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FACULTY OF BUSINESS ECONOMICS
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Distribution channel capabilities of energy products at the bottom of the pyramid in Africa

Promotor :
Prof. dr. Pieter PAUWELS

Sintija Gabrane

Master Thesis nominated to obtain the degree of Master of Management

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Preface

I wrote this master thesis as a completion of my Master of International Management studies at Hasselt University. Studies and this paper would not be possible to finish without the contribution of several people. Therefore, I would like to express deep gratitude to those that put their contribution and gave me the possibility to complete this thesis.

First, I would like to thank my mother that supported me and gave the possibility to come to Hasselt and expand my knowledge base in International Marketing and obtain this master degree. I am also truly grateful to all my professors that made this intense course of studies very exciting, interesting and valuable. I am also indebted to my supervisor and promoter professor Piet Pauwels, who with his enthusiastic approach to International marketing course and unlimited knowledge base inspired me to choose this topic for my thesis and supported me in the process of writing it. And last, but not the least, I want to express my deepest gratitude to my son and husband for continuous support throughout this challenging period of writing this thesis and for being a constant source of encouragement. Without them, it would not be possible to complete this thesis.

Executive Summary

In recent year's multinational companies (MNC's), government and non-government organizations as well as corporation have paid undeniable interest to the emerging markets and 4 billion poor people living at The Bottom of the Pyramid (BOP). In the early years Prahalads' (2011) theory of engaging 4 billion poor people at the BOP in the business and making profit in these markets seemed vague, then now, when most of multinational companies have reached a saturation point and limited market opportunities due to intense competition in developed markets, more and more multinational companies have shifted their interest towards emerging markets and poor as customers. While the entire world is showing economic and financial recession, emerging markets are known as global drivers of economic growth where the number of consuming class is growing very fast. As MNC's have identified the huge potential of BOP markets they are investing more and more money in market research and business model innovations in order to enter BOP markets. This is not an easy task as the success of MNC's reaching these markets has been challenging: distribution channels at the BOP are dispersed or even non-existent, poor people often lives in villages located in very remote parts of the country where usual means of transportation cannot reach and other. Despite the growing interest of distribution methods at the BOP markets there is still little research done on distribution strategies and models used to access these challenging BOP markets in Africa. Whereas, India is one of the countries with the highest number of poor people living at the BOP and has been the centre of attraction of marketing research at the BOP.

Therefore, the aim of this master thesis is to understand if MNC's, that want to produce and sell consumer durables at the BOP in Africa, can implement and use the same distribution channel models as companies producing consumer durables in India's BOP markets do. Furthermore, this paper will help to distinguish what capabilities are crucial for successful distribution of consumer durables at the BOP markets in Africa. In order to solve the central research question, I first briefly explain what distribution process is and what activities it includes. It has been recognized that distribution at the BOP is more challenging and complex then distribution in developed countries, but as the basics theory of the distribution is the same, marketing question at the BOP should answer the same marketing question as it does in developed markets: "*how do customers get access to the products and services?*" (Vachani and Smith, 2008, pg 4). Later in the theoretical part of the paper I examined the

challenges MNC's will face when entering Africa's BOP markets. Since it is very crucial for MNC's to understand the barriers they need to overcome and take into account when developing successful business model, I explicitly explained customer profile at the BOP, paying more attention to income levels of the BOP populations, their savings patterns and product preferences. Furthermore, I discussed what companies need to know about the unique product characteristics. But it is not enough to be aware of the customer profile and product challenges at the BOP, companies should also cognize the operational environmental as, knowing the factors that negatively affects business, makes it easier to overcome them. Consequently being aware of these factors helps MNC's to define characteristics for successful business model and distribution channel capabilities at the BOP.

Following on this note, I explicitly used Shukla and Bairiganjan approach of defining most important distribution channel of consumer durables capabilities at the BOP. This information will help MNC's to exclusively use the findings in previous chapters to recognize most important distribution channel capabilities. But in order to successfully reach the most rural villages and satisfy the needs of the poor it is not enough to define distribution channel capabilities, companies should integrate these capabilities in the distribution models. As it is explained in the paper there are six different distribution models that are successfully exploited at the BOP in India by companies distributing consumer durables. From the research I concluded that partnerships with different government, non-government organizations and/or large domestic corporations plays important role in companies business as this is an opportunity to exploit capabilities that partners master the best. Each of the distribution channel models discussed exploits different capabilities; therefore MNC's should carefully evaluate which of the models fit their business model.

Linking and integrating information found in theoretical part of the paper I continued by making an assumption regarding possible distribution model capabilities that based on extensive literature study could be important for distribution of consumer durables to the BOP markets. As it can be found in the paper, I assumed that in order to distribute the consumer durables in these challenging BOP markets companies should pay attention to capabilities such as physical distribution, promotion, information, finance and credit, contact, post-sales services, leaving risk taking and negotiation as a secondary capabilities, but completely excluded matching capability. As I assumed that in order to be successful at the BOP

companies not necessarily need to exploit all of these capabilities. MNC's need to investigate characteristics of the product and identify capabilities that will be most suited to these characteristics.

I continued with explicit analysis of Toyola Limited, company that produces energy effective cook stoves and solar lanterns in Ghana. Company is exclusively distributing cook stoves to the rural and urban people in Ghana and has implemented successful business model that engages Ghanaian people throughout the all value chain. The main objects of the study were companies' distribution channel capabilities and its distribution model of the cook stoves. After analyzing companies' distribution model and distinguishing capabilities, I was able to answer the main research question and subquestions.

From the analysis, I concluded that there is no a standard way that could tell MNC's how to enter these so challenging markets at the BOP in Africa. A key to the success is ability to understand the market and consumers in it as well as implementation of good business model and enough funds for a start up. It is evident from the analysis that MNC's need to tailor their organisational capabilities and adapt them to the local market context. From the analysis I also understood that companies can use existing distribution systems that serve poor people at the BOP markets, but in order to be successful MNC's needs to, by taking into account the findings of the market research and recognizing crucial distribution channel capabilities, to innovate the company's business model. For the distribution of consumer durables companies should consider following critical distribution capabilities physical distribution, promotion, credit and finance, information and contact. Risk taking, and matching is favourable capabilities to consider. Drivers of the success also are successful partnerships and strategy of engaging rural poor customers in the whole value chain thus increasing their income levels.

The complexity of answering research questions confirms the challenging nature of the BOP markets and distribution to the poor. In this paper I reviled only small tip of the iceberg of problems companies face when entering BOP markets in Africa. Therefore I need to emphasize that further research of the topic should be done.

Introduction

While most of the companies in developed countries have reached a saturation point in the market and are facing intense competition as well as limited market opportunities, CEOs of large multinational companies say that they are well aware of the fact that emerging markets hold the key to long-term success (Atsmon, et.al, 2012). The International Monetary Fund says that emerging markets continue to be *“the global driver of growth, forecasting 5.3 percent for 2012 and 5.6 percent for 2013”* (Reuttner and Glass, 2012, pg 3).

According to McKinsey Global Institute (MGI) report (2012), over the past two decades, the urbanization of emerging markets—*“supported by long-term trends such as removal of trade barriers, and the spread of market-oriented economic policies”*—has powered growth in emerging economies and more than doubled the ranks of the consuming class (Atsmon, et.al, 2012, pg 3). MGI research suggests that by 2025, number of consuming class will nearly double and reach 4.2 billion consumers out of 7.9 billion people globally (Atsmon, et.al, 2012). By 2025, MGI estimates, that annual consumption in emerging markets will rise to \$30 trillion, up from \$12 trillion in 2010, and therefore account for nearly 50 percent of the world’s total, up from 32 percent in 2010 (Atsmon, et.al, 2012).

More in the past there was assumption that *„the poor have no purchasing power and, therefore, are not a viable market.”* (Prahalad, 2011, pg 35). Since Prahalad and Hart (2002) came up with the BOP concept, there has been a growing interest to understand what this concept implies. The BOP concept is based on the belief that there is an untapped market opportunity for doing business with the 4 billion poor of the world. Prahalad and Hart (2002) engaged in the idea that business can profit while providing products and services to the poor and actively partnering with them. Nowadays this idea of inclusive business, the business which represents win-win scenarios for both – the low-income communities and the businesses, has been developed further in many researches and company initiatives.

While the food, fuel, and financial crises over the past years have worsened the situation of the Bottom of the Pyramid (BOP) populations and slowed down poverty reduction in some countries, global poverty rates in general have continued to fall (Lee, S.S., et.al, 2012). It is evident that between 2005 and 2008 both the poverty rate and the number of people living in extreme poverty have decreased in all six developing country regions (Lee, et.al, 2012).

It is evident that there are different approaches of calculating the real size of BOP markets, therefore estimated market size differ from author to author. For example, World Economic Forum report (2009) shows that the BOP market income pool accounts for more than US\$ 2.3 trillion. The report divides the BOP into three income segments – lowest, middle and top. According to this division lowest segment consists of about 1 billion people that struggle to live on \$ 1 a day or less, 1.6 billion people as a BOP middle segment, that constitutes the largest group and lives on \$1 to \$2 a day. This middle segment is able to support their basic needs. As the last segment report mention top segment with 1.1 billion people living on \$2 to \$8 a day. People in this segment have sufficient income to support nonessential products, but also lack adequate attention from most businesses, because they are still at risk of irregular income.

Africa, as one of the regions where poverty is an integral part of total African population, has started to turn the corner on reducing poverty (Africa Progress Report, 2012). Between 1999 and 2008, the share of Africans living on less than \$1.25 a day fell from 58 to 48 per cent (Africa Progress Report, 2012). More encouraging, the rate at which poverty is falling appears to have gathered pace and the World Bank's most recent estimates suggest that the number of poor people in the Sub-Saharan region fell by around nine million between 2005 and 2008 (Africa Progress Report, 2012). However, the overall number of people living in poverty does not match the economic growth of countries in Africa (Africa Progress Report, 2012). There are still 386 million Africans struggling to survive on less than \$1.25 a day and Africa accounts for a rising share of world poverty (Africa Progress Report, 2012). And while much has been made of the growth of Africa's middle class this group remains small (Africa Progress Report, 2012).

Executives' at most large MNC's still are vexed by the complexity of seizing the opportunity of emerging markets. Many acknowledge that "*despite greater size, larger capital bases, superior product technology, and more sophisticated marketing tools*", they are struggling to keep their competitiveness against local upstarts (Atsmon, et.al, 2012, pg 2). For MNC's in developed countries, winning consumers in these new high-growth markets requires a "*radical change in mind-set, capabilities, and allocation of resources*" (Atsmon, et.al, 2012, pg 5). "*The value consciousness of emerging-market consumers, the diversity of their preferences, and their sheer numbers mean that MNC's must rethink every aspect of*

operations, including product portfolios, marketing, research and development, supply chain management, and talent development” (Atsmon, et.al, 2012, pg 5).

