggest that building relationships to bridge the distance between organizations in the business and non-profit sectors is paramount to learning in B2N alliances. As relationships develop, an enhanced understanding and appreciation for the knowledge of others arises and this may, in turn, cause an organization to re-envision its own contribution to meeting an unmet social need. Thus, the model of RCSI includes bi-directional arrows to represent processes of feedback and learning between the components of relationship building, recognizing the value of other's knowledge, and envisioning a contribution to a societal dilemma. Solid lines represent likely feedback or learning loops, while dashed lines represent loops which, although less likely, are considered possible or optional.

At the BOP, non-traditional partners provide multinationals with essential knowledge of existing social strengths (London and Hart, 2004) and both formal and informal institutions (Webb et al., 2009). In the case of the Grameen-Danone collaboration, strong relationships developed between the leaders of both organizations, Franck Riboud, CEO of Danone Group, and Muhammad Yunus, founder of Grameen Bank, while Danone also established a large team of individuals with boundary spanning capabilities in Bangladesh to develop relationships and learn from Grameen and other local organizations (Yunus, 2007). In the case of Essilor, prior to their alliance, the company had long-term transactional relationships with both of its partners, who it supplied lenses to (Garette et al., 2008). These relationships fostered mutual trust and a high regard for the knowledge and resources possessed by each organization.

Acquisition, assimilation, and transformation of external knowledge: Co-creation

When relationships are formed, a process of learning and developing solutions to address societal needs may begin. Contrasting with ACAP, which focuses on the ultimate commercial application of innovations, RCSI recognizes that social innovations require the co-creation of new knowledge involving several sectors (Phills et al., 2008), that is, an iterative process of co-designing solutions for societal problems, combining and/or transforming the knowledge and cognitive structures of the partners involved, then piloting potential solutions on a small scale. Phills, Deiglmeier, and Miller (2008) stress that "most difficult and important social problems can't be understood, let alone solved, without involving the nonprofit, public, and private sectors" (p. 43). Thus, learning from an external source of knowledge, such as a B2B alliance partner, then applying this knowledge for commercial purposes, misses the point of social innovation which calls for learning *among* partners and the co-creation of new knowledge that no organization or sector could have generated on its own.

The cases of Danone and Essilor offer contrasting examples of what this process may look like and how outcomes of B2N alliances may differ when co-creation of new knowledge does not take place. In Danone's alliance with Grameen, discussions of what the organizations could do together led to the vision of a proximity-based business model that would bring benefits to the community throughout the value chain (Yunus, 2007), in spite of the fact that neither organization had a clear understanding of how this would work at an early stage in the alliance's formation. With this general design in mind, the partners both combined and transformed their own knowledge and cognitive schema in order to co-create an innovative solution to alleviate poverty and malnutrition in Bangladesh, departing from ACAP's traditional model of adaptation of knowledge, rather than cognitive schema.

In contrast to the process of interorganizational learning and co-creation that occurred within the Danone-Grameen alliance, Essilor's alliance with Aravind and SN resulted in little learning or co-creation of new knowledge. In general, the partners in this alliance combined resources, but kept close to their core organizational objectives. Ultimately, the alliance produced no product innovations and what Essilor learned from this was limited to reconfirming that its strength lies in the production, rather than the distribution, of lenses.

While the Danone-Grameen and Essilor-Aravind-SN alliances took different approaches to determining how to address unmet societal needs, both alliances piloted their solutions on a small scale prior to implementing them on a larger basis. While piloting solutions prior to

full-scale implementation is not exclusive to social innovation in comparison to business innovation, it is so essential to processes of learning and galvanizing support and enthusiasm for social innovations (Mulgan, Tucker, Ali, and Sanders, 2007) that it is highlighted as a distinct component of the model of RCSI.

Exploiting external knowledge / outcomes: Innovation and implementation

In the context of social innovation, when a pilot is perceived to reach a satisfactory level of performance, it is generally implemented on a larger scale in order to provide greater social benefits and gain economies of scale (Webb et al., 2009). If the implementation or "exploitation", as ACAP's models refer to it, is successful, it results in innovation and benefits accruing primarily to society in the form of improved social or environmental welfare (Phills et al., 2008). As suggested by Proposition 4a, the firm can also realize benefits arising from B2N alliances when social integration mechanisms are put in place to integrate knowledge acquired in the alliance into the firm's knowledge base. Furthermore, successfully addressing previously unmet social needs may have an impact on an organization's identity. The cases of Danone-Grameen and Essilor–Aravind-SN are useful for illustrating these points.

In the case of Danone-Grameen, Danone utilizes staff from its R&D, operations, and marketing functions to co-create with Grameen a new business model which differs significantly from any that either organization has employed before. Yogurt factories are created on a micro-scale and powered by renewable energy; supplies of milk are sourced from small-scale dairy farmers near the factory; distribution includes a network of local sales ladies; yogurt is fortified with nutrients to a degree previously unattained; and containers are made of bio-degradable materials (Yunus, 2007). Meanwhile, Danone carefully designed routines and processes for spreading new knowledge developed with Grameen throughout the company, as detailed in Table 3). As a result, according to Danone Communities' General Manager, Danone's alliance with Grameen provides the company "a proven learning experience" leading to numerous product and process innovations. Consequently, the participation of R&D staff assigned to work on Danone's social projects has increased from a few hours of spare time to the full-time dedication of a team of 15 staff supported by the part-time commitment of a further 60 employees. These staff not only innovate for the purpose of the social initiatives they are focused on, but use information gained from such initiatives for entering emerging markets such as India and, increasingly, a process of reverse innovation

brings new knowledge back from these projects into Danone's more established markets. In contrast, in the case of Essilor-Aravind-SN, partners merely combine their knowledge and resources rather than transforming them to promote innovation. While this alliance provides a valuable service to Indian society by increasing the level of eye-care available to the rural poor, Essilor's VP of Sustainable Development reports that the alliance does not produce great benefits to Essilor itself. Essilor's management recognizes that the marketing knowledge generated by the program is rather limited and has not percolated to other business units within the company. Likewise, the project did not generate any product innovations.

These examples illustrate that, although B2N alliances hold the potential for both organizational and societal benefits, realizing organizational benefits is not automatic. In the RCSI model, dotted lines thus represent potential or optional links between piloting and/or implementing socially innovative solutions and absorbing the new knowledge and capabilities that may arise from learning in a B2N alliance. When adequate social integration mechanisms are in place, organizations may benefit from some commercial applications of new knowledge gained from B2N alliances. However, in the absence of such routines, this new knowledge is likely to remain with the individuals or teams directly involved in the alliance, without benefitting the overall organization.

Moderators and contingent factors

Mirroring ACAP, the model of RCSI acknowledges activation triggers as important catalysts which launch efforts in pursuit of social innovation. In the context of both business and social innovation, something needs to occur to prompt an organization to search for external knowledge in order to learn.

The model of RCSI also incorporates the components of power relations and social integration mechanisms present in the Todorova and Durisin (2007) model of ACAP. Power relations are a constant factor both within organizations and between alliance partners and moderate what knowledge is valued and how it is utilized. Likewise, social integration mechanisms moderate all components of RCSI. For example, the ability to identify new external knowledge or co-create new knowledge is moderated by the way social networks are employed for sharing information between and within organizations.

The case of Essilor highlights the limitations to learning and its diffusion throughout the company when social integration mechanisms are under-utilized. Conversely, the case of

Danone reveals the possibilities of widespread learning within an organization when routines and processes are in place to utilize social networks and share knowledge.

Departing from models of ACAP, the model of RCSI does not include the moderating factor of regimes of appropriability. As Proposition 5 suggests, regimes of appropriability are less relevant to B2N alliances, due to the priority given to the pursuit of benefits for society over those for the firm. As Danone Communities' General Manager mentioned in the interview, "everything that has been learned [from the Grameen-Danone joint venture] should be shared as much as possible to bring solutions to as many people as possible". The substantial amount of information that Danone and Grameen share about the alliance in publications (Yunus, 2007; Yunus et al., 2010), on their web-sites, and by opening the doors of their micro-factory to thousands of visitors, reflects this spirit of openness.

Conclusion

This paper applies ACAP to the context of B2N alliances, exploring whether ACAP can be directly transposed to the context of B2N alliances. The analysis suggests that, due to significant differences in both the objectives and the partners of B2B and B2N alliances, current models of ACAP fit imperfectly to the context of learning and innovation in cross-sector alliances. While these differences do not contradict the model of ACAP itself, the prevalence of B2N alliances established with aims of learning and social innovation cannot be explained or understood using the model of ACAP. As a result of the imperfect fit of the model of ACAP to B2N alliances, this article introduces the concept of Relational Capacity for Social Innovation (RCSI), which is better suited to explaining the dynamics of learning and innovation in the context of B2N alliances, especially those at the BOP.

The model of RCSI shares several fundamental components with the model of ACAP. However, RCSI also introduces several components that do not appear in ACAP, but are important to dynamics of learning and innovation in B2N alliances. In particular, RCSI emphasizes the importance of an organization's identity to understand how it responds to activation triggers; envisioning a contribution to the resolution of a societal dilemma; carefully building relationships with partners in order to bridge wide gaps in basic knowledge; co-creating new knowledge and transforming cognitive schemas; and piloting solutions to highly complex problems prior to implementation. While ACAP recognizes the importance of social integration mechanisms, RCSI places additional emphasis on

intentionally building such routines and processes because of their essential role in facilitating the integration of learnings and benefits arising from B2N alliances. Also, differing from ACAP, RCSI de-emphasizes the importance of regimes of appropriability due to the priority that B2N alliances give to creating benefits for society as a whole.

This research contributes to the literature in three areas. First, the construct of RCSI contributes to the literature on cross-sector partnerships by explaining the processes and dynamics of learning and innovation in B2N alliances. Second, by providing a framework to improve understanding of processes of co-creation and co-innovation in markets characterized by poverty, this work contributes to BOP and subsistence marketplaces literatures. Third, by highlighting the impact that different types of partners and the overall goals of B2N alliances have on learning and innovation, the article contributes to the broader inter-partner learning and innovation literatures. Finally, this research assists practitioners in recognizing the specificity of learning and innovation in cross-sector alliances and aids them in organizing processes to benefit from such alliances.

As is the case in any research endeavor, there are limitations to this paper. Given its emphasis on B2N alliances at the BOP, for instance, this study has not analyzed cases of B2N alliances in developed contexts that might lead to further insights regarding the model of RCSI. Similarly, some scholars (e.g.,, Kerlin, 2006), especially in Europe, have pointed to similarities between NPOs and social enterprises and have argued that alliances between firms and social enterprises are a form of B2N alliances. The study of RCSI in alliances between for-profit firms and social enterprises, also beyond the scope of this paper, is likely to provide important insights into how firms learn and innovate in non-traditional alliances. Finally, this is primarily a conceptual paper, relying on in-depth case study data to illustrate the proposed concept of RCSI. A quantitative study exploring the dimensions and impacts of RCSI in B2N alliances may be more generalizable, albeit most probably at the cost of a detailed understanding of the phenomenon. This work should encourage other scholars to pursue the exploration of the dynamics of inter-partner learning in the context of B2N alliances.

