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Realizing BOP Potential through Business Model Innovation

An Empirical Multiple Case Study of Business Model Innovation at
the Base of the Pyramid

by

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Abstract

There is an ever-growing interest among researchers and practitioners in base of the pyramid (BOP) markets. Still, the distinguishable challenges in terms of presenting a viable business model at the BOP are evident both in research and practice. This thesis aims to examine how private sector firms can innovate business models to attend to the BOP. A qualitative research approach in the form of a multiple case study centered on private sector firms operative in BOP markets across South Asia and Africa is adopted. The empirical material is collected through a series of semi-structured interviews along with secondary data. Based on previous BOP literature, the researchers conceive a conceptual framework suggested to increase the understanding of business model innovation at the BOP by linking BOP market characteristics to business model innovation implications. The conceptual framework is validated and revised by the analytic application of the framework on the empirical findings from the multiple case study. The findings of the study suggest partnerships with various actors facilitate business model viability at the BOP. Contrasting to previous literature, the findings of this study deemphasize the role of NGOs as a valuable partner in BOP settings. The findings also suggest innovation beyond pricing as a measure to ensure affordability at the BOP.

Keywords: Base of the Pyramid, BOP Concept, Business Model, Business Model Innovation, Conceptual Framework, 4 A's Framework, Social Enterprise

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1 Introduction

1.1 Background

Up until the late 1990s, the underpinning conceptualization of most work addressing international strategy has been somewhat straightforward: finding the appropriate balance between global integration and local responsiveness (Bartlett & Goshal, 1989; Ricart et al., 2002). Significant as this contribution has been, it reflects what is readily visible in international markets; the top of the economic pyramid, ignoring the 4-5 billion people around the world living in poverty at the base of the pyramid (Ricart et al., 2002; Prahalad & Hart, 2002; Prahalad, 2004; Collier, 2007; Kandachar & Halme, 2017). In the early 2000s, a concept for creating growth and achieving economic profits in the private sector while aiding in alleviating poverty evolved, suggested to kill two birds with one stone. The base of the pyramid (BOP) approach to achieving economic profits and alleviating poverty has gained significant attention in strategic management literature since the first article on the subject was published in 2002 (Prahalad & Hart, 2002; Pitta, Guesalaga & Marshall, 2008). The approach was introduced as *bottom* of the pyramid, however, the term is nowadays often referred to as *base* of the pyramid to avoid the negative connotation of the word bottom (Kolb, 2008). Since introduced, the number of conferences, initiatives, as well as research papers on the topic has exploded (Simanis, Hart & Duke, 2008). BOP scholars have agreed that an undifferentiated approach to these markets will not work and the private sector must adopt innovative business models to attend to the BOP (Ricart et al., 2004; Pitta, Guesalaga & Marshall, 2008; Agnihotri, 2012).

1.1.1 Poverty

“No poverty” is the first of the 17 Global Sustainability Development Goals set out by world leaders in 2015 to be achieved before 2030 (The Global Goals, 2019; UN, 2019a, UN, 2019b). Poverty is more than the lack of monetary income and resources to fulfil the most basic human needs (Kandachar & Halme, 2017; UN, 2019a; 2019b). The manifestations of poverty are multiple, including hunger and malnutrition, social discrimination and exclusion, and limited access to water, sanitation, education, health and other basic services (Jagtap et

al., 2013; UN, 2019b). Further, poverty is also displayed as the lack of participation in decision-making (UN, 2019b). For the poor, quality of life has several dimensions spanning both material and psychological aspects. Quality of life is good health, safety, a sense of belonging, freedom of choice, a reliable livelihood, a stable source of income and food (Kandachar & Halme, 2017).

The international poverty line is drawn at a per capita income of \$1.90 parity purchasing power (PPP) per day. The UN (2019a) defines the population with a per capita income below the international poverty line to be living in extreme poverty. 783 million people, corresponding to 11 percent of the world's population, live below the international poverty line (UN, 2019a). Above the international poverty line defining extreme poverty, is a considerable low-income population living in poverty. The UN (2019c) turn heads to the private sector in aiding the no poverty goal, referring to private sector as an engine of economic growth with a major role to play in creating an inclusive growth and hence poverty reduction. In line with this notion, Tashman and Marano (2010) argue that the specific institution of business, as the central driver of economic development, carries important characteristics necessary to lift people out of poverty that other types of organizations lack.

1.1.2 BOP Definition

The BOP is a demographic classification of the population with the lowest income levels in society, at the base of the economic pyramid (Simanis, Hart & Duke, 2008). Kolk, Rivera-Santos and Rufin (2014) along with Pitta, Guesalaga and Marshall (2008) point out that researchers have used inconsistent definitions of poverty in studies addressing the BOP. Suggested income levels at the BOP range from up to \$2 to \$8 a day or \$750 to \$3,000 per annum (Prahalad & Hart, 2002; Prahalad & Hammond, 2002; Prahalad, 2004; Hammond et al., 2007; Casado Cañeque & Hart, 2017). More imprecise and often implicit definitions of the BOP are also present in research and literature, referring to the “4 billion” poorest people in the world (Karnani, 2005; Kolk, Rivera-Santos & Rufin, 2014). Others consider low-income populations in general terms to amount to the BOP (Kolk, Rivera-Santos & Rufin, 2014). Table 1 summarizes various prevalent definitions of the BOP in literature.

Table 1. BOP Definitions

Author(s) and year	Per capita income (U.S. \$, expressed on comparable PPP basis)	Population at BOP
Prahalad & Hart (2002)	\$1,500 per year	4 billion
Prahalad & Hammond (2002)	\$2,000 per year	4 billion
Prahalad (2004)	\$2 per day (\$750 per year)	> 4 billion
Hammond et al. (2007)	\$3,000 per year	4 billion
Casado Cañeque & Hart (2017)	\$8 per day	4,5 billion

Given the variations in definitions of the BOP in research and literature, it is critical to explicitly define the BOP population (Kolk, Rivera-Santos & Rufin, 2014). Throughout the remainder of this thesis, the researchers have adopted a definition of the BOP suggested by Hammond et al. (2007); the population of 4 billion with an annual income per capita less than \$3,000 per year in local purchasing power (PPP). To serve as an example, an income of \$3,000 PPP per year is equivalent to an income less than \$1.56 per day in India (Kandachar & Halme, 2017).

There are wide variations across regions, countries, and sectors in different BOP markets (Hammond et al., 2007; Kolk, Rivera-Santos & Rufin, 2014). According to Hammond et al. (2007), Asia represents the largest BOP market with a population of 2.86 billion at the BOP, followed by Africa (486 million), Latin America & the Caribbean (360 million) and Eastern Europe (254 million). The regions in focus in this study are South Asia and Africa, the two largest BOP markets in terms of population size at the BOP. 25 percent of the world's population live in South Asia and the region has an aggregated gross domestic product (GDP) of five percent (UN, 2018). Respective figures for Africa are 17 percent of the world's population with three percent aggregated GDP (UN, 2018). The largest sector markets at the BOP are defined as food, energy, housing, transportation, health, information and communication technology, and water (Hammond et al., 2007).

1.1.3 The BOP Proposition; Alleviating Poverty through Profits

The BOP proposition is based on the suggestion that there is considerable untapped purchasing power and market potential at the BOP which the private sector can turn into significant growth and economic profits by selling to the poor (Prahalad, 2004; Karnani, 2005). By selling to the poor, the private sector can simultaneously facilitate the development at the BOP, and thus help alleviate poverty (Prahalad, 2004; Karnani, 2007; Pitta, Guesalaga & Marshall, 2008). Creating BOP markets with market economy characteristics and active engagement from the private sector draws attention to the population at the BOP as economic actors, potential entrepreneurs and value demanding consumers (Prahalad, 2004; Angot & Plé, 2015). Hence, active engagement from the private sector in BOP markets is vital in creating an inclusive capitalism and alleviating poverty (Prahalad, 2004; UN, 2019c).

1.1.4 Realizing BOP Potential through Business Model Innovation

A presumption for converting poverty into economic profits and growth opportunities is new creative approaches where innovation is central (Prahalad, 2004). Traditionally, the general assumption of innovation research has been that the focus of innovation is new technologies and products for developed markets (Anderson & Markides, 2007; Prahalad, 2011). Nevertheless, Prahalad (2011; 2012) identifies BOP markets as emerging source of innovation and claims that growth in most sectors are dependent on effective participation in BOP markets. To effectively participate in BOP markets, the private sector must understand the dynamics of these markets along with the innovation processes therein, and an undifferentiated approach will not work (Khanna, Palepu & Shina, 2005; Prahalad, 2011). According to Prahalad (2011), this shift in emphasis imposes a shift from the technology and product centric approach towards an approach focused on business model innovation and delivery of value. Throughout this thesis, the term business model is defined as: “A business model describes the rationale of how an organization creates, delivers, and captures value” (Osterwalder & Pigneur’s, 2010, p. 14). The constraints and challenges characterizing BOP markets push private sector firms into a new direction of creative thinking and business model innovation (Prahalad, 2004; 2012). BOP scholars agree with Prahalad’s proposition and acknowledge that combining profit with poverty alleviation at the BOP requires new innovative business models (Ricart et al., 2004; Pitta, Guesalaga & Marshall, 2008; Agnihotri, 2012).

Business model innovation could potentially have major implications for the BOP. Johnson, Christensen and Kagermann (2008) state business model innovation have transformed entire industries and redistributed billions of dollars – an appealing proposition for the BOP. The private sector must develop innovative business models to match the needs of the economically constrained consumers at the BOP along with the limitations of the BOP environments (Angot & Plé, 2015). Prahalad (2011) maps out the commitment to availability, affordability, acceptability and awareness, the 4 A's, as the apparent starting point for innovation at the BOP and defines innovation at the BOP as a continuous learning process. According to Anderson and Billou (2007), the key success factor among companies managing to profitably serve the BOP is a business model that delivers the 4 A's. Kolk, Rivera-Santos and Rufin (2014) conclude that there is a gap in research calling for a profound analysis of various business models at the base of the pyramid.

1.2 Aims and Objective

Evident in both research and practice are the distinguishable challenges in presenting a viable business model at the BOP, given the distinct characteristics of BOP markets (e.g. Ricart et al., 2004; Pitta, Guesalaga & Marshall, 2008; Agnihotri, 2012). Despite various suggestions of strategies for BOP markets present in academic literature (e.g. Prahalad, 2004; London & Hart, 2004; Anderson & Billou, 2007), the practical implications for business model innovation at the BOP are relatively unclear. Further, there is a gap in research calling for analysis of various business models at the BOP (Kolk, Rivera-Santos & Rufin, 2014). Therefore, the primary objective of this study is to examine how private sector firms can innovate business model to attend to BOP markets. By pursuing this objective, the researchers aspire to provide implications for researchers as well as practitioners on the topic of business model innovation at the BOP. Considering the outlined objective of the thesis, an overall research question to be addressed throughout the study is formulated as following:

How can private sector firms innovate business models to attend to the base of the pyramid?

In order to achieve the primary objective of the thesis and address the formulated overall research question, multiple aims are set out. The aims are stated as following:

- Define and assess the BOP concept along with BOP market characteristics and their implications for business model innovation at the BOP;
- Conceive a conceptual framework based on previous literature within the topic that can be used to understand business model innovation at the BOP, linking BOP market characteristics with business model innovation implications;
- Validate the conceptual framework by applying it on private sector firms currently operative in BOP markets;
- Provide a revised framework if any variances between the framework and empirical findings are detected.

The first along with the second aim are accounted for in the literature review (chapter 2), whereas the first aim is addressed throughout the chapter resulting in the fulfillment of the second aim presented in the final section of the chapter. The third aim is addressed in chapter 4 of the thesis, “Empirical Findings, Analysis and Discussion”, by applying the conceptual framework to the business models of three private sector firms operative in BOP markets across South Asia and Africa. In the case that variances between the initial conceptual framework and the empirical findings are identified, a revised conceptual framework will be accounted for in the end of chapter 4.

1.3 Outline of the Thesis

The overall structure of the thesis takes the form of five chapters, including this introductory chapter. Thereafter, a critical analysis of published literature on the topic is provided in the literature review chapter (chapter 2). In particular, research on the role of private sector engagement in society, the BOP concept, business models and business model innovation are reviewed, resulting in a conceptual framework for business model innovation at the BOP. The methodology chapter (chapter 3) discusses research approach and research design along with data collection method and data analysis approach. Further, the methodology chapter addresses the issues of validity and reliability. The following chapter (chapter 4) presents the findings from the empirical data collection. In the same chapter, the empirical findings are confronted with previous literature and the conceptual framework in a combined analysis and discussion. Chapter 4 are finished off with a revised conceptual framework based on implications from the analysis and discussion. The conclusion chapter (chapter 5) concludes

the study's main findings, reflects on the research aim and objectives and indicate practical, theoretical and future research implications.

2 Literature Review

2.1 Literature Review Approach

The main scope of this literature review is to present an objective, thorough summary along with a critical analysis of relevant research and literature on the topics of the BOP concept along with business model innovation at the BOP (Hart, 1998; Cronin, Ryan & Coughlan, 2007). Several related fields were identified as relevant to review in this chapter to provide adequate context throughout the study. Major research contributions in the form of articles were identified in leading journals whereas books were collected from the university library. Reviewing the citations in the identified literature allowed the researchers to go backward and identify prior articles and books to be considered in the literature review (Webster, 2002).

The structure of the literature review is concept-centric (Webster, 2002). The chapter takes starting point in a broad discussion about the fundamental role of private sector in society. Following is a review of BOP concept along with an explanation of the economic pyramid. The next section discusses various types of private sector engagement at the BOP. Following is a description of the distinct characteristics of BOP markets. Thereafter, a discussion about criticism of the BOP concept is accounted for. The upcoming section defines the term business model along with business model innovation. Following, BOP market characteristics are explicitly linked to business models by examining the implications of the characteristics on business model innovation in terms of the 4 A's. The final section of the chapter presents a conceptual framework for business model innovation at the BOP based on the previous section linking BOP market characteristics to business model innovation implications.

2.2 The Role of Private Sector in Society

The role of private sector in society has been disputed among scholars throughout history. The idea that the pursuit of economic profits by the private sector can reduce poverty on a large scale is not a new suggestion. Kolk, Rivera-Santos and Rufin (2014) describe a long tradition in economic thought arguing that market forces and private sector ownership lead to a prosperous society and mention Adam Smith (1776) and Milton Friedman (Friedman &

Friedman, 1990) as examples of this school of thought. According to this school of thought, the one and only responsibility of businesses is to generate profits.

Freeman (2010) on the other hand proposes a stakeholder view of the private sector firm, taking into account all individuals and groups that either can affect or be affected by the achievement of the organizational objectives. Put differently, Freeman (2010) claim stakeholder theory considers all actors with a stake in the organization. Stakeholders include (but are not limited to) customers, owners, governments, suppliers, employees, media, competitors, local community organizations, and environmentalists (Freeman, 2010).

The relationship between private sector and society has also been heavily discussed under the term corporate social responsibility (CSR) that in addition to the relationship between private sector firms and society also emphasizes the responsibilities of both actors (Chandler, 2017). According to McWilliams and Siegel (2001), CSR are actions that further social good beyond the requirements of law and interest of the firm. Carroll (1991) was one of the first scholars to make distinctions between organizations' different responsibilities, displaying the responsibilities in a hierarchy called the Pyramid of Corporate Social Responsibility. At the base of the pyramid is the firm's fundamental responsibilities; the economic and legal responsibility (Carroll, 1991). The next step in the CSR pyramid is the firm's ethical responsibility which the author refers to as the responsibility not to harm any stakeholders, including the environment. Finally, Carrol (1991) argues for firms' discretionary responsibility, meaning the proactive and strategic behaviour that benefit the environment, themselves or both. According to the author, a socially responsible firm incorporates all of the four responsibilities in the firm and its values, culture, and everyday operations.

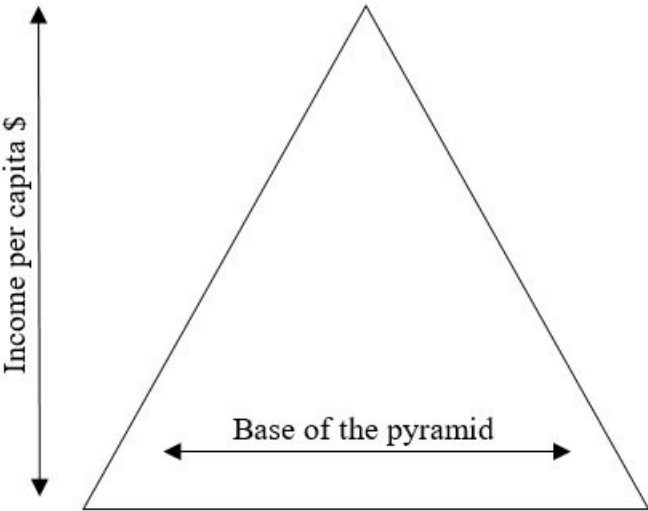
Porter and Kramer (2006; 2011) suggest the principle of creating shared value (CSV). The private sector has a long history of pitting business and society against each other, despite their apparent interdependence (Porter & Kramer, 2006). According to Porter and Kramer (2011), the concept of CSV is built on the suggestion that the private sector can create economic value by creating societal value. Moreover, the authors state that CSV departs from CSR in distinct ways. CSR defines value as doing good, while CSV defines value as economic and societal benefits relative to cost (Porter & Kramer, 2011). Further, the authors argue that CSV views creating societal value as integral to competing and value maximization. Porter and Kramer (2011) propose that CSV will reinvent capitalism and unleash the next wave of innovation and growth.

2.3 BOP Concept

The BOP concept for achieving economic profits while alleviating poverty at the base of the economic pyramid evolved in the early 2000s (Prahalad, 2009). The first article on the topic was published in 2002 by Prahalad and Hart, but the most visible work elaborating the BOP concept is Prahalad’s book published in 2004; *Fortune at the Bottom of the Pyramid: Eradicating Poverty through Profits* (Karnani, 2007; Kolk, Rivera-Santos & Rufin, 2014).

Conceptual, the world’s wealth distribution along with capacity to generate income can be illustrated in the form of a pyramid; commonly referred to as the economic pyramid. The economic pyramid is segmented into different levels, whereas at the top of the pyramid, the population is wealthy with significant opportunities for generating high incomes (Prahalad, 2004). Opposed, at the base of the pyramid, is the population of 4 billion with a per capita income less than \$3,000 (PPP) per year (Prahalad, 2004; Hammond et al., 2007).

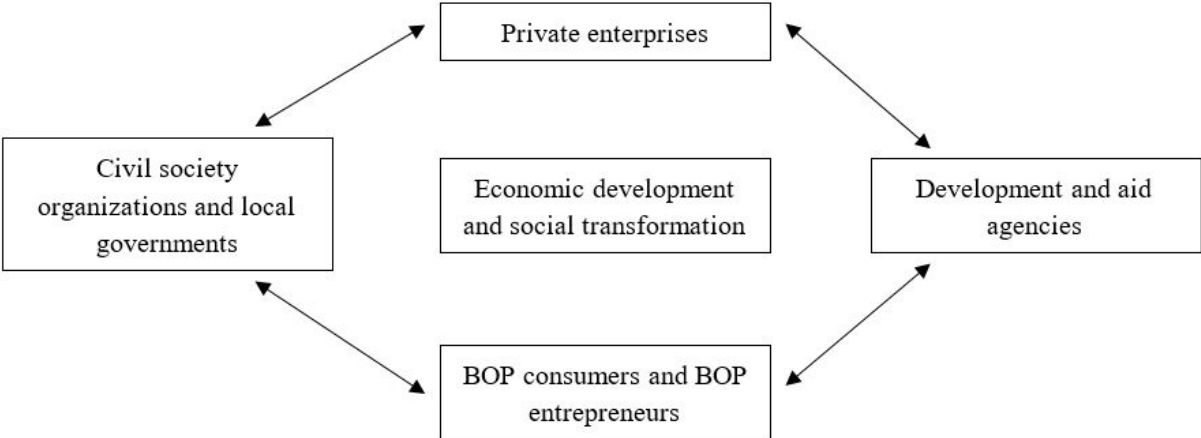
Figure 1. The Economic Pyramid



The main concern of the BOP proposition is creating economic profits while simultaneously alleviating poverty through active engagement of the private sector in BOP markets (Prahalad, 2004). The BOP proposition is based on the suggestion that there is much untapped purchasing power and market potential at the BOP (Prahalad, 2004; Karnani, 2007; Pitta, Guesalaga & Marshall, 2008). Put differently, the BOP proposition suggests that poor consumers that previously has been overlooked by the formal sector can be profitable consumers (Pitta, Gueasalaga & Marshall, 2008). In the nexus of the BOP concept is that

poverty alleviation by private sector engagement at the BOP requires collaboration between the private sector, civil society organizations and local governments (Prahalad, 2004). Hence, a co-creation of a solution to the problem of poverty is suggested. Opportunities at the BOP cannot be realized unless private sector organizations, civil society organizations, local governments, development agencies and the poor work together with a shared agenda (Prahalad, 2004). Market development at the BOP facilitates entrepreneurship at the grass root level, allowing the poor to participate in the economic development not only as consumers but as entrepreneurs (Prahalad, 2004; Angot & Plé, 2015). The BOP framework for economic development and social transformation is readily visible in figure 2.