There is considerable potential for companies to build linkages between enterprises and higher value-chains in production and distribution, therefore policy makers need to create an environment where businesses can flourish to allow them be competitive in domestic and global markets (Africa Progress Report, 2012). This requires attention to everything, “*from improving physical infrastructure (estimates by the African Development Bank suggest that a shortage of infrastructure reduces business productivity in Sub-Saharan Africa by approximately 40 per cent), access to finance (research shows that the availability of local banks leads to faster growth of small and medium-size firms and more investment, for example in Morocco), appropriate tax policies, transparent and fair procedures for dispute settlement, and removal of unnecessary (and often illegal) barriers to the movement of goods within and across jurisdictions” (Kende-Robb et.al, 2012, pg 21).*

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1 Problem definition

As developed markets become saturated, MNC's have increasingly shifted their focus toward the emerging markets in order to expand their business and generate increased revenue growth (London and Hart, 2004). The poorest populations raise a new managerial challenge for the world's wealthiest MNC's: *"selling to the poor and helping them to improve their lives by producing and distributing products and services in culturally sensitive, environmentally sustainable, and economically profitable ways"* (JETRO, 2009, pg 4).

The success of MNC's in accessing low income markets has been erratic, and unlike the developed world, distribution channels are often fragmented or non-existent making it very challenging for MNC's to deliver products and services to the BOP customers (Anderson and Billou, 2007). In order to be successful in these markets MNC's need to ensure radical innovations in business models and technology. JETRO (2009) report highlights that MNC's must build an organizational infrastructure that would build local base of support reorient R&D in order to focus on the needs of the poor, reinvent cost structures, form new partnerships and increase employment intensity.

According to Prahalad (2011), access to distribution in rural markets continues to be problematic. The majority comprising the bottom of the pyramid resides in hundreds of thousands of villages located beyond most MNC's distribution networks (Vachani and Smith, 2008). Authors emphasize *"that access to essential goods is limited not just by high prices, but also by inadequate rural distribution therefore, better distribution systems and communication links are essential to development of the BOP"* (Prahalad and Hart, 2002, pg 9).

Despite the poverty, the BOP represents big untapped market opportunities. According to Prahalad (2011) estimations there are 4 billion poor people living in poverty that have purchasing power of \$ 5 trillion. Therefore all MNC's need to do is to exploit this opportunity by implementing good business strategies.

1.1 Research problem and purpose

One of the greatest contributions that business can make to society is to expand access to goods, services, and economic opportunities (Gradl and Jenkins, 2011). *“While MNC’s are increasingly viewing low-income markets in developing countries as potential sources of future growth, there is almost no empirical research on strategies for pursuing these opportunities”* (London and Hart, 2004, pg 10). Despite the extent of the markets and the volume of the hype, few MNC’s have built sizable businesses serving people who survive on just a few dollars a day (Karamchandani et. al, 2011).

A critical aspect of serving low-income consumers in developing markets is ensuring the availability of products and services and marketing (Anderson and Markides, 2007). At the BOP, where operating margins tend to be low, profitability can require high volumes whereas high volumes call for distribution networks capable of bringing goods and services to BOP customers at scale (Jenkins et. al, 2010).

Distribution networks in emerging markets tend to be unique and disjointed (Shukla and Bairiganjan, 2011). It is critical for any MNC’s or small-to-medium enterprise considering entry into the market to understand both the characteristics of the prevailing distribution systems and how the distribution systems would evolve (Shukla and Bairiganjan, 2011). MNC’s must also assess whether accurate and timely product distribution can be achieved without first investing in its distribution networks (Shukla and Bairiganjan, 2011). Therefore, *“building these networks can be particularly challenging because BOP customers are often located in harder-to-reach areas, like urban peripheries or rural villages, where infrastructure is poor or populations are dispersed”* (Jenkins et al, 2010, pg 7).

Targeting BOP markets will require a quantum leap in the number of commercially inclusive business models operating at scale (Jenkins and Ishikawa, 2010). Those which have been successful have done so through pursuing innovative business models in their product, service and or distribution models (Anderson and Billou, 2007). While some companies have existing networks that they can leverage, others are building new that are tailored for BOP markets, and still others are partnering in order to access the networks of third parties — *“including companies, civil society organizations, and even occasionally government agencies”* (Jenkins et al, 2010, pg 13).

There has been a lot of research done focusing on the India's distribution channels and models implemented to overcome different distribution challenges, while distribution at the BOP in Africa has been left aside. As the characteristics of poor BOP people and market constrains at the BOP in India and Africa correspond the same profile, it arise a need to answer the question: "Can research made based on India's BOP market examples can be applied and considered to fit Africa's BOP market specifics?" Purpose of this paper is to understand what distribution models are used and how effective these models are when looking at critical distribution capabilities that are essential for the distribution of energy products to the BOP markets.

1.2 Central research question and sub-questions

The aim of the paper is to question distribution methods used while distributing energy products to the rural poor people and to help companies identify efficient distribution channels and evaluate their capabilities. Within the theoretical part of this paper I will present different complexities of operating environment in Africa, distribution channel choices available and used by energy companies at the BOP in India. And in analytical part of this paper, using the same approach used analyzing India's distribution channels, will analyze distribution channel strategy of Toyola Energy Ltd. producing and distributing energy efficient cook stoves in Africa.

Therefore these issues give rise to the *central research question*:

"Can MNC's producing energy products enter Africa's energy market using already existing distribution models based on India's experience?"

To give a comprehensive answer to the central research question mentioned above, it is important to discuss the following sub-questions based on Toyola Energy Ltd. case analysis:

"What distribution capabilities are essential for Toyola Energy Ltd. targeting BOP markets in Africa?"

"What distribution model Toyola has implemented?"

"What makes distribution of Toyola's cook stoves to the BOP successful?"

1.3 Research approach

This research is conducted in two major steps. In the first step I will use an extensive literature study to give an insight on rural BOP customer profile, product challenges and operating environment in Africa. It will be followed with the literature study about distribution channel specifications and capabilities at the BOP and different distribution models used at the BOP markets in India.

The second step involves case analysis of Toyola Energy Ltd., company that distributes energy products – energy efficient cook stoves – to the BOP markets and successfully reaches most remote parts of the Ghana. I will carry out extensive investigation on how company deal with the challenges it faces when distributing their products to the poor and the steps taken to manage successful go-to-market strategy.

Research will be rounded up with the conclusions that will guide the readers through the findings of the paper and will answer the main research question and sub-questions.

1.4 Research limitations

I look at the research area from the perspective of MNC's that is aiming to improve their distribution network capabilities at the BOP or to enter the BOP market as a new player in Africa's market and is concerned on how to reach poor people in most efficient and convenient way. I have limited the research by looking only to Business – to Customer marketing strategies that aims to distribute products to the customers. Therefore I am not analyzing information about distribution of services.

2 Distribution

As Vachani and Smith (2008) put it „*distribution is conceived as the provision of availability*” (Vachani and Smith, 2008, pg 4). Channels of distribution, according to Kotler (2000), are routes leading to customers and associated marketing management considerations range from gathering and providing customer and product information to physical distribution. Although the literature is talking generally about developed world marketplace where distribution infrastructure and intense competition is an integral part of distribution, and developing world with its rural markets are ignored, the core marketing question remains the same – „*how do customers get access to products and services*” (Vachani and Smith, 2008, pg 4). As we all know „*distribution involves a number of activities, such as transportation, storage, inventory control, packaging, and before and after sales customer services*” (Negandhi, 1987, pg 49). And „*arranging these various components logically is useful for the effective distribution of products and services*” (Negandhi, 1987, pg 49).

A distribution channel is an interdependent network that creates value through the physical flow of goods and services and the transfer of ownership. Furthermore, Chopra (2001) reflects that distribution refers to the steps taken to move and store a product from the supplier stage to a customer stage in the supply chain. It is the core part of the “value-added chain”, which also includes all the suppliers to each company in the channel (Morris, et.al, 2001). Therefore, as Morris, et.al. (2001) puts it, each member of the channel greatly affects the total value received by a final customer. Respectively, each member of the channel affects the costs and effectiveness of the other members (Morris, et.al, 2001). Thus, distribution is a key driver of the overall profitability of a firm because it directly affects both the supply chain cost and the customer experience (Chopra, 2001). Therefore, good distribution can be used to achieve a variety of supply chain objectives ranging from low cost to high responsiveness (Chopra, 2001).

According to Morris et.al. (2001), distribution channels attempt to bridge the gap between the “production orientation” of a manufacturer and the “usage orientation” of a buyer. They argue that “*this bridging is accomplished through a variety of value creating functions provided by members of the channel*” (Morris et.al, 2001, pg 10). Examples of such functions include

transportation, storage, inventory management, breaking bulk, sorting, creating assortments, financing, selling, promoting, market feedback, training and service (Morris et.al, 2001).

3 BOP Distribution Challenges

Numerous literature sources mention distribution as being one of the main and biggest challenges for the MNC's that want to serve BOP markets. Otherwise simply the task of delivering goods to the end customer turns out to be major obstacle to overcome in BOP markets. Compared to the developed world, distribution channels in emerging markets are often characterised as very fragmented or even nonexistent, which in greater extent affects the flow of products in low income markets. This negatively impacts on the poor's ability to generate income and improve their quality of life (Vachani and Smith, 2008). The BOP markets mostly have simple and basic needs such as access to clean water, food, healthcare, shelter, etc. Although these needs may seem very basic, in most of the cases, due to different market conditions, it is difficult to meet them. Therefore, the products and services provided by MNC's in developed markets will not necessarily be suitable for BOP markets. Different market conditions, such as inadequate access, poor distribution, local monopolies, and lack of formal institutions make the way of MNC's products in the BOP market more challenging and results in increased and inadequate prices for BOP customers. BOP markets in Africa mostly are concentrated in rural parts of the continent (Sub-Saharan Africa), are poorly served, dominated by informal institutions and economies, and therefore characterized as uncompetitive and inefficient.