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Table 10: Comparison of business innovation vs. social innovation

	Business Innovation	**Social Innovation**
Definition	An innovation that will be exploited for the purpose of taking advantage of an economic opportunity (Schumpeter, 1934). "The multi-stage process whereby organizations transform ideas into new/improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace" (Baregheh et al., 2009).	"A novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions and for which the value created accrues primarily to society as a whole rather than to private individuals" (Phills, et al., 2008, p. 39).
Goals	- "to gain an enhanced position in the market and related temporary profits or "economic rents" from their innovation" (von Hippel, 1988: 43). - To provide aggressive top-line growth and increase bottom-line results (Davila, et al., 2006). - To advance, compete and differentiate themselves in the marketplace (Baregheh et al., 2009).	- "motivated by a goal of meeting a social need" (Mulgan et al, 2007: 8). - The mission is to create and sustain social value (not just private value) (Dees, 2001). - "virtuous intent in an organization is a necessary condition for social innovation" (Bright and Godwin, 2010: 180).
Primary Beneficiary	- The organization (Schumpeter, 1950; Zahra and Coven, 1994; Bessant et al, 2005; Baregheh, et al, 2009).	- Benefits primarily accrue to society (Mulgan et al., 2007; Phills et al., 2008). "Many innovations address social problems or meet social needs, but only for social innovations is the distribution of financial and social value tilted toward society as a whole" (Phills, et al., 2008: 38)
Originator	- Focus on the firm or users of the firm's products or services (von Hippel, 1988). - Various combinations of innovators internal and external to the firm (Chesbrough, 2003).	- Public organizations, social enterprises, cooperatives, cross-sector collaborations (Phills et al., 2008). "The most important implication (of the concept of social innovation) is the importance of recognizing the fundamental role of cross-sector dynamics (Phills et al., 2008: 42).

Table 11: Comparison of B2B and integrative B2N alliances relative to ACAP

Components of ACAP (Todorova and Durisin, 2007)	**B2B Alliance**	**B2N Alliances**
Prior Knowledge (K) & Recognizing the Value of External K Sharing basic knowledge with the source of new knowledge facilitates recognizing the value of new external knowledge (Cohen and Levinthal, 1990).	- B2B partners are likely to share more in terms of org culture - B2B partners are more likely to share professional language - B2B partners are more likely to share views of what constitutes social value and how to obtain it - B2B partners are more likely to share similar missions at a fundamental level (e.g., profit)	- B2N partners are likely to share less in terms of org culture (Austin, 2000; Berger et al., 2004; Waddell and Brown, 1997) - B2N partners are less likely to share professional language (Austin, 2000; Lucea, 2007) - B2N partners are less likely to share views of what constitutes social value and how to obtain it (Hardy et al., 2006; LeBer and Branzei, 2010) - B2N partners are less likely to share similar missions at a fundamental level (e.g., societal) (Kanter, 1999; Rondinelli and London; 2003; Waddell and Brown, 1997)
Assimilate New External K Similar knowledge processing systems facilitate internalization of new K from external sources (Cohen and Levinthal, 1990). Compensation practices and organization structure (i.e. degree of formalization and centralization) serve as proxies for knowledge-processing systems (Lane and Lubatkin, 1998).	- Compensation practices in B2B likely to be more similar - Org structures in B2B more likely to be similar – more formal and more centralized decision making in businesses - Governance practices in B2B likely to be similar - Less psychological hurdles in B2B - More likely to share missions and goals in B2B	- Compensation practices in B2N likely to be different (Preston, 1989; Weisbrod, 1983) - Org structure in B2N likely to be different - less formal and less centralized decision making in NPOs (Berger et al., 2004) - Governance practices in B2N will be different (Doh and Teegen, 2003; Leete, 2000; Rondinelli and London, 2003) - More psychological hurdles in B2N (e.g., mistrust, fear, loss of control, misunderstanding of motives) (Rondinelli and London, 2003) - Less likely to share missions and goals in B2N (leads to misunderstandings and interorganizational conflict) (Kanter, 1999; LeBer and Branzei, 2010; Rondinelli and London; 2003; Waddell and Brown, 1997)

	- B2B partners more likely to share professional language. - Partners in B2B tend to share more in terms of org. culture	- B2N partners less likely to share professional language (Austin, 2000; Lucea, 2007) - Partners in B2N tend to share less in terms of org. culture (Austin, 2000; Berger et al., 2004; Waddell and Brown, 1997)

Table 12 : Components of the model of RCSI in relation to the Danone and Essilor cases

Component	Definition	Danone	Essilor
Existing Organizational Identity & Knowledge	- Identity: Perceptions of central, enduring and distinctive attributes (Albert and Whetten, 1985) shared by the members of an organization. - Knowledge: Facts, information, and skills acquired through experience or education (Oxford Dictionaries Online)	- Danone's mission, to bring health through food to as many as possible, reflects its identity as a business focused on development of healthy foods and beverages. - Prior experience of social projects to develop foods that address malnutrition (e.g., Bikaut Susu & Milkaut in Indonesia; fortified yogurt product in Morocco; calcium enriched biscuits in China; Mleczny Start children's cereal in Poland). - Ability to work across cultures gained over years of expansion into emerging markets. - Ability to collaborate in pursuit of social projects (e.g., Mleczny Start in Poland).	- Essilor defines its mission as "Seeing the World Better". The firm was created in 1849 as a cooperative. - Tradition of societal involvement: sponsorship of eye care NPOs - Active and innovative Foundation; tagline: "Better Life through Better Sight"; free eye exams in schools; education of parents, teachers, caregivers, and community leaders about eye care - Before entering India, Essilor offered low cost products in emerging markets such as Brazil. Since the '60s, success in Brazil was built on a low-cost product that addresses the vast majority of the market.

		- R&D and management capability focused on production of healthy foods and drinks.	
Activation Trigger(s)	Events that encourage or compel an organization to respond to specific internal or external stimuli (Todorova and Durisin, 2007).	- Sale of biscuit unit, LU, caused crisis bringing pressure on Danone to restore its identity as a socially sensitive business. - Push into emerging markets as growth strategy; markets where issues of poverty and inequality are more prevalent Long-standing dual commitment to economic and social progress - "We have a duty…to reduce excessive inequality in living and working conditions" (CEO, A. Riboud, 1972).	- Essilor's strategy to expand its market share in India to match its global market share (30%) (Garette et al., 2008). - Essilor products do not have a significant environmental footprint, so focusing on blindness prevention is seen as an alternative focus for sustainable development efforts.
Envision Contribution	Ability to appreciate how existing knowledge and/or capabilities may be employed to address societal issues	- Recognition of how Danone's products, R&D capability, and social network may be employed to address issues of malnutrition. - Danone's Mission: "Health through food to as many as possible"	- Essilor contributes to providing affordable vision to the poor by providing lenses and financial resources to like-minded partners / distributors. - Recognition that Aravind, Sankara Nethralaya (SN) and Essilor have the same mission, i.e.

			giving affordable vision to masses in India (Garette et al., 2008)
Recognize Value in Others	Ability to identify others with complimentary knowledge and/or capabilities useful to address a societal issue. Learning about others knowledge and capabilities can lead to new ways of envisioning one's own contribution.	- Danone is aware of the effectiveness of Grameen in implementing innovative solutions to societal dilemmas. - M. Yunus is aware of Danone's capability of producing nutritious yogurts. - F. Riboud sought out M. Yunus in order to get ideas about how to use Danone's knowledge and capabilities to address issues of malnutrition in impoverished communities (Yunus, 2007).	- Aravind and SN had experience reaching rural patients in India with campaigns (since 1987 for SN; since 1976 for Aravind) (Garette et al., 2008). - SN and Aravind recognized Essilor as the most reliable lens maker in India. Partnering with Essilor aligned with their strategy of not proposing "second hand" or reading lenses (Garette et al., 2008). - Essilor management was impressed by the leadership and charisma of the entrepreneurs who founded SN and Aravind.
Build Relations	Ability to build bridges and trust across sectors and cultures. As relationships are built, envisioning may occur together; different aspects of the other's knowledge and/or capabilities may become apparent.	- F. Riboud strikes up a trustful relationship with M. Yunus, agreeing on a handshake to develop a social business together (Yunus, 2007). - Danone commits significant human resources to understanding the context and building a	- Essilor was a supplier to Aravind and SN before the collaboration. All partners already knew each other well.

		network of relationships in Bangladesh (Yunus, 2007).	
Co-Design	Collaborative conception of solutions to societal issues.	- The Grameen-Danone team imagines a proximity based business model that will bring benefits to the community throughout the value chain of the business; from supply, through production and distribution (Yunus, 2007).	- Each partner keeps close to its core business. The program consists of only incremental improvement to existing Aravind and SN eye camps. - No co-design of a new business model or product, but innovation in distribution processes.
Combine	Joining complimentary knowledge and/or capabilities to address societal dilemmas.	- Grameen contributes knowledge of local culture and tastes; activates its social network; leverages its organizational capabilities (e.g., establishing network of sales ladies) (Yunus, 2007) - Danone contributes technical capabilities for producing healthy foods; acumen for market research, marketing, and efficient organizational management - Creation of a joint venture: Grameen Danone Foods Limited	- Essilor pays for refraction vans (4 provided between 2007 and 2008); provides low cost lenses; trains optometrists (Garette et al., 2008) - Aravind and SN run the refraction vans and bear all operating costs (Garette et al., 2008). - No legal structure founded for this program; partners monitor implementation through regular meetings
Transform	Changing new knowledge and/or perceptual schema to address societal dilemmas	- A new type of business organization, the social business, is established.	- Alliance exhibits no transformation of knowledge or perceptual schemas

		- To create a proximity business model Danone transforms its knowledge about yogurt factories to create a micro-factory. - To maximize intended health benefits, yogurt is enriched with 30% of RDA, more than previously thought possible.	
Pilot	Testing the new product or service on a small scale for the purpose of evaluating effectiveness, learning, and enhancing future models.	- GDFL piloted products and business model on a small scale and recalibrated in response to customer reactions and issues with the business model (e.g., preference for sweeter yogurt; reliance on Grameen-ladies sales network; fluctuation in milk prices) (Yunus, 2007).	- Pilot started with four refraction vans provided by Essilor (Garette et al., 2008).
Implement	Operationalizing the new product or service on a larger scale.	- Ramping up production to fully serve the community within a 50 km radius of the factory. - Current construction of a 2nd micro-factory in Dhaka. - Planned expansion of the business model throughout	- Eight vans have been put into operation. To reach the 600,000 villages of India, approximately 1,000 vans would be required (Garette et al., 2008).