Figure 2. The BOP Framework (Prahalad, 2004, p. 2)



Simanis, Hart and Duke (2008) suggest a second generation of the BOP concept; BOP 2.0. The second generation of the BOP concept evolved as a high failure rate of BOP initiatives was observed by the authors. This observation led to a call for a deeper dialogue and learning approach between private sector firms and the BOP, resulting in BOP 2.0 (Simanis, Hart & Duke, 2008). BOP 2.0 recognizes individuals at the BOP not only as consumers but also producers or active members of the production chain (Munir, Ansari & Gregg; 2010). The second generation of the BOP concept puts weight on the importance of collaboration and co-development with end users at the BOP along with close partnerships with non-governmental organizations (NGOs) (Munir, Ansari & Gregg, 2010; Agnihotri, 2012). BOP 2.0 imposes two important shifts in perception from the first generation of the BOP concept; from consumers to co-creators, and from selling to the poor to co-venturing the business with shared commitment (Simanis, Hart & Duke, 2008).

2.3.1 Private Sector Engagement at the BOP

There is a considerable disagreement between scholars regarding the most successful private sector approach to the BOP (Christensen Jones, Siemsen & Balasubramanian, 2015). As displayed in table 2, United Nations Development Program (UNDP) (2014) maps out four types of private sector approaches to poverty reduction in relation to the models’ profit motives. The approaches mentioned by UNDP (2014) are mainstream business, inclusive business, social enterprise and CSR.

Table 2. Private Sector Engagement in Poverty Reduction (UNDP, 2014, p. 5)

Corporate social responsibility (CSR)	Social enterprise	Inclusive business	Mainstream business
Activities, projects and programs undertaken by a privately owned enterprise with an explicit aim to do social good without any expectation of financial return and which are not required by law.	Organization with commercial, market-based strategies to improve human well-being rather than maximize profits.	Businesses which includes poor on the demand side, as clients and customers – and on the supply side as employees, producers and business owners in the value chain.	Enterprises for which providing a financial return to its owners is the primary objective.
Not-for-profit models		Hybrid models	For-profit models

Private sector BOP engagement can be conducted with a traditional for-profit approach (mainstream business), in line with the original BOP proposition as introduced by Prahalad and colleagues with suggested emphasis on multinational corporations (MNCs) leading role in BOP initiatives (Prahalad, 2004; Karnani, 2007). However, Anderson and Billou (2007) describe MNCs success in BOP markets as “patchy at best”. In contrast to Prahalad’s (2004) call for for-profit and MNCs BOP initiatives, Kolk, Rivera-Santos and Rufin (2014) maintain the articles in their systematic review studying 104 articles addressing the BOP concept during the period of 2000-2009 reflect a broader variation in BOP contexts and initiatives, with only a limited number of initiatives led by MNCs. The authors mention social entrepreneurs, small companies, domestic companies, not-for-profit organizations and government agencies as important initiators of BOP initiatives. Kolk, Rivera-Santos and Rufin (2014) derive that the BOP concept has evolved during the studied period to

deemphasize MNCs role as BOP initiators. In line with this notion, Karnani (2007) questions the role of MNCs in BOP initiatives claiming that local, small to medium-sized enterprises are best suited to exploit the opportunities at the BOP.

Contrasting to the for-profit approach of BOP engagement is CSR, where the ultimate aim of the enterprise is to do social good without expectations of financial returns on that particular activity (UNDP, 2014). In Prahalad's (2004) meaning, these initiatives can bring great contributions and results, however these activities are not likely to be integrated within firms' core activities. In contrast, advocates of CSR BOP approaches suggest that firms benefit from CSR through goodwill effects, firm insurance-, and risk management-, and market benefits (Christensen Jones, Siemsen & Balasubramanian, 2015). However, it is crucial to state that CSR initiatives by private firms can have other underlying motives; financial return motives should not be excluded as a driver for these kinds of activities (Aguilera et al., 2007).

In-between the for-profit and not-for-profit private sector approaches, are the hybrid models social enterprise and inclusive business. According to UNDP (2014), a social enterprise is a commercial marked based firm operating to increase human well-being without profit as the one ultimate goal. Similar, an inclusive business aims to create mutual benefits by integrating the poor on the demand side, as well as on the supply side (UNDP, 2014). Inclusive businesses generally include a social purpose alongside the profit motive, which according to UNDP (2014) is the main difference between inclusive businesses and mainstream businesses. As implied, a main characteristic of the hybrid models is the combined purposes of social impact and profitability (Kolk, Rivera-Santos & Rufin, 2014). The private sector engagement at the BOP in focus in this study is for-profit and hybrid models.

2.3.2 BOP Markets Characteristics

Central in understanding the BOP concept and its implications for business model innovation is to comprehend the characteristics of BOP markets. Defining characteristics of BOP market post a challenge as these markets represent multiple geographies, ethnicities, cultures, religions, income levels, and basically every other conceivable basis for segmentation (Karnani, 2007; Prahalad, 2009; 2011). The researchers have drawn on BOP literature and d the most important general characteristics of BOP markets. The link between BOP markets characteristics and BOP business model implications will be discussed in a later section of the literature review.

Regions, Sectors and Market Locations

As previously defined, the BOP amounts to a population of 4 billion with an annual per capita income less than \$3,000 (PPP) per year (Hammond et al., 2007). According to Hammond et al. (2007), the population of 4 billion at the BOP is spread across continents, with 2.86 billion in Asia, 486 million in Africa, 360 million in Latin America & the Caribbean, and 254 million in Eastern Europe. The regional profiles including population size at the BOP, number of surveyed countries, percentage of the population at the BOP and aggregated income have been mapped out in table 3 (Hammond et al., 2007). The largest sector markets at the BOP are food (\$2,895 billion), energy (\$433 billion), housing (\$332 billion), transportation (\$179 billion), health (\$158 billion), information and communication technology (\$51 billion) and water (\$20 billion) (Hammond et al., 2007).

Table 3. Regional Profiles of BOP Markets (Hammond et al., 2007)

	Asia (including the Middle East)	Africa	Latin America & the Caribbean	Eastern Europe
Population at the BOP	2.86 billion	486 million	360 million	254 million
Surveyed countries	19	22	21	28
% of population at the BOP	83%	95%	70%	64%
Aggregate income	\$3.47 trillion	\$429 billion	\$509 billion	\$485 billion

A frequently mentioned characteristic in BOP literature is the extreme geographic locations of BOP populations and markets (Prahalad & Hammond, 2002; Anderson & Markides, 2007; Karnani, 2007; Rivera-Santos & Rufin, 2010). BOP markets are distributed over both urban and rural settings (Prahalad, 2011). The urban poor lives in densely populated so called slum areas (Karnani, 2007; Rivera-Santos & Rufin, 2010). In contrast, the rural poor are geographically dispersed over large areas (Anderson & Markides, 2007).

Income Levels, Cash-Flows and Financial Infrastructure

Characteristic for BOP markets is the low levels of income among the population at the BOP (Rivera-Santos & Rufin, 2010). As individuals, the poor have low-income levels, but as a collective, the BOP segment accounts for high levels of aggregated incomes (Prahalad, 2004). As presented in table 3, the aggregated income at the BOP amount to \$5 trillion a year. Further, Hammond et al. (2007) state that the economic structure of the population at the BOP varies from region to region. The BOP segment itself can be divided into different segments, whereas there are large numbers of consumers in the mid- to high-income segments (Hammond et al., 2007.) Another important characteristic at the BOP is unstable cash-flows and irregularity of income (D'Andrea, Stengel & Goebel-Krstelj, 2004; Rivera-Santos & Rufin, 2010). Individual incomes vary at the BOP and income streams can typically not be observed in advance (Rivera-Santos & Rufin, 2010). People at the BOP typically receive their income on a daily basis rather than on a weekly or monthly basis (Anderson & Billou, 2007).

The financial infrastructure at the BOP is altogether underdeveloped and a majority of the population at the BOP lack access to basic financial services (Hammond et al., 2007; Japtap et al., 2013; Kandachar & Halme, 2017). For instance, Hammond et al. (2007) along with Kandachar and Halme (2017) claim that most of the BOP population lack access to credit and banking services (e.g. bank accounts). The authors state that if BOP individuals were to borrow money, it is typically from a local informal money lender at high interest rate. Further, the access to insurance at the BOP remains low; usually between four and nine percent in developing countries (Kandachar & Halme, 2017).

Underdeveloped Physical Infrastructure

Underdeveloped or inadequate physical infrastructure is characteristic for BOP markets (Sakaraya, Eckman & Hyllegard, 2006; Simanis, 2012;; Kandachar & Halme, 2017). Access to traditional infrastructure in terms of transportation (e.g. roads and railroads), electricity, water, sewage, and telephone lines cannot be assumed at the BOP (Elychar, 2012, Jagtap et al., 2013). Underdeveloped physical infrastructure result in fragmented or non-existent distribution channels at the BOP (Prahalad 2004; 2006; Anderson & Billou, 2007). A functioning infrastructure is critical at the BOP as the population lives in both urban and rural settings. Lack of education resulting in lack of workforce talent and skills in developing countries is another distinct characteristic of BOP markets (Prahalad, 2004, Agnihotri, 2012).

Informality of Markets and Local Actors

Vital in understanding the characteristics of BOP markets is to comprehend the degree of informality in these markets. BOP markets are often served by the unorganized inefficient sector; a large, hidden, informal market that is usually not recorded in official gross national product (GNP) or PPP statistics (London & Hart, 2004; Hammond et al., 2007; Rivera-Santos & Rufin 2010; Prahalad, 2011). Informality means that a majority of individuals at the BOP lack access to formal electricity, water, sanitation, healthcare or financial services (Kandachar & Halme, 2017). London and Hart (2004) argue that an explanation of the high degree of informality in BOP markets is the high costs associated with entering the formal economy. A majority of the workforce in developing economies function within the informal economy and makes a living through self-employment or working in organizations that are not legally organized businesses (Hammond et al., 2007; Kandachar & Halme, 2017). Hence, the environment of local actors is typically informal with few and small competitors that offer low quality at high price points (Prahalad & Hammond, 2002; Prahalad, 2004; Rivera-Santos & Rufin, 2010). Still, local actors may play a significant role in the informal economy of BOP markets, especially if embedded with the local culture and/or linked to local authorities (De Soto, 2000, cited in Rivera-Santos & Rufin, 2010).

A result of market informality at the BOP is the so-called poverty penalty (Kandachar & Halme, 2017). The poverty penalty is a cost disparity between the rich and BOP consumers within the same economy (Prahalad & Hammond, 2002; Prahalad, 2004; Kandachar & Halme, 2017). In brief, the poverty penalty can be explained as a result of informality and inefficiencies in BOP markets (Hammond et al., 2007; Kandachar & Halme, 2017). Prahalad and Hammond (2002) exemplify the poverty penalty with the example of inhabitants of the urban slum throughout the developing world, who pay between 4 and 100 times as much for drinking water compared to the higher segments of the economic pyramid.

Formal and Informal Institutional Environment

Another characteristic of BOP markets is the weak formal institutional environment they exist in (Karnani, 2007; Rivera-Santos & Rufin, 2010; Jagtap et al. 2013). The weak formal institutional infrastructure in BOP markets can be exemplified in terms of weak legal enforcement, corruption and absence of property rights (Kandachar & Halme, 2017; Rivera-Santos & Rufin, 2010; Jagtap et al., 2013). The absence of formal institution creates reliance

on the informal institutions; norms and activities that have no legal validity or do not comply with the formal regulations (River-Santos & Rufin, 2010). In the informal economy, informal social boundaries often dominate over formal legal documentation (Rivera-Santos & Rufin, 2010). Relationships are based on social rather than legal contracts, resulting in transactions based on networks and relationships rather than contracts (de Soto, 2000, cited in London & Hart, 2004; Rivera-Santos & Rufin, 2010).

2.3.3 Criticism of the BOP Concept

The proposition that poverty can, and should, be alleviated through profits has not been undisputed among scholars (Agnihotri, 2012; Kolk, Rivera-Santos & Rufin, 2014). For example, Aneel Karnani is a known critic of the BOP concept who has written a majority of published critical articles targeting the BOP concept between 2000 and 2009 (Kolk, Rivera-Santos & Rufin, 2014). According to Karnani (2007), the BOP concept is riddled with fallacies, logically flawed and inconsistent with empirical evidence. The author claims that the market size at the BOP is overestimated and the costs of serving the BOP are high, resulting in low potential profitability. Flawed performance along with lack of profitability in corporate BOP initiatives is stated by Simanis, Hart and Duke (2008), who acknowledge that these initiatives often underperform investor expectations. According to Karnani (2007), the high costs are associated with the characteristics of BOP markets, e.g. geographic dispersion, poor infrastructure, cultural heterogeneity, and small transactions. The author argues that these factors make it difficult for actors targeting the BOP to achieve economies of scale. According to Karnani (2007), companies committed to the BOP concept often fail because they have overestimated the buying power of the BOP and set prices too high.

More criticism in the area relates to the attachment of the term “market” to the many BOP consumers. Simanis, Hart and Duke (2008) argue that the BOP is not in any way a homogenous market, and by definition not a market at all, but a demographic classification. On the one hand, the market classification might help in changing the private sector’s mindset about the poor in a positive manner, but on the other hand this can foster a misunderstanding as corporations then use identical approaches, tools and frameworks used to serve customers in developed markets (Simanis, Hart & Duke, 2008). As a consequence, according to the authors, BOP initiatives adopting such an approach have failed in delivering profitability.

2.4 Business Models

Underlying the central argument of the BOP proposition; to combine the benefits of economic profits with poverty alleviation at the BOP, is the need for new innovative business models (Ricart et al., 2004; Pitta, Guesalaga & Marshall, 2008; Agnihotri, 2012). Hence, to understand and investigate further in BOP business models and its implications for organizations operating at the base of the economic pyramid, it is of relevance to define the term business model. However, scholars have yet to agree on a generally accepted definition and meaning of the term business model (Magretta, 2002; George & Bock, 2010; Zott, Amit & Massa, 2011). Table 4 outlines some of the most prevalent definitions suggested in literature for the term business model (e.g. George & Bock, 2011, p. 86; Zott, Amit & Massa, 2011, p. 1024; Fielt, 2013, p. 87-88).

Table 4. Business Model Definitions

Author(s) and year	Definition
Timmers (1998)	A business model is “An architecture for product, service and information flows, including a description of the various business actors and their roles; a description of the potential benefits for the various business actors; and a description of the sources of revenues” (p. 2).
Amit & Zott (2001)	“A business model depicts the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities” (p. 493).
Magretta (2002)	Business models are “... at heart, stories – stories that explain how enterprises work” (p. 4).
Shafer, Smith & Linder (2005)	A business model is “... a representation of a firm’s underlying core logic and strategic choices for creating and capturing value within a value network” (p. 202).
Johnson, Christensen & Kagermann (2008)	Business models “... consists of four interlocking elements that, taken together, create and deliver value” (p. 52). Referring to customer value proposition, profit formula, key processes and, key resources.
Osterwalder & Pigneur (2010)	“A business model describes the rationale of how an organization creates, delivers, and captures value” (p. 14)
Teece (2010)	“A business model articulates the logic, the data, and other evidence that support a value proposition for the customer, and a viable structure of revenues and costs for the enterprise delivering that value” (p. 179).

According to Fiel (2013), early definitions of the term business model often summarize the components of a business model. Contrasting, later definitions are more abstract and formulated around the value logic, centered on the creation, delivery and capturing of value (Fiel, 2013). The author further explains that the term value refers to customer value. Throughout the remainder of this thesis, Osterwalder and Pigneur’s (2010, p. 14) definition of the term has been adopted: “A business model describes the rationale of how an organization creates, delivers, and captures value”. The definition was chosen as it evolves around the value logic rather than the specific components of a business model. The nexus of this study is evolving around business model innovation centered on the value logic (Prahalad, 2011).

2.4.1 Business Model Innovation

Having defined the term business model, the next advance is to define the term business model innovation. Table 5 outlines some of the the most commonly adopted definitions of the term business model innovation in literature.

Table 5. Business Model Innovation Definitions

Author(s) and year	Definition
Mitchell & Coles (2004)	“By business model innovation, we mean business model replacements that provide product or service offerings to customers and end users that were not previously available. We also refer to the process of developing these novel replacements as business model innovation” (p. 17).
Markides (2006)	“Business-model innovation is the discovery of a fundamentally different business model in an existing business” (p. 20).
Osterwalder & Pigneur (2010)	“Business model innovation is about creating value, for companies, customers, and society. It is about replacing outdated models” (p. 5).
Berglund & Sandström (2013)	“A business model innovation can thus be thought of as the introduction of a new business model aimed to create commercial value” (p. 276).
Casadesus-Masanell & Zhu (2013)	“At root, business model innovation refers to the search for new logics of the firm and new ways to create and capture value for its stakeholders; it focuses primarily on finding new ways to generate revenues and define value propositions for customers, suppliers, and partners” (p. 464).
Khanagha, Volberda & Oshri (2014)	“Business model innovation activities can range from incremental changes in individual components of business models, extension of the existing business model, introduction of parallel business models, right through to disruption of the business model, which may potentially entail replacing the existing model with a fundamentally different one” (p. 324).

Without explicitly choosing a specific definition of the term to be adopted throughout this thesis, one can derive that several of the definitions in table 5 hold similar characteristics. Broadly summarized, one could derive that business model innovation is concerned with making changes in an existing business model or creating a new business model with the primary objective of creating enhanced value. Hence, the majority of the definitions are centred on the value logic. The nature of changes to an existing business model can range from incremental changes to replacing the existing business model with a fundamentally different one. Throughout the remainder of the thesis, this spectrum of business model innovation will be adopted.

2.5 Linking BOP Characteristics and Business Models: Implications for Business Model Innovation

Scholars have acknowledged that combining profit with poverty alleviation at the BOP requires new innovative business models, given the distinct characteristics and limitations at the BOP (e.g. Ricart et al., 2004; Pitta, Guesalaga & Marshall, 2008, Agnihotri, 2012; Angot & Plé, 2015). Yet, few have managed to explicitly specify not only what characterizes BOP markets, but also what implications these characteristics have for business model innovation at the BOP in an elaborate and conclusive manner. This section of the literature review aims to readily connect the characteristics of BOP markets with their implications for business model innovation at the BOP. The researchers conclude this section with introducing a conceptual framework for business model innovation at the BOP, readily illustrating what implications BOP market characteristics have on business model innovation at the BOP.

For the purpose of linking BOP market characteristics' implications to business model innovation, the researchers have taken stand in the 4 A's framework; a framework for innovation at the BOP that can be applied to business model innovation in specific (Anderson & Billou, 2007; Anderson & Markides, 2007). The 4 A's are referring to availability, affordability, awareness and acceptability. Prahalad (2011) describes the 4 A's as prerequisites for innovation at the BOP claiming commitment to the 4 A's is the starting point for successful innovation targeting the BOP. According to Anderson and Billou (2007), the key success factor among companies managing to profitably serve the BOP is a business model that delivers the 4 A's. Table 6 readily displays a definition of each A.