As Shukla and Bairiganjan (2011) put it rural BOP markets are very complex and demanding for companies that want to do business there. Authors divide the challenges that companies need to overcome when doing business in BOP markets into three categories:

- Rural BOP Customer Profile
- Product Challenges
- Operating Environment (Eco-system)

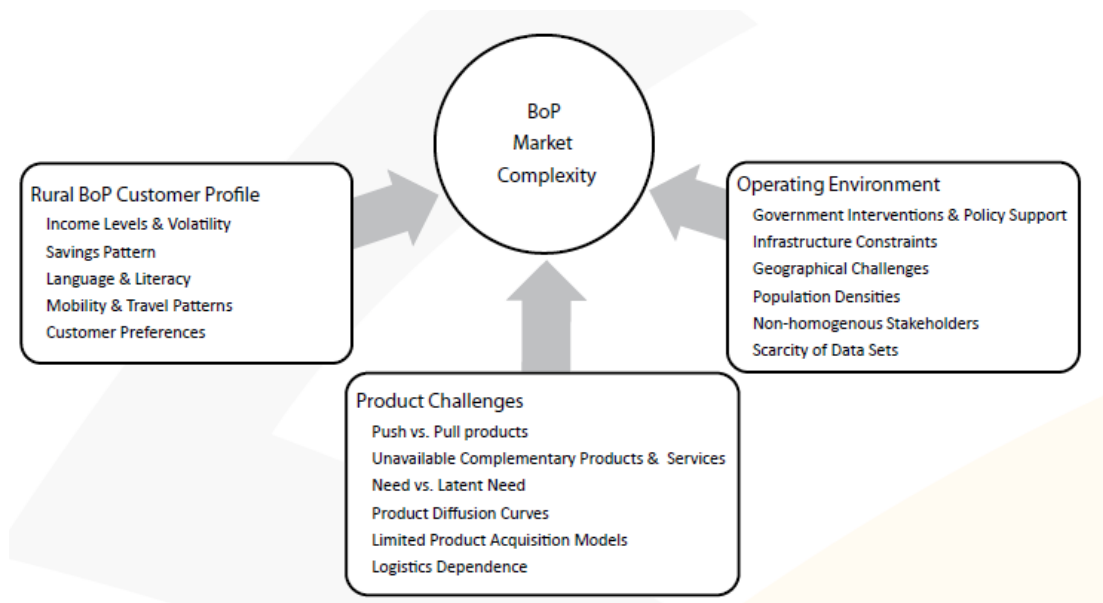


Figure 3.1 BOP Market Complexity – Contribution Factors (Shukla and Bairiganjan (2011), pg 3)

The categories reflected in the figure 3.1 will be discussed in the next paragraphs and will be analyzed based on Africa’s BOP market specifics; thus helping MNC’s to understand the complex nature and challenges they will need to consider and overcome when doing business with the poor.

3.1 Rural BOP Customer Profile

As discussed earlier rural BOP customers create highly heterogeneous market which in most cases shows context-specific and cross-national differences. With different income and expenditure levels and unique demands customers at BOP create different levels of difficulty for companies serving these markets not only across countries but even from one region to another within the country. As per Shukla and Bairiganjan (2011), despite the varied needs of rural BOP customers “they share several common characteristics in their *“domestic constraints, difficult living conditions, lack of basic information for making informed decisions, financial hardships and informal quality standards”* (Shukla and Bairiganjan, 2011, pg 20), amongst others, such as :

- Income levels and volatility

Since Prahalad and Hart (2002) came up with the BOP concept, other researchers and businesses over the years have questioned the real size of the BOP market and therefore have come up with slightly different approaches of dividing the population. While Prahalad (2011) considers 4 billion individuals that live on less than \$1.500 per year (based on PPP in U.S. dollars) or on less than \$ 2 per day, other researchers find this definition as vague and inaccurate and therefore have come up with other measures. For example, according to the Worlds Bank \$ 1.25 per day (in purchasing power parity rates) represent people living in extreme poverty and people living with \$ 2 per day (in purchasing power parity rates) as ones in moderate poverty. To mention more, Harvard Business Review (2011) categorizes 4 billion people at the Base of the Pyramid into three segments. They recognize an income level of \$1 a day that separates the extremely poor people from everyone else. By their estimations there are 1 billion people living in extreme poverty who “*lack basic necessities as clean water, nutritious food, and adequate shelter*” (Harvard Business Review, 2011, pg 15) . Next segment presents 1.6 billion people who live on \$1 to \$3 a day, they are poorly educated and low skilled, without permanent income. And third segment is represented by 1.4 billion people who live on \$3 to \$5 a day. Usually they are people with few years of secondary education and necessary skills to enter the job market. But in general household income firstly are allocated to fulfil survival needs. As Shukla and Bairiganjan (2011) stress out the seasonal nature of income increase the importance of credit services that match poor people cash outflows to cash inflows for discretionary products.

- Savings pattern

Due to undeveloped financial sector at the BOP, customers lack access to financial institutions and services. Therefore movement of financial resources across BOP markets are limited and disposure to economic risks in BOP markets are quite high. Rural BOP households still have minimal knowledge about savings and as they retain illiquid assets they are more exposed to economic shocks than households in more urban areas.

- Language and literacy

Shukla and Bairiganjan (2011) explain that illiteracy and variation in languages across rural regions limits the creation of standard, cost-effective marketing and communication materials

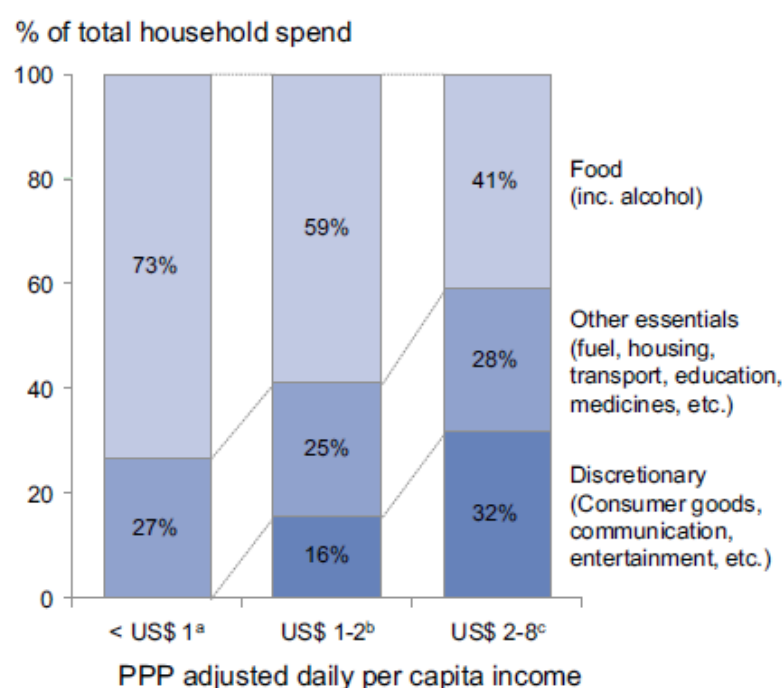
(Shukla and Bairiganjan, 2011, pg 4). They stress out that the lack of persistent and effective marketing leads to long gestation periods for new products and information asymmetry across regions. According to Vachani and Smith (2010) populations that are illiterate or poorly educated suffer greater disadvantages in developing the knowledge and skills. They are more exposed to counterfeits as they are more likely not able to read information on product packages. As per authors illiterates often rely on package design to recognize and evaluate brands giving opportunity for counterfeiters and imitators to use the situation and design packaging closely resembling original products.

- Mobility and travel patterns

Shukla and Bairiganjan (2011) stress out that limited travel patterns and insufficient mobility of rural BOP populations lead to slow expansion of knowledge, higher resistance to change, and little benefit from existing customer experiences from outside their local communities.

- Customer preferences

Need of customized products to suit unique needs of people at the BOP lowers the attractiveness of the market for the companies looking to cross-sell products that they offer to customers in more urban regions. For the companies targeting BOP markets it is very important to understand the preferences poor people have when they are spending their limited income. Poor people are forced to overthink the basic needs and live upon their income level (see figure 3.2).



- a. World Bank US\$1.08 a day (at 1993 PPP) adjusted to 2002 PPP.
- b. World Bank US\$ 2.15 a day (at 1993 PPP) adjusted to 2002 PPP.
- c. World Resources Institute cut-off of US\$ 8 a day in 2002 PPP.

Figure 3.2 Spenditure of the poor based on their income level (World Economic Forum report, 2009, pg 10)

Therefore, sector markets for the 4 billion consumers at the BOP range widely in size (World Economic Forum report, 2009). According to World Resources Institute report people at the BOP mostly spend on food (\$2,895 billion), energy (\$433 billion) and housing (\$332 billion). Health (\$158 billion) and transportation (\$179 billion) represents medium scale sectors. But relatively small part of BOP income is directed to water (\$20 billion), information and communication technology, or ICT (World Economic Forum report, 2009).

Consumers in BOP markets not only have specific rational needs, they also might be affected by irrational behaviours concerning buying habits. As per Karnani (2009) poor people not necessarily always are rational when it comes to economic decision-making. The poor can spend their income on unhealthy products such as carbonized soft drinks, alcohol and cigarettes instead of spending more money on the food or other necessities. This shows that they are ready to spend more on unnecessary things in order to show that they do not belong to most poor social group in the community. Therefore, the assumptions of rational behaviour regarding spending money may not be applicable to certain groups in BOP.

3.2 Product Challenges

For MNC's to enter BOP markets and target rural poor populations requires product and process innovation. It involves not only product design innovation but also creation of new business models and finding new ways of scaling up those mixed models. According to Simanis and Hart (2008) for MNC's to reduce fixed costs and create economies of scale they must innovate. Shukla and Bairiganjan (2011) stress out the challenging nature of doing business at the BOP. Authors continue by emphasising the pressure that manufacturers and producers are facing when reinventing their offerings, marketing and communication technologies, supply chain arrangements as well as ownership models through which customers at the BOP can access their products. Those pressures are:

- Push vs. Pull products

According to several literature sources push products are promoted by product producer or manufacturer to wholesalers, which in turn promote it to retailers, while the retailers promote it to costumers. Therefore, push products (consumption and lifestyle-improving products) as such do not require big demand stimulation; it is the supply that creates the demand of the products promoted via this strategy. But BOP markets with its lack of formal institutions, good media communication methods as well without "*rural-targeted brands across multiple product categories*" (Shukla and Bairiganjan, 2011, pg 5) excludes most of the products from the pull product category, thus eliminating any cross-selling opportunities. Shukla and Bairiganjan (2011) states that new, improved products as well as those that are categorized as luxury is usually considered as push products and requires additional effort to communicate their value to the customers.

- Unavailable complementary products and services

Due to lack of complementary products and services consumers at the BOP tend to purchase products that are complete or close to that state, therefore avoiding products that would require complementary products or services. Thus people at the BOP are forced to buy products that inadequately serve their unique demands.

- Need vs. Latent need

Shukla and Bairiganjan (2011) points out that historical purchase decision, product associations and conventional wisdom, along with long running market inefficiencies, have led rural BOP consumers to deny or not recognize their latent needs and to pursue a fulfilment of only immediate, tangible needs. Authors go on emphasizing that products would otherwise qualify as substitute products are the ones that actually drive demand and make BOP customers to spend limited income on these products.

- Typical product diffusion curves in rural BOP market

Consumers at the BOP are reluctant towards new and/or improved products due to their low income levels. This consumer group is not ready to risk with their limited income therefore avoid making independent decisions for products that are not tested and they do not have any information about. Therefore in rural communities social media and social group leaders that rural poor consumers trust play pivotal role in influencing early adapters and followers.