		Bangladesh by 2020 (50 factories).	
Absorb	Recognition and integration of new knowledge to apply to organizational purposes.	- Danone recognizes innovations from the alliance may be used to further other organizational purposes: e.g., micro-factories provide a lower cost model in some new and established markets; yogurts may be enriched with levels of nutrients higher than previously imagined; bio-degradable cups may be used in other markets.	- Essilor management recognizes marketing knowledge generated by the alliance is limited and has not percolated to other business units. - The program confirmed Essilor's strategy of being only a producer and not expanding into distribution.
Power Relations	Relationships that involve the use of power and other resources to obtain preferred outcomes (Todorova and Durisin, 2007).	- Frank Riboud and Mohammad Yunus, both organizational leaders and well-known public figures, used their influence to promote the Grameen-Danone joint venture both internally and publicly.	- Leaders of all partners had respect for the other organizations and supported working together due to pre-existing transactional relationships and shared missions of bringing improved eye-care to the rural poor in India.
Social Integration Mechanisms	Formal and informal means of sharing knowledge within the firm and across organizations (Todorova and Durisin, 2007)	- Social Responsibility Committee of Board of Directors dedicated to societal innovation - Social Innovation Advisory Board comprised of external advisors - Sharing good practices through	- Essilor did not establish any formal processes or routines related to learning or sharing experiences from this alliance.

		"Social Innovation Lab" and "Social Innovation Network" intranet - Danone's partnerships with other NPOs and social entrepreneurs (e.g., in Senegal) (Danone, 2009).	
Societal Benefits	Social innovation may benefit society and the environment in many ways. These innovations may be replicated or lead to further social innovations. Providing benefits to society also impacts the identity of organizations.	- Proximity business model resulted in: - process improvements + increased and steady sales opportunities for local dairy producers - new stream of income for ladies sales network - increased local employment due to low-tech factory design - innovations in factory design (e.g., micro-factory; use of clean energy; production of bio-gas) - Nutritious and affordable products to address nutritional needs of local population	- Training of optometrists to reduce skills shortage - Preventing poor vision or blindness with affordable spectacles

		- Use of bio-degradable containers - Model and inspiration for other types of social businesses (Yunus, 2007). - Creation of danone.communities fund to support social businesses (Danone, 2009).	
Organizational Benefits	Competitive advantages gained from increased flexibility, performance, innovation, and reverse innovation	- Increased levels of flexibility and innovation as evidenced by radically different factory designs; new products, packaging, and production processes; new organizational structures; new funding mechanism (danone.communities) for social business ventures - Reverse innovation: e.g., adoption of aspects of micro-factories and/or enriched yogurts in industrialized markets - Per internal surveys, Danone staff show increased levels of motivation and commitment, and increasingly associate Danone's identity with bringing healthy foods to all.	- Confirmation of manufacturing position in the value chain - Limited marketing knowledge generated through the program - Better understanding of challenges faced by optometrists and distributors in rural areas

		- Creation of BOP department in 2009 inspired by alliance with Grameen; “goal is to work differently in order to invent new models to maximize impact on health for the greatest number of people” (Danone, 2009).	

Appendix 1 - Case Summaries

Groupe Danone, headquartered in Paris, France, is a global food-products company with leadership positions in bottled water, dairy products, baby food, and beverages. In 2006, the company created a joint venture, Grameen Danone Foods Limited (GDFL), with the Bangladeshi Grameen Group, a coalition of four non-profit organizations founded by the Nobel Peace Prize winner Muhammad Yunus. The purpose of the collaboration is to reduce poverty and malnutrition in Bangladesh through the provision of affordable and healthy nutrition supplied via a business model which incorporates resources from local communities throughout the value chain (Yunus, 2007). To accomplish this, Danone built a low-cost, green, production facility in Bogra and also developed new types of yogurts fortified with important nutrients lacking in the local diet. Grameen, on its side, developed two networks that support the value chain with, on the one hand, dairy farmers who supply milk to the plant and, on the other hand, sales ladies who visit customers door to door (Yunus, 2007). In 2010, the collaboration involved more than 800 ladies in the distribution of about 40,000 cups per day (personal communication). A second production plant is being developed to extend the program to other areas in 2011 (personal communication) and GDFL aims to build 50 plants throughout Bangladesh by 2020 (Yunus, 2007). To support the development of this program, as well as other social businesses developed outside the joint venture, Danone created a fund dedicated to finance social ventures, called “Danone Communities”, open to all investors, from Danone employees to the public at large (Danone, 2009).

The Essilor-Aravind-Sankara Nethralaya collaboration addresses the lack of access to eye-care for people in rural areas of India. Essilor is one of the leading manufacturers of optical lenses with a global market share of about 30% and operations in developed and emerging markets. In 2007, Essilor entered a partnership with two large non-profit eye-care hospitals in India, Aravind and Sankara Nethralaya (SN). These two hospitals are famous for conducting eye-care camps in rural India in which they identify people suffering from visual disorders before treating them in their hospitals (Garette, Benkirane, and Roger-Machart, 2008). The goal of their partnership with Essilor is to add to the eye camps a free sight-test and the possibility to simultaneously offer new and reliable spectacles that are assembled on-site and equipped with affordable lenses. Essilor, which was already a lens supplier for the two hospitals, provided four “refraction vans” and trained the optometrists who operate them. The two hospitals operate the vans which produce lenses on-site (Garette et al., 2008). In 2009,

Essilor sold 20,000 additional lenses through this partnership and the company is now considering different ways to extend the refraction van system across India.

Conclusion

By collaborating with firms engaged at the BOP, and by generating new cases with Lafarge, this thesis contributes to better understanding market strategies in low-income segments. However, this only goes half way to understanding the validity of the BOP proposal. Indeed, with the existence of ever more BOP cases, it is now becoming critical to start addressing more systematically the question of the performance of these ventures.

1. Suggestions for Further Research: From the Identification of BOP Strategies to the Measurement of Social and Financial Performance

The performance issue is twofold and encompasses the financial and social performance of the firm, the latter with regard to the positive or negative impacts that these programs have on the lives of low-income families. Building on the conclusions of this dissertation, the next paragraphs suggest three complementary topics to address the BOP programs' performance issue.

1.1 The influence of the type of economic good on social and financial performance

This dissertation highlights the influence of product-related challenges and institutional constraints in the development of BOP strategies. However, developing solutions for durable goods, i.e., products that yield services over time (such as utilities or housing) may be much more difficult because of the initial price (housing) or the investment required for constructing infrastructure (energy, water, sewage), and the importance of local institutions (municipalities, governments) in dealing with this type of goods. Thus, it would be interesting to further investigate how the type of economic goods influences the achievable financial performance of the program, and also the possible social impact for the consumers.

The table provides an overview of the differences of challenges between durable and consumable goods.

Table 13: Challenges depending on the type of good: durable versus consumable

Type of challenge		Specific challenges for	
		Durable goods	**Consumable goods**
Product challenges	Affordability	• Generally more expensive and with initial investment required for public goods (e.g., utilities infrastructure)	• Achievable through change in package size or quality reduction
	Accessibility	• Distribution issues to rural and dense areas	• The issue of distribution to rural and dense areas can be overcome (small packages, etc.)
	Awareness	• Relatively high for most desired durable goods	• Not challenging, except for totally new products and experience goods (e.g., glasses). Can be overcome through education and advertising
Institutional environment		• Very important role of government policies and the involvement of local authorities. E.g., land titles, existence of contracts, etc.	• Role of public institutions less important
Competition		• Different models of private or public systems may compete	• Competition is a triggering factor for firms to engage

The dissertation raises the question of access to durable goods, such as equipment goods in the EDF case on access to energy in Africa. This case illustrates the challenges of establishing the necessary infrastructure to enable people to access electricity. The question of funding the initial investment appears the key challenge, as illustrated by EDF in its attempt to channel private and public funding.

In an attempt to identify possible solutions to the provision of durable goods, it would be worth investigating strategies which overcome the problem of access to a durable good (e.g.,, electricity, housing), by providing a consumable good instead of a durable good. In contrast to EDF, who relies on public-private partnerships with local governments to provide electricity solutions (diesel engines, grid connections, etc.), Schneider Electric provides

individual lighting solutions, such as LED systems associated with small photovoltaic panels. Consequently, the product has more of a resemblance to a consumable good (limited lifetime of batteries), which requires a very limited investment of less than 100 euro. In contrast, a diesel engine for instance, can be considered as "equipment", and generally costs in excess of 10 000 euro, thus requiring public-private financing. In this case, the customer only pays for the use of the good, and not the initial investment. These examples demonstrate two very different types of responses to the question of access to electricity, through a consumable good (mostly used for comfort) or a durable good. This shift from investment to consumption can also be illustrated in other sectors, as in the case of housing, with the shift from house acquisition to rental.

However, answering the social issue through a durable good or a consumable good may not have the same social impact on the lives of customers: an LED system allows for comfort lighting, while the connection to a diesel engine enables users to run a small machine and, potentially, a small business. Thus the question of the links between the type of economic good, the social impact for the end-users and the financial performance of the firm should be further investigated.

1.2 Understanding the financial performance and its implications on strategies and funding

The two programs in Indonesia contributed to illustrating the differences in terms of the pay-off timeframe between market capture approaches (short-term pay-offs) and market creation approaches (longer term). The comparative analysis of other cases in the dissertation also highlights that innovative programs such as those introduced by Danone, Essilor and EDF do not significantly contribute to the firms' business results.

Given this, the possibility may arise that firms opt for market capture strategies rather than market creation strategies to satisfy short-term requirements of financial performance. Basic financial principles state that if a program's return on investment is lower than the firm's cost of capital, then the firm should not embark on it, and recent research has started to address this issue with regard to BOP programs (Garrette & Karnani 2010). However, based on the Danone case, this dissertation also suggests that firms engaged in market creation programs benefit from new learning and knowledge obtained through this approach that they reuse for

their mainstream business model. This question of reverse innovation should then be better documented and investigated, as it represents a way forward to understanding the benefits of innovative approaches (Faivre-Tavignot et al. 2010).

In the pay-off timeframe of innovative programs, one of the challenges lies in the ability to extend such programs. So far, the analysis of BOP programs has mostly consisted of demonstrating the difficulties in building pilots. The next topic is certainly to better understand bottlenecks in the extension and replication of programs. One of the success factors of BOP programs lies in their ability to integrate local needs and specificities (Hart & Simanis 2008). However, such a (very) local approach implies that solutions are tailor-made and valid for a certain and limited market, and are thus at odds with the sources of competitive advantage of MNCs – global knowledge, replication strategies and economies of scale. It would then be interesting to better understand whether programs can be local enough to match with specific needs and replicable across countries. The dissertation highlights in Chapter 2 the need for more ambidexterity, i.e., the development of programs leveraging new capabilities and existing capabilities of the firm. In particular, it would be interesting to better understand how firms can combine the capabilities available at the local level (such as market knowledge) with those at the global level (innovation and access to funding, for example), through the implementation of appropriate incentive programs and management support schemes.

There has been a constant debate in Lafarge about whether BOP programs should deliver as much financial performance – measured, for example, in terms of "return on capital employed" – as the mainstream business model. For some people, as innovative BOP programs require greater services and assistance and thus increase costs, they are likely to deliver lower performance than the mainstream business. Conversely, others consider that BOP programs allow the firm to sell more value-added products at a higher price than traditional products, and thus believe that they should be able to create as much, or even more, value than the mainstream business. With the growth in the number of available programs, this debate (which is still rather theoretical) will certainly benefit from the analysis of more empirical results.

However, the core problem is not the level of financial performance *per se* but the alignment between what shareholders expect and what these projects deliver. Thus, if market creation programs turn out to be less value-creative, the question is more about the ability for firms to

spin off this activity and find investors willing to accept such a level of performance. The dissertation raises the question of the sources of funding for innovative programs, such as Danone who created a finance vehicle channeling funds from investors who agree on below-market returns. This example illustrates that certain investors are willing to accept below-market returns, provided the program embeds the social mission sought.