Table 6. The 4 A's Framework (Anderson & Billou, 2007; p.15)

Availability	Affordability	Awareness	Acceptability
<p>“Availability [is] the extent to which customers are able to readily acquire and use a product or service” (p. 15).</p>	<p>“Affordability [is] the degree to which a firm’s goods or services are affordable to BOP consumers” (p. 15).</p>	<p>“Awareness [is] the degree to which customers are aware of a product or service” (p. 15).</p>	<p>“Acceptability [is] the extent to which consumers and others in the value chain are willing to consume, distribute or sell a product or service” (p. 15).</p>

The 4 A's framework is to some extent built on the recognition of BOP market characteristics, however, the researchers apologetically claim the framework fails to explicitly connect BOP market characteristics with implications for business model innovation. Further, the framework neglects some characteristics of BOP markets with important implications for business model innovation at the BOP. Therefore, the researchers have made an effort to draw on the presented characteristics of BOP markets and identify the characteristics' implications for business model innovation, in terms of the 4 A's. Hence, following is a review of the 4 A's aiming to connect the characteristics of BOP markets with their implications for business model innovation at the BOP.

2.5.1 Availability

Availability refers to the extent to which customers are able to readily access and use a company's offerings (Anderson & Billou, 2007; Anderson & Markides, 2007). The characteristic extreme geographic locations of BOP populations and markets post a challenge in terms of ensuring availability of products and services at the BOP (Prahalad & Hammond, 2002; Anderson & Markides, 2007; Karnani, 2007; Rivera-Santos & Rufin, 2010). This taken together with the characteristics of underdeveloped financial and physical infrastructure and fragmented or non-existent distribution channels have implications for business model innovation at the BOP (Prahalad, 2004; Sakaraya, Eckman & Hyllegard, 2006; Simanis, 2012; Jagtap et al., 2013). The extreme geographic locations of BOP populations and markets along with the lack of physical infrastructure stretches supply chains and adds costs of doing business at the BOP (Anderson & Billou, 2007; Pitta, Guesalaga & Marsahll, 2008). Prahalad (2005) suggests innovation in processes along with distribution channels at the BOP is as

important as product or service innovation. According to the author, it is central to adjust the process to fit the infrastructure in BOP settings. Martinez and Carbonell (2007) claim that the geographic challenges of BOP markets call for a special distribution network. Gaps in local value chains with an absence of traditional suppliers and distributors implies the need for strong local adaption of distribution models at the BOP (Rivera-Santos & Rufin, 2010). Gaps in local value chains can also be exemplified through the general lack of education and skills at the BOP, resulting in lack of workforce talent and skills (Prahalad, 2004; Agnihotri, 2012; Kandachar & Halme 2017).

The underdeveloped financial infrastructure and lack of access to basic financial services at the BOP has implications for payment channels at the BOP (Hammond et al., 2007; Japtap et al., 2013). As a majority of BOP consumers lack access to credit and banking services (e.g. bank accounts), companies must come up with innovative solutions in terms of payment channels at the BOP (Hammond et al., 2007). As small transactions characterize BOP markets, the adopted payment channels have to be adapted to these types of transactions (Rivera-Santos & Rufin, 2010). Anderson and Billou (2007) claim that ensuring availability of products and services in BOP settings is one of the most central challenges in attending to BOP markets.

2.5.2 Affordability

Affordability refers to the degree of how affordable a company's offerings are to consumers at the BOP (Anderson & Markides, 2007). The low income levels at the BOP is a characteristic of BOP markets that has to be considered in ensuring affordability (Hammond et al., 2007; Rivera-Santos & Rufin, 2010). Firms targeting the BOP must be able to deliver offerings at a price that enables BOP consumers to consume its products or services, having certain implications for business model innovation at the BOP (Anderson & Billou, 2007; Pitta, Guesalaga & Marshall, 2008).

In ensuring affordability at the BOP, the price-performance ratio of products and services is central (Prahalad, 2004). Pitta, Guesalaga and Marshall (2008) argue that product modification will help lower prices and thus improve affordability. Reducing prices by 5 to 10 percent is not sufficient in BOP markets; an overall price-performance ratio improvement of 30 to 100 times should be targeted (Prahalad, 2004). To achieve this price-performance ratio improvement, companies generally use target-based costing (Agnihotri, 2015). Consequently,

the logic of cost, price and profits must be $Price - Profit = Cost$, rather than the traditional logic of $Cost + Profit = Price$ (Prahalad, 2011; Agnihotri, 2015). According to this logic, price is the starting point with affordability in focus (Prahalad, 2011). Further, Prahalad (2011) recognizes profit as a requirement in ensuring sustainability and growth of the business. Consequently, cost is the only lever that can be effectively managed, according to the author.

Discussing affordable pricing at the BOP, Prahalad (2002; 2004; 2006; 2011) draws attention to scalability of business models. According to the author, solutions developed for the BOP must be scalable along with adaptable to similar BOP markets, as most BOP markets are relatively small and fragmented. Profitability in BOP settings are dependent on volume (scalability), low margin per unit, (low) capital intensity, and return on employed capital (Prahalad, 2004; 2011).

Another characteristic that has implications in terms of affordability is the BOP populations' unstable, irregular cash-flows (D'Andrea, Stengel & Goebel-Krstelj, 2004; Rivera-Santos & Rufin, 2010). As described in the characteristic section, consumers typically receive their income on a daily basis rather than on a weekly or monthly basis and firms must adapt to match customers' cash flows (Anderson & Billou, 2007; Anderson & Markides, 2007). A strategy to advance affordability by matching customers' cash flows at the BOP is reducing product sizes, as smaller product sizes enable lower price points relative to incomes at the BOP (Pitta, Guesalaga & Marshall, 2008; Rivera-Santos & Rufin, 2010). Smaller product sizes and hence smaller transactions allows consumers to better manage and match their cash flows, as the consumers do not have to pay a large sum relative to their low and irregular income (Karnani, 2007; Rivera-Santos & Rufin, 2010).

2.5.3 Awareness

Anderson and Markides (2007) describe that awareness is concerned with customer understanding and knowledge about a company's offerings. Creating awareness of products and services is a central challenge for companies attending to the BOP (Anderson & Billou, 2007). Prahalad (2004) argues that significant investments in customer education is required to increase awareness when targeting the BOP. Kandachar and Halme (2017) explain that the general lack of knowledge and skills at the BOP can create difficulties as customers may not understand the use of product/service or its value. Customer education therefore refers to

educating customers on how to use and make benefits of specific products/services offered at the BOP (Prahalad, 2004).

Prahalad (2004) along with Anderson and Billou (2007) explain that another challenge in creating awareness in BOP settings is that a majority of BOP consumers live in so called media dark zones without access to traditional media channels as TV or radio. Without access to the traditional mediums of communication and advertisement, firms targeting the BOP are strained to come up with new and innovative approaches in this area and more than a single format and approach is required (Prahalad, 2004). According to Prahalad (2004), the methods and approaches for creating awareness and educating consumers at the BOP varies. Billboards painted on walls, video mounted on trucks and low-cost demonstration crews travelling village to village are mentioned as examples (Prahalad, 2004). However, in contrast to other technology based products, the adoption of mobile phones in developing economies has grown rapidly among consumers at the BOP (Kandachar & Halme, 2017). At the BOP, the mobile penetration accounts for opportunities for not only communication and marketing, but also for creativity and action for businesses at the BOP (Lehr, 2007, cited in Kandachar & Halme, 2017).

Another approach to creating awareness among BOP consumers suggested by Prahalad (2004) is collaboration between organizations. Collaboration between private sector firms, NGOs, and other types of organizations such as authorities can be valuable in creating awareness and educating customers (Prahalad, 2004; Agnihotri, 2012).

2.5.4 Acceptability

According to Anderson and Billou (2007), acceptability refers to consumers' willingness to consume-, or other actors in the value chains' willingness to distribute or sell a product or service. The authors explain that serving BOP markets often require products and services adapted to the specific needs of both customers and distributors in these settings. National or regional cultural or socioeconomic aspects are central along with specific requirements of local business standards and practices (Anderson & Billou, 2007). Anderson and Markides (2007) describe gaining customer acceptance may require modifications to ensure a product or service to be culturally or socioeconomically acceptable. Further, the authors state that battling against prevailing cultural or socioeconomic beliefs can account for a challenge. Reducing or eliminating certain features can increase the acceptability of a product or service

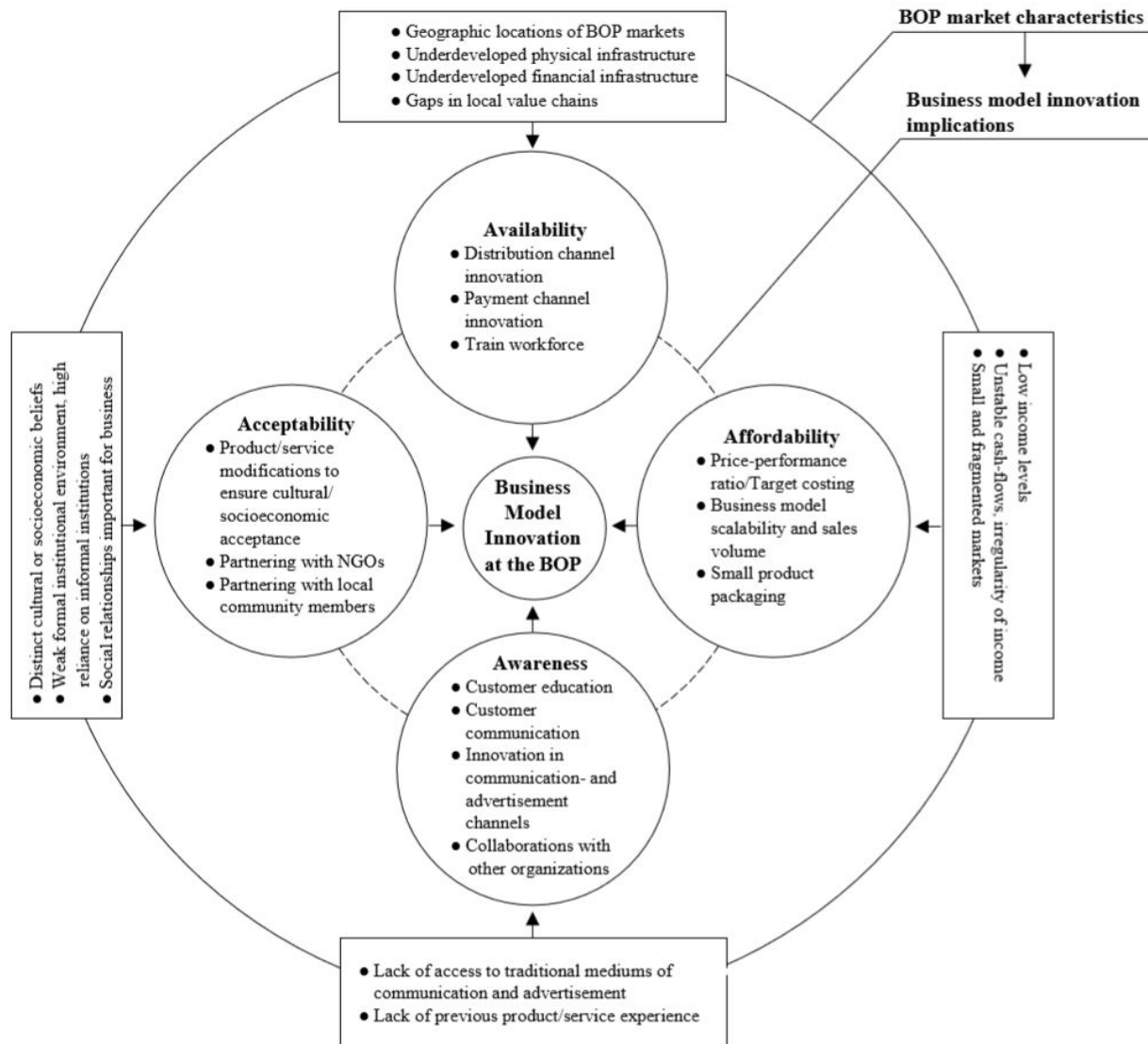
(Anderson & Markides, 2007). Products and services targeting the BOP must be easy to readily use without long or complex learning curves, as the majority of BOP customers are likely to be first-time users (Prahalad, 2004).

The weak formal institutional environment and the reliance on strong informal institutions at the BOP has implications for business models in terms of gaining acceptability (Rivera-Santos & Rufin, 2010). As relationships at the BOP are based on social rather than legal contracts, social networks and relationships are key to gaining social acceptability for offerings targeting the BOP (de Soto, 2000, cited in London & Hart, 2004; Rivera-Santos & Rufin, 2010). Trust and legitimacy can be established by partnering with NGOs or influential members of the local community (Rivera-Santos & Rufin, 2010). Chambers (1997) suggests that the capability to recognize and exploit existing social infrastructure at the BOP is an important success factor in attending to the BOP.

2.5.5 Conceptual Framework for Business Model Innovation at the BOP

Previously in this literature review chapter, an attempt to derive and categorize the most substantial general characteristics of BOP markets was made. As a further advance, the BOP market characteristics were linked to the characteristics' implications for business model innovation at the BOP, in terms of the 4 A's. Based on this process of qualitative analysis of literature and theory, the researchers have conceived a conceptual framework for business model innovation at the BOP readily visible in figure 3. The proposed conceptual framework seeks not to offer an explanation of how business model innovation at the BOP de facto works, but to provide understanding of business model innovation at the BOP by linking the distinct characteristics of BOP markets to its implications for business model innovation at the BOP (Jabareen, 2009). It is possible, or even presumable, that other factors than BOP market characteristics have implications for business models in BOP contexts, for instance dynamics of industries. Notwithstanding, the standpoint of this conceptual framework is based on the proposition that the specific characteristics of BOP markets have implications for business model innovation at the BOP that private sector firms must scrutinize in developing a viable business model for BOP markets (Rivera-Santos & Rufin, 2010).

Figure 3. Conceptual Framework for Business Model Innovation at the BOP



The outer circle of the framework represents the previously defined BOP market characteristics derived from BOP literature (e.g. Prahalad, 2004; London & Hart, 2004; Hammond et al., 2007; Rivera-Santos & Rufin, 2010; Agnihotri, 2012; Kandachar & Halme, 2017). The implications of the distinct market characteristics of BOP markets have been linked to each A from the 4 A's framework (Anderson & Billou, 2007; Anderson & Markides, 2007). Notwithstanding, the circle indicates that the characteristics might have less obvious implications for more than one of the A's. In addition, the circle is symbolically set out to encompass any BOP market characteristics with implications for business model innovation at the BOP that has not been explicitly assigned to an A. The arrows drawn from the BOP market characteristics imply that the characteristics have implications for business model innovation that can be categorized under the 4 A's (Rivera-Santos & Rufin, 2010).

Hence, the implications for business model innovation at the BOP have then been listed under each A. The dotted circle connecting the four A's is set out to suggest that the four A's are interrelated. As a last step, the arrows from business model innovation implications in terms of the four A's are drawn toward the circle in the middle, "Business Model Innovation at the BOP". This indicates that private sector firms should consider the business model innovation implications given by BOP market characteristics in developing a business model that is viable at the BOP.

3 Methodology

3.1 Research Approach

This research aims to examine how private sector firms can innovate business models to attend to the BOP. As this include an understanding of the linkages between the societal constructs at the BOP and the formation of business models, a qualitative research approach was chosen (Bryman & Bell, 2011). As an approach, qualitative research seeks to explore and understand the meaning ascribed to social or human problems by individuals or groups (Bryman & Bell, 2011; Creswell & Creswell, 2018). By doing so, qualitative research attempts to contribute to an enhanced understanding of social realities (Flick, von Kardoff & Steinke, 2004). There are certain elements of the research process characterizing qualitative research; Creswell and Creswell (2018) explain that the research process typically involves emerging questions and method. Further, the authors state that data collection generally takes place in the research participant's environment and data analysis usually takes an inductive approach based on specific or general themes. Considering the complex nature of BOP markets, especially when linked to business models and business model innovation, the researchers argue that a qualitative approach was suitable to meet the overall objective of the research. Particularly since the qualitative approach allows an in depth understanding of social settings, constructs and processes (Easterby-Smith, Thorpe & Jackson, 2015). In addition, the qualitative research approach was found appropriate as it provide opportunities of open ended forms of data, which was the researchers' preferred mean to address the research problem because of its complex, social character (Creswell & Creswell, 2018).

Further, the researchers chose a research approach for this qualitative study that encompassed aspects from both inductive and deductive research approaches, as neither approach on its own was considered a perfect fit. A deductive approach entails a linear research process that is based on theory and deduced hypotheses that is empirically tested and then proved or disproved (Bryman & Bell, 2011). In contrast, an inductive approach takes a starting point in the observations or findings from where conclusions are drawn, and with theory as the outcome, instead of a starting point, of the research (Bryman & Bell, 2011). This research was based on some of the more deductive characteristics, such as a profound theoretical foundation as the starting point of the research. However, except from that, the approach of

this study leans towards the inductive approach as the theoretical foundation was altered after data collection, as the data and findings direct and steer the relevance of theory.

3.2 Research Design

Research design, or strategies of inquiry, refers to the choice of research design that provide direct guidelines and directions for the research process and procedures (Creswell & Creswell, 2018). Given the primary objective of the thesis; to examine how private sector firms can innovate business models to attend to the BOP, empirical evidence of business models at the BOP was required. Based on this objective, the researchers found that a case study approach would be suitable. Yin (2009) describes a case study as an empirical study that investigates a current phenomenon in depth and in its real settings. Further, the author states that this design is relevant when the boundaries between the context and phenomenon are indistinct. Moreover, Yin (2009) declares that case studies can cover multiple cases and thus facilitate cross-case analysis. According to Bryman and Bell (2011), the multiple case study design is being increasingly used in business and management research.

The researchers found a multiple case study design appropriate for this study for two reasons. First, a multiple case study design was preferred by the researchers as it allowed the researchers to conduct an in-depth analysis of a number of case organizations, in turn enabling the researchers to access the needed empirical evidence of business models at the BOP (Bryman & Bell 2011; Creswell, 2014). Second, the study was conducted as a multiple case study rather than a single-case-study to facilitate data collection from different settings, markets and organizations, enabling comparisons and the possibility to draw conclusions based on potential patterns in the findings. Yin (2009) along with Bryman and Bell (2011) also underline the purpose of comparability of the cases as well as the possibility to consider what is unique and common among the cases, which is in line with the research objective of this study.

The multiple case study approach, and hence this research, can be considered a part of the research design comparative design, as this design involves the application of the same methods on two or more cases to facilitate comparison (Bryman & Bell, 2011). Central to the comparative research design, according to Bryman and Bell (2011), is the capacity to let the contrasting characteristics and findings act as a point of departure for theoretical reflections.

The initial intent of the researchers was to limit the case study to a specific industry in a specific BOP market. As the researchers started reaching out to organizations with inquiries, the issue of access was realized as a limitation to implementing a multiple case study research design focused on one industry in one BOP market. In order to reach organizations, the inquiries were sent out via e-mail to both personal and corporate addresses, to individuals at LinkedIn, and finally by telephone calls. The access issue was multitude. Few organizations responded to the inquiries stating they lacked resources to participate in the study, while most organizations and individuals did not respond at all. Given this, the researchers decided to widen the possible case organization population to encompass a broader set of industries and BOP markets, which on the one hand reduced some of the depth, but on the other hand opened up for more generalizable conclusions and comparison between industries and markets. Further, the researchers initiated contact with various organizations supporting BOP organizations hoping to be able to establish relevant contacts. However, these efforts did not prove fruitful as the response rate was low.

In selecting appropriate case organizations for the study, the researchers had specific requirements. The case organizations had to be a for-profit private sector firm targeting the BOP in a developing country. Further, the organizations had to have been operative for at least five years at the time of the study. The five-year requirement was established to ensure operations had been up and running for some time, to facilitate the data collection and data analysis process. SELCO India, BIMA and Sanivation fulfilled the researchers' requirements and accepted the inquiry to participate in the study.

3.3 Data Collection Method

3.3.1 Primary Data Collection

Primary data was collected in the form of eight qualitative interviews with informants from the studied case organizations. Qualitative interviewing is an interactive and flexible data collection tool that allowed the researchers to capture perspectives of the studied organizations and individual voices (Rabionet, 2011; Creswell, 2014). A potential disadvantage of qualitative interviewing is that the captured perspectives might be too subjective (Creswell, 2014). The researchers attempted to counteract overly-subjective perspectives by interviewing more than one informant from each organization. Another

potential downside to qualitative interviewing is that the researchers' presence may bias the informants' responses if information is sensitive (Creswell & Creswell, 2018). There are three types of qualitative interviews which can be placed along a continuum: structured, semi-structured and unstructured interviews (Clifford et al., 2016). The researchers adopted semi-structured interviews as a data collection tool for this study. Semi-structured interviews are characterized by being scheduled in advance and organized around a set of predetermined themes and questions (Whiting, 2008). Further, Whiting (2008) describes semi-structured interviews allow other related questions to emerge from dialogue.