- Limited product acquisition models

There have been only a few acquisition models in BOP markets that were tested to scale and have shown limited success. According to Shukla and Bairiganjan (2011) there are three prevalent ways for rural BOP end users to acquire products:

- a. A household owns the product after an initial upfront payment;
- b. A household purchases the product at a fixed price, and any additional complementary products/services are purchased on an ongoing basis from a local agent;
- c. The local community owns a product/service and shares the associated fixed costs, while individuals/households avail the facilities on a pay-per-use basis.

- Logistics dependence

Products that require very unique physical distribution methods, such as complex assembly and installation, repair or maintenance, specialized transportation need various components in order to be physically transported to various sites and only then assembled locally.

3.3 Operating Environment

It is obvious that BOP markets are challenging for everyone that wants to do business with the rural poor. In these markets MNC's are facing "*political, social, economic and technological unpredictability*" (Shukla and Bairiganjan, 2011, pg 6) that discourages most of manufacturers and producers to take participation in this market environment. There are several factors that negatively affect the interests of rural poor customers at the BOP and according to Shukla and Bairiganjan (2011) they are:

- Government Interventions and Policy Support

Rural poor customers in certain regions due to certain political, social, economical and environmental factors have wide access to low-quality products that shifts their perception away from more qualitative and better product choices. This is outcome of non-efficiently executed, planned and intermittent government schemes as well as short-term subsidy programs that have led to sparse and not effective distribution thorough rural areas. The comparative weakness of institutions within BOP markets also presents what are known as formal institutional voids (London and Hart, 2004). A formal institutional void refers to poorly developed or wholly undeveloped formal institutions and infrastructures that can significantly reduce transaction efficiency (Khanna, et.el, 2005). Roads, bridges, and other forms of transportation infrastructure are often (but poorly) maintained by local communities, media and communication channels are non-existent or sporadic in transmission, and businesses are labour-intensive yet draw upon primarily unskilled labour. Whereas, developed markets are characterized by strong communication, transportation, and media infrastructures which allow for efficient exchange of information between firms and their customers. In contrast, the infrastructure of BOP markets is poorly developed or in some cases even nonexistent, making such communication costly to the company. Furthermore, while relationships between firms and their customers are governed by strong legal institutions and formalized property rights and contractual laws in developed markets, relationships in BOP markets are primarily governed by informal networks which can be difficult for firms to access and leverage (Webb et. al. 2009).

- Infrastructure constrains

A large proportion of rural poor population are located in remote villages with inadequate connection to the roads and poorly served by affordable and appropriate transport, all this together poses physical barrier to BOP markets. Shukla and Bairiganjan (2011) points out the issue with infrastructure at the BOP where MNC's in BOP markets are faced with lack of modern technological interventions and absence of effective mass media participation which contributes to information asymmetry that limit growth of effective BOP markets. Authors emphasize that lack of good roads, water channels; telecommunication and electricity have created considerable barriers to entry for affordable products. Small demand together with high transportation costs has added additional financial burden as they need to adjust manufacturing facilities, physical distribution, redesign product and make sure that operations and maintenance are more suited to nature of local infrastructure.

- Geographical Challenges and population density

People living at the BOP are spread all over the world, yet they are particularly concentrated in a few areas. Africa, Asia and Latin America together account for 94% of the total BOP population (World Economic Forum, 2009). Though Africa still is region number one regarding the highest share of the poorest segment – only 65% of Africa's BOP population is above the World Bank's US\$ 1 a day poverty line, compared with more than 86% in Latin America (see figure 3.3.) (World Economic Forum, 2009). The highest populations of the BOP still live in rural areas (68% globally), which adds to the complexity and costs of reaching these populations (World Economic Forum 2009). Therefore long distances and extreme weather conditions are factors that require unique storage and transportation requirements. Thereby MNC's need to carefully consider and customize process of planning and execution of product distribution to rural poor consumers at the BOP.

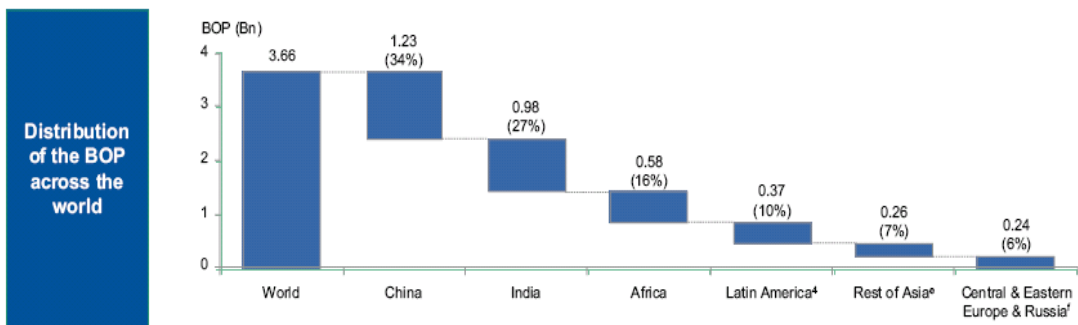


Figure 3.3 Distribution of BOP across the world (World Economic Forum, 2009, pg 12)

Population density and the fact that rural villages are spread over sparse geographical areas prohibit manufacturers and producers from gaining economies of scale.

- Non-homogenous stakeholders

According to Shukla and Bairiganjan (2011) lack of homogeneity among key stakeholders in the BOP markets (commercial players, government institutions, civil society players) and uncertain political, economic and social power centres across local communities makes it difficult to have one standardized marketing approach for local distributors, manufacturers and producers.

4 Defining Distribution to the BOP markets

Unfortunately, inadequate attention has been given to the specific strategies and business models for effectively engaging the bottom of the pyramid (Chesbrough, et.al, 2006). As Prahalad (2011) points out distribution systems that reach the BOP are critical for developing this market. He highlights that “*innovations in distribution are as critical as product and process innovations*” (Prahalad, 2011, pg 25). In other words, until now there was no particular solution or model that could solve the problem of the distribution access to the poor. However, there are opportunities for creative companies to orient their distribution toward this unserved market, stated by Prahalad and Hart (2002). Only few businesses have design their distribution to cater to the needs of poor, rural customers. Companies should build new business models, finding the efficient methods and adjusting them to the needs of the poor. Therefore, anyone that is eager to do a business in rural areas should forget about existing distribution, marketing and research concepts and use new approaches in following areas that Hammond and Prahalad (2002) have called attention to:

- *Business Models*: "Shed traditional business models developed with wealthy consumers in mind."
- *Innovative Research and Development*: "Successful product development requires a deep understanding of local circumstances, so that critical features and functionality (..) can be incorporated into the product's design (Hammond and Prahalad, 2002, pg 10) ."
- *Modernizing Distribution Channel*.

As per Chesbrough et.al, (2006) to see the importance of creating a distribution channel, it is helpful to establish its role in a business model. Authors point out that, „*In the developing world context, a coherent, locally relevant business model is critical in meeting the goal of developing profitable, sustainable markets*” Chesbrough et.al, 2006, pg 22). In turn, building a distribution channel, according to Chesbrough et.al, (2006), requires:

- enticing local entrepreneurs to invest alongside the technology to place orders, hold stock, break bulk, and make deliveries to often remote locations;
- making sure that supplies needed are available within the country;

- training would-be entrepreneurs and helping them to get started;
- gaining the trust of established local entrepreneurs to franchise them and upgrade their standards of quality in manufacturing or customer service;
- creating original sales channels by leveraging advocates such as entrepreneurial women; and
- educating dealers and installers on new practices such as warranties.

And these are only few advices mentioned by Chesbrough et. al. (2006), that companies need to bear in mind when wanting to do business in BOP markets.

S.Shukla and S.Bairiganjan (2011) go on describing that to successfully reach the most rural villages and satisfy needs of the poorest consumers, distribution channel at the BOP must demonstrate one or more of the following nine capabilities:

- **Physical Distribution**

This involves the transportation and storage of products that are meant to be delivered to the final consumer. Rural BOP distribution channel should demonstrate minimum capabilities such as appropriate transportation infrastructure, warehousing for storage of goods, inventory control as well as appropriate packaging throughout all distribution process. These capabilities according to Shukla and Bairiganjan (2011) are most relevant in scenarios involving

- physical products that are essential for delivery of the value proposition;
- special packaging or sorting requirements;
- unique storage and transportation requirements, for example, for ice cream, vaccines.

- **Promotion**

It involves creating and spreading compelling product proposition to the end customer in order to inform and persuade a potential buyer's purchase decision. According to authors a prospective rural BOP channel should demonstrate following capabilities:

- Ability to develop powerful information flow which is easy to understand by the rural poor and stimulates their purchasing decisions
- Ability to access mass media platforms, social events, etc.

Promotion is most relevant capability in scenarios involving:

- ✓ New product introduction
- ✓ Differentiating a product
- ✓ Increasing demand for an existing product by creating customer pull
- ✓ Presenting product-related information to customers and other stakeholders

- **Credit and financing**

The credit capability in the process of distribution involves helping end customers to have access to financial products and services in a manner that is acceptable, convenient, continuous, flexible and affordable in order to make products more accessible and affordable. According to authors credit capability is most relevant to discretionary products that are priced in a mid-to-high range.

The financing capability in the process of distribution involves access to alternate sources of capital in order to ensure proper functioning of channel operations as well as ability to exploit manufacturers and /or producers promotional schemes and offers and is relevant to all products.

- **Post-Sale Services**

It involves all support services, such as servicing and repair, provision of information, product fulfilment, provided to the customer to ensure maximizing uptime, extended product life cycle and smooth functioning. This capability according to Shukla and Bairiganjan (2011) should demonstrate:

- Ability to optimize facility location and provide rapid product fulfilment, laying the groundwork for a post-sales program that consistently meets customer demands
- Ability to accurately manage inventory and establish control through integrated capabilities supported by technology and operational processes
- Ability to map out the longevity of a product and/or its parts to plan for maintenance and predict repair cycles
- Ability to execute repair/fulfilment and continuous outreach that end users are provided with any help they need after purchase of the product.

Post-Sale Services is most relevant capability in scenarios involving:

- ✓ Products with relatively high degrees of technical complexity and maintenance requirements
- ✓ Products requiring other complimentary (usually consumable) products for their normal functioning

- **Information**

It involves having necessary information and research about the market, population, behavioural patterns etc, as well as necessary skills for data analysis to get meaningful insights. This capability is most relevant for differentiated non-commodity products and services.

- **Contact**

Shukla and Bairiganjan (2011) inform that contact is the set of activities that involve finding and communicating the value proposition of an offering to the potential buyers. According to authors a prospective distribution channel at the BOP should demonstrate following capabilities:

- Regular physical outreach or branding presence with target customers in their local areas
- Access to local intermediaries, village level entrepreneurs (VLEs) and opinion leaders with deep understanding of pathways to influence rural individuals, households and enterprises

Contact is most relevant capability in scenarios involving offerings that are not essential for survival needs.