Recently, the term “impact investing” has gained in popularity and describes “investments intended to create positive impact beyond financial return” (O’Donohoe et al. 2010). This should be differentiated from socially-responsible investment (SRI). SRI consists of overweighting in investment decisions the firms engaged in social or environmental strategies. While SRI concerns investments in the stock market, “impact investment” refers to an emerging asset class that consists of directly investing in projects which are profitable and which generate a social impact. The study by JP Morgan establishes that this asset class should represent between 400 billion and one trillion dollars in the next ten years. The main bottleneck in the growth of this sector is said to be the existence of projects which embed a social dimension and are able to generate positive financial returns. Several firms, such as GDF Suez or Schneider, have started to build vehicles intended to channel such funding to their BOP programs. Consequently, it would be very interesting to better understand the level of financial performance that these investors require, and the balance with the social performance that they look for.

While the level of financial and social performances sought by investors needs to be investigated further, this example illustrates how the ability to demonstrate social impacts is becoming increasingly important, and that social impacts is a topic that requires a greater level of understanding.

1.3 Measuring the effects of BOP programs on poverty

This dissertation has focused on the generation of projects that would allow a better understanding of the development of strategies and their implementation. However, the issue of building the theoretical framework for the identification and measurement of the social impacts of BOP programs still remains to be addressed. With this objective, a method has begun to be implemented in the program in Aceh for a sample of participants, although the time needed to obtain the results clearly exceeds the timeframe of this dissertation.

Numerous methods are now available to measure the impacts – from the more empirical qualitative methods developed to provide appealing stories, to the more scientifically-controlled methods implemented by scholars and using rigorist statistical principles, such as the "Randomized Controlled Trial" (RCT) promoted by the MIT Poverty Action Lab. In between, a wide range of methods developed by NGOs (Oxfam Poverty Footprint), universities (Social Return on Investment) and development agencies (Geschäftspolitisches Project Rating) are also in use.

The reasons for building an impact measurement framework appear evident for the ethical reasons related to avoiding the possible negative effects on vulnerable consumers. Being able to identify impacts is then a way to correct deficiencies of the programs. However, there may be other reasons that drive the interest for measuring impacts of BOP programs, and further investigation on this topic would be interesting.

First, going beyond the issue of which method and indicators to use, the question of who measures, validates and discloses the results needs to be addressed. Indeed, having external parties such as NGOs or universities contributing to measuring and reporting social impacts is very different from in-house methods implemented by managers and used for internal purposes. Behind the issue of measurement, the question of the accountability of firms with regard to their BOP programs arises. As BOP program measurement practices develop, the extent to which they contribute to extending the reporting of firms on their broader social impacts should be investigated.

Second, measurement is becoming increasingly embedded in the programs developed by governments, NGOs, development agencies and the private sector. Consequently, the debate on the comparative efficiency of the various programs aiming at reducing poverty and the type of solutions preferable, in accordance with country specificities and the issues at stake, arises. Since development can be compared to a market on which actors offer solutions (Mahieu 1996), players such as international and local NGOs and social entrepreneurs can be seen to compete for resources – so far primarily for donations and, more recently, for private investment (in microfinance). If the BOP represents a firm's entry on the "market of development", then the competition for these resources, and below-market rate investments especially, may become fiercer. Consequently, this is likely to render the ability to demonstrate social performance a critical performance dimension.

However, in spite of the importance of the social impact measurement of BOP programs, the choice of a method remains a pending issue. So far, most BOP programs are evaluated based on narratives which do not account for the impacts. Some firms, such as Veolia in Morocco, have opted for more scientific methods, such as RCT. To obtain statistically significant results, the RCT method imposes strong constraints rendering it difficult to undertake in the setting of a BOP program. In particular, these methods require the interviewing by a dedicated and trained staff of a high number of participants, generally over 800 people, which is far higher than the number of people impacted by BOP programs in their early stages. Moreover, these methods also require assigning people eligible to the program to a control group, thus reducing the number of clients in the customer base of the company. There is, then, a need to develop flexible and action-oriented tools that would be sufficiently rigorist to account for real effects, but manageable enough to be implemented at an acceptable cost and provide meaningful insights for managers.

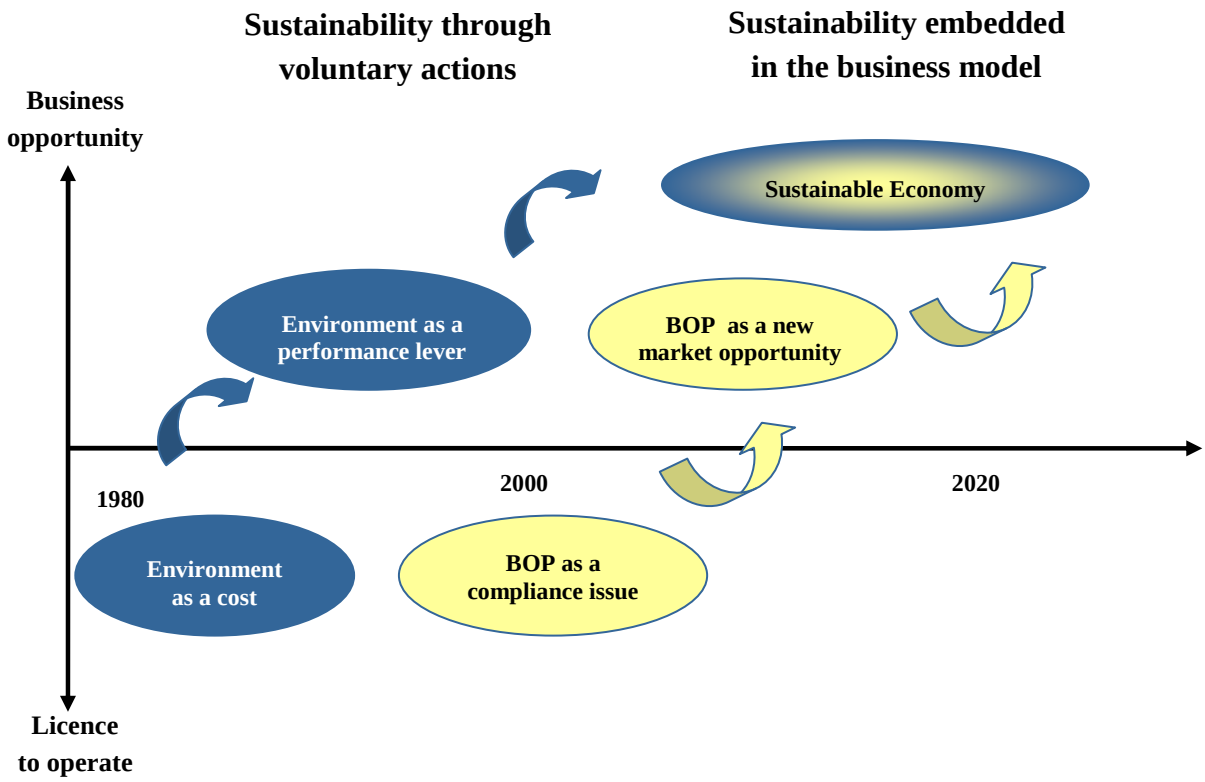
2. BOP Practices as Experiments of a Transition towards Sustainability

It is always surprising to see so many students who dedicate their time and passion to the topic of the BOP, develop competences focused on social issues and seek to enter companies with the objective of working on BOP programs. This interest, along with that of many professionals, illustrates the new level of expectations facing corporations about the possible impact of their business model. This interest also demonstrates that what it as stake with the BOP overcomes the single issue of addressing poverty and refers to the broader role of corporations in achieving global sustainability.

The BOP topic contributes to the change in the perception of sustainability from something external to the core business, to something embedded in the business model. Until the late 1990s, engagements of social and environmental programs were perceived as voluntary actions in response to the expectations of stakeholders. The underlying strategy was then to conform to stakeholder expectations in order to maintain the license-to-operate. However, a first shift occurred regarding the environment: while responses to environmental issues were considered as costs that companies had to bear, following Porter’s hypothesis, they began to appear as performance improvement levers.

The social issue of poverty followed the same path but ten years later than environmental issues. Up until the 1990s, poverty was perceived mostly as a philanthropic issue. With the growth of concerns about firms' contributions to development, poverty started being addressed by voluntary actions intended to maintain the license-to-operate. Then, in the 2000s, as illustrated with the Lafarge case, poverty began to be addressed through business programs embedding a business objective.

Figure 9: Towards a view of sustainability embedded in business models



The development of the "Green Economy" illustrates the search for a new stage, where environmental issues are turned into business opportunities and are addressed through core business. Sustainability, in this stage, is no longer achieved through voluntary actions complementing core business practices, but through business models which embed it as an objective. The shift and the interest that the public at large show to the "Green Economy" reveal the expectations facing firms to contribute to the transition to a sustainable economy.

In this context, BOP programs can be seen as learning opportunities which allow the testing of modalities for a sustainable economy, and are thus transitional experiments. From an empirical standpoint, these programs contribute to the experimentation of new interactions between firms, NGOs and governments, and to the reinforcement of the issue of measuring firms' impacts. Indeed, to develop BOP programs, new partnerships between NGOs, social entrepreneurs and for-profit companies and to some extent governments have arisen, with the objective of building business ventures with expected impacts on a social issue. Through the BOP, these partnerships now concern the core business of the firm, which may open up new ways for collaboration between these actors on other sustainability issues related to the core business. In addition, through BOP programs, firms have started to measure and communicate the social impacts of their practices. This introduces new forms of program governance and contributes to raising the question about the broader impact of corporations on society.

However, the shift towards a view of sustainability embedded in business models is a lengthy process. At the beginning of the research, the most frequently-asked question on the BOP was: "is it social or business?". This illustrates how difficult it is for some managers to conceive that the resolution of a social problem can be embedded in a business venture. However, when managers are introduced to real cases that demonstrate how solving a social issue can be embedded in a project's business model, the initial perception of the trade-off between economic and social concerns disappears. Yet, major challenges remain for managers to achieve this embeddedness in practice. This emphasizes the importance of further promoting research that becomes involved in the analysis and resolution of empirical difficulties, thus contributing to the transition towards sustainability.

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Article « Vers la construction des marchés au bas de la pyramide : Implications sur la gestion et le financement des projets »

L’idée que des marchés gigantesques existent au bas de la pyramide est née d’une confusion entre l’immensité des besoins des populations pauvres et la réalité de la demande. L’article affirme ainsi que la plupart des marchés BOP n’existent pas mais sont à construire par une série d’efforts visant à lever les contraintes auxquelles font face les clients pauvres dans l’accès aux produits. L’article discute alors des implications d’une stratégie de construction de marchés sur la gestion des projets BOP et le financement des différents coûts et investissements liés à cette approche.