A snowball sampling strategy was adopted to identify and connect with relevant informants. The researchers established initial contact with a set of individuals representing different organizations relevant to the research topic and then used these initial contacts to establish contact with other informants (Bryman & Bell, 2011). Hence, after the first interview with an informant, the researchers requested the informant to make a connection to a colleague within the organization that could contribute to the study by participating. The researchers found the snowball sampling strategy valuable, as the first informant in an organization in most cases could make a connection to a colleague within the organization with relevant knowledge and insights that could be translated into a valuable contribution to the study. A disadvantage of the snowball sampling strategy was that the sampling strategy reduced the researchers' control over the data collection process and thus accounted for a challenge given the limited time frame of the study. Another downside of snowball sampling is that the collected sample is unlikely to be representative of the population which can pose questions about external validity (Bryman & Bell, 2011). Nevertheless, Bryman and Bell (2011) argue snowball sampling can be relevant in studies of a qualitative research approach, as questions about external validity and generalizability is not as evident in qualitative research as in quantitative research. Table 7 outlines relevant information about the interviewed informants.

Table 7. Informants and Interviews

Interview	Company	Informant	Time, minutes	Medium of communication
Interview 1	BIMA	Country Manager, Bangladesh	60	WhatsApp Video
Interview 2	BIMA	Strategic Business Analyst, Africa	60	Skype Video
Interview 3	BIMA	Regional Project Manager, Africa	50	Skype Audio
Interview 4	Selco India	Senior Adviser, India	60	Skype Audio
Interview 5	Selco India	Assistant General Manager Operations, India	40	Skype Audio
Interview 6	Sanivation	Business Development Manager, Kenya	50	Skype Audio
Interview 7	Sanivation	Business Development Manager, Kenya	45	Skype Audio
Interview 8	Sanivation	Government Relations Manager, Kenya	50	WhatsApp Audio

Before conducting the interviews, the researchers established an interview guide encompassing the themes and questions to be addressed during the interviews (see Appendix A). The questions in the interview guide were relatively few along with open-ended, allowing the informants to provide the researchers with a rich in-depth description of their knowledge and perceptions (Creswell & Creswell, 2018). The researchers centred the predetermined themes and questions in alignment with the overall objective of the thesis, and on the main components of the developed conceptual framework. Relevant adjustments of the interview guide in terms of organization specific questions were made to adapt the interview guide to the studied case organizations.

The practical procedure of the interviews was similar as they followed a three step process initiated by the researchers. Each interview was opened with a presentation of the study, the study's purpose and practical information about the publication of the research. With consent from the respondents, the audio of each interview was recorded. The initiation of the

interviews was chosen based on research ethical concerns; providing the respondents with the purpose of the study along with relevant information and informing them about the choice on whether to be anonymous or not. The interviews were recorded and transcribed to facilitate the data analysis along with strengthening the study's validity. Transcribing the interviews was perceived as necessary to ensure short-lived conversational behaviour to be permanently accessible on paper for data analysis (Flick, von Kardoff & Steinke, 2004). Thereafter, the researchers asked the informants interview questions following the interview guide. The semi-structured approach to interviewing allowed follow-up-questions to emerge during the interviews to capture relevant aspects that the interview guide did not address sufficiently (Whiting, 2008). The interviews were finished off with a brief summary of the conversation and the respondents were given the opportunity to receive the study via e-mail after completion. As readily visible in table 7, the interviews were held over Skype or WhatsApp and each interview lasted for approximately 50-60 minutes.

3.3.2 Secondary Data Collection

Secondary data in form of qualitative documents such as fact sheets, internal reports, product brochures and newspaper articles as well as other documents provided by the case organizations were collected during the research process. The purpose of collecting and assessing these documents was to gather information about the studied case organizations along with their business models and offerings. By accessing this information in form of secondary data instead of interviews, the researchers were allowed to focus the interviews on the more abstract and in depth questions within the research objective, which was beneficial considering the limited time frame of each interview. The time convenience of documents is also highlighted as an advantage of this data source by Creswell and Creswell (2018). However, this type of data might possess limitations such as incompleteness or non-accurate information (Creswell & Creswell, 2018). To avoid this limitation, the researchers used several sources of data and compared different sources to ensure accurate information.

3.4 Data Analysis

Qualitative research methodologies and data collection methods generally result in extensive and complex data in terms of textual material to be structured, analyzed and interpreted

(Waring & Wainwright, 2008; Bryman & Bell, 2011; Symon & Cassell, 2012). As was the case in this study, with transcripts from the semi-structured interviews making up a thick bundle of textual material. A data analytical technique that can be applied to structure the data analysis of rich textual data is template analysis (Symon & Cassell, 2012). Template analysis can be described as a form of thematic analysis balancing a relatively high degree of structure in the analysis process of textual data material with the flexibility to adapt it to the needs of a particular study (Symon & Cassell, 2012). Hence, the template analysis approach was adopted over similar approaches as the template analysis provides more flexibility involving fewer specified procedures, allowing the researchers to adapt the template analysis to match their own requirements (Symon & Cassell, 2012).

Before the coding procedure of data began, the transcripts were thoroughly read through to familiarize the researchers with the textual material and correct any possible transcription errors (Symon & Cassell, 2012; Creswell & Creswell, 2018). Thereafter, a coding template was manually developed with a basis in the main components of the conceptual framework (Waring & Wainwright, 2008; Symon & Cassell, 2012). The coding template encompassed seven themes; general case organization information, business model, availability, affordability, awareness, acceptability, along with a theme set out to comprehend interesting aspects that were not captured by any of the other themes. The researchers used the coding template to manually color code the collected textual data. Following, the coded data was sorted into segments in order to get all similar text in one place (Waring & Wainwright, 2008). Thereafter, thoroughly reading the segments allowed the researchers to identify reoccurring patterns and similarities along with differences and contrasting examples. As a last step, the researchers went back to the transcriptions screening for relevant aspects that could have been overlooked in the process.

3.5 Validity and Reliability

Validity and reliability are considered as two of the most central criteria for evaluation of business and management research (Bryman & Bell, 2011). According to Bryman and Bell (2011), reliability refers to how repeatable the results of a study are whereas validity refers to the integrity of the conclusions that are generated from a study. The authors suggest that

validity and reliability in the context of qualitative research can be further decomposed into internal and external validity along with internal and external reliability.

External validity, according to Yin (2009), refers to the generalizability of findings across different settings. External validity accounts for a challenge within qualitative research because of the common adoption of case studies and small samples, which is also the case in this research (Bryman & Bell, 2011). However, Creswell and Creswell (2018), argue that the value of qualitative research lies in the description of a specific setting and in the particularity rather than the generalizability. Still, the multiple case study approach of this research enables analysis within each setting, as well as across settings, which is suggested to increase the generalizability of this study (Baxter & Jack, 2008). Nevertheless, in this study, the researchers aim for analytic generalization. Analytic generalization is commonly used in case studies as the approach attempts to generalize the results to broader theory (Yin, 2009). Consequently, the researchers aimed to draw conclusions and generalize findings on a conceptual level rather than an organizational level, as this study aims to contribute to BOP research with implications for both practitioners and researchers. In contrast, the internal validity refers to the degree of consistency between the researchers' empirical observations and their theoretical implications (Bryman & Bell, 2011). To increase the internal validity, the researchers adopted a triangulation strategy. A triangulation strategy refers to data collection from multiple sources, such as several interviews and document analysis (Creswell & Creswell, 2018). In this study, internal validity was strengthened as the researchers' interactions, collaborations, interviews and knowledge about the case organizations allowed for a deep understanding and thus congruence between the concepts and observations.

External reliability, according to Bryman and Bell (2011), refers to the study's degree of replicability, and accounts for a challenge in qualitative research because of the shifting nature and circumstances of the social settings that are being studied. On the one hand, it could therefore be challenging to replicate this study. On the other hand, with the described methodology and with the provided literature review including chosen definitions, along with the attached interview guide, it should be possible to study the case organizations with similar findings. Internal reliability refers to the level of agreement of the empirical observations and the implications of collected data between the members of the research team (Bryman & Bell, 2011). To increase the internal reliability, both of the researchers has been present and active during all stages of the research process, including the interviews, to avoid different

interpretations and to facilitate discussion of findings and potential differences in opinions. Moreover, the researchers favored interviews with several respondents within the same company to guarantee unanimity between the informants' contributions, and hence increase the reliability. Further, the interviews were transcribed, providing a common base for analysis and coding, a process which both researchers actively participated in. The downside of this procedure is time efficiency, as there is a tradeoff between division of tasks versus close collaboration, whereas close collaboration was favored in this research to allow unified interpretations and valuable discussions and thus increase the internal reliability of the study.

4 Empirical Findings, Analysis and Discussion

4.1 Case Organizations and Context Descriptions

4.1.1 SELCO India

SELCO India is a rural energy service social enterprise structured as a private limited company established in 1995 with headquarters in Bangalore, Karnataka, India (Senior Adviser; SELCO, 2019a). SELCO India is one of four organizations under the SELCO umbrella accompanied by SELCO Foundation, SELCO's Incubation Program and SELCO Fund (SELCO, 2019a). From here on, SELCO India will be referred to as SELCO but the social enterprise should not be confused with the other organizations under the SELCO brand. SELCO operates in Karnataka, Maharashtra, Kerala, Tamilnadu and Bihar (SELCO, 2019a). SELCO works across urban, semi-rural and rural poor areas in India and target poor customers within underserved populations (SELCO, 2019b). SELCO has been operating profitably during the last ten years (Senior Adviser).

SELCO's objective is to "...provide reliable, affordable, and environmentally sustainable energy services to underserved homes and businesses, especially in the rural areas with customized technology, appropriate financing and door step service" (SELCO, 2019d, p. 4). SELCO has 60 last mile branches covering a radius of 80-100 kilometres each, located across five geographies (SELCO, 2019c). SELCO offers solar products to three different customer categories; households, livelihoods and institutions. The social enterprise has more than 20 solar products in its portfolio, ranging from solar home lightning, solar water heaters and solar inverter systems for households to sewing machines and milking machines for livelihoods to energy solutions for institutions (SELCO, 2019b). SELCO enables its customers to finance the purchases by partnering with financial institution such as public sector banks, rural banks, cooperative banks and microfinance institutions (Senior Adviser India; SELCO, 2019b). Depending on the customer need, SELCO's household solutions can be either individually owned or community owned (SELCO, 2019b).

4.1.2 BIMA

BIMA is a for-profit Swedish company with headquarters in Stockholm using mobile technology to deliver health and insurance services to underserved consumers in emerging markets (BIMA, 2018; 2019). BIMA launched its first operations in 2010 in Ghana and today BIMA operates in Africa (Ghana, Senegal and Tanzania), Asia (Bangladesh, Cambodia, Indonesia, Malaysia, Pakistan, Philippines and Sri Lanka), Asia Pacific (Fiji and Papua New Guinea), and Latin America (Paraguay) (BIMA, 2018; BIMA, 2019). Previously, BIMA also had operations in Uganda, Mauritius and Nicaragua (Strategic Business Analyst Africa). The data collection has been centered to the African markets along with the Bangladesh market, hence these are the markets in focus throughout the remaining sections about BIMA. BIMA is currently the leading mobile delivered insurance provider in Africa (Regional Project Manager Africa). BIMA is profitable in some of its markets and has yet to reach profitability in others (Williams-Grut, 2016; Carey, 2017).

BIMA's main objective is to provide affordable insurance and health services delivered by mobile technology to underserved customers in emerging markets (Regional Project Manager Africa). All BIMA's services are registered and paid for using mobile technology (BIMA, 2019). BIMA adopts a three-party system partnering with an insurance company and a mobile network operator (Regional Project Manager Africa). BIMA partners with mobile operators to allow the company to reach scale by accessing the mobile operators' customer base. The mobile operators benefit from the partnership as BIMA's services are value-adding for their subscribers (Strategic Business Analyst Africa). The initial focus of BIMA was offering insurance products (life, accident and hospitalization). In 2015, the company expanded into mobile health. BIMA targets customers who have until now have been underserved by traditional players, and 75% of BIMA's customers are accessing insurance for the first time. 93% of BIMA's customers live on less than \$10 a day, 54 % less than \$2.50, and 22% less than \$1.25 a day (BIMA, 2018).

4.1.3 Sanivation

Sanivation is a Kenya based for-profit sanitation social enterprise established in 2014. The enterprise is operating in Naivasha and Kakuma. (Sanivation, 2015) The nexus of Sanivation is sanitation infrastructure in emerging markets. As a means to ensure the sanitation infrastructure business is sustainable and cost effective, Sanivation sells a reuse product made

from the waste collected in the sanitation process, which for the time being is solid fuel in the form of charcoal briquettes. The charcoal briquettes are mainly sold to industries. Sanivation has not yet reached profitability but estimates to break even within the next five years. (Business Development Manager)

Sanivation has three treatment plants for converting waste into charcoal briquettes (Business Development Manager). The first treatment plant was built in the community of Naivasha, where Sanivation provides the full value chain for sanitation from providing container based toilets, to waste collection, to waste treatment and converting the waste into charcoal briquettes (Sanivation, 2015). The container based toilets are provided by Sanivation and placed in households free of charge. Then, the customer pays a monthly service fee for having Sanivation collect the waste. Sanivation currently has 130 container-based toilets out in the community. (Business Development Manager) The second treatment plant was built in Kakuma (Sanivation, 2015). In Kakuma, the setup is different and Sanivation is contracted by UNHCR to provide the full sanitation value chain for a refugee camp with 500 container-based toilets. The third treatment plant, established most recently, is also located in Naivasha but adopts a different approach from the previous two. Sanivation discovered that many of the people living in the community already had pit latrines and septic tanks but the waste was taken to a wastewater treatment plant which was occupied over capacity. As a result, the waste went into the environment untreated, accounting for a problem for everyone living in the community. Sanivation decided to partner with the government and tap into the existing network and build a treatment plant next to the wastewater treatment plant. (Business Development Manager) By shifting the focus from providing sanitation services for individual households to being the government's non-sewage sanitation provider, the enterprise could have more impact. The government in Kenya has a cost of 15 dollars per person per year for these services, while Sanivation delivers the services at a cost of 3 dollars per person per year. (Business Development Manager)

4.2 Within-Case and Cross-Case Analysis

The remainder of this chapter is structured around the main components of the suggested conceptual framework for business model innovation at the BOP, the 4 A's. In addressing the primary objective and research question of the study, the researchers have conducted a within-

case as well as a cross-case analysis for each A. Under each A, the reader will first be provided with a within-case analysis presenting the empirical findings of each case organization. Thereafter, a cross-case analysis is presented. In the cross-case analysis, the researchers define, analyze and discuss similarities, themes and differences between the studied cases, in relation to previous research along with the conceptual framework. To graphically compile the results of the within-case and cross-case analyses in relation the suggested conceptual framework for business model innovation at the BOP, a radar model was developed. The model maps out to what extent the studied case organizations' business models are addressing the business model implications in the conceptual framework related to each A. The construction of this model required an analysis process of converting qualitative descriptions into quantifiable numbers, an inherently complex process given potential subjective biases. Bearing this in mind, the researchers discusses the appropriate quantifications for each case organization related to each A, with basis in the empirical data. A numeric scale approach was adopted to quantify the qualitative findings to be mapped out in the radar model. This method and graphic model was favored as they allowed the researchers to in a dynamic way display the case organizations' business models in relation to each other along with the conceptual framework.

4.3 Availability

4.3.1 SELCO

“What people tend to forget is that we are working in an environment where the eco system either does not exist or is very immature. You have to as an enterprise build a lot of that yourselves. ... Like I mentioned, infrastructure, things that should have been there but it is not” (Senior Adviser).

“We largely had to create a system that ideally should have been there. But it didn't exist so you start from scratch” (Senior Adviser).

SELCO's Senior Adviser explains that SELCO is working in an environment where the eco system for businesses is either very immature or non-existing. In order to be able to conduct business with consumers in these environments and make its offerings available, the enterprise has largely had to create a system on its own (Senior Adviser; Assistant General Manager Operations). Physical infrastructure, financial infrastructure, and gaps in the value

chain in terms of suppliers and skilled workforce are mentioned by the Senior Adviser as examples of availability challenges SELCO has had to address. To address the challenge of lack of skilled and talented workforce, SELCO is training technicians and collaborating with local technical colleges (Assistant General Manager Operations).

“At an end-user level, [challenges] could be things like for example even just the supply chains or infrastructure to reach that place. Usually, they are not very easy to reach. The terrain itself is quite challenging to be able to transport material. There is an added cost and added dimension to the challenge when you are located in an area where insurgencies are common for example” (Senior Adviser).

According to the Senior Adviser, the company is serving low-income consumers in rural and urban areas. The informant explains that a challenge in serving these customers is the supply chains or physical infrastructure needed to access the customers and deliver solutions. A measure of addressing the physical infrastructure challenge for SELCO was setting up a branch network of 60 decentralized branches covering a radius of 80-100 kilometers each (Senior Adviser). Further, SELCO has negotiated certain terms with its suppliers to ensure the company is able to deliver its installations on time to its customers (Senior Adviser). The informant describes other means by which SELCO addresses the physical infrastructure challenge:

“We typically take two-wheelers or three-wheelers or other types of vehicles that make it easier for us to access these places. We hire for example local technicians or services or sales so we pay on a commission basis system to help us install things from the local area” (Senior Adviser).

SELCO’s Senior Advisor explain that the company use vehicles adjusted to fit the terrain to access its customers. Further, the informant describes that social enterprise hires local work force paid on a commission basis that can help SELCO deliver its offerings.

“Like I mentioned, infrastructure, things that should have been there but it is not” (Senior Adviser).

Financial infrastructure is mentioned as a major challenge in serving low-income consumers for SELCO. The Senior Adviser explains that many of the customers SELCO are working with do not have access to a bank account and if they do, it is usually inactive. The reason the bank account is inactive is because the bank is either located too far away from the customer or the bank has not opened up any other financial services to the customer beyond the bank

account (Senior Adviser). According to the Senior Adviser, the company's business model is dependent on customers' ability to readily access financing for it to work. Therefore, an integral part of SELCO's business model is facilitating linkages between its customers and financial institutions, according to the informant. However, the Senior Adviser explains that it is not that these financial institutions are readily waiting to lend to SELCO's customers. The financial institutions are apprehensive. SELCO has had to break that and build a trusting relationship to facilitate the linkages between its customers and the financial institutions. Without financing, customers would not be able to readily acquire SELCO's services. (Senior Adviser)

4.3.2 BIMA

BIMA makes its services available to customers by partnering with mobile operators, mobile money providers and its 3000 strong agent force (Strategic Business Analyst Africa; Country Manager Bangladesh). BIMA makes sure that the agents are well trained to ensure that the products are well explained to the customers (Regional Project Manager Africa). In some markets, for instance Ghana, BIMA has mobile agents doing field sales, complementing the call centers (Regional Project Manager Africa). In many markets, it is more effective to segment and reach the correct customers through call center sales rather than field agents (Country Manager Bangladesh).

"I would say that is customers' access to payment channels from my point of view" (Strategic Business Analyst Africa).

One of the main challenges in terms of reaching underserved consumers for BIMA is customers' access to payment channels (Strategic Business Analyst Africa). In most markets, BIMA partners with mobile operators and customers pay for the service through deductions from their air-time-balance (Country Manager Bangladesh; Regional Project Manager Africa). According to the informants, a challenge for BIMA using this payment channel is that it is common for consumers in the emerging markets to have multiple sim-cards. By having multiple sim-cards, some consumers depending on which mobile operator has the best offer (Country Manager Bangladesh; Regional Project Manager Africa). Additionally, customers may not recharge their airtime balance that is subscribed to BIMA according to the informants. When the customer sim-card has no airtime balance for a long time, the customer cannot receive the full BIMA's service benefits, and in some cases, BIMA will be de-

registered automatically in order to ensure the company is aligned to conditions set by the mobile operators (Strategic Business Analyst Africa). Therefore, BIMA's Strategic Business Analyst describes that one of the company's key strategies is to diversify payment channels, which includes to further develop mobile money channels. A mobile money wallet as similar to a bank account yet it is hosted by mobile operators. Consumers can store their money in their mobile money wallet and also use it to make payments (Strategic Business Analyst Africa). BIMA's Regional Project Manager Africa explains that BIMA has adapted its business model to accommodate for the rapid growth in mobile money. The Strategic Business Analyst Africa describes the importance of mobile money as a payment channel for BIMA:

“The arrival of mobile money in Africa opens a payment channel where BIMA can reach a brand on its own can go out to a broader audience and offer products in a channel that they are already familiar with” (Strategic Business Analyst Africa).