- **Matching**

It involves ability to fit and match the offering to the needs of the customer. It includes activities like assembling and packaging, grading and manufacturing. Distribution channel at the BOP should demonstrate following capabilities:

- Ability to understand and adapt manufacturers or producers offering to the needs of different customer segments
- Ability to have access to infrastructure and supplementary products in order to serve end customers' latent needs

Matching is most relevant capability in scenarios involving customizable products where modification of the product is needed in order to suit end customer requirements.

- **Negotiation**

It involves negotiating of the price and other terms to reach the level of acceptance in the eyes of customer in order for a purchase to take a place. Distribution channel according to Shukla and Bairiganjan (2011) at the BOP should demonstrate following capabilities:

- Access to local marketing intermediaries that are capable of engaging the end customer in a product and pricing information related dialogue
- Knowledge of end customers' product alternatives, walk-away positions and zones of possible agreement
- Ability to communicate long-term vs. short-term tradeoffs among alternate choices to the end customer

Negotiation is most relevant capability in scenarios involving:

- ✓ Customized products
- ✓ Products with relatively medium or high price
- ✓ Products for which price is not yet set.

- **Risk Taking**

It involves awareness of the business risks. Company should be able to identify and be aware of the sources of risks to the business as well as understand the product life-cycle and end customer purchasing patterns.

Risk taking is most relevant capability in scenarios involving:

- ✓ Products with changing and uncertain demand
- ✓ Perishable products
- ✓ Physical products with high inventory and transportation costs.

This chapter summarizes the key distribution capabilities MNC's need to question when entering the BOP market. Identification of key capabilities for the distribution channel will increase the possibility of successful distribution process to the poor.

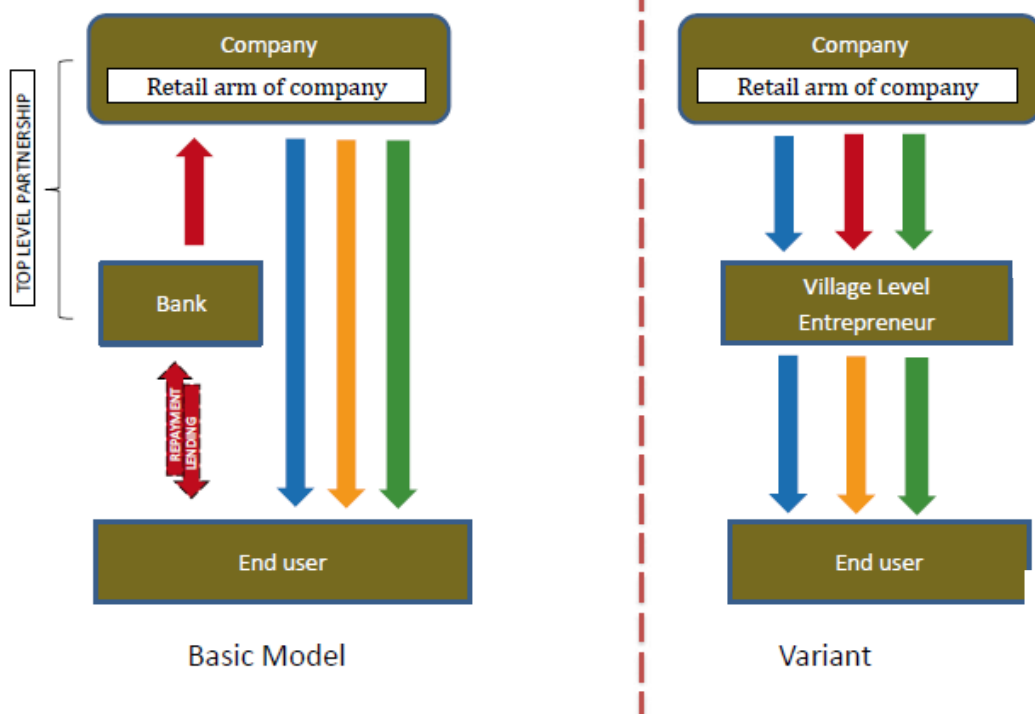
5 Market entry modes

MNC's face significant barriers when entering BOP markets in the form of insufficient formal institutions. Within BOP markets traditional partners often are unstable or in short supply (London & Hart, 2004). Therefore MNC's should consider the possible partners that could help overcome distribution challenges as well as are strong and stable players in the community.

But going deeper Shukla and Bairiganjan (2011) in their research have indentified six distribution methods to enter the rural BOP markets:

- **Proprietary Distribution**

Proprietary distribution channels and retail distribution channels are alike except that, in the case of proprietary distribution, the producer owns all or most intermediary levels to the end-consumer (Shukla and Bairiganjan, 2011). Authors specifies that "*few producers choose to develop and own their own dedicated retail distribution networks, due to the complexities and prohibitive costs related to channel development, control, monitoring and management*" (Shukla and Bairiganjan, 2011, pg 33). Authors explain that proprietary channel choice is an expensive to pursuit unless they want to distribute complementary.



Product
Promotion
Credit & Finance
Service
Information

Figure 5.1 Proprietary distribution model and its variant (Shukla and Bairiganjan, 2011, pg 34)

As we see from the basic model in figure 5.1 company or retail arm of the company reach their end customers directly. In order to make sure that end customers can afford the product they need, company provide credit using banks credit schemes. In this model banks pay to the company full price of the product or whole purchase while customers pay to the bank weekly/ monthly payments.

Proprietary distribution model as shown in figure 5.1 can deviate and instead of reaching end customer directly, company or retail arm of the company firstly reaches to the VLEs to whom it provides venture finance facilities.

- **Non-Governmental Organizations (NGO)**

According to the authors, NGO are legal entities created by a group of people with no governmental affiliation or endorsements who come together to address a social cause or a related set of social causes. They explain that NGO generate revenue and funding in the form of grants from international or national donors, membership dues, the sale of goods and services and private donations. Extensive reach of NGO becomes the primary driver for considering them as distribution partners, in spite of their limited commercial capabilities and orientation required for most products (Shukla and Bairiganjan, 2011). NGO can have decentralized structures, which can make decision-making for commercial endeavors a complicated process (Shukla and Bairiganjan, 2011).

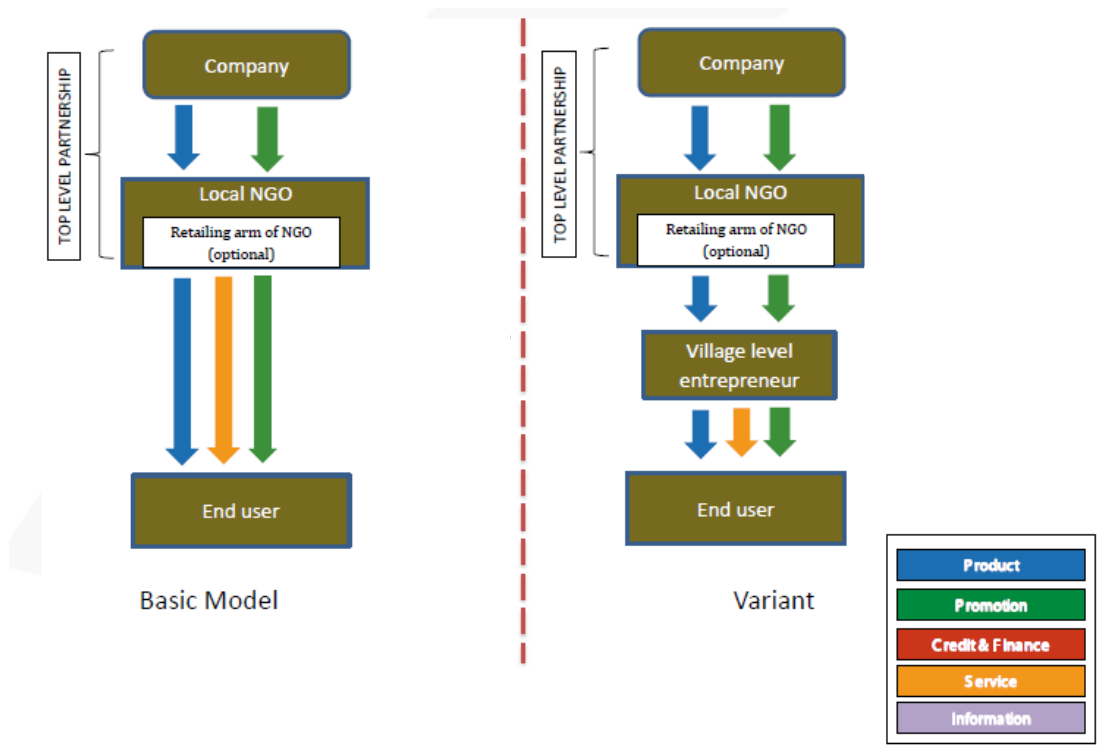


Figure 5.2 NGO distribution model and its variant (Shukla and Bairiganjan, 2011, pg 36)

NGO distribution model as reflected in figure 5.2 shows that company reach its end customers true local NGO or NGOs retail networks/outlets. NGO field staff is trained to provide end customers with post-sales services. NGO distribution models variant shows that company asks local NGO to promote and sell their products, while NGO engage VLEs to do physical distribution and promotion of the product. What is more, VLEs will provide not only

last mile distribution by finding interested customer but also will increase awareness as well as provide end customers with post-sales services.

- **Cooperatives (Co-ops)**

A cooperative is a business organization owned and operated by its members for their mutual benefit (Shukla and Bairiganjan, 2011). Authors continue by explaining that cooperatives are frequently defined as autonomous associations of people who become the joint owners of an enterprise to meet their shared socio-economic objectives. Furthermore, a cooperative is a designated legal entity owned and democratically controlled by its members (Shukla and Bairiganjan, 2011). Therefore, cooperatives share their annual earnings, divided among the members based on their participation in the enterprise (Shukla and Bairiganjan, 2011).