L'idée selon laquelle il existe des gisements de croissance pour les entreprises au bas de la pyramide économique (BOP) s'est imposée en l'espace d'une dizaine d'années. De nombreuses entreprises telles que Danone, Dupont, Essilor, Total, GDF-Suez ou Schneider se sont lancées dans des projets pilotes cherchant à comprendre les clés de modèles économiques rentables et socialement responsables au bas de la pyramide. Autour de l'acronyme « BOP » s'est développée une véritable « industrie » : des écoles de gestion (ex : HEC, Essec) ont lancé des programmes d'enseignement et de recherche-action, des cabinets de conseil (ex : Monitor, ATKearney) et des *think tank* (ex : IMS, CSR Europe) ont développé des expertises dans ce domaine et des ONG ont également accepté de collaborer avec des entreprises sur ce sujet (ex : Care).

Une première génération de publications a conduit à populariser les cas issus des recherches de Prahalad et Hart (Prahalad et Hart 2002, Prahalad 2004) : Aravind Eye, Cemex Patrimonio Hoy, Hindustan Unilever Ltd, etc. La littérature académique s'est ensuite écartée du « romantisme » des propositions initiales (Karnani 2008), en laissant place à des critiques sur l'efficacité des programmes BOP en termes de réduction de la pauvreté (Crabtree 2007) ou sur l'impact environnemental de cette nouvelle consommation (Hart 2007). Une autre série d'interrogations, plus radicales, questionnent l'idée même de l'existence des supposés marchés gigantesques qui attendraient l'implication des entreprises au bas de la pyramide (Karnani 2007, 2008 ; Simanis 2009, Warhnolz 2007). Dans cette veine, Simanis (2009) ose un certain réalisme et affirme que les premières démarches BOP ont échoué par une trop grande avidité et que la réussite des entreprises ne peut avoir lieu que si elles acceptent de *construire* ces marchés, dans une démarche partenariale.

L'objectif de cet article est de mieux caractériser les grandes formes de stratégies des entreprises multinationales vis-à-vis du BOP et d'expliciter l'idée de construire les marchés BOP. Pour cela, il s'agit d'identifier les conditions qui doivent être réunies pour qu'un marché émerge au bas de la pyramide, et d'analyser les grands leviers que l'entreprise peut utiliser pour atteindre cet objectif. L'idée que les marchés sont à construire à travers une série d'efforts particuliers s'appuie également sur l'expérience acquise dans la mise en place d'une démarche BOP pour l'entreprise Lafarge, dans le cadre d'un programme de recherche-action (Perrot 2009).

L'article commence par un état des lieux sur la réalité des marchés BOP puis propose une analyse des conditions d'émergence d'un marché, dans le contexte particulier du bas de la

pyramide. A partir de l'étude de quatre programmes BOP, l'article identifie les spécificités d'une stratégie qui vise à construire un marché au BOP. La troisième partie discute des implications de ce type de stratégie sur la gestion des projets BOP et la couverture d'une série de coûts et d'investissements liés à une approche de création de marché.

1. La difficile réalité des marches BOP

1.1 Des estimations de marchés gigantesques …

De nombreuses estimations sont venues jalonner le débat sur la taille supposée des marchés au bas de la pyramide. Prahalad (2004) évalue leur valeur totale à 13 000 milliards de dollars, en parité de pouvoir d'achat (PPA), sans préciser véritablement comment ce montant est obtenu. Remarquant que les « profits sont rapatriés au taux de change des marchés financiers, et non en parité de pouvoir d'achat », Karnani (2007) ramène l'estimation de Prahalad à 300 milliards, en dollars réels. L'évaluation réalisée par le World Resource Institute fait par ailleurs état d'un marché total de 5 000 milliards de dollars PPA, dont plus de la moitié est constituée par le secteur des biens d'alimentation (WRI 2006). Quel que soit le raffinement du montant, le signal envoyé par ces estimations aux entreprises est alors relativement clair : il existe des marchés gigantesques au bas de la pyramide.

Table 14 : Estimations des marchés au BOP

Secteur	Taille du marché
Alimentation	2 895 milliards
Energie	433 milliards
Logement	332 milliards
Transports	179 milliards
Télécommunications	51 milliards

Source : WRI 2006

1.2 … mais une réalité plus contrastée

De nombreuses revues de cas ont été conduites, notamment par des institutions internationales comme le Programme des Nations Unis pour le Développement (UNDP 2008) ou des organisations non gouvernementales (ONG) comme Ashoka[9] afin de recenser les cas BOP qui réussissent.

Trois constats émergent de ces études de cas. Tout d'abord, tous les secteurs ne semblent pas égaux quant à la capacité des projets BOP à réussir. Le secteur des services financiers (microcrédit, micro assurance) connaît de nombreux projets pour lesquels l'unité de compte est le million de clients : 8 millions de clients sont par exemple clients de la banque de microcrédit BRAC au Bangladesh. Dans les télécommunications également, certains succès atteignent une échelle importante : au Bangladesh toujours, près de 15% de la population est cliente de l'opérateur téléphonique GrameenPhone (tableau 15). A l'inverse, dans d'autres secteurs comme celui du logement ou de l'énergie, les principales initiatives achoppent autour de quelques dizaines de milliers de clients servis par projet. Sur les 50 cas répertoriés par UNDP en 2008, seulement deux font référence à des initiatives liées au logement, alors que six fois plus de cas font référence à des projets liés à l'alimentation. Le deuxième constat est qu'il existe une prédominance forte des projets qui ont pour terrain d'application des pays asiatiques, avec en premier lieu l'Inde et le Bangladesh. Enfin, une analyse du nombre de clients servis par les cas fréquemment répertoriés (tableau 2) montre que la plupart de ces projets couronnés de succès sont loin d'atteindre une échelle significative par rapport à la taille des enjeux de pauvreté. Par exemple, l'initiative du cimentier mexicain Cemex, « Patromonio Hoy », qui permet la fourniture de matériaux de construction à travers du microcrédit, ne représente qu'un pourcent de la production annuelle de l'entreprise sur le territoire du projet (Perrot 2009).

[9] Site internet : changemakers.net

Table 15: Nombre de clients servis pour les principaux cas

Secteur	Cas	Pays	Année de lancement	Nombre de clients servis
Alimentation	HUL Annapurna	Inde	2000	1 million/ jour*
	Danone Grameen	Bangladesh	2005	34 000 /jour
Energie	EDF	Mali, Afrique du Sud, Maroc, Sénégal	1994	37 400
Logement	Cemex Patrimonio Hoy	Mexique	1998	30 000 par an
	Holcim Mi Casa	Mexique	2000	20 000 par an*
Santé	Aravind Eye Care	Inde	1976	2, 4 millions **
Services financiers	Grameen Bank	Bangladesh	1983	8 millions
	SEWA	Inde	1972	1 million
Communication	E-choupal	Inde	1999	4 millions*
	Grameen Phone	Bangladesh	1997	20 millions

Sources : Heuraux 2010, Prahalad 2004, Subrahmanyan et Gomez-Arias 2008, UNDP 2008. Sites internet Danone, Cemex, Holcim.

Note :* valeur estimée à partir des données disponibles, ** : depuis le lancement de l'entreprise

Comment dès lors expliquer l'écart entre les évaluations laissant penser à des marchés gigantesques et la réalité entrepreneuriale qui montre des projets de taille relativement modeste ?

Plusieurs niveaux de réponse sont possibles. Le premier consiste à chercher à l'intérieur des organisations les facteurs bloquants au développement de projets BOP : la difficulté à intégrer des critères extra-financiers dans les incitations des manageurs, l'inadaptation des méthodes classiques de calcul de la performance des projets, ou les barrières cognitives à la compréhension des enjeux spécifiques des populations pauvres sont des éléments souvent cités comme des obstacles au déploiement de projets BOP à grande échelle (Olsen et Boxenbaum 2009).

Cet article avance une autre piste, plus externe à l'entreprise : en fait les marchés BOP ne sont pas une réalité que l'entreprise ne saurait pas saisir, comme si celle-ci était myope ou dans l'incapacité de s'organiser pour répondre à la demande existante. L'idée défendue est que la majorité des marchés au bas de la pyramide, en dehors de quelques produits comme dans l'alimentation, n'existent tout simplement pas.

1.3 Confusion entre marchés et besoins au BOP

Les évaluations introduites dès le début du « mouvement BOP » conduit à une confusion entre la réalité du besoin au bas de la pyramide et celle de la demande. S'il n'est pas possible de contester l'existence de besoins gigantesques comme par exemple dans l'accès à l'eau, à l'énergie, ou au logement dans les pays émergents, l'existence d'un besoin n'est pas synonyme d'une demande solvable. Simanis (2009) montre comment Procter& Gamble, en introduisant un nouveau produit de purification de l'eau, destinée au BOP, pensait répondre au besoin existant d'un accès à une eau de qualité. L'entreprise s'est confrontée à la perception des consommateurs potentiels qui ne voyaient pas l'utilité d'acheter un produit venant en complément d'un bien traditionnellement gratuit comme l'eau. Le projet a depuis été transformé en programme philanthropique.

Certains articles récents ont commencé à reconnaître que la plupart des marchés au bas de la pyramide ne renvoient pas à une demande existante qui serait restée inexplorée, comme oubliée ou méconnue des entreprises privées. « Le bas de la pyramide n'est en fait pas un marché (…) Elles [les personnes à faibles revenus] n'ont pas été conditionnées à penser que

les produits qui leur sont proposés constituent quelque chose qui pourrait être acheté. Et elles n'ont pas adapté leurs comportements et leurs budgets de telle façon à introduire ces nouveaux produits dans leur vie quotidienne » (Simanis 2009). La question centrale n'est alors plus la mise en place d'une offre permettant de capter une demande existante mais la construction des conditions d'émergence de nouveaux marchés centrés sur des personnes à bas revenus.

2. Construction des marchés au BOP

2.1 Conditions d'émergences de marchés au BOP

Bien que la recherche de nouveaux marchés soit un problème courant pour les manageurs, l'identification des conditions nécessaires à l'émergence d'un marché reste relativement complexe (Geroski 2003), un point admis étant que l'émergence d'un nouveau marché résulte d'un processus difficilement prévisible *ex ante* (Rogers 1995). Dans la veine de l'économie schumpétérienne, l'apparition de nouveaux marchés est le résultat de changements technologiques, d'innovations ainsi que de modifications des politiques et cadres institutionnels que mettent à profit les manageurs (Sarasvathy et Dew 2005). Dans le processus d'adaptation de l'offre en vue de répondre à ces opportunités, le manageur dispose d'une connaissance limitée *ex ante* des marchés pouvant être rentables (Sarasvathy et Dew 2005). La création d'un marché renvoie au final à un tâtonnement de l'entrepreneur qui consiste en une combinaison d'actions de deux ordres (March 1991): des actions visant à exploiter les ressources de l'entreprise (activités, biens et services existants, technologies), dont la maîtrise est assurée, et d'autres visant à l'exploration de nouvelles idées, de nouveaux savoir-faire à acquérir, dans un processus de recherche et de sélection, qui transforme les ressources de l'entreprise.

Dans cette combinaison d'actions d'exploration de nouvelles solutions et d'exploitation des compétences acquises, les marchés émergents posent des contraintes singulières à l'entrepreneur. Tout d'abord, la capacité de l'entreprise a tirer un avantage des ressources qui ont fait son succès dans les pays développés est fortement contrainte par les spécificités institutionnelles des pays émergents. Ces spécificités renvoient aux vides institutionnels tels que l'inexistence de systèmes judiciaires opérants, la difficulté à faire respecter les contrats ou et les titres de propriété ou encore le fort niveau de corruption (Khanna et al 2005).