Mobile money enables BIMA to diversify its partnerships and customer base (Strategic Business Analyst Africa). The effect of this is that BIMA is able to make their services available to a wider audience (Country Manager Bangladesh).

BIMA's Regional Project Manager Africa acknowledges the lack of legal infrastructure around mobile-delivered insurance poses a challenge for BIMA in making its products available in certain markets. Mobile-delivered insurance is a relatively new experience for many customers and in some cases there is a lack of regulation. BIMA is working to overcome this by building relationships with regulatory bodies. (Regional Project Manager Africa) BIMA's Regional Project Manager Africa describes:

“Another challenge has to do with the insurance-regulatory space. Everybody is used to classic insurance so there are few rules around micro insurance. When we try to launch something, we sometimes face regulatory push back because the guidelines aren't in place already. What this means is we are working with the regulators on the framework alongside working on product launches. We build very strong relationships with very key people in the insurance-departments so that we can secure product approval and launch in market” (Regional Project Manager Africa).

4.3.3 Sanivation

Sanivation uses tuk tuk motorcycles to transport the buckets of waste from the container based toilets back to its site (Business Development Manager). The Government Relations Manager explain that on the other side of the value chain, the household fuel briquette market, Sanivation has a sales team that goes out selling briquettes to households. In addition to the door-step sales, the informant describe that customers are coming to Sanivation's site or shop to buy briquettes. Additionally, Sanivation has agreements with small shops that are distributing the social enterprise's briquettes (Government Relations Manager).

“What you see throughout Kenya, even in Nairobi, is that infrastructure is outdated. It is not able to meet the demands of rapid urbanization. There are inefficiencies around being centralized. A lot of infrastructure has been centralized, so that only can serve a certain amount of people. It is not an inclusive approach when you have centralized infrastructure. It's outdated and it's centralized and that has been a huge challenge that we've faced” (Business Development Manager).

Sanivation's Business Development Manager highlights the problem of centralized, outdated infrastructure in Kenya. According to the Government Relations Manager, an ongoing challenge for the social enterprise is the logistic of transport. Sanivation does not own its own transport vehicles. Sometimes there are delays in delivery if a car breaks down or similar. (Government Relations Manager)

4.3.4 Comparison, Analysis and Discussion

BOP scholars suggest that the geographic locations of BOP markets along with the underdeveloped physical infrastructure and distribution channels in BOP settings require companies to come up with innovative approaches to make its offerings available (Prahalad, 2004; Sakaraya, Eckman & Hyllegard, 2006; Simanis, 2012; Jagtap et al., 2013). Both SELCO and Sanivation has experienced challenges related to underdeveloped physical infrastructure. For SELCO, a mean for addressing the physical infrastructure challenge was setting up a decentralized branch network. This is in line with Martinez and Carbonell's (2007) suggestion that the geographic challenges of BOP contexts call for a special distribution network. Similar, Sanivation mentioned the problem of centralized and outdated physical infrastructure. Both SELCO and Sanivation use vehicles adjusted to fit the infrastructure in making their offerings available. In contrast to SELCO and Sanivation,

BIMA did not mention any challenges in terms of physical infrastructure. An explanation behind this could be that BIMA's business model is designed in a way that overcomes the limitation of underdeveloped physical infrastructure in BOP markets.

Hammond et al. (2007) suggest that underdeveloped financial infrastructure and lack of access to basic financial services at the BOP oblige firms to come up with innovative solutions in terms of payment channels to allow BOP consumers to readily acquire a firm's offerings. The empirical findings presented in this section reinforces this proposition. BIMA has worked around the traditional payment channels and come up with a solution that allows the company to charge its customer through their sim-cards or mobile money wallets. While few at the BOP has access to a bank account, a majority of the population has access to a mobile phone. SELCO has addressed the challenge of underdeveloped financial infrastructure by partnering with financial institutions and facilitating the linkages between financial institutions and its customers. Contrasting, Sanivation did not mention underdeveloped financial infrastructure as a major challenge for the social enterprise.

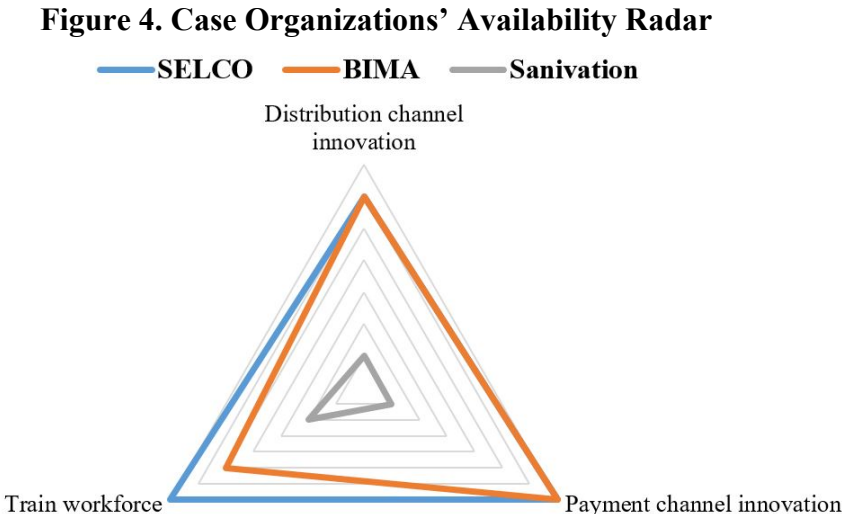
Gaps in local value chains in terms of lack of educated and skilled workforce at the BOP is another characteristic with implications for business model innovation in terms of availability (Prahalad, 2004; Agnihotri, 2012; Kandachar & Halme 2017). Consistent with this notion, SELCO has experienced a lack of skilled workforce as there is a lack of energy technicians. The social enterprise has trained its own workforce and collaborate with technical universities to develop talent. A measure to address the shortage of talented and skilled workforce seems to be to train the local workforce or collaborating with educational institutions.

Another measure to increase availability in BOP contexts overlooked by the conceptual framework is partnering with other actors. All three studied case organizations work with different types of partners to deliver its offerings. SELCO is partnering with financial institutions to make its offerings available to low-income consumers. Further, SELCO has long term partnerships with its suppliers to ensure the social enterprise can deliver its offerings on time. BIMA adopts a three-party system partnering with an insurance provider and a mobile operator to make its services available in BOP markets. Further, BIMA is working closely with the insurance department of the local government to counterbalance the lack of legal infrastructure related to mobile-delivered insurance. Sanivation has also found it beneficial to partner with the government to be able to make its sanitation services available to a larger extent. Further, Sanivation partners with small shops to distribute its fuel

briquettes. Collaboration with other organizations is suggested by Prahalad (2004) along with Agnihotri (2012) as a medium to increase awareness. Yet, the empirical data suggests collaboration with other organizations is also a means to enhance availability. This notion strengthens the suggestion that the 4 A's are closely interrelated and that the approaches to enhance one of the A's may be applicable to enhance several A's.

An additional remark of this analysis section can be made. Interestingly, all case organizations have business models that address characteristic limitations of BOP markets related to availability. BIMA's business model tackles an issue related to financial infrastructure; lack of insurance among underserved consumers. Further, SELCO attempts to address the issue of underdeveloped physical infrastructure in terms of lack of access to reliable electricity in urban and rural areas while simultaneously facilitating access to financial infrastructure for low income-consumers. Sanivation undertakes the task to develop the physical infrastructure in urbanizing communities in terms of the sanitation value chain.

Based on the empirical findings along with the following analysis and discussion, the researchers have visually mapped out to what extent the studied case organizations' business models are addressing the business model implications in the conceptual framework related to each A in a radar model. Hence, Figure 4 maps out to what extent the studied case organizations' business models are addressing each business model implication related to availability. Both SELCO and BIMA are readily working with distribution channel innovation, payment channel innovation and training workforce. Sanivation's business model is not perceived to remarkably address the business model implications related to availability.



4.4 Affordability

4.4.1 SELCO

“...even if you solved the technology piece and you have a great working reliable system, people can't pay for it” (Senior Adviser).

SELCO provides a product and system that is inherently difficult to afford for low-income consumers due to the investment nature of its solutions. SELCO underlines the difficulties of providing long lasting, reliable solar energy systems in BOP settings due to low levels of disposable income among the consumers (Senior Adviser). The Assistant General Manager Operations claims that other organizations targeting consumers at the BOP try to reduce the capital cost by reducing the size of the product, the efficiency of the product or the long terms sustainability of the product. According to the Senior Adviser, the SELCO holds the view that this is the wrong way of looking at it. Instead, the social enterprise chose to put quality and reliability as a standard, and from there determine price (Senior Adviser). The informant explains that the company believes customers will pay for something they see value in.

“... what we realized was that it was expensive because we were asking for people to pay for the system upfront. So, for a 300-500-dollar system with cash up front, which is difficult to do. If it was a 50, 20 or 10-dollar system maybe it would have been easier for people to pay cash up front but we wanted to provide a system that was not only reliable, but which would last people for many years to come and that was easily serviceable. So, our benchmark was quality and reliability, and then you arrive at your price point.” (Senior Adviser)

“There is a difference between a product being cheap and affordable” (Assistant General Manager Operations).

SELCO found that the affordability challenge was in fact based on the large payment that the customers had to submit up front (Senior Adviser). The Assistant General Manager Operations explains that affordable is not the same as cheap. To make the solutions affordable at the BOP, a financing system is key (Assistant General Manager Operations). To address this challenge, SELCO partnered with financial institutions, e.g. public sector banks, rural banks, cooperative banks and microfinance institutions (Senior Adviser; SELCO, 2019b). The informants of SELCO explain that the social enterprise connects the customer to the financial institution which can help finance SELCO's solutions by providing a loan to the customer.

SELCO receives the payment for its services up front. Then, the informants explain that the relationship continues between the customer and the financier. Further, the informants describe that the possibility to divide the payment for SELCO's solutions over smaller installments over a few years allow low-income consumers to afford SELCO's solutions. The repayments can be paid on weekly, monthly or even seasonal basis (Senior Adviser; Assistant General Manager Operations). The Senior Adviser explains that facilitating access to financing for people through solar has opened doors for many of SELCO's customers in accessing financial services for other purposes as well, for example education or medical emergencies. The informant describes how SELCO overcame the affordability barrier by partnering with financiers:

“The way [SELCO] cracked the affordability barrier was by working with local financial institutions and linking the end users to the financial institutions in many ways. There was a dual partnership of some sort; we coming in with assessments, identifying the customer, providing after sales service, installing the system, but the financial provider will come in from a financing point of view, seeing whether the customer is credible, how much should the loan be, actually involved in the collections for the system, and again a very deliberate approach” (Senior Adviser).

Regarding scaling of the company, the Senior Adviser describes that SELCO is frequently asked why the company has not scaled faster. Highlighting that SELCO has still installed around 500,000 systems across India, the informant explains that for SELCO, sustainable growth is a priority. Related to the previous section about availability, the Senior Adviser explains that the company is working in an environment where the eco system for businesses either does not exist or is very immature, making sustainable growth key in these settings.

4.4.2 BIMA

“One challenge is the fluctuation of income of the customers in these markets” (Strategic Business Analyst Africa).

According to the Strategic Business Analyst Africa, customer's fluctuation in income could be seen as a challenge for BIMA, as the purchasing power and thus subscribing customer base can change rapidly due to the irregularity in income among BIMA's customers. To ensure affordability, BIMA makes sure to understand the income brackets of the market and works to tailor their products for particular customer segments before a product is launched (Strategic

Business Analyst Africa). BIMA's products are typically priced between less than 1 dollar and a few dollars per month (Country Manager Bangladesh).

Further, BIMA ensures affordability by dividing the monthly insurance premium into smaller payments that are deducted on a daily basis from their customers' airtime balance (BIMA, 2018). In this way, BIMA's customers have the opportunity to manage cash flows in a more flexible manner (Strategic Business Analyst Africa). The Regional Project Manager in Africa explains this payment method and its advantages:

“With the airtime model, we have the daily approach where the customer has to pay for the product over 10-20 days. We take very small amounts and spread it across those days. The pros are that we are giving customers the flexibility to actually pay for it and it is less expensive for the customers” (Regional Project Manager Africa).

BIMA considers its business model to be highly scalable, serving consumer demographics that historically have been underserved by traditional insurance companies (BIMA, 2018). According to the company, scale and profitability is achieved by combining mobile technology, key partnerships and a human approach to education (BIMA, 2018). BIMA's Country Manager Bangladesh highlights the subscription business model as appropriate to scale, as once a customer is acquired and a large customer base is reached, there are no additional sales costs.

4.4.3 Sanivation

According to the Business Development Manager, the nexus of the social enterprise is to provide sanitation infrastructure. The informant explains that in order to do so in a sustainable and cost effective way, the company has to sell a reuse product which for the time being is fuel. One approach that Sanivation's use to ensure end-consumer affordability is to provide a product for free, along with a service-subscription model. In Naivasha where Sanivation offers the full sanitation value chain to households, the container based toilets are distributed to subscribing households for free and the toilets remain assets of Sanivation (Business Development Manager). The Business Development Manager explains that what the customers are charged for is a monthly service fee for having the waste collected.

“...because of the context in which our community is, so it is a low-income area in which people living are in temporarily labors. ... They have very

low salaries first of all, so to pay for sanitation is a bit of a stretch in their budgets. ... Also, in part, there is a lot of difficulties in getting people to pay on time, people to pay regularly” (Business Development Manager).

The volatility and temporality in customers’ income account for a challenge for Sanivation (Business Development Manager). The household sanitation model is therefore not affordable to everyone (Government Relations Manager). The Business Development Manager acknowledges that the social enterprise experiences difficulties getting people to pay regularly and on time. Based on the enterprise’s historical records, only 80% of subscribing households would be able to pay on time (Business Development Manager).

“Scale is required for profitability” (Business Development Manager).

The Business Development Manager explains that in order for the household sanitation model to work, a certain scale is required (estimated to 500 households). Sanivation could not reach this threshold due to customers’ unwillingness and inability to pay. By partnering with the government and UNCHR, Sanivation can access the waste input needed and scale in order to become profitable, as well as overcoming the challenge of end users’ payment capacity and volatility in income (Business Development Manager). In relation to the government, Sanivation could provide a cost saving approach of sanitation. The Business Development Manager describes that cost for sewage sanitation in Kenya is about \$15 per person and year, whereas Sanivation’s approach costs \$3 per person and year. Sanivation does not charge the government, but access waste through the government that the social enterprise turns into value in terms of a reuse product (Government Relations Manager). Hence, what the partnership with the government essentially means is a free input that Sanivation process and sell in the form of fuel briquettes (Business Development Manager).

In the other end of Sanivation’s value chain, the energy output, the fuel was initially sold to households as the company found that the existing market for cooking fuel in Kenya was volatile as demand, supply and prices fluctuated (Business Development Manager). Compared to other alternatives, Sanivation’s energy briquettes are either cheaper or cost comparable (Government Relations Manager). However, customers’ purchasing patterns accounted for a challenge since households purchased small quantities often, resulting in high sales and distribution costs for Sanivation (Business Development Manager). Therefore, the Business Development Manager explains that the Sanivation changed customer focus to industries that purchase fuel in large quantities.

4.4.4 Comparison, Analysis and Discussion

In BOP literature, affordability is above all centered on pricing. An enhanced price-performance ratio is considered key in ensuring affordability and can be achieved using target-based costing (Prahalad, 2004; 2011; Agnihotri, 2015). Other approaches to achieve an improved price-performance ratio is simplifying products in terms of product modification (Pitta, Guesalaga & Marshall 2008). Thus, price is perceived as the obvious starting point in ensuring affordability in BOP settings. In BIMA's case, price as a measure to ensure affordability could be observed, as the company price its products around customers' income brackets, resulting in a pricing level between less than one and few dollars per month.

Contrasting, SELCO has taken another approach to ensure affordability. For SELCO, quality and reliability were the starting point determining the price, as opposed to the target based costing approach suggested by BOP literature. Instead of compromising on the quality of its offerings, the organization has partnered with financial institutions to link its customers to financial services and capital to ensure affordability. According to SELCO, affordable is not the same thing as cheap. Interestingly, and opposed to the dominant price focus in BOP literature, the case organization implies that affordability goes beyond the pricing of an offering. Thus, this implies an opportunity for organizations to innovate in other parts of their business models to ensure affordability, and in the extension an opportunity to enhance its customer value propositions. A similar logic can be applied to Sanivation. For the social enterprise to be able to provide sanitary solutions at the BOP in an affordable manner, Sanivation has extended its value chain into a two-sided value chain. On one side of Sanivation's value chain are the sanitation services. From the sanitation, the waste is treated to create value in the other side of the value chain, where the reuse product in the form of fuel briquettes are sold. Hence, Sanivation can offer affordable sanitation solutions by innovating beyond price.

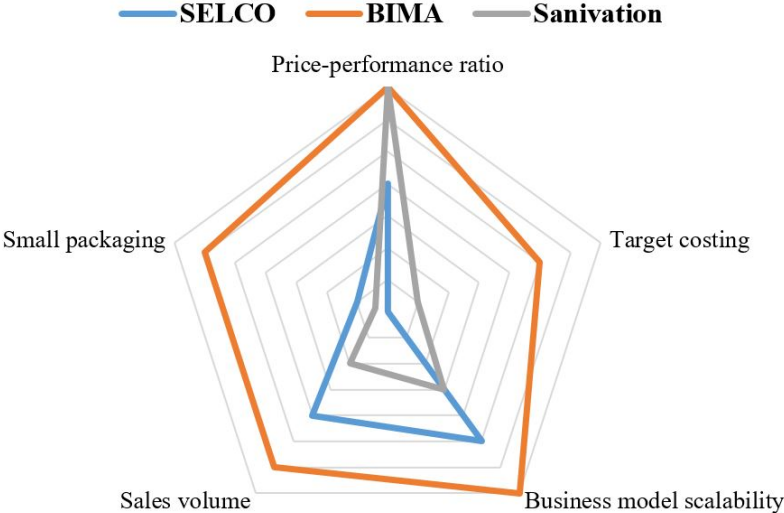
Another aspect of ensuring affordability in BOP contexts is adaptation to cash flows at the BOP. Prior studies have noted the importance of adaption to the BOP consumers' low and irregular income, in terms of smaller product sizes and transactions. Consistent with literature, the studied case organizations all showcase an adaptation, or a reaction, to the irregularity in income and small transactions. BIMA experiences volatility in subscribing customer base due to fluctuation in income among its customers. BIMA provides the opportunity of dividing the monthly insurance premium into daily payments to match customers' cash flows. Similar,

SELCO's customers have the opportunity to divide payments through the financial institution by matching the installments to their income streams. Sanivation experienced challenges related to customers' irregular income at both sides of its value chain. On the fuel side, individual households' small, frequent purchases of fuel briquettes caused high sales and distribution costs. On the sanitation side, the social enterprise experienced a challenge in customers' inability to pay regularly and on time. Sanivation's shift in customer focus to governments and industries could be seen as a reaction to these challenges.