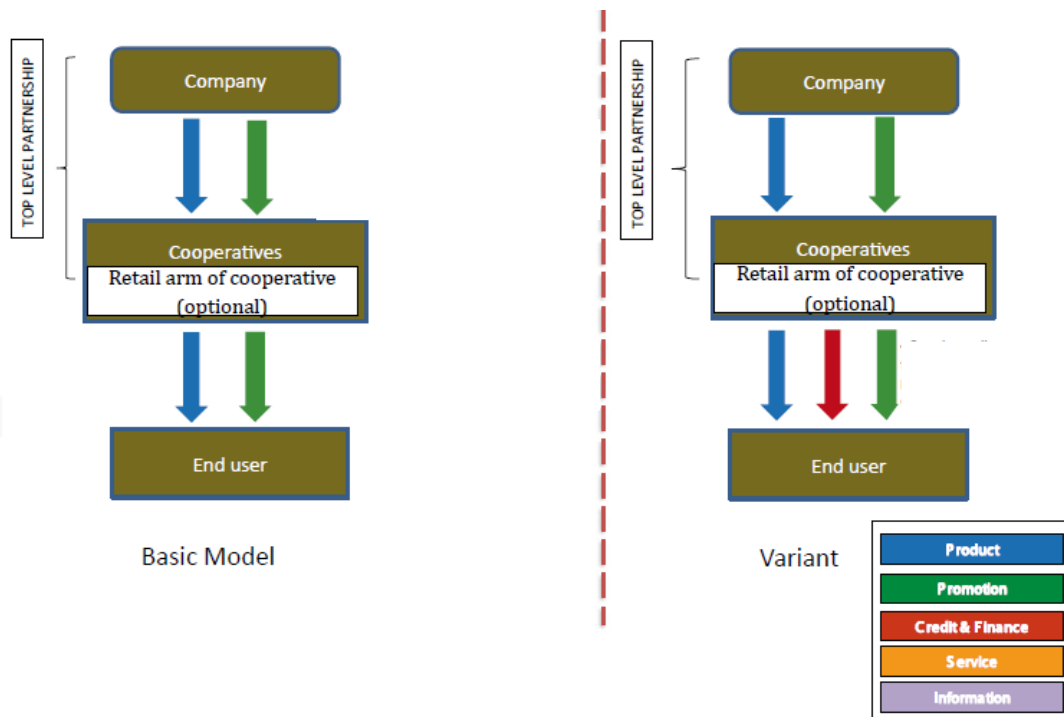


Figure 5.3 Co-ops distribution model and its variant (Shukla and Bairiganjan, 2011, pg 38)

In this distribution model, shown in figure 5.3, company sells the product to Co-ops. Co-ops members receive specialized training and information needed in order to sell and increase product awareness to the end customers through their local outlets or localities. As this model's variant shows there are certain credit Co-ops that can finance end customers in order to make product more available to those who cannot afford it.

- **Self Help Groups (SHG)**

As authors put it, a SHG is a group of micro-entrepreneurs, typically 10-15 local women, with similar social-economic backgrounds, who voluntarily come together to save regular small amounts of money individually, while also contributing to a common corpus to meet their emergency needs on the basis of mutual understanding (Shukla and Bairiganjan, 2011). They explain that SHG were initially mobilized by NGO that had broad anti-poverty objectives and have evolved to serve a variety of goals, including women’s empowerment, livelihood enhancement, and improving health and nutrition. Furthermore, the group structure of SHG reduces the transaction costs of external agents interested in dealing with large population bases (Shukla and Bairiganjan, 2011). SHG federations have extensive field presence and organizational capabilities; however this might not necessarily lead to any commercial capabilities (Shukla and Bairiganjan, 2011). Nevertheless, partnerships between private players and SHG federations have been piloted with various degrees of success across value domains (Shukla and Bairiganjan, 2011).

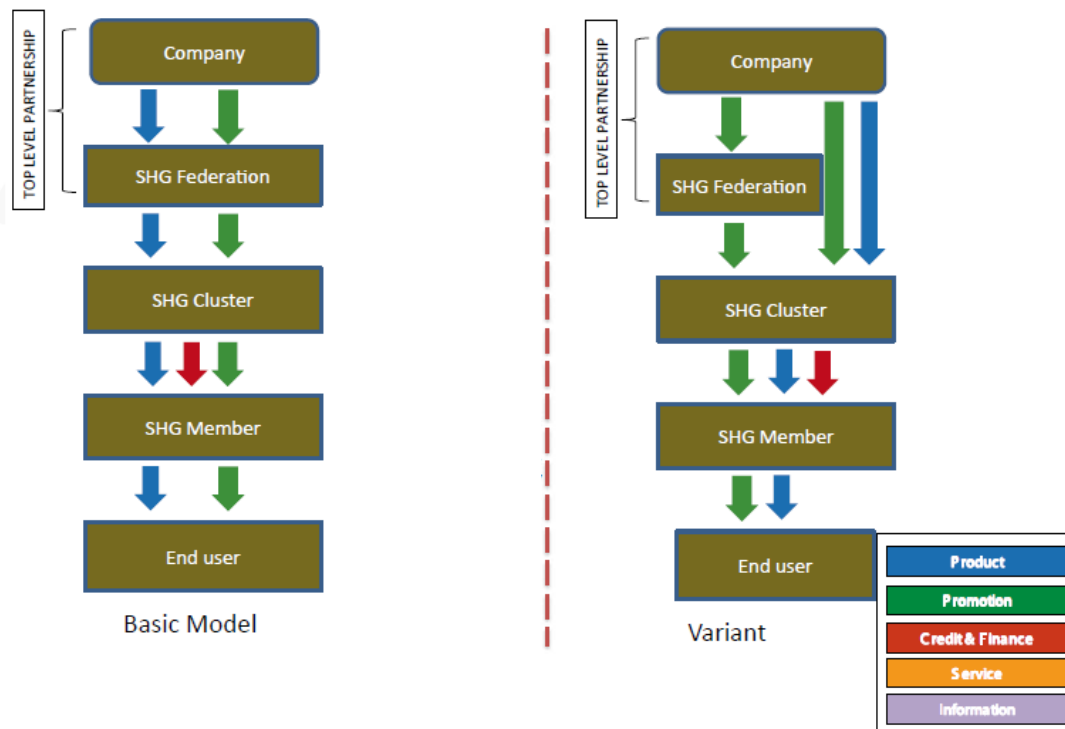


Figure 5.4 SHG model and its variant (Shukla and Bairiganjan, 2011, pg 40)

It is reflected in the figure 5.4 company sell the products to the SHG federation, and provide SHG federation members with necessary training and information. SGH federation pass the

information to the SGH clusters and finance cluster members with financial support from their own funds in terms of credit so SHG members can sell the product to the end customers, provide awareness and if necessary make product installations. This SHG distribution model can deviate and instead of training SHG federation members, company can approach SHG cluster members directly and provide them with the necessary training and products.

- **Microfinance Institutions (MFI)**

A microfinance institution (MFI) is an organization with the core mandate to provide financial services to the poor. “This very broad definition includes a wide range of providers that vary in legal structure, mission and methodology.” (Shukla and Bairiganjan, 2011, pg 44). Many new players in microfinance have large existing branch networks, vast distribution capabilities, and the ability to make significant investments in technology that could bring financial services closer to their clients (Shukla and Bairiganjan, 2011). Increasingly, links among different types of service providers are emerging to offer considerable scope for extending financial access (Shukla and Bairiganjan, 2011). They explain that MFIs and corporations have realized that the relationships, channels and infrastructure created for micro-credit can now be leveraged for delivery of services beyond credit. Thus, this will bring greater choice and value to the end consumer while opening vast new markets to corporations in a manageable and cost-effective manner (Shukla and Bairiganjan, 2011). The outreach, growth rates and financing capabilities of MFIs make them attractive distribution partners; many MFIs have already experimented with leveraging their strengths for pushing mobile phones, solar lanterns, improved cook stoves and white goods into BOP markets (Shukla and Bairiganjan, 2011). However, according to the authors, such experiments have faced significant challenges in the field and have struggled to scale beyond the pilot stage. They highlight that while MFIs continue to hold a significant position in the debate for alternate distribution channels for rural BOP customers, most product partnerships have been attempted without an organized effort to match the kind of products with MFIs’ unique distribution capabilities.

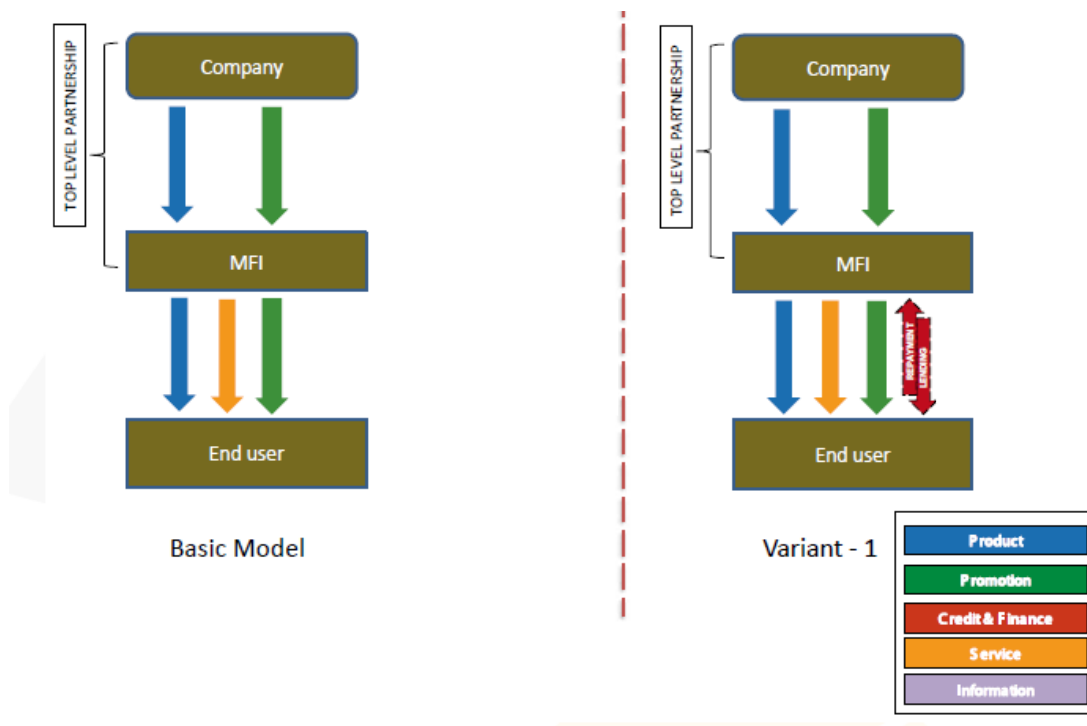


Figure 5.5 MFI model and its variation (Shukla and Bairiganjan, 2011, pg 43)

MFI distribution model shown in figure 5.5 informs that company sell its products to the MFI and provide its staff with necessary training and information as well as make sure that staff will be able to provide after sales services. MFI, in turn, educates and rise product awareness amongst the customer base. MFI provides its customers with loan through its loan officers or other staff members. MFI distribution model comparing to other models discussed earlier can have several variations, in this paper we will discuss only one variant.

- **Rural Retail**

According to the authors rural retail consists of multiple players: wholesalers or distributors acting as intermediaries and retailers acting as last-mile touch points to the end customers.