Ensuite, la capacité d'exploration de nouvelles solutions pouvant donner lieu à de nouveaux marchés est moins encouragée dans des marchés émergents où, contrairement aux pays développés, les Gouvernements n'ont par les ressources fiscales pour accompagner la création de marchés par des politiques de subventions ou la mise en place de cadres législatifs favorisant l'innovation (ibid).

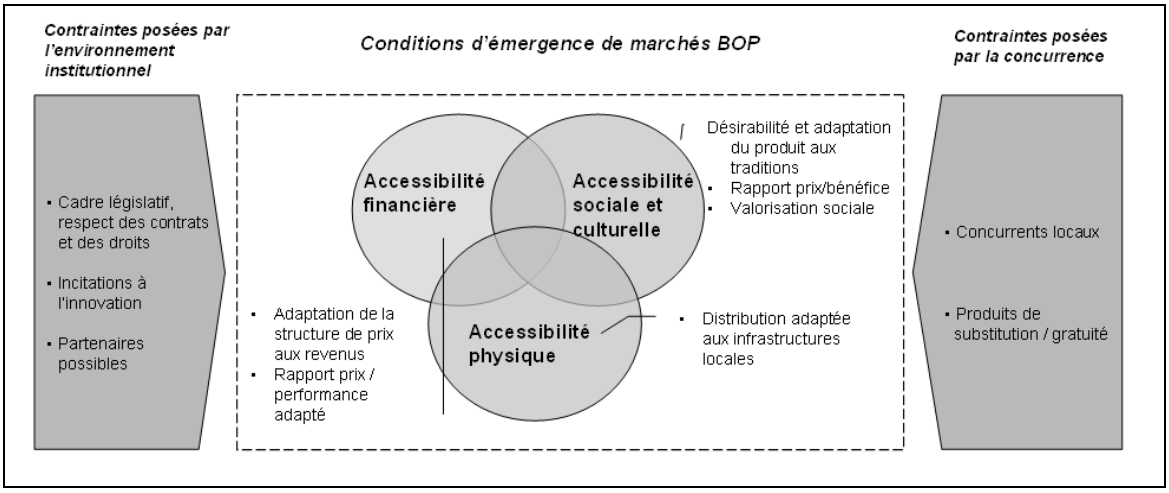
A ces contraintes propres aux marchés des pays émergents s'ajoutent celles liées aux caractéristiques du segment « BOP ». Elles sont de deux ordres. La première contrainte est liée aux enjeux singuliers auxquels sont confrontés les consommateurs BOP, et qui nécessitent des réponses adaptées pour que l'entreprise puisse accéder à ce consommateur (Prahalad 2005, Subrahmanyan et Gomez-Arias 2008). Trois grands enjeux peuvent être identifiés autour de la notion d'accessibilité dans toutes ses dimensions : financière, sociale et culturelle et, enfin, physique.

- L'*accessibilité financière* renvoie à l'adaptation de la structure de prix aux niveaux de revenus et à leurs caractéristiques (fluctuation potentiellement forte en fonction des saisons, par exemple) pour les clients BOP.
- L'*accessibilité sociale* renvoie à la désirabilité du produit, qui peut être définie comme le rapport entre le prix et les bénéfices perçus par le client, ainsi qu'à la valeur sociale qui est conférée à l'achat ou à l'utilisation du produit. On peut inclure également la question du niveau d'éducation nécessaire pour pouvoir avoir la pleine maîtrise du produit ou service acheté.
- L'*accessibilité physique* qui renvoie à la capacité à amener le produit jusque dans les zones reculées, où les infrastructures routières sont parfois manquantes les personnes vivent isolées.

La seconde contrainte spécifique aux marchés BOP a trait à la difficulté pour les manageurs d'identifier les besoins ainsi que les modes de consommation des clients au bas de la pyramide. Ceci est d'autant plus délicat que les manageurs sont en général issus des pays du Nord ou des classes économiques aisées des pays du Sud, et possèdent ainsi une connaissance relativement limitée des enjeux et besoins singuliers des consommateurs BOP (Khanna et al 2005). Pour aider l'entreprise dans son processus d'acculturation, Simanis et al (2008) proposent un protocole de développement des programmes BOP à partir d'une démarche centrée sur la participation des pauvres eux-mêmes dans la préparation de l'offre de l'entreprise.

Le graphique 1 synthétise les différentes contraintes auxquelles doit faire face l'entreprise afin de créer les conditions d'émergence de marchés BOP. L'objet de la section qui suit est d'analyser, à partir de cette grille et pour trois cas d'entreprises, comment ces conditions ont un impact sur l'existence du marché BOP et comment chacune des entreprises y fait face.

Figure 10: Conditions d'émergence de marchés BOP



2.2 Etude de cas illustratifs

2.2.1 Aspects méthodologiques

La méthodologie utilisée a consisté à étudier un premier échantillon d'une dizaine de programmes BOP de grandes entreprises, pour lesquels les données ont été collectées essentiellement à partir de multiples sources secondaires (Yin 1994) incluant des rapports de développement durable, des publications, des sites Internet, et des présentations de praticiens à des séminaires de recherche. Parmi ces dix programmes, quatre ont finalement été retenus avec l'objectif d'établir une typologie des méthodes d'approches des marchés BOP. Pour cela, une démarche inductive et comparatiste a été privilégiée dans l'analyse des cas (Eisenhardt 1989), en s'appuyant sur une série d'aller-retour entre la grille précédemment présentée, issue de la littérature, et la réalité des cas étudiés.

Le cas HUL

Hindustan Unilever Ltd (HUL) est la filiale indienne du géant néerlandais des biens de consommation, Unilever. En 2000, HUL demande à des consultants d'identifier des nouveaux vecteurs de croissance. L'équipe de consultants propose une douzaine de projets, dont un, baptisé « Shakti » (signifiant force en hindi) consiste à introduire une nouvelle gamme de produits destinés aux marchés des zones rurales indiennes. Ce projet s'inscrit alors en réponse au développement rapide du concurrent local Nirma sur les zones rurales où traditionnellement HUL n'était pas présent.

L'approche retenue par HUL a consisté à conditionner en emballages individuels ses produits d'hygiène et de soin (shampoing, savon, crèmes), avec l'objectif de les rendre plus accessibles sur le plan financier. Comme le montre alors le développement rapide de Nirma, la connaissance de ces produits est déjà existante dans les zones rurales.

Afin de surmonter la difficulté que constitue l'atomisation de la clientèle, dans des petits villages de l'Inde rurale, HUL a fait appel à des réseaux de femmes entrepreneuses, appelées « Shakti Amma », issues des communautés défavorisées dans lesquelles ces produits doivent être vendus. Ces femmes sont recrutées parmi les participants des groupes d'épargne villageoise introduits de longue date par les ONG afin de favoriser l'autonomisation des femmes. Dans sa démarche, Unilever a ainsi bénéficié de l'existence de ces regroupements de femmes suffisamment solides et pré existants permettant la pénétration rapide d'une grande partie du territoire.

Grâce au projet, HUL a doublé en l'espace de 5 ans sa couverture directe des régions rurales indiennes. Plus de 45 000 « Shakti Amma » couvrent plus de 135 000 villages à travers 15 Etats indiens (Jaiswal 2008). Unilever a par ailleurs annoncé en 2009 son intention de répliquer l'expérience Shakti dans d'autres pays dont le Sri Lanka et le Vietnam (Vijayraghavan 2009).

Le cas EDF

EDF dispose de plus de 15 ans d'expérience dans l'aide à l'accès à l'énergie pour les personnes pauvres vivant dans les zones rurales africaines. Jusque dans les années 1990, l'approche d'EDF remplissait un objectif philanthropique à travers de l'assistance technique

et le don de matériels. Au début des années 2000, EDF a changé d'approche en lançant sa stratégie de « Sociétés de Services Décentralisés » ou SSD (Heuraux 2010), dont l'objectif est de développer des entreprises pérennes devant permettre l'accès à l'électricité en zone rurale.

Le mécanisme des SSD est le suivant. EDF crée de petites entreprises locales en charge de mettre en place des systèmes de production d'électricité (diesel, photovoltaïque, éolien) L'énergéticien reste alors actionnaire de ces structures pour une durée de 15 à 20 ans, avant de transférer sa participation à des partenaires locaux. Pour déployer les structures de production d'électricité, l'entreprise doit faire face à des coûts relativement forts qui ne peuvent être couverts par le client. En ciblant les zones rurales, EDF a du faire face à la contrainte de la dispersion des populations, conduisant à multiplier les équipements nécessaires à un coût du kWh relativement élevé. Afin de couvrir le coût des infrastructures, l'entreprise fait appel à un financement international qui couvre 80% du montant de l'équipement initial, les 20% restants étant payés à part égale par le consommateur et EDF. Les autorités gouvernementales et locales sont alors impliquées à travers le transfert des subventions des institutions internationales partenaires et l'identification des clients récipiendaires.

Sept entreprises locales ont été créées au Mali, en Afrique du sud, au Maroc, et au Sénégal. Jusqu'à présent, deux projets seulement ont atteint une situation financière permettant à EDF de se retirer du capital au profit de partenaires locaux. A la fin 2008, 37 400 foyers bénéficiaient du programme, ce qui représente une population totale impactée avoisinant les 250 000 personnes.

Le cas Cemex

A la fin des années 1990, Cemex, un des leaders mondiaux du ciment, réalise qu'en dépit de la crise que connait le Mexique, ses ventes dans le secteur informel semblent moins sensible au choc économique. L'entreprise décide alors d'envoyer un groupe de salariés et de consultants en immersion dans une zone pauvre près de Guadalajara pour mieux comprendre le fonctionnement de ces marchés informels. Ils réalisent alors que les personnes vivant au BOP passent une grande partie de leur temps disponible à agrandir leur maison, une pièce à la fois. Chaque agrandissement prend plusieurs années et est réalisé à partir de matériaux de

mauvaise qualité achetés à un prix élevé. Le principal facteur bloquant les réalisations est le manque d'accès à du financement qui permettrait d'échelonner dans le temps le remboursement des matériaux.

Cemex lance alors le programme « Patrimonio Hoy » (littéralement, « un patrimoine aujourd'hui ») qui permet à des familles à faibles revenus d'obtenir un microcrédit pour agrandir ou rénover leur habitation. Réunis en groupes de 3 ou 4 voisins, appelés des « socios », les clients épargnent pendant 2 semaines, puis remboursent le microcrédit pendant 8 semaines, ce cycle se répétant ensuite pendant 70 semaines. A chaque cycle, le « socio » a accès à une quantité de matériaux (ciment et autres produits) dont le prix est prédéfini à l'avance. Ces groupes sont constitués par l'intermédiaire de « promotoras » qui sont des femmes issues des communautés, promouvant le mécanisme et veillant au respect des remboursements. A travers un réseau de 80 bureaux « Patrimonio Hoy » implantés dans les communautés, l'entreprise accompagne les microcrédits de conseils sur la construction.