The relationship between affordability and profitability is self-evident. If a firm's offerings are not affordable, the company will not be profitable. If a firm is not profitable, it cannot survive in the marketplace nor provide affordable products or services in the long term. Hence, a discussion about profitability is in place. Prahalad (2004; 2011) suggests that profitability in BOP settings is dependent on scalability of business models. According to the author, most BOP markets are relatively small and fragmented while margin per unit is low, whereas business models need to be scalable to be profitable. BIMA's business model has proved itself scalable with the company being active in 13 different countries. Further, BIMA adopts a subscription model. The benefit of a subscription model is that once a certain profitability threshold is reached in number of subscribing customers, and existing customers are retained, the additional costs of sales and distribution are relatively low. SELCO's business model can also be considered scalable; the social enterprise has 60 branches across five states in India. Whether Sanivation's business model is scalable to a large extent remains to observe. Working in the household market for sanitation, Sanivation came to realize its business model was difficult to scale when individual households were charged. Households lacked willingness and/or ability to pay for sanitation services and sales and distribution costs were high. Therefore, the social enterprise redefined its customer focus from individual households to local governments as a means to achieve scale. Whether this approach will be successful or not is yet to be observed. Related to scale are sales volume and margin per unit. BOP markets are characterized by low margins per unit (Prahalad, 2004). In accordance with this notion, BIMA's and Sanivation's margin per unit can be anticipated to be quite low, given their low pricing levels. Opposed to this notion, SELCO's margin per unit can be assumed to be relatively high. SELCO has managed to achieve a high margin per sold unit despite the characteristic low margin per unit in BOP contexts due to its customer financing solution.

Figure 5 graphically maps out to what extent the studied case organizations’ business models are addressing each business model implication related to affordability. The figure is slightly misleading as it implies neither SELCO’s nor Sanivation’s offerings are affordable to a large extent. As discussed, SELCO has managed to make its offerings affordable at the BOP by connecting BOP consumers to financial institutions and capital. Sanivation’s approach to ensure affordability is to sell a reuse product. This implies that the conceptual framework based on previous BOP literature fails to encompass all aspects key to achieving affordability. Another measure to ensure affordability in BOP is hence to innovate in beyond pricing.

Figure 5. Case Organizations’ Affordability Radar



4.5 Awareness

4.5.1 SELCO

“The other thing is awareness, customer awareness - people being aware of what the solution can do. In some places we get an apathy towards anything that is renewable just simply because it doesn’t work. It’s given from charity or from a government scheme and it doesn’t work on the field, so people get this idea that solar doesn’t work when it is more the design of the product itself or design of the system that is poorly designed. So customer awareness and shifting those biases” (Senior Adviser).

SELCO’s Senior Adviser recognizes customer awareness as challenge for the social enterprise in targeting low-income consumers. The informant explains that SELCO at times experiences an apathy from consumers towards its solutions because the solutions are

renewable. Low-income consumers in rural or urban areas sometimes hold a perception that renewable sources of energy do not work because of their previous experiences of renewable solutions handed out by charities or from a governmental scheme that did not function well (Senior Adviser). Therefore, a challenge for SELCO is to create customer awareness of their solutions and shift biases towards renewable energy (Senior Adviser).

“In places where we build a brand and reputation after a certain time, one of the biggest reason which we get our customers is our word-of-mouth. There could not be a stronger marketing tool for any organization than people recommending you” (Senior Adviser).

In creating awareness, SELCO employs activities as door-to-door sales, roadshows and demonstrations of their energy systems (Senior Adviser). The Assistant General Manager explains that SELCO does not believe in traditional marketing in terms of newspaper ads or billboards and states that only a fraction of SELCO’s marketing efforts consist of mainstream marketing. SELCO’s Senior Adviser agrees stating the social enterprise has never spent a big budget on advertising and marketing. Instead, SELCO’s strongest marketing tool and benefits are coming from word-of-mouth (Assistant General Manager Operations). The Senior Advisor suggests word-of-mouth might be the strongest marketing tool for any organization. After having built a brand and established a reputation in a new area, word-of-mouth is one of the largest sources of new customer acquisitions for SELCO (Senior Adviser). SELCO tries to initiate word-of-mouth by partnering with influential community members:

“... it could be a community partner that has connection to the end-users on the ground and helps us with marketing or sales activities and basically building trust with the end-users” (Senior Adviser).

SELCO identifies and partners with local village leaders or community partners to build trust and awareness among consumers (Senior Adviser). The Assistant General Manager explains that an opinion maker can be a school teacher, a bank manager, a priest of a temple or a postman of the local post office. Further, the informant describes that these opinion makers have a lot of influence in the communities whereas SELCO benefits from partnering with them. The opinion makers adopt a SELCO solution, use it for some time and then spread the message through word-of-mouth (Assistant General Manager). Further, the Assistant General Manager explains that SELCO organizes demonstrations to increase awareness of its solutions. With SELCO’s long history and local presence, SELCO’s Assistant General

Manager claims that customers are well aware about SELCO and its solutions in the areas where the social enterprise has been active for some time.

4.5.2 BIMA

*“Some of the challenges of BIMA in Africa are related to awareness”
(Regional Project Manager Africa).*

BIMA as a brand is not generally recognized by consumers across the African markets, imposing a key challenge in creating customer awareness for the company (Regional Project Manager Africa). BIMA has addressed the awareness challenge by partnering with mobile operators and selling its products under the mobile operators’ brands (Strategic Business Analyst Africa). By partnering with a mobile operator with a known brand, customers automatically find it easier to relate to BIMA’s products (Regional Project Manager Africa).

“We haven't done a lot of campaigning or marketing around our products so it's basically sold from word-of-mouth” (Regional Project Manager Africa).

BIMA’s Strategic Business Analyst Africa explains that the company has not invested in marketing at scale but is seeing this as a growth area. Up to date, BIMA’s services has mostly been sold from word-of-mouth. The Strategic Business Analyst Africa explains that people really understand the benefits of their solutions when they see a friend or relative that has made an insurance claim and how they benefited from BIMA’s insurance.

*“I think an ongoing challenge is always to educate the customers and make sure that they are aware of the product that they have purchased”
(Strategic Business Analyst Africa).*

“From what we have seen from classic insurance is that they have a lot of terms and conditions that tend to confuse the end-user. So what we try to do is to create very simple terms and conditions that the customer understands so they know what they are buying payments are made and how they can benefit from the product” (Regional Project Manager Africa).

Another challenge related to awareness is customer education (Strategic Business Analyst Africa). In order to ensure sufficient customer education, BIMA trains its call center sales agents to ensure that they are fully educated on how the products work (Regional Project Manager Africa). According to the Regional Project Manager Africa, BIMA has differentiated

itself from traditional insurance providers by simplifying the terms and conditions of its products to facilitate the customer education process.

Discussing awareness, BIMA's success in the Ghana is a key area of interest. Ghana is BIMA's largest African market and the company has been operating successfully in Ghana since 2010 (Strategic Business Analyst Africa). The Strategic Business Analyst Africa highlights that the success factor in Ghana has been that the company has been able to raise good customer awareness.

“The fact that we are actually physically present and that we are running such campaigns makes the customers relate to them and then they will come in and register for the product” (Regional Project Manager Africa).

In order to target new potential customers and create awareness, the physical presence with various events and sales activities is perceived as key (Strategic Business Analyst Africa). The Regional Project Manager Africa claims that BIMA has been able to raise awareness of BIMA's brand in Ghana through direct to consumer field sales with mobile sales agents and marketplace below the line marketing events.

“We have the mobile agents in BIMA-branded t-shirts and customers actually walk up to them, trying to understand what BIMA actually stands for as a company or as a brand” (Regional Project Manager Africa).

“In the field sales it is very much about being in bigger cities and make sure you cover relevant parts of the cities, going out to the customers, educating them about the product and try to get them signed up” (Strategic Business Analyst Africa).

In the markets where BIMA employs mobile agents, for instance Ghana, these agents are out in public creating customer awareness by representing the company and talking to consumers (Regional Project Manager Africa). Just like the call center agents, the mobile agents have been trained to educate customers about BIMA's services (Regional Project Manager Africa). Further, the Strategic Business Analyst Africa argues that the general awareness is related to the size of the customer portfolio, as customers more easily will trust and believe in the product if it is well recognized:

“To make customers aware about us is also to build up the customer portfolio in general. Because the bigger you get, the more potential customers will know about you and that creates trust in the product” (Strategic Business Analyst Africa).

4.5.3 Sanivation

According to the Business Development Manager, a door-to-door sales strategy was adopted to achieve local awareness for Sanivation's toilets and fuel. In addition, the marketing tool roadshow was used by Sanivation to increase awareness (Business Development Manager).

The informant describes the procedure of a roadshow:

“When we were selling directly to households we had roadshows, which is a really popular marketing technique in Kenya, when you drive a big truck really slowly through the community, playing music and handing out flyers” (Business Development Manager).

As Sanivation's customer focus has shifted on the sanitation side of the value chain and the social enterprise perceives local governments as its customers, the means for creating awareness has shifted (Business Development Manager). The Business Development Manager describes that attending sanitation conferences and events where local governments are present are means to create customer awareness adopted by Sanivation in present. In order to create awareness for its sanitary solutions, Sanivation has had to increase the awareness about sanitation in general and start a debate as there is a knowledge gap about sanitary solutions among governments in Kenya (Business Development Manager). The informants of Sanivation describe:

“I would say in the last six months it's been an impressively knowledge and awareness of other innovative models within sanitation that governments are becoming aware of. But before that, there was just a massive knowledge gap and you know they only knew one way to do it. I think that has been a bit of a hurdle. It's been getting better, there's been a lot of attention in the last six months or so, but there's still several county governments that has no idea what to do for their sanitation” (Business Development Manager).

“I think one thing that we are proud of, is that in the last couple of years we have seen people starting to come out and mentioning these conversations of poop” (Government Relations Manager).

On the fuel briquette side of Sanivation's value chain, the social enterprise is working with early adopters to create awareness of its product (Government Relations Manager). The Government Relations Manager describes that the early adopters spread the message about the products through word-of-mouth. Further, Sanivation has been giving out free samples to create awareness of its briquettes (Business Development Manager).

4.5.4 Comparison, Analysis and Discussion

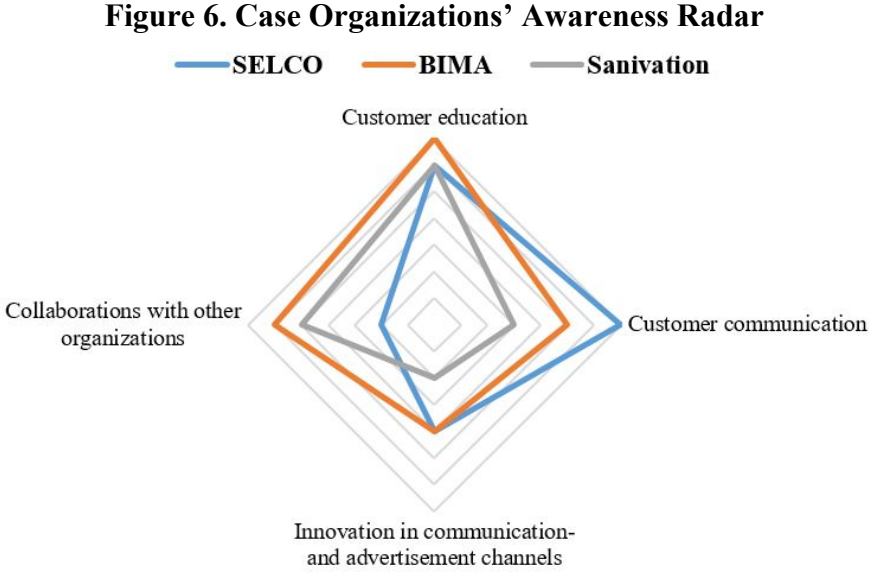
According to Prahalad (2004), investments in customer education is necessary in the process of creating awareness at the BOP. Kandachar and Halme (2017) suggest that the lack of knowledge at the BOP can prevent customers from understanding the value or benefits of an offering. Based on the empirical findings presented in this section, these suggestions seem to be correct as all studied case organizations are working with customer education to increase awareness. SELCO explains that the social enterprise sometimes meet an apathy towards its solutions as low-income consumers have a perception renewable energy solutions do not work. Therefore, SELCO is working with demonstrations to educate the customers on the benefits and value of SELCO's solutions. BIMA's sales agents are educating the customers on how the company's solutions work to address the knowledge gap related to insurance in BOP settings along with increase awareness of its services. Sanivation is working with reducing the knowledge gap of local governments in terms of sanitary solutions to increase awareness of the benefits of the social enterprise's solutions.

The previous literature review has highlighted that the media dark areas common in BOP markets have implications for creating awareness at the BOP (Prahalad, 2004; Anderson & Billou, 2007). According to Prahalad (2004), firms are strained to come up with new innovative solutions to create awareness as BOP markets to a large extent lack access to traditional mediums of communication and advertisement. None of the studied case organizations have mentioned an extensive use of traditional marketing channels as they are known in the West. All studied case organizations highlight word-of-mouth as the most important marketing tool in creating awareness. Further, both SELCO and Sanivation has adopted a door-to-door sales strategy to create awareness. SELCO is currently using the marketing tool of roadshows to enhance awareness while Sanivation is a former user of the tool. BIMA is working with social events to enhance awareness of its service. As discussed in the literature review, BOP markets are rarely media dark in terms of mobile phone adoption (Kandachar & Halme, 2017). BIMA's business model which is fundamentally built on telemarketing has indeed proved that there is an opportunity for firms to capitalize on the adoption of mobile phones in BOP markets.

Prahalad (2004) along with Agnihotri (2012) suggest collaborations between private sector firms, NGOs and other organizations can be valuable in creating awareness and educating customers. BIMA has benefited from its partnerships with mobile operators in creating

awareness. As customers are aware of the mobile operators' brands, it is easier for BIMA to create awareness when marketing itself under the mobile operators' brands. Rather than partnering with other organizations to increase awareness, SELCO and Sanivation are partnering with local community members to create awareness. BIMA's customer testimonials are quite similar to the other organizations' partnerships with local community members as the customers leaving the customer testimonials can be seen as product champions for BIMA. Hence, other than collaborations with other organization, this section of the empirical findings has highlighted that collaboration with local community members appears to be key in enhancing awareness in BOP settings.

Figure 6 graphically maps out to what extent the studied case organizations' business models are addressing each business model implication related to awareness. All three studied case organizations are to a great extent working with customer education to create awareness for their solutions. Customer communication and collaborations with other organizations seems to be quite important in creating awareness as well. SELCO and BIMA have been somewhat innovative in communication- and advertisement channels. Another factor highlighted by all three organizations as key in creating awareness is collaboration with local community members. Collaborations with local community members is a measure to increase awareness that has been overlooked in previous literature along with the conceptual framework.



Concluding this section, the respective age of each case organization should be addressed as the age might have implications for awareness. SELCO has been in the market for almost 25 years, BIMA for nearly 10 years and Sanivation for 5 years. SELCO highlights that the social enterprise has been able to create a good awareness in the areas where the SELCO has been active for a long time. Ghana was BIMA's first market and it is also a market where BIMA has been able to create good awareness of its services. Sanivation is a relatively young organization that has started from scratch in creating awareness not only of its solutions, but also sanitation in general. Hence, age of the organization, time in the marketplace and other external factors can be anticipated to have effects on awareness.

4.6 Acceptability

4.6.1 SELCO

“Accepting is... Customer awareness. It's a combination of the things I mentioned before. Doing the right kind of customer awareness, whether it is demonstrations, identifying local village leaders or champions who then will have an impact in being able to convince other people, being close to the ground, building a trusting relationship with people so they want to use what you are giving” (Senior Adviser).

SELCO's Senior Adviser describes measurements to increase acceptability in terms of awareness. According to the informant, acceptability is achieved when the right type of awareness is created. SELCO has experienced some challenges in achieving acceptance for its offerings. On the other hand, the Senior Adviser speculates, achieving acceptability is a challenge for every business and achieving acceptability sometimes takes time. As previously mentioned, there sometimes is a perception among low-income consumers that renewable energy solutions do not work, due to previous negative experiences of solar energy systems (Senior Adviser). This perception can post a challenge for the social enterprise in achieving acceptance for its solutions (Senior Adviser; Assistant General Manager Operations).

“Very often when people look at solutions for the poor, these solutions are either super opposed or very different in context and then just made to apply in their context. It's taken from the west or from urban India, and then super opposed to their lives, without really understanding what they require. I think SELCO is being very cognizant there, of finding solutions that is suited to their needs rather than super imposing others. I think we

are being able to deliver a certain level of service and trust to our customer so that they don't feel that they are being given something that will work for a few years or months. We really value the trust.” (Senior Adviser)

SELCO's Senior Adviser highlights the need for local adaptation and personal relationships in building trust and acceptability. The Assistant General Manager Operations explains that SELCO's decentralization and local presence in terms of the branch network is key in achieving acceptability. The informant describes that the company is serving customers in their homes and recruits people from the same communities in which the social enterprise is working. By hiring local employees, the personnel possess a deeper understanding of the problem statement in the community (Assistant General Manager Operations). Further, the informant explains that many of SELCO's employees have been with the company for a long time and know their customers by name. Partnering with local opinion makers in the communities helps SELCO increase acceptability as the communities trust those (Assistant General Manager Operations). Thus, SELCO's organizational structure and human capital are perceived as vital in building trusting relationships with customers and partners to increase acceptability. The Senior Adviser explains:

“... the architecture of the operational or organizational structure has allowed us to be closer to our customers, which allows us to interface with the customers and be even more personal. The same I can say about our partnerships.” (Senior Adviser)

“... we really value that trust and ensure that it is not just a transaction relationship between our business and the customer, it goes beyond that.” (Senior Adviser)

4.6.2 BIMA

“With increasing penetration, awareness rises and it's easier for customers then to accept the product or be less suspicious of what you are selling” (Strategic Business Analyst Africa).

BIMA's Strategic Business Analyst Africa describes awareness and acceptability to go hand in hand; as awareness rises with increasing market penetration, customers become less suspicious and it is easier for customers to understand and trust the brand. The Regional Project Manager Africa acknowledges that the company has experienced some challenges in achieving acceptability for its products. In some countries in Africa there is a lack of trust and

a strong perception among customers that insurance companies will not pay claims (Regional Project Manager Africa). In Bangladesh, the situation is similar, with the insurance penetration rate among low-income consumers being low (Country Manager Bangladesh). The perception that insurance is not available for underserved customers along with a lack of trust accounts for a challenge in achieving acceptability. BIMA informants explain:

“For underserved customers, they perceive insurance to be something that is available for the rich, so when you try to sell insurance to them they quickly tell you that they have no money” (Regional Project Manager Africa).

“In emerging markets, like Bangladesh, people don’t trust traditional insurance, many people have never experienced insurance in their lives. They don’t know it and they don’t trust it” (Country Manager Bangladesh).

To eliminate the perception that insurance is not for underserved customers and increase acceptability, BIMA is committed to ensuring its products are simple and affordable (Regional Project Manager Africa). The key process in ensuring this is adapting to customer preferences and needs. The Regional Project Manager Africa describes how BIMA is working with product adaption to facilitate acceptability:

“What we are doing is making sure that our products are very simple and easy to use” (Regional Project Manager Africa).

“Before we roll out any product we make sure we interact with the customer to try to understand what they really want. And then we try to tailor our services to their needs. We understand that what will work in one market will not necessarily work in another. We don’t use the copy-paste approach”. (Regional Project Manager Africa)

Another method used by BIMA to enhance acceptance of its products is customer education (Regional Project Manager Africa). BIMA’s Regional Project Manager Africa describes that if the sales agents can readily explain the products in a way that the customer understands, trust increases. The informant describes:

“The agents are very well trained and we make sure that we explain our products to the customers to the extent that the customers believe what we are saying and actually that what we are saying is true. We make sure that we take our time, break everything down step by step. Go through the terms and conditions, to outline to the customers so that the customers really know how it works” (Regional Project Manager Africa).

Social events as public claim pay-outs and customer testimonials are mentioned as important measures in building trust and increasing acceptability by all BIMA informants. Particular weight is put on the influence of customer testimonials. The Regional Project Manager Africa explains that the customer testimonials create trust and function as an assurance that the company actually delivers what it promises. Customer testimonials are presented at social events and on the company's website (Country Manager Bangladesh). BIMA informants describe the logic and influence of public pay-out and customer testimonials:

"Sometimes we make claims pay-outs in public, arranging for some of the claimants to come to the market and get up on the stage to receive a check with their claims check pay-out. These events are powerful, highlight the brand and show that we are for real and we don't take the customers money without giving anything back" (Strategic Business Analyst Africa).

"The most powerful tool we have in our marketing is the customer testimonials" (Country Manager Bangladesh).

"I think customers really understands BIMA when they see a close friend or relative or someone they can relate to through a customer testimonial making a claim and seeing that the claim made a difference to that person" (Strategic Business Analyst Africa).