Wholesalers/Distributors: Wholesale or distribution is responsible for the resale of goods or merchandise to various market players like retailers, industrial users, commercial entities, or even to other wholesalers and related subordinated services engaged in distribution (Shukla and Bairiganjan, 2011). They proceed explaining that apart from their physical distribution role, wholesalers and distributors also frequently assemble, sort and grade goods in large quantities to repackage and redistribute in smaller lots. Traditionally, wholesalers and

distributors are located closer to the markets they supply than to the source of products. Wholesalers and distributors typically carry a bouquet of products supplied by multiple producers (Shukla and Bairiganjan, 2011).

Retailers: “Retailing consists of selling products and services from a fixed location, such as department stores, boutiques or “kirana shops”, in small or individual quantities for direct consumption by the consumer” (Shukla and Bairiganjan, 2011, pg 45). Authors explain that a retailer buys goods and products in large quantities directly from manufacturers and producers or via wholesalers, and then sells them in smaller quantities to end customers (Shukla and Bairiganjan, 2011). Retailing might also include subordinated services, such as delivery. Marketers consider the process of retailing as an essential part of their overall distribution strategy (Shukla and Bairiganjan, 2011).

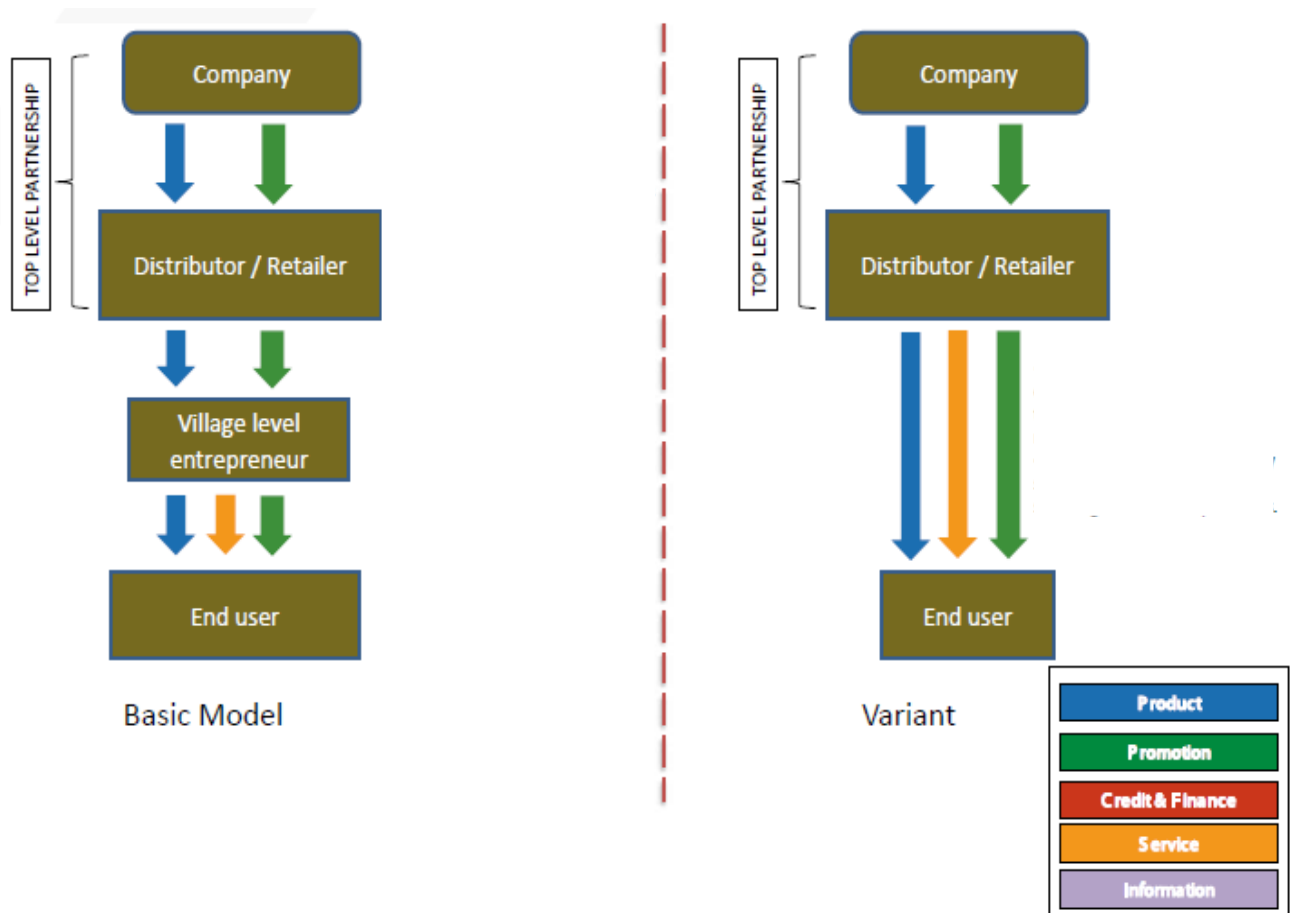


Figure 5.6 Rural retail distribution channel and its variant (Shukla and Bairiganjan, 2011, pg 46)

In this distribution model (see figure 5.6) company approaches locally available distributors/retailers and agree with them that distributors will include companies' products in their product portfolio and will promote and sell companies products. Distributors/retailers in turn, work in close collaboration with VLEs that promotes and distributes the products. VLEs reach most rural areas, increase awareness of the products, find costumers that are interested in the product, if necessary make installations and later provide post sales services. In alternative model distributors/retailers directly engage with end customers through their existing retail network and outlets.

Authors conclude that manufacturers and producers are susceptible to fall into the trap of assuming that their role is complete once their products have been pushed to the first link of the distribution chain. However, they highlight that each member in a distribution network is undertaking a part of the responsibility. If MNC's that target BOP markets truly desire to be market-oriented, they must develop the ability to manage all factors of channel from the beginning until the product is available to the end customer. Shukla and Bairiganjan (2011) point out that this will not be easy for most small players as finding the most suitable distribution partner might come at a substantial cost, increasing the importance of analysis of possible partners' complete distribution capabilities and comparison with the product offerings' unique channel requirements. *"For producers of rural-targeted BOP products, the distribution channel decision is crucial to successful product adoption."* (Shukla and Bairiganjan, 2011, pg 48)

According to the authors *"Spending sufficient time researching and experimenting with rural distribution choices before diving into the rural BOP markets can help large, medium and small companies prevent unnecessary crash and burns"* (Shukla and Bairiganjan, 2011, 49). Attempts to do it all alone will be difficult for manufacturers and producers who are better off focusing their energies on their core competencies and forging relationships with suitable partners (Shukla and Bairiganjan, 2011). Authors point out that the cost of using intermediaries to achieve wider distribution is theoretically lower. If the suitable opportunity presents itself, collaborating with existing players who have ready touch points in BOP markets can provide manufacturers and producers with key strategic advantages (Shukla and Bairiganjan, 2011).

6 Distribution requirements of Consumer Durables for BOP markets

MNC's that are interested in entering Africa's BOP markets must define product characteristics to meet distinct market and distribution requirements at the BOP. In other words, companies entering BOP markets must identify certain distribution requirements of the products they are going to introduce to the rural poor customers as well as distribution model and its capabilities to be able to match those requirements. Only after doing so MNC's can better understand which distribution model will be more appropriate in order to successfully fulfil these distribution requirements and overcome distribution challenges at the BOP. As a consequence, companies will be able to choose the best distribution channel and adapt marketing strategies that can be successfully handled using given channel.

All products offered to rural customers at the BOP can be categorized into five following groups:

1. Fast Moving Consumer Goods (FMCG);
2. Consumer Durables;
3. Services;
4. Agricultural Inputs – Consumables;
5. Agricultural Inputs – Durables.

Each product group requires individual and unique distribution approach as the product and therefore channel characteristics differ from one product to another. Shukla and Bairiganjan (2011) have come up with a distribution capability gradient defined in table 6.1. Earlier in the paper I discussed different capabilities that distribution channel should acquire in order to be able to handle products for BOP markets. These capabilities mentioned in chapter 4 are applied to the five product groups mentioned above. This same capability gradient is being used throughout this research.





Legend	Distribution capability gradient	Capability requirement of different product classes	Available capability of different distribution channels
	High	Good distribution capability is required	Good distribution capability exists
	Medium – High	Favorable distribution capability is required	Favorable distribution capability exists
	Low – Medium	Unfavorable distribution capability is acceptable	Unfavorable distribution capability exists
	Low	No distribution capability is acceptable	No distribution capability exists

Table 6.1 Distribution Capability Gradient (Shukla and Bairiganjan, 2011, pg 12)

But before analyzing distribution channel capabilities that are necessary to acquire in order to do successful distribution to the BOP markets, let's understand what energy products are. Energy products are subgroup of products under consumer durables group. Consumer durables are products that are manufactured for long-term use and usually are used for several years or even longer before the need to change them appears. Nowadays every household have variety of consumer durables used in daily life, such as furniture and appliances or energy products. In developed markets energy products often are sold with warranty repairing or additional service pack, that enable to use the product for several years. Energy products include ovens, toasters, cookers, water heaters, TV, grinders, toasters, etc. Energy products for BOP markets are not that sophisticated as products offered in developed countries' markets, they are simple to use and understand, usually instead of electricity using other means, such as solar energy, charcoal, fuel etc. Therefore in context of this paper I will talk about consumer durables and energy products as such and examples of them include solar lanterns and cook stoves.

For the companies producing and distributing consumer durables it is important to identify efficient marketing scenarios. Choosing the right marketing scenario can facilitate the mapping of essential requirements for a rural BOP distribution channel. Shukla and Bairiganjan (2011) have summarized these requirements in the table 6.2 below:











Scenarios/Requirements of Consumer durables	Applicable
Physical distribution	
Physical product (not service) is involved and is essential for delivery of the value proposition	Yes
Special packaging or sorting requirements	No
Unique storage & transportation requirements	No
Promotion	
New product introduction	Yes
Differentiating product	Yes
Increasing demand for existing products by creating customer pull	No
Presenting product related information to customers as well as other players	Yes
Credit	
Discretionary products priced in a mid to high range	Yes
Financing	
All products and services	Yes
Post-Sales Services	
Products with relatively high degree of complexity & maintenance requirements	Yes
Products requiring other complimentary (usually consumable) products for their normal functioning	Yes
Information	
Differentiated (Non-commodity) products & services	Yes
Contact	
Absolute requirement for all offerings which are not essential for immediate survival needs	Yes
Matching	
Customizable products where alteration (by design) of product attributes is required to suit customer requirements	No
Negotiation	
Customized products	No
Products for which price discovery mechanisms are not already established	No
Products with relatively medium to high price points	Yes
Risk Taking	
Products with uncertain demand	Yes
Physical products with significant transportation and inventory cost	No
Perishable products	No

Table 6.2 Distribution Requirements of BOP consumer durables (adapted approach form Shukla and Bairiganjan, 2011, pg 15)

Based on the table above, there are six critical distribution capabilities that are essential for distribution of Consumer durables to rural BOP markets and two secondary capabilities that are important, but not that critical when identifying marketing strategy for rural distribution and therefore can be summarized as follows:

Critical:

1. Physical Distribution
2. Promotion
3. Credit and Financing
4. Post Sales Services
5. Information
6. Contact

Consumer Durables therefore energy products as well can be easily distributed true channels where Physical distribution, Promotion, Credit and Financing, Post Sales Services, Information and Contact are essential part of distribution process, but Negotiation, as the prices of energy product usually are medium high or even high and Risk taking capabilities are low. Whereas Matching capability does not play any role in the distribution process.