Depuis son lancement, le programme a bénéficié à 230 000 familles, auxquelles s'ajoutent chaque années 30 000 nouveaux participants. Le programme permet à Cemex de générer environ 30 millions de dollars de ventes additionnelles en provenance du BOP, soit l'équivalent d'1% de sa production annuelle au Mexique.

En 2009, l'entreprise a lancé un programme pilote appelé « Mejora tu calle » (« Améliore ta rue ») dont l'objectif est de permettre à des groupes de voisins d'emprunter des microcrédits pour financer la viabilisation et le pavement de leur rue. Avec un objectif de plus de 30 000 participants, le programme rassemble autour de Cemex les municipalités, des groupes de voisins, et la Banque InterAméricaine de Développement qui garantit les microcrédits.

Le cas Danone

En 2005, à la suite d'une rencontre entre le PDG de Danone, Franck Riboud, et Muhammad Yunus, le fondateur de la Grameen Bank, Danone se lance dans une joint venture « Grameen Danone Limited Food » dont l'objectif est de produire et vendre au Bangladesh des yaourts à bas coût enrichis en nutriments.

Dans le cas de Danone, la joint venture formée avec la Grameen pose des objectifs de départ qui sont ceux du « social business » tels que définis par Yunus (2008) : tout profit réalisé doit être réinvesti dans la structure afin de maintenir les coûts de production aussi bas que

possible et augmenter les bénéfices sociaux pour les consommateurs pauvres. L'objectif pour Danone n'est alors qu'indirectement financier : il s'agit en premier lieu, comme le rappelle volontairement son PDG, d'apprendre à servir de nouveaux clients, dans une approche innovante permettant à long terme d'élargir la base de consommateurs pour l'entreprise.

Dans la joint venture, Danone a la charge de concevoir le produit et de construire l'usine de production de yaourt, à Bogra. D'un coût inférieur à 1 million d'euros, soit dix fois moins que l'investissement pour la construction d'un site standard, cette usine est conçue de telle sorte à pouvoir employer des ouvriers faiblement qualifiés provenant des populations locales. De son côté, la banque Grameen est en charge de la partie amont du modèle économique avec la constitution du réseau d'approvisionnement en lait, et la partie aval avec la mise en place du réseau de vendeuses ambulantes. Plus de 500 vendeuses sont impliquées dans la distribution des 40 000 pots individuels de yaourt vendus chaque jour. Environ 10% du chiffre d'affaires réalisé par les vendeuses leur est reversé pour un revenu mensuel d'environ 30 dollars.

En 2008, Danone lance le fonds « Danone Communities » qui permet au grand public de contribuer au développement du « social business », en investissant dans le capital nécessaire la réplication du programme avec Grameen ou à d'autres initiatives.

3. De la capture à la construction des marchés : implications sur la gestion et le financement des projets BOP

3.1 Typologie de stratégies BOP

La comparaison des différents cas permet de dessiner deux modèles distincts d'approche du BOP (Tableau 2) : un modèle de capture de marchés existants avec un objectif de rentabilité à court terme (« BOP1.0 ») et un autre, orienté la construction de marchés par série d'efforts pour lever les différentes contraintes à la consommation pour les clients BOP (« BOP2.0 »).

Capture versus construction de marchés

Nous voyons avec HUL une stratégie défensive de capture d'une demande existante à partir de l'adaptation relativement limitée du modèle économique de l'entreprise. Les conditions

pour l'émergence du marché BOP sont réunies dès le départ : l'acceptation sociale du produit par les populations rurales est déjà acquise, les réseaux de femmes sont préexistants et permettent de lever la contrainte d'accessibilité physique et, enfin, l'accessibilité financière requiert une adaptation marginale du modèle économique par un ensachage des produits. Dans le cas de HUL, l'objectif est clairement financier : l'entreprise développe un modèle économique qui lui permet de gagner des parts de marché, et qui puit être répliqué dans d'autres pays.

Les approches de Danone, EDF et Cemex se rapprochent de stratégies pro actives où l'entreprise cherche à créer un marcher en levant les différentes contraintes qui empêchent la consommation en provenance du BOP. Cemex, dans le cas de son programme Patrimonio Hoy, lève la contrainte liée au financement de l'acquisition de matériaux, à travers le microcrédit. Danone est dans une situation de départ où l'entreprise doit à la fois développer une nouvelle demande pour un produit méconnu des consommateurs bangladais et construire le système de production, l'offre de produits et l'approvisionnement associé. A travers ce projet pilote, l'entreprise cherche à comprendre les leviers de l'élargissement de sa base de consommateurs dans les pays émergents, à un horizon qui tient plus du moyen terme. Le cas EDF offre également une illustration d'une démarche de création de marché où l'entreprise introduit un nouveau produit, l'énergie moderne, et un financement associé permettant d'améliorer l'accessibilité financière de cette énergie.

Implications sur la gestion

Cette différence dans la stratégie des entreprises trouve un écho dans la dimension partenariale et l'orientation pro sociale du projet. La comparaison entre HUL et Danone permet de voir qu'il existe de fortes différences dans le périmètre de l'impact social des deux programmes. La partie aval de la chaîne de valeur (distribution des produits) est certes similaire, mais la partie amont est quant à elle bien différente. Danone a, en effet, cherché à impliquer des personnes pauvres dans l'approvisionnement en lait, et dans le fonctionnement de l'usine au quotidien. Une piste pour HUL aurait été d'impliquer plus les vendeuses par exemple dans le conditionnement des produits, afin d'accroître leurs revenus (Simanis et Hart 2009).

Les différences dans les objectifs stratégiques ont un impact sur la gestion du programme (tableau 2). Pour HUL, le programme est géré dans le portefeuille des activités courantes de

la filiale indienne alors que les trois autres entreprises bâtissent une organisation ad hoc venant soutenir le développement et la réplication des projets. Dans les programmes de type « BOP2.0 », l'implication des hauts dirigeants est essentielle pour que, malgré leur taille modeste, les initiatives puissent se maintenir : les PDG d'Essilor comme ceux de Danone ou Cemex se sont personnellement impliqués dans le suivi des projets, contribuant à leur notoriété comme à la pérennisation des ressources dédiées.

3.2 Le financement de la construction des marchés BOP

Une démarche de construction de marchés génère un certain nombre de coûts et investissements spécifiques à cette approche entrepreneuriale. Les programmes que nous venons d'étudier permettent d'en identifier trois grandes formes: des coûts liés à l'éducation et la sensibilisation du consommateur, des investissements dans la construction de l'écosystème (distributeurs, producteurs, etc.), notamment à travers le recours au microcrédit et, enfin, des investissements dans le capital de la structure. Des pistes d'évolution et des innovations récentes sont identifiées.

Sensibilisation et éducation des consommateurs

Arriver à démontrer l'utilité qu'un produit peut avoir pour un consommateur pauvre est un enjeu important, y compris pour des produits dont le gain en termes de bien être peut paraitre évident[10]. HUL a ainsi accompagné son programme de vente ambulante en zone rurale d'un programme de sensibilisation à l'hygiène. Si dans ce cas l'intérêt économique de l'entreprise est assez perceptible, la frontière entre coûts marketing et coûts de nature sociale s'avère bien souvent beaucoup plus ténue. Le cas EDF a permis de voir qu'apporter une solution de production d'électricité dans les zones rurales ne conduisait pas directement à la création de petites activités économiques qui contribueraient à une amélioration du niveau de vie des clients. Dès lors, la question peut se poser de qui à la responsabilité d'accompagner le

[10] Essilor, leader mondial de la fabrication de verres, a entrepris plusieurs programmes de sensibilisation à l'importance de corriger la vision, en zone rurale indienne. Pour cela, l'entreprise a offert des paires lunettes à des enfants. Voyant dans ces lunettes le stigmate d'une différence entre leurs enfants et les autres, de nombreuses familles ont ainsi refusé que les enfants s'en voient équipés.

consommateur, entre l'entreprise EDF, les gouvernements locaux ou les ONG, pour orienter l'usage du service vers des finalités de nature plus fortement sociale.

Table 16 : Typologie de modèles d'approche: BOP1.0 et 2.0

	Capture de marchés : approche « BOP 1.0 »	**Construction de marchés : approche « BOP 2.0 »**
Situation initiale	- Demande solvable existante - Concurrence existante	- Absence de marché - Produits de substitution
Objectifs	- Pénétration d'un marché	- Préparation de futurs marchés dans une logique de développement durable
Modèle économique	- Pauvres perçus comme consommateurs potentiels Adaptation limitée du modèle économique : exploitation des ressources existantes de l'entreprise - Recherche d'un modèle pouvant être facilement répliqué	- Pauvres perçus comme consommateurs et parties prenantes des projets - Partenariat avec ONG ou entreprises sociales visant à combiner les compétences et à développer de nouvelles ressources pour l'entreprise - Expérimentation locale
Management	- Géré comme partie intégrante de l'organisation ("business as usual") - Résultats évalués selon les critères standards de mesure de la performance pour l'entreprise	- Projet dédié avec équipe et budgets associés, située au siège de l'entreprise et pilotant la réplication - Résultats évalués selon des critères propres au projet et valorisant l'apprentissage
Financement	- Essentiellement des coûts de marketing, pris en charge par l'entreprise	- Financement de la mise en place de l'écosystème : réseau de distribution, approvisionnement impliquant des personnes pauvres - Coûts de marketing social - Investissements dans le capital de la structure, selon modalités innovantes
Exemples	- HUL - Coca-Cola - …	- Danone-Grameen - EDF - Essilor - …

A l'heure actuelle, les coûts des actions de sensibilisation, bien souvent conduites par des ONG ou des entrepreneurs sociaux, sont portés par l'entreprise elle-même. Malgré la pression des entreprises pour obtenir des onds publics, devant permettre de couvrir ces coûts, les grandes institutions, comme l'Union Européenne, ou les ONG sont pour l'instant réticentes à financer ces actions jugées comme trop proche du cœur de métier de l'entreprise. Il y a alors pour l'entreprise un curseur à placer entre deux grand choix possibles. Le premier consiste à transférer ce coût au client final à travers une politique de prix élevés. C'est ce que pratiquent les banques de microfinance qui, dans certains pays, proposent des taux d'intérêts très élevés, dépassant parfois les 100% comme Compartamos au Mexique, en conséquence, pour partie, des coûts opérationnels liés à l'accompagnement intensif des clients pauvres. Une seconde option pour l'entreprise consiste à baisser les marges en couvrant ce coût d'accompagnement. C'est le cas de Cemex au Mexique qui intègre dans la structure Patrimonio Hoy des charges liées au travail d'accompagnement des groupes d'emprunteurs. C'est plus largement ce que défend Muhammad Yunus (2008) dans son concept de « social business » où les marges doivent être réduites au profit de l'accessibilité pour les consommateurs.