The Strategic Business Analyst Africa explains that Uganda, where BIMA no longer operates, was a challenging market for customer acceptability. Trust in insurance is low in Uganda and it was difficult to change attitudes in this market (Strategic Business Analyst Africa).

"In Uganda they experienced challenges in customer trust, despite paying claims and educating the consumer. That is always a challenge we face and why we always factor customer education into our market launches" (Strategic Business Analyst Africa).

4.6.3 Sanivation

"Our container-based toilets are not accepted by everyone. ... They are the traditional toilet-seat style, so what we are used to in the western world, whereas here a lot of people use squat plates and so they deem squat plates as more hygienic than a toilet seat, so that can be a bit of a turn off." (Business Development Manager).

"There are a lot of culture differences in Kenya; like a daughter and a father cannot share a seat on toilet" (Government Relations Manager).

The informants of Sanivation explain that the company has experienced challenges in terms of achieving acceptability for its container-based toilets due to cultural differences in Kenya. For instance, squat plates are common in Kenya whereas people can perceive toilet-seat styled toilets as less hygienic than squat plates (Business Development Manager). Another example of cultural differences mentioned by the Government Relations Manager is that there is a perception in Kenya that it is inappropriate for a father and a daughter to share a toilet seat. Sanivation is working with two approaches for addressing cultural perceptions that limits acceptability; education and working with the government (Government Relations Manager). According to the Government Relations Manager, Sanivation's products have been certified by Kenya Bureau of Standard, a government agency in Kenya. The informant describes that once customers know that the product has been certified by a government agency, acceptability increases as the customers are trusting in using something the government has proclaimed as safe. Marketing the social enterprise as a government partner increases acceptability as customers identify with Sanivation as a government partner (Government Relations Manager).

In terms of the fuel briquettes, the Business Development Manager acknowledges that the company has experienced some scepticism as well. The informant explains that the company are being very transparent towards customers about the fact that the briquettes are made out of waste products. To address the immediate scepticism that emerges, Sanivation gives the customer a free sample to demonstrate the benefits of the product (Business Development Manager). More often than not, the customer will come back to Sanivation and purchase more (Government Relations Manager). Another measure mentioned by the Government Relations Manager that has worked well for Sanivation in increasing acceptability for its briquettes, is working with early adopters. According to the informant, the early adopters start using the products and then spread the message about its benefits.

4.6.4 Comparison, Analysis and Discussion

Both SELCO and BIMA describe acceptability in terms of awareness. BIMA suggests that increased awareness leads to increased acceptability. Similar, SELCO describes the measures for achieving acceptability as the same as the measures for achieving awareness. Hence, awareness and acceptability appears to be closely interrelated. A possible interpretation of the

empirical findings could be that achieving awareness is a precondition for achieving acceptability.

Anderson and Billou (2007) highlight that firms targeting the BOP may encounter cultural or socioeconomic beliefs that need to be addressed to achieve acceptability. SELCO and BIMA have had to combat socioeconomic beliefs hampering acceptability. There is a perception among the low-income consumers SELCO is targeting that renewable energy solutions do not work. In BIMA's case, there is a perception among underserved consumers that insurance is not available for the poor. While SELCO's and BIMA's acceptability challenges has been centred on socioeconomic perceptions, Sanivation has experienced challenges related to cultural beliefs. Anderson and Markides (2007) suggest firms need to adapt its offerings to respond to cultural or socioeconomic aspects by reducing or eliminating certain features of the offering. In line with this notion, BIMA is working to ensure its products are simple and can readily be used at the BOP. Anderson and Billou (2007) are more general stating that serving BOP markets often require offerings adapted to the specific customer needs in these settings. Accordingly, both BIMA and SELCO are tailoring its solutions around the needs of their customers to increase acceptability.

Customer education is another factor mentioned by all case organizations as key to facilitating acceptability. BIMA uses customer education to deflate the perception that insurance is not for underserved consumers while Sanivation uses customer education to combat cultural beliefs hindering acceptability. SELCO is also working with customer education in terms of demonstrations. Prahalad (2004) suggests that customer education can be used as a measure to increase awareness. The fact that the case organizations use customer education as a measure to increase acceptability once again implies that awareness and acceptability is closely interrelated. Further, this supports the suggestion that the same measures can be used to increase both awareness and acceptability.

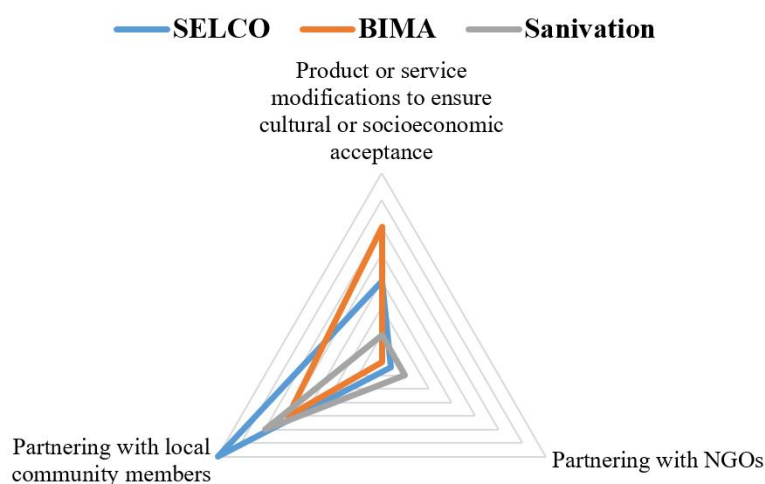
SELCO underlines the importance of social relationships. Rivera-Santos and Rufin (2010) claim that the weak formal institutional environment in BOP contexts creates a strong reliance on informal institutions. Social contracts substitute legal contracts and social relationships and networks are key in achieving acceptability (de Soto, 2000, cited in London & Hart, 2004; Rivera-Santos & Rufin, 2010). Trust is a reoccurring word when discussing acceptability throughout all interviews. According to Rivera-Santos and Rufin (2010), partnering with NGOs of influential members of the local community can establish legitimacy and trust at the

BOP. Partnering with local opinion makers in the communities has been key for SELCO in building trust and acceptance. Hiring local workforce has also helped SELCO achieve acceptability. Sanivation is working with early adopters to spread the message about its offerings. Similar, BIMA points to its social events and customer testimonials as pivotal in enhancing trust and acceptance. Word-of mouth is highlighted as powerful to achieve acceptance by all studied case organizations. Hence, partnering with local community members to increase trust and acceptability seems to be a successful approach. The fact that the case organizations emphasize collaboration with end users is leaning towards what literature define as the BOP 2.0 approach where collaboration and co-development with end users is described as important. However, the empirical material of this study does not support the BOP 2.0 emphasis on co-development in specific.

NGOs on the other hand are not mentioned as a partner by any of the case organizations. The empirical findings presented in this section has highlighted another partnership that can established to increase acceptance; partnering with the local government. For Sanivation, partnering with local governments has been key in achieving acceptance. This is in line with the BOP framework suggested by Prahalad (2004), advocating that collaboration between private sector, local governments and other actors is required to realize BOP potential in terms of economic development and social transformation.

Figure 7 graphically maps out to what extent the studied case organizations' business models are addressing each business model implication related to acceptability. While one could interpret that BIMA along with SELCO has adapted its offerings to some extent in order to ensure socioeconomic acceptance, education seems to be a generally more adopted approach to facilitate acceptance. In previous BOP literature, along with the conceptual framework, customer education is highlighted as a measure to achieve awareness. The empirical findings of this study suggest customer education can further be used as a tool to increase acceptability. While all three organization are partnering with local community members to gain acceptability, none of the organizations has highlighted NGOs as important partners. Rather, Sanivation suggests partnering with local governments can enhance acceptability.

Figure 7. Case Organizations' Acceptability Radar



4.7 Revised Conceptual Framework

Based on the application of the conceived conceptual framework on the empirical data collected in this study, a few comments can be made. Consistent with previous literature on the topic of business model innovation at the BOP, the empirical findings of this study imply that the 4 A's are of gravity in business model innovation at the BOP. Further, the empirical data support the derived BOP market characteristics presented in the conceptual framework as a whole. Notwithstanding, the application of the conceptual framework on the empirical data generated some interesting results along with insights in position to previous literature on the topic of business model innovation at the BOP.

The empirical data reinforce the suggestion that the 4 A's are interrelated, with special emphasis on the close relationship between awareness and acceptability. The analysis of empirical data suggests awareness can be perceived as a presumption for acceptability and analogous measures can be used to facilitate both A's. For instance, the empirical data suggest customer education is key in facilitating not only awareness but also acceptability. The interrelatedness of the 4 A's has been marked out in the revised conceptual framework by replacing the dotted circle connecting the 4 A's with a continuous circle. The special emphasis on the close relationship between awareness and acceptability is indicated by adding a dotted line between the A's.

Analysing patterns of the findings across the 4 A's, another interesting aspect is that collaborations and partnerships are mentioned as central in relation to all of the 4 A's. In

previous literature and thus the conceptual framework, collaborations and partnerships have been discussed as measures to increase awareness and acceptability at the BOP (e.g. Prahalad, 2004; Rivera Santos & Rufin, 2010; Agnihotri, 2012). In contrast to previous literature, findings from the empirical data collected in this study imply that collaborations and partnerships can be used as a measure to address all of the 4 A's. Hence, collaborations and partnerships with various actors at the BOP are perceived to play a significant role in business model innovation at the BOP. This finding has implications for the conceived conceptual framework, as partnerships and collaborations not only have implications for business model innovation in terms of ensuring acceptability and awareness, but also affordability and availability. The weight of collaborations and partnerships with different actors at the BOP as a measure facilitate the 4 A's has been reinforced in the revised conceptual framework by adding "Partnerships" as a business model innovation implication under all 4 A's.

Additional comment on "various actors at the BOP" as collaborative partners is called for. In accordance with previous BOP literature (e.g. Simanis, Hart & Duke, 2008), the importance of collaboration and partnership with local community members is reinforced by all studied case organizations. In contrast to previous BOP literature, the empirical findings from this study has deemphasized the role of NGOs as an important collaborative partner in creating acceptability, as none of the studied case organizations mentioned NGOs as a collaboration partner. This has been marked out in the revised conceptual framework by putting "Partnering with NGOs" within parentheses. Rather, the empirical findings of this study highlight partnerships with local governments as valuable in facilitating the 4 A's. Collaborations with local governments are not prominent in previous research addressing business model innovation at the BOP. Yet, the BOP concept itself suggests collaboration with local governments is necessary (Prahalad, 2004). Hence, the bullet point "Partnerships" is set out to encompass collaborations and partnerships with other private sector firms, governments and local community members.

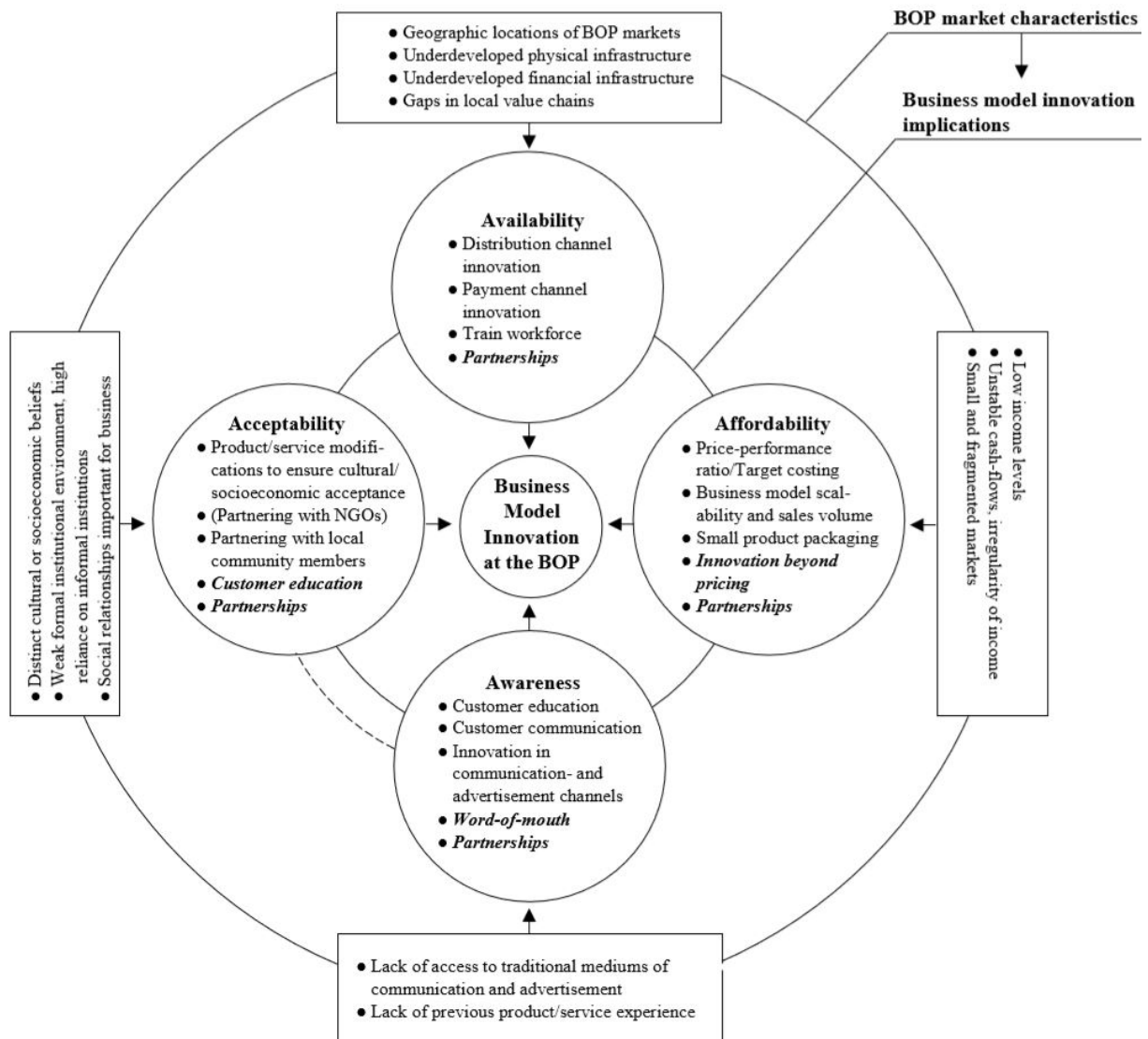
All three studied case organizations underlined word-of-mouth as key to achieve awareness. A connection between word-of mouth and the characteristic importance of social relationships in business at the BOP can be made. Business relationships at the BOP are based on social rather than legal contracts (e.g. Rivera-Santos & Rufin, 2010). With social relationships being highly valued, word-of-mouth recommendations are key in creating awareness at the BOP.

Given its perceived importance in creating awareness at the BOP, “Word-of-mouth” has been added as an implication categorized under awareness in the revised conceptual framework.

Another unanticipated finding was uncovered investigating the studied case organizations’ business model innovation practices adopted to ensure affordability at the BOP. Contrasting to the dominant price focus in previous literature, the empirical findings suggest affordability goes beyond the pricing of a firm’s offerings. Examples from the empirical findings involve innovation in payment solutions and creating a two-sided value chain. Hence, an implication for the revised conceptual framework is that innovation measures beyond pricing can be used as a means to ensure affordability at the BOP. “Innovation beyond pricing” has been added a business model innovation implications categorized under affordability.

Taking above analysis and considerations in mind, the researchers argue for an updated conceptual framework for business model innovation at the BOP. The revised conceptual framework is readily visible in figure 8 on the next page.

Figure 8. Revised Conceptual Framework for Business Model Innovation at the BOP



5 Conclusion

5.1 Aims and Objective

The objective of this study was to examine how private sector firms can innovate their business models to attend to BOP markets. The overall research question the thesis was set out to address was: ***“How can private sector firms innovate business models to attend to the base of the pyramid?”***

In order to achieve the objective of the study and address the overall research question, the researcher developed a conceptual framework based on previous literature that was validated through application on empirical data from case organizations operating at the BOP. This process was constructed around the fulfillment of four aims. The four aims along with the fulfillment of the aims are described below.

Define and assess the BOP concept along with BOP market characteristics and their implications for business model innovation at the BOP

The BOP concept is centered on the idea that it is possible to create economic growth and profits while simultaneously alleviating poverty at the base of the economic pyramid. The concept has been widely disputed and has received significant attention in literature, and BOP scholars are unanimous in recognizing that conducting business as usual will not work at the BOP. To capture the untapped purchasing power and market potential at the BOP, private sector firms must realize the distinct characteristics and limitations at the BOP, and innovate their business models accordingly. In the literature review of this thesis, the researchers derived and categorized the most important characteristics of BOP markets based on previous literature within the topic. In the same chapter, the characteristics were linked to their implications for business model innovation with a standpoint in the 4 A's framework, whereas availability, affordability, awareness and acceptability can be perceived as prerequisites for successful business model innovation at the BOP.

Conceive a conceptual framework based on previous literature within the topic that can be used to understand business model innovation at the BOP, linking BOP market characteristics with business model innovation implications

The outcome of the second objective, the conceptual framework for business model innovation at the BOP, is readily visible in figure 3. Firstly, the conceptual framework is based on the researchers' derivation and categorization of the most substantial general characteristics of BOP markets. Secondly, the conceptual framework is built on the researchers' suggested linkages between the characteristics and the implications for business model innovation at the BOP in terms of the 4 A's.

Validate the conceptual framework by applying it on private sector firms currently operative in BOP markets

Provide a revised framework if any variances between the framework and empirical findings are detected

Empirical data analysis of three studied case organizations currently operating at the BOP supported critical aspects of the conceptual framework. Previous literature and thus the conceived conceptual framework suggest that considering the 4 A's in business model innovation is key to a viable business model at the BOP. The empirical findings of this study validate this proposition.

During the analysis of the empirical data and comparison with the outlined conceptual framework, some discrepancies were found, upon which a revised framework was conceived. The discrepancies included both the uncovering of additional aspects, as well as de-emphasis of one aspect. Although most of the presented characteristics and business model innovation implications from the conceptual framework were validated through the empirical data, one component was not prominent at all. In contrast to the developed framework, the empirical findings of this study have deemphasized the role of NGOs as a valuable partner since no such evidence was found in the empirical material.

Furthermore, the empirical data uncovered dimensions outside of the presented conceptual framework that the researchers identify as significant given the emphasis in the empirical material. This research identified that private sector firms at the BOP can innovate their business models in terms of collaborations with various organizations, including the government and local community members to enhance all of the 4 A's. The second major uncovered finding relates to business model innovation in terms of affordability. The study has found that affordability can be achieved not only by the traditional means of ensuring affordability at the BOP but also through innovation practices beyond pricing. Lastly, the

study has found that the aspects of business model innovation in terms of the 4 A's appears to be interrelated, with special emphasis on the close relationship between awareness and acceptability.

5.2 Practical and Theoretical Implications

To summarize, this research attempted to examine how private sector firms can innovate business models to attend to the BOP. The outcomes of this research carry theoretical implications for the research community likewise opportunities for practical application at the BOP by practitioners. Considering the challenge in presenting a viable business model at the BOP evident among private sector firms along with the call in research for analysis of various business models at the BOP, strengthening the theoretical understanding and deriving practical implications of the phenomenon was perceived as remarkably relevant.

The contribution of this study on a theoretical level is the conceptual framework for business model innovation presented in chapter 2 and revised in chapter 4. The BOP market characteristics along with the business model implications categorized under the 4 A's in the conceptual framework is derived from previous BOP literature. Empirical analysis outcomes from the conducted case studies allowed the researchers to revise the framework accordingly. The empirical findings of this study reinforced the researchers' suggestion that the 4 A's are interrelated, with special emphasis on the close relationship between awareness and acceptability. On a theoretical level, this implies that the research community should consider the 4 A's of business model innovation at the BOP as dynamic, rather than static. Furthermore, the perceived weight of partnerships in business model innovation at the BOP has theoretical implications. When studying business models at the BOP, researchers should take into account the firm's position in its network along with analyze the linkages to other actors in the network or value chain.