Construire l'écosystème par le financement du microcrédit

La mise en place de programmes BOP requiert également un travail important de développement de l'écosystème – c'est-à-dire du tissu économique nécessaire à la mise aux programmes. Pour cela la microfinance joue un rôle tout à fait central. En amont de la production, il s'agit de créer les chaînes d'approvisionnement auprès de petits producteurs locaux qui ont besoin d'être aidés dans le développement de leur qualité et de la régularité de leur production, comme Unilever en Indonésie (voir Clay 2005). En aval, dans la distribution, la microfinance joue également un rôle en permettant la création de réseaux de distribution en fournissant le capital pour les vendeuses ambulantes ou les petits kiosks servant de points de vente, comme pour la mise en place de prestataires de services associés au produit (installateurs, réparateurs, etc.). Enfin, en lien même avec l'acquisition du produit, il peut s'agir de mettre en place les services de crédit qui permettront à des clients pauvres d'échelonner dans le temps le coût d'acquisition du produit (ex : Cemex Patrimonio Hoy).

Or, dans de nombreux pays émergents, la microfinance, au sens de banques concédant des prêts de petites tailles à des personnes pauvres avec peu de contraintes de garanties, en est encore à ses balbutiements. Si la microfinance connaît une croissance forte de l'ordre de 20 à 30% par an, les banques de microcrédit sont encore de taille très modeste, et caractérisées par un faible niveau de formation des manageurs et un important manque de fonds propres limitant leur développement (Daly-Harris 2009). Dès lors, quel peut être le rôle de l'entreprise non bancaire développant un programme de type BOP dans un pays émergent ?

Les cas de Cemex amorcent une évolution possible du rôle que l'entreprise non bancaire peut jouer vis-à-vis de la microfinance. Dans un premier temps, avec Patrimonio Hoy, l'entreprise a joué le rôle d'institution de microfinance lors du lancement du programme à la fin des années 1990, en réalisant le microcrédit elle-même : sélection des clients, gestion des remboursements, et apport du capital nécessaire. L'encours de microcrédits, porté par Cemex sur ses comptes, est de l'ordre de 110 millions de dollars. Dans le cas plus récent du programme « Mejora tu Calle », le financement du microcrédit est assuré à hauteur de 10 millions de dollars par une banque internationale qui couvre les risques liés aux microcrédits. L'entreprise s'éloigne d'un rôle de financeur, loin de son cœur de métier, pour jouer celui d'intermédiaire entre les différentes parties prenantes (bailleurs internationaux, organismes de crédit, municipalités, fournisseurs) et d'animateur du programme.

Le développement actuel de la microfinance ouvre de nouvelles pistes de collaboration entre entreprises non bancaires et réseaux de microfinance. En l'espace d'une dizaine d'années, il s'est constitué une véritable industrie de la microfinance avec l'apparition de nouveaux réseaux de banques de microcrédits dynamiques au Sud (Leed Foundation en Egypte, par exemple), la diversification des produits proposés (microassurance ou microcrédit logement), et le développement de fonds de refinancement des IMF (BlueOrchard, ResponsAbility, Oikocredit). Ces fonds, basés dans les pays du Nord, représentent plusieurs centaines de millions de dollars chacun et investissent dans la croissance de banques de microcrédits pour la plupart sous capitalisées. Au total, ce sont plus de 4 milliards de dollars de financements provenant des pays du Nord qui sont investis dans des banques de microcrédit situées au Sud (Reille et Forster, 2008). Cette industrie ouvre de nouvelles formes d'implication pour les entreprises non bancaires qui peuvent jouer le rôle de connecteur entre les financeurs auxquelles les multinationales ont facilement accès et les réseaux de microcrédit dont le développement est nécessaire au succès des programmes BOP..

Investissements dans le capital de la structure

Une dernière forme de financement des programmes BOP a trait aux investissements en capital dans les sociétés créées pour porter ces projets. Les cas d'EDF en Afrique et celui de Danone avec Grameen, fournissent deux illustrations intéressantes, l'une renvoyant à un partenariat public privé entre entreprise et grands bailleurs internationaux, l'autre reposant sur la mobilisation de fonds privés provenant d'investisseurs soucieux de l'impact social de leurs choix d'investissements.

Dans le cas d'EDF, des organisations internationales prennent part au financement des infrastructures de production qui sont mises en places puis gérées par les sociétés décentralisées. Ces partenariats, s'ils sont dans le cas d'EDF un facteur important dans la mise en place des sociétés locales, introduisent une double limite. La première limite renvoie au caractère nécessairement limité du financement public, qui rend difficile la mise en place d'une solution qui soit à la hauteur de l'enjeu de l'électrification des zones rurales. La seconde limite, plus opérationnelle, a trait à la difficulté à mettre en œuvre et maintenir de tels partenariats. Il a été ainsi évalué que les financements internationaux perdent l'équivalent d'un tiers de leur valeur en raison de problèmes de coordination entre les financeurs et les Etats et organismes bénéficiaires (Kharas 2007). L'implication d'organisations internationales également impose des contraintes fortes comme la nécessité de réaliser des appels d'offres ou l'obligation de faire transiter les fonds par des autorités publiques, ce qui entraîne des coûts et des délais supplémentaires (Heuraux 2010).

Le cas de Danone repose sur la mobilisation de fonds privés. D'un montant avoisinant les 70 millions, le fonds « Danone Communities » investit à 90% dans des valeurs monétaires, permettant de sécuriser le fonds et d'assurer une rentabilité minimale. Les 10% restants sont utilisables pour de l'investissement à risque dans le capital des « social business » que le fonds souhaite soutenir et qui comprend pour l'instant, la joint-venture avec Grameen, une laiterie au Sénégal et un programme d'accès à l'eau au Cambodge. Une évaluation rapide de ces trois projets en portefeuille fait apparaitre qu'environ trois millions d'euros seulement sont investis sur les sept millions utilisables.

Cette pratique innovante illustre la principale limite à laquelle est confronté l'investissement privé dans le capital de programmes BOP : il y a relativement peu de projets qui aient à la fois un modèle économique dont le caractère pérenne serait clairement démontré, et avec un effet sur la pauvreté également établi. A l'heure actuelle, le marché du financement de

programmes BOP est ainsi plus limité par l'absence de projets que par la disponibilité de capitaux. La plupart des programmes BOP actuels sont encore dans des phases pilotes, avec des besoins d'investissements nettement inférieurs à la taille minimum des fonds apportés par des bailleurs privés ou publics. A titre d'exemple, le programme pilote de Veolia, signé également avec la Grameen pour l'accès à l'eau en zone rurale du Bangladesh, a nécessité un investissement d'environ 500 000 euros (Lesueur 2009), ce qui est loin des montants, autour de plusieurs millions d'euros, à partir desquels les fonds d'investissement acceptent de s'impliquer (IMS 2009).

Conclusion

L'analyse des cas proposés conduit à affiner le jugement sur l'existence des marchés au BOP. Certains marchés, comme dans les biens de consommation courante, existent et nécessitent seulement des démarches d'adaptation marginale du modèle économique de l'entreprise. D'autres marchés où l'accessibilité des produits est encore difficile, requièrent plus d'efforts afin de lever l'ensemble des contraintes qui pèsent sur la transformation du besoin en une demande pouvant accéder à l'offre de l'entreprise. Cette coexistence de marchés déjà établis et d'autres encore à créer signifie qu'une segmentation assez fine s'impose, au sein même des portefeuilles de métiers et produits d'une entreprise, afin de distinguer les marchés qui demandent une stratégie relativement classique, avec un horizon de court ou moyen terme, et ceux qui nécessitent des efforts particuliers pour lever l'ensemble des facteurs bloquants l'émergence, à plus long terme, d'un marché.

Les cas nous montrent que plus les barrières à l'accessibilité des produits sont importantes, qu'elles soient financières, sociales ou physiques, plus les coûts et investissements afférant à la mise en place du marché sont élevés. Si le financement du marketing social reste encore problématique, des innovations financières apparaissent pour couvrir les investissements dans le tissu économique local et le capital des programmes.

La proposition ainsi revisitée de marchés BOP dont l'existence est conditionnée à des efforts importants est certainement moins attractive que la formulation initiale de marchés gigantesques, « trop belle pour être vraie » (Karnani 2007). Elle est néanmoins plus réaliste et plus durable. L'enjeu est en effet d'éviter que l'engouement autour du BOP ne s'essouffle avec la confrontation des manageurs aux difficultés empiriques. Il est essentiel ainsi d'arriver

à bâtir une littérature qui garde l' « inspiration » d'origine, tout en reconnaissant et en analysant en profondeur les défis et les leviers dans la construction de marchés au bas de la pyramide.

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Résumé

Le concept de « Bas de la Pyramide » suggère que les entreprises multinationales peuvent contribuer à réduire la pauvreté dans les pays émergents en développant une offre dédiée pour les consommateurs à faibles revenus. Afin de mieux comprendre la validité de cette proposition, la thèse s'intéresse aux stratégies des firmes vis-à-vis de ce segment et s'appuie pour cela sur un programme de recherche-action mené avec le Groupe Lafarge, au siège social et dans une filiale en Indonésie. Elle propose un cadre d'analyse des stratégies des firmes qui oppose deux formes d'approches: une démarche cherchant à maintenir la légitimité de la firme (« licence-to-operate ») d'une part, et une recherche d'opportunités commerciales d'autre part. La thèse montre comment Lafarge a évolué de la première à la seconde approche entre 2007 et 2010. Elle analyse les facteurs ayant conduit à ce changement et notamment le rôle joué par deux programmes pilotes d'accès au logement lancés en Indonésie dans le cadre de la recherche-action et qui ont contribué à la construction de plus de 800 maisons. La thèse distingue ensuite deux grandes formes de stratégies commerciales en opposant les approches de capture et de création de marchés, et souligne l'importance des spécificités locales du marché dans le choix de l'une ou l'autre de ces stratégies. Enfin, la thèse analyse, dans le cadre de stratégies de création de marchés, sous quelles conditions les partenariats entre entreprises et organisations non lucratives sont sources d'innovations et d'apprentissages pour la firme. Elle met en avant trois éléments clés : le partage d'une vision commune entre partenaires, la création conjointe des programmes et la mise en place de processus intentionnels d'apprentissage.

Mots-clés : Bas de la Pyramide, Entreprises multinationales, Stratégies, Pays émergents, Pauvreté, Responsabilité sociale des entreprises.

Summary

The "Base of the Pyramid" concept suggests that multinational corporations can contribute to poverty reduction in emerging countries by developing a dedicated offer for low-income consumers. To better understand the validity of this proposal, the thesis analyzes the strategies of firms vis-à-vis this segment and builds on an action-research program conducted with Lafarge, at the head office and in the Indonesian subsidiary. The thesis proposes a strategic framework which opposes two types of approaches: a licence-to-operate approach, and a business opportunity-seeking approach. The thesis shows how Lafarge moved from the former to the latter approach between 2007 and 2010. It analyzes the factors which enabled that change and in particular the role of two Indonesian pilot programs of access to housing which contributed to the construction of more than 800 houses. The thesis opposes two forms of business strategies – market capture and market creation – and highlights the importance of local specificities in the choice between the two. Finally, the thesis analyzes, with regard to market creation strategies, under which conditions partnerships between for-profit and not-for-profit organizations are sources of innovation and learning for the firm. It raises three key success factors: sharing a common vision between partners, co-creating programs, and implementing intentional learning processes.

Key-words: Base of the Pyramid, Multinational Corporations, Strategies, Emerging countries, Poverty, Corporate Social Responsibility.