The practical implications of the developed conceptual framework for business model innovation at the BOP is somewhat restricted due to the relatively small sample of empirical evidence used to validate the framework. On the other hand, the empirical material used to validate the framework was collected in different markets and industries, indicating the framework can in fact be adopted to different BOP settings. The conceptual framework can be adopted by practitioners to develop an understanding of the linkages between BOP market

characteristics and business model innovation implications at the BOP. Companies attending the BOP should realize the importance of ensuring availability, affordability, awareness and acceptability of the firm's offerings in presenting a viable business model at the BOP. Beyond the conceptual framework, the study brings about several practical implications practitioners can benefit from in innovating viable business models at the BOP. First, practitioners should consider partnering with various actors as a measure to facilitate availability, affordability, awareness and acceptability. Still, partnerships at the BOP might bring about other challenges. For instance, collaborative partners in terms of influential local community members has proved efficient in influencing other community members through word-of-mouth. Hence, practitioners should consider identifying and partnering with these individuals. Notwithstanding, these partnerships should be handled with delicacy, as a disagreement with this type of partner could potentially have devastating effects for business at the BOP. Further, the empirical findings of this study suggest practitioners should not disregard local governments as a valuable partner when conducting business at the BOP. A collaborative relationship with local governments can facilitate getting new offerings to the marketplace. Another empirical finding of this study that practitioners should consider in creating a viable business model at the BOP is innovation beyond pricing to ensure affordability. The realization that affordability goes beyond pricing opens up for new types of products and services to be introduced at the BOP. Being less reliant on high sales volumes to compensate low per unit margins might even enhance profitability of business models at the BOP.

5.3 Limitations and Future Research

Theoretical along with practical implications of this study be examined in the light of the study's fundamental limitations, indicating the direction for future research on the topic of business model innovation at the BOP.

First, the case studies of this study were conducted in different BOP markets across South Asia and Africa and encompassed organizations active in different industries. This allowed the researchers to test and validate the conceptual framework in different contexts. However, with BOP markets along with industries being largely heterogeneous, the study's conclusions might be vaguer than if the study had been limited to a single market along with industry. The relatively small quantity of studied organizations should also be addressed. The limited

number of studied case organizations allowed the researchers to study the organizations in depth and apply the conceptual framework with profound analysis. Another approach to validate the conceptual framework could be to adopt a survey research design, allowing multiple case organizations to participate in the study. However, with BOP organizations having proved difficult to access, achieving a large sample of respondents might be challenging and require significant time and resources.

Second, the studied case organization population of this study has been limited to private sector firms currently operative in the marketplace. Conducting a study over failed BOP initiatives by private sector firms might add another dimension to the discussion, further realizing the strengths and weaknesses of the conceived conceptual framework. In a study observing failed initiatives, the researcher(s) might be able to derive which aspects of business model innovation the failed initiatives were lacking and thus which aspects carries the most importance for a viable business model at the BOP.

Lastly, this study was not able to encompass additional stakeholders' perspectives on business model innovation in BOP initiatives, due to time and resource constraints. For example, local governments surfaced as an important partnership for private sector firms at the BOP. Therefore, it would have been interesting studying the relationship between private sector firms and public sector in BOP initiatives. Furthermore, to strengthen or diminish the contributions of this thesis, and validate whether the findings could be generalized over a broader context, future research is encouraged. For instance, it would be of interest to test whether this study's findings related to partnerships at the BOP are valid in a broader context. In addition, this study has raised question about the value of NGOs as a collaborative partner for private sector firms at the BOP. Therefore, a study set out to examine the value of partnership between private sector firms and NGOs at the BOP is encouraged. Such study could determine whether the lack of attention to NGOs as a valuable partner was an effect of the adopted design of this study or if the emphasis on NGOs as a valuable partner has been exaggerated in previous BOP literature.

References

- Agnihotri, A. (2012). Revisiting the Debate over the Bottom of the Pyramid Market. *Journal of Macromarketing*, Vol. 32, No. 4, pp. 417-423.
- Agnihotri, A. (2015). Low-cost innovation in emerging markets. *Journal of Strategic Marketing*, Vol. 23, No. 5, pp. 399-411.
- Aguilera, R. V., Rupp, D. E., Williams C. A. & Ganapathi, J. (2007). Putting the S back in corporate social responsibility: A multilevel theory of social change in organizations. *Academy of Management Review*, Vol. 32, No. 3, pp. 836-863.
- Amit, R. & Zott, C. (2001). Value creation in E-business. *Strategic Management Journal*, Vol. 22, pp. 493-520.
- Anderson, J. & Billou, N. (2007). Serving the world's poor: innovation at the base of the economic pyramid. *Journal of Business Strategy*, Vol. 28, No. 2, pp. 14-21.
- Anderson, J. & Markides, C. (2007). Strategic Innovation at the Base of the Pyramid. *MIT Sloan Management Review*, Fall 2007, vol. 49, No.1.
- Angot, J. & Plé, L. (2015). Serving poor people in rich countries: the bottom-of-the-pyramid business model solution. *Journal of Business Strategy*, Vol. 36, No. 2, pp. 3 – 15.
- Bartlett & Goshal. (1989). *Managing across borders*. HBS Press: Boston.
- Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, Vol. 13, No. 4, pp. 544-559.
- Berglund, H. & Sandström, C. Business model innovation from an open systems perspective: structural challenges and managerial solutions. *International Journal of Product Development*, Vol. 18, Nos. 3/4.
- BIMA. (2018). Factsheet 2018.
- BIMA. (2019). About Bima. Available at: <http://www.bimamobile.com/about-bima/about-us-new/> (Accessed: 23 April 2019)

Bryman, A. & Bell, E. (2011). *Business Research Methods*. Third edition. Oxford: Oxford University Press.

Carey, S. (2017). How Swedish Insurtech startup Bima scaled its mobile-only microinsurance product globally. *Techworld*. Available at: <https://www.techworld.com/startups/how-swedish-insurtech-startup-bima-scaled-mobile-only-microinsurance-3664339/> (Accessed: 28 May 2019)

Carroll, A.B. (1991). The Pyramid of Corporate Social Responsibility: Toward the Moral Management of Organizational Stakeholders. *Business Horizons*, Vol. 34, No. 4, pp. 39-48.

Casadesus-Masanell, R. & Zhu, F. (2013). Business model innovation and competitive imitation: The case of sponsor-based business models. *Strategic Management Journal*, Vol. 34, p. 464-482.

Casado Cañeque, F. & Hart, S.L. (2017) *Base of the Pyramid 3.0*. New York: Routledge Taylor & Francis Group.

Chandler, D. (2017). *Strategic Corporate Social Responsibility*. California: SAGE publications, Inc.

Chambers, R. (1997). *Whose Reality Counts? Putting the First Last*. London: Intermediate Technology Publications.

Christensen Jones, L., Siemsen, E. & Balasubramanian, S. (2015). Consumer Behavior Change at the Base of the Pyramid: Bridging the Gap Between For-Profit and Social Responsibility Strategies. *Strategic Management Journal*, Vol. 36, No. 2, pp. 307-317.

Clifford, N., Cope, M., Gillespie, T. & French, S. (2016). *Key Methods in Geography*. Third edition. London: SAGE Publications.

Collier, P. (2007). *The Bottom Billion: Why the poorest countries are failing and what can be done about it*. New York: Oxford University Press, Inc.

Creswell, J. W. (2014). *Research design. Qualitative, Quantitative, and Mixed Method Approaches*. Fourth edition. California: SAGE Publications, Inc.

Creswell, J.W. & Creswell, D.J. (2018). *Research design. Qualitative, Quantitative, and Mixed Method Approaches*. Fifth edition. California: SAGE Publications, Inc.

Cronin, P., Ryan, F. & Coughlan, M. (2007). Undertaking a literature review: a step-by-step approach. *British Journal of Nursing*, Vol. 17, No. 1, pp. 38-43.

D'Andrea, G., Stengel, E. A. & Goebel-Krstejl, A. (2004). Six truths about emerging market consumers. *Strategy and Business*, Vol. 34, pp. 2-12.

Easterby-Smith, M., Thorpe, R. & Jackson, P.R. (2015). *Management and Business Research*. California: SAGE publications, Inc.

Elychar, J. (2012). Next Practices: Knowledge, Infrastructure, and Public Goods at the Bottom of the Pyramid. *Public Culture*, Vol. 24, No. 1, pp. 109-129.

Fielt, E. (2013). Conceptualising Business Models: Definitions, Frameworks and Classification. *Journal of Business Models*, Vol. 1, No. 1, pp. 85-105.

Flick, U., von Kardoff, E. & Steinke, I. (2004). *A companion to qualitative research*. London: SAGE Publications.

Freeman, R. E. (2010). *Strategic Management: A Stakeholder Approach*. Cambridge: Cambridge University Press.

Friedman, M. & Friedman, R. (1990). *Free to Choose: A Personal Statement*. Orlando: Harcourt Books.

George, G. & Bock, A. J. (2011). *The Business Model in Practice and its Implications for Entrepreneurship Research*. *Entrepreneurship Theory and Practice*, January 2011.

Hammond, A., Kramer, W.J., Tran, J. & Katz, R. (2007). *The Next 4 Billion – Market Size and Business Strategy at The Base of The Pyramid*. World Resource Institute & International Finance Corporation.

Hart, C. (1998). *Doing a Literature Review*. London: Sage Publications.

Jabareen, Y. (2009). Building a Conceptual Framework: Philosophy, Definitions, and Procedure. *International Journal of Qualitative Methods*, Vol 8, No. 4, pp. 49-62.

- Jagtap, S., Larsson, A., Warell, A. & Olander, E. (2013). The Fortune at the Base of the Pyramid: Strategies for Creating Innovations. *Management of Innovation and Technology*, No. 4, December, 2013.
- Johnson, M. W., Christensen, C. M. & Kagermann, H. (2008). Reinventing your business model. *Harvard Business Review*, Vol. 86, pp. 50-59.
- Kandachar, P. & Halme, M. (2017). Sustainability Challenges and Solutions at the Base of the Pyramid - Business, Technology and the Poor. 1st Edition. New York: Routledge
- Karnani, A. (2005). Misfortune at the Bottom of the Pyramid. *Greener Management International*, No. 51, pp. 99-110.
- Karnani, A. (2007). The Mirage of Marketing to the Bottom of the Pyramid. *California Management Review*, Vol. 49, No. 4, pp. 90-111.
- Khanagha, S., Volberda, H. & Oshri, I. (2014). Business model renewal and ambidexterity: Structural alteration and strategy formation process during transition to a Cloud business model. *R&D Management*, Vol. 44, No. 3, pp. 322-340.
- Khanna, T., Palepu, K. G. & Sihna, J. (2005). Strategies That Fit Emerging Markets. *Harvard Business Review*, June 2005.
- Kolb, W. R. (2008). *Encyclopedia of Business Ethics and Society*. Los Angeles: Sage Publications
- Kolk, A., Rivera-Santos, M. & Rufin, C. (2014). Reviewing a Decade of Research on the “Base/Bottom of the Pyramid” (BOP) Concept. *Sage Business & Society*, Vol. 53, No. 3, pp. 338-377.
- London, T. & Hart, S.L. (2004). Reinventing strategies for emerging markets: beyond the transnational model. *Journal of International Business Studies*, Vol. 35, No. 5, pp 350-370, September 2004.
- Magretta, J. (2002). Why Business Models Matter. *Harvard Business Review*, Vol. 80, No. 5, pp. 1-8.

- Markides, C. (2006). Disruptive Innovation: In Need of Better Theory. *The Journal of Product Innovation Management*, Vol. 23, No. 1, pp. 19–25.
- Martinez, J.L. & Carbonell, M. (2007). Value at the bottom of the pyramid. *Business Strategy Review*, Vol. 18, No. 3, pp. 50-55.
- Mitchell, D.W. & Coles, C.B. (2004). Business model innovation breakthrough moves. *Journal of Business Strategy*, Vol. 25, No. 1, pp. 16-26
- McWilliams, A. & Siegel, D. (2001). Corporate Social Responsibility: A theory of the firm perspective. *Academy of Management Review*, Vol. 26, No. 1, pp. 117-127.
- Munir, K., Ansari, S. & Gregg, T. (2010). Beyond the hype: Taking business strategy to the "Bottom of the pyramid". *The Globalization of Strategy Research - Advances in Strategic Management*, Vol. 27, pp. 247-276.
- Osterwalder, A. & Pigneur, Y. (2010). *Business Model Generation*. New Jersey: John Wiley & Sons.
- Pitta, D. A., Guesalaga, R. & Marshall, P. (2008). The quest for the fortune at the bottom of the pyramid. *Journal of Consumer Marketing*, Vol. 25, No. 7, pp. 393-401.
- Porter, M. E. & Kramer, M. R. (2006). Strategy & Society: The Link Between Competitive Advantage and Corporate Social Responsibility. *Harvard Business Review*, Vol. 84, No. 12, pp. 78-92.
- Porter, M. E. & Kramer, M. R. (2011). Creating Shared Value. *Harvard Business Review*, January-February 2011.
- Prahalad, C. K. (2002). Strategies for the Bottom of the Economic Pyramid: India as a Source of Innovation. *Reflections: The Society of Organizational Learning Journal*, Vol. 3, No. 4, pp. 6-17.
- Prahalad, C. K. (2004). *The Fortune at the Bottom of the Pyramid – Eradicating Poverty through Profits*. New Jersey: Wharton School Publishing.
- Prahalad, C.K. (2006). The Innovation Sandbox. *Strategy and Business*, Vol 44, pp. 1-10.

- Prahalad, C. K. (2009). *The Fortune at the Bottom of the Pyramid – Eradicating Poverty through Profits*. Revised and updated fifth edition. New Jersey: Wharton School Publishing.
- Prahalad, C.K. (2012). Bottom of the Pyramid as a Source of Breakthrough Innovations. *Journal of Product Innovation Management*, Vol. 29, No. 1, pp. 6–12.
- Prahalad, C.K. & Hammond, A. (2002). Serving the World’s Poor, Profitably. *Harvard Business Review*, September 2002.
- Prahalad, C. K. & Hart, S. L. (2002). The fortune at the bottom of the pyramid. *Strategy + Business*, Vol. 26, pp. 2-14.
- Ricart, J. E., Enright, M. J., Ghemawat, P., Hart, S. L. & Khanna, T. (2004). New frontiers in international strategy. *Journal of International Business Studies*, Vol. 35, No. 3, pp. 175-200.
- Rivera-Santos, M. & Rufin, C. (2010). Global village vs. small town: Understanding networks at the Base of the Pyramid. *International Business Review*, Vol. 19, No. 2, pp. 126-139.
- Rabionet, S. E. (2011). How I Learned to Design and Conduct Semi-Structured Interviews: An Ongoing and Continuous Journey. *The Qualitative Report*, Vol. 16, No 2, pp. 563-566.
- Sakarya S., Eckman, M. & Hyllegard, K. (2006). Market selection for international expansion - Assessing opportunities in emerging markets. *International Marketing Review*, Vol. 24, No. 2, pp. 208-238.
- Sanivation. (2015). Our Model. <https://www.sanivation.com> (Accessed: 6 May 2019)
- SELCO. (2019a). *Who we are*. Available at: <http://www.selco-india.com/who-we-are> (Accessed: 26 April 2019)
- SELCO. (2019b). *What we do*. Available at: <http://www.selco-india.com/what-we-do> (Accessed: 4 May 2019)
- SELCO. (2019c). *How we operate*. Available at: <http://www.selco-india.com/how-we-operate> (Accessed: 9 May 2019)
- SELCO. (2019d). *Household brochure*. Available at: <http://www.selco-india.com/public/pdf/household-brochure.pdf> (Accessed: 4 May 2019)

- Shafer, S. M., Smith, H. J. & Linder, J. C. (2005). The power of business models. *Business Horizons*, Vol. 48, No. 3, pp. 199-207.
- Simanis, E. (2012). Reality Check at the Bottom of the Pyramid. *Harvard Business Review*, Vol. 90, No. 6, pp. 120-125.
- Simanis, E., Hart, S. & Duke, D. (2008). The Base of the Pyramid Protocol – beyond “Basic Needs” Business Strategies. *Innovations*, Winter 2008.
- Smith, A. (1776). *The wealth of nations*. New York: The Modern Library.
- Symon, G. & Cassell, C. (2012). *Qualitative Organizational Research- Core Methods and Current Challenges*. Los Angeles: Sage Publications.
- Tashman, P. & Marano, V. (2010). Dynamic Capabilities and Base of the Pyramid Business Strategies. *Journal of Business Ethics*, Vol. 89, No. 4, pp. 495-514.
- Teece, D. J. (2010). Business models, business strategy and innovation. *Long Range Planning*, Vol. 43, No. 2-3, pp. 172-194.
- The Global Goals. (2019). The 17 Goals. Available at: <https://www.globalgoals.org/> (Accessed: 20 March 2019)
- Timmers, P. (1998). Business models for electronic markets. *Electronic Markets*, Vol. 8, No. 2, pp. 3-8.
- United Nations. (2018). *World Economic Situation Prospects*. New York: United Nations.
- United Nations. (2019a). About the Sustainable Development Goals. Available at: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/> (Accessed: 20 March 2019)
- United Nations. (2019b). Goal 1: End poverty in all its forms everywhere. Available at: <https://www.un.org/sustainabledevelopment/poverty/> (Accessed: 20 March 2019)
- United Nations. (2019c). No poverty: Why it matters. Available at: <https://www.un.org/sustainabledevelopment/wp-content/uploads/2018/09/Goal-1.pdf> (Accessed: 20 March 2019)

United Nations Development Programme (UNDP). (2014). *The Role of The Private Sector in Inclusive Development - Barriers and Opportunities at the Base of The Pyramid*. Istanbul International Center for Private Sector in development, August 2014.

Waring, T. & Wainwright, D. (2008). Issues and Challenges in the Use of Template Analysis: Two Comparative Case Studies from the Field. *The Electronic Journal of Business Research Methods*, Vol. 6, No. 1, pp. 85-94.

Webster, J. (2002). Analyzing the Past to Prepare for the Future: Writing a Literature Review. *MIS Quarterly*, Vol. 26, No. 2, pp. xiii-xxiii.

Whiting, L. S. (2008). Semi-structured interviews: guidance for novice researchers. *Nursing Standard*, Vol. 22, No. 23, pp. 35-40.

Williams-Grut, O. (2017). Allianz invests \$96.6 million in mobile insurance startup BIMA. *Business Insider*. Available at: <https://www.businessinsider.com/allianz-invests-in-bima-2017-12?r=US&IR=T> (Accessed: 28 May 2019)

Yin, R.K. (2009). *Case Study Research – Design and Methods*. Fourth Edition. Los Angeles: Sage Publications

Zott, C., Amit, R. & Massa, L. (2011). The Business Model: Recent Developments and Future Research. *Journal of Management*, Vol. 37, No. 4, pp. 1019-1042.

APPENDIX A

Interview guide

Informant and organization

- Could you tell us about your position at X? E.g. for how long you have been with X and your background within the organization.
- Could you tell us about X's operations?
 - When and where was X established?
 - How many employees do X have?
- Could you tell us about critical throughout X's history? (positive and negative)
- Is X profitable?

Industry

- Could you please define X's industry? E.g. competitive landscape.
- What are the challenges in X's industry?

Customers

- Which customer segments are X targeting and why?
- What are the challenges in targeting these customer segments?
- How large is X's customer base?
- Do you involve customers in any product development activities?

Business model

- Could you describe X's business model?
- Could you describe X's offerings?
- Could you describe how X creates value for its customers?
- Could you describe the income streams and the cost structure of X?
- What would you define as X's key processes?
- What would you define as X's resources?
- Have X had to adapt its business model along the way? How and why?

- Could you describe X's collaborations with other organizations?

The 4 A:s

Affordability

- How do you ensure your solutions are affordable to consumers at the bottom of the pyramid?
- What are the pricing levels of X's offerings products?

Acceptability

- How do you work with getting customers to accept X's products?
- Have you experienced any challenges in getting customers to accept X's products?

Awareness

- How do you market your solutions?
- How do you create awareness of your solutions?
- How do you educate your customers?
- Do customers generally understand the benefits of X's offerings?

Availability

- How do you ensure your solutions are accessible to your customers?
- Have you experienced any challenges in making your offerings available to base of the pyramid consumers?
- Could you describe X's distribution channels?

Other

- Could you describe the social impact of X operations?
- What would you point out as the key success factors in serving the base of the pyramid?
- What are the main challenges in terms of profitability in serving the base of the pyramid consumers?