As discussed in chapter 5 there are numerous entities, such as government and non-government organizations, banks and micro finance institutions and others that can take part in distribution process to the BOP markets. As it was stated in chapter 4, no matter which entity is targeting BOP market and rural poor as customers it is very crucial to already have some framework on how to access rural poor customers (Contact capability) as well as to have means, financial viability for a project, to be able to make independent decisions (financial capability).

As the authors have done research based on India's market examples and analyzed companies doing business in India, in my further research I will investigate if the same framework used analyzing distribution channel capabilities can be applied and used by companies that want to do business in Africa. In chapter 7, I will analyze Toyola Energy Ltd. that produces and distributes energy efficient cook stoves to the rural poor in Africa. After extensive analysis of the Toyola case, I will compare the result, which will include the capabilities that Toyola finds critical when distributing to the poor, with ones that Shukla and Bairiganjan have come up with in table 6.2, chapter 6.

7 Case study

As discussed earlier it is crucial for any company to have contact and financial capabilities in place before they are even considering entering BOP market with the goal to target rural poor customers and reach into very remote parts of the countries to serve as much poor customers as possible. It is also discussed that single distribution models in the BOP markets is not an answer to the problems MNC's face when entering challenging BOP markets. In most of the cases, as it is shown in chapter 5, hybridized approaches or even approach of using several distribution models are used in the BOP markets in order to overcome distribution challenges such as transportation, warehousing or promotion. To use hybridized distribution approach means that company leverage and adapt several key aspects from different distribution models in order to more efficiently reach their target customers at the BOP. Company targeting BOP markets, for example, can enter into partnership with non-profit organization in order to have financial means and information that is necessary to start up the business, then with the help of MFI, provide financial means to the customers, for them to be able to buy companies products, and with the help of NGO distribute the products to the customers. These hybridized distribution approaches incurs less costs as they use those capabilities that partners have expertise.

The case of Toyola Energy limited was chosen based of following criterias:

- Company have implemented innovative business model that have ensured successful business in the energy product sector for already 6 years.
- Company produces and distributes consumer durable products to the urban and rural poor, even to most dispersed areas of Ghana.
- Company produces and distributes energy efficient cook stoves and accounts for positive environmental, economic and social effects.
- Company involves poor people throughout whole value chain as manufacturers, distributors, retailers and customers, thus improving the lives of the poor.

7.1 Toyola Energy Ltd. Company background

Toyola Energy Ltd. (Toyola) is a limited liability company that was established in 2006 in Ghana by two Ghanaian entrepreneurs Suraj Wahab and Ernest Kyei. In 2002 they were part of EnterpriseWorks Ghana project. United States Agency for International Development (USAID) sponsored the project of 78 artisans who “*were trained to produce fuel efficient cook stoves to help minimize the rate of deforestation and carbon dioxide emissions in Ghana*” (Osei, 2010, pg 9). After a project, in 2006 Suraj and Ernest with assistance of the Kumasi Institute of Technology and Environment (KITE, Ghana) developed a business plan and started the business.

The company produces and distributes solar lanterns and energy efficient charcoal stoves for users in the urban and rural parts of Ghana (Osei, 2010). Founders of Toyola have implemented an inclusive business model that includes the poor people at the BOP along the whole value chain. The poor take part in Toyolas’ business as “*suppliers, manufacturers, retailers and customers*” and therefore are drivers of positive social, economic and environmental effects (Osei, 2010, pg 2). In the beginning, by selling three thousand cook stoves a year, the company was able to attract international non-profit organization E+Co which provided a loan for the purchase of Toyola’s first track as well as gave possibility to grant credit to the companies’ distributors and customers, which in turn boosted sales. By doing successful business and receiving help from several non-profit organizations Toyola now is expanding in other African regions and since 2008 has entered into solar business by selling solar lightning products to the poor people at the BOP.

Product/technology

Toyola focuses on producing and selling four types of energy efficient cook stoves (two household stoves and two restaurant stoves) in urban and rural parts of Ghana. Parts for stoves are made and assembled using local manufacturer expertise and materials that are available locally, for example, fired clay liners and scrap metal. The Toyola cook stoves are fitted with a ceramic liner to improve stoves fuel efficiency by 50% (Osei, 2010). As other stoves, the Toyola stoves use charcoal, but due to technological improvements they consume less and are 40% more efficient than traditional cook stoves (Osei, 2010). As

people using Toyolas cook stoves use less charcoal, they save money as well as lower air pollution by reducing carbon dioxide emissions.

Toyola has set price depending on the size of cook stoves from 12 up to 20 GHC (7-12 US\$). Pricing policy also defines 2 GHC premium (1 US\$) for payment on credit and 2GHC premium that covers extra distribution costs when product is sold in very remote parts of Ghana. Toyola is very flexible in terms of credit as the company does not ask any down payments and allows paying back the money over a period of some weeks to few months. They are allowed to pay back placing the payments in the “Toyola Money box” (a simple box), that agents will collect on their next visit (Osei, 2010). If properly used Toyola cook stoves usually lasts for 3 to 5 years, but in case if ceramic liner breaks, company offers to replace it. Company provide a 6 months warranty to all types of cook stoves.

7.2 Toyola Business model

Toyolas’ business model is designed in a way that encourages individuals that takes part in companies’ value chain to specialize and, after choosing their niche, work for themselves in the manufacturing and distribution process of the stoves.

According to Osei (2010) founders of the company, Suraj and Ernest, have named three key ingredients in the company’s business model:

1. **Increased specialization:** The business model includes various manufacturers as suppliers of stove parts (Osei, 2010). As productivity of the process when manufacturing cook stoves was low, over time, company realized that it is necessary to increase specialization in the value chain. Therefore company changed their approach and made sure that manufacturers specialize on a certain part of the stove. In other words, manufacturers were not producing the whole cook stove themselves anymore. With this approach company increased the efficiency of work which led to increased productivity. With this approach company was able to produce thirty cook stoves a day instead of five initially.
2. **Incentives:** Toyola designed the manufacturing process in a way that the people included in the value creation are offered incentives (Osei, 2010). “[*The manufacturers of*

the stove parts] work for themselves and so the more effort they put in the more money they make,” confirms Suraj Wahab (Osei 2010, pg 10). Company also offers its manufacturers incentives for training apprentices to produce cook stove parts. To keep this incentive going company pays extra money for the parts that are produced by manufacturers apprentices and daily allowances of 6 GHC (4.16 US\$) to each apprentice over a period of three months. Thus, Suraj and Ernest state that all benefit from these incentives: *“the manufacturers profit from an increased income, the apprentices receive a salary as well as a three-month long training that enables them to become selfemployed manufacturers, and Toyola benefits from being able to provide larger quantities of production”* (Osei 2010, pg 10).

3. **Pre-financing operations** throughout the value chain: Toyola has subcontracted local market vendors who very often use possibility to purchase the cook stoves on credit and sell these stoves in their shops. By doing so, company is expanding its distribution base and avoiding the need to increase their staff. Again, this is a win-win situation for both parties as vendor, by taking the stoves on credit, minimizes his/her risks and also does not have to anticipate the costs, but Toyola has access to a larger distribution network at low costs (Osei, 2010).

Toyola has implemented business model that includes the poor people along the whole value chain. Poor people participate in value creation of the company as suppliers, component and metal frame suppliers, stove manufacturers and assemblers as well as retailers and end customers. As the number of end users is rapidly increasing Toyola is turning more attention and effort at training more artisans and engaging poor people in the value creation. As the scrap metal is one of the most important component of cook stoves Toyola makes sure that stoves are manufactured by three categories of artisans namely, the component suppliers, the metal frame suppliers and stove assemblers (Osei, 2010). In the end of stove's part production, parts are sold to Toyola to be assembled by artisans that has specialized in assembling the cook stoves. Implementing and using this business model has helped Toyola to have over 300 artisans, manufactures and sales people in its value chain, from who only five people are employed and receives salary from Toyola. Toyola employs two drivers, two office assistants and one secretary. All other participants in value chain are trained artisans that were encouraged to be self-employed. Thus, these artisans are not limited to fixed salary, but their income is based on their performance and output. Toyola is supporting the

communities by using different incentives. These incentives local manufacturers see as a possibility to earn some extra income for their families. Company has implemented various forms of employment for the people at the BOP. Toyola following its strategy buy all stoves or stove parts from local manufacturers, thus encouraging entrepreneurship not only among manufacturers, but also among retailers (Osei, 2010). By implementing this successful business model company was able to produce and sell 20 000 cook stoves in the first year and 40 000 stoves in 2009, although their projection was 6 000 and 30 000 cook stoves respectively.

Toyola has five production centres in Ghana and they are, Achiansa (the biggest) in the Eastern region, Kumasi in the Ashanti region, Tamale in the Northern region, Watren in the Upper West region and Sarpeiman in the Greater Accra region (Osei, 2010). They also use sales depots, that are located throughout the country, and component production centres in Asamankese and Akosombo both in the Eastern Region of Ghana (Osei, 2010).

Toyola stoves are often sold to retailers in urban areas as well as distributed to the retailers in more rural areas of Ghana. Toyola has implemented a system where rural poor people as well VLE can buy the stoves on credit with 20% down payment. Company expects people to pay for stoves with the savings they make from using less charcoal (Osei, 2010). Company does not specify the pay back terms or timelines for payments. There has even been a situation where company gave out the stove on barter terms. But for the stoves given out on credit company asks higher prices. For instance, medium-size stove is sold in a price range of GHC 7.00 and GHC 9.00 (4.86 US\$ and 6.25US\$ accordingly). Therefore those who choose to buy cook stove on credit pay higher rates.

7.3 Distribution models

As it was explained previously, Toyola trains manufacturers that produce different parts of cook stoves and then delivers these parts to the production centres where manufacturers specialized in the assembly of the stoves put them together. Then Toyola collects the stoves from 5 production centres in Ghana or from ones in Togo, Nigeria or in Benin and Toyola's value creation cycle is completed only when their products are in the hands of end customers. To successfully reach end customers and cover larger sales network, Toyola has established several distribution channels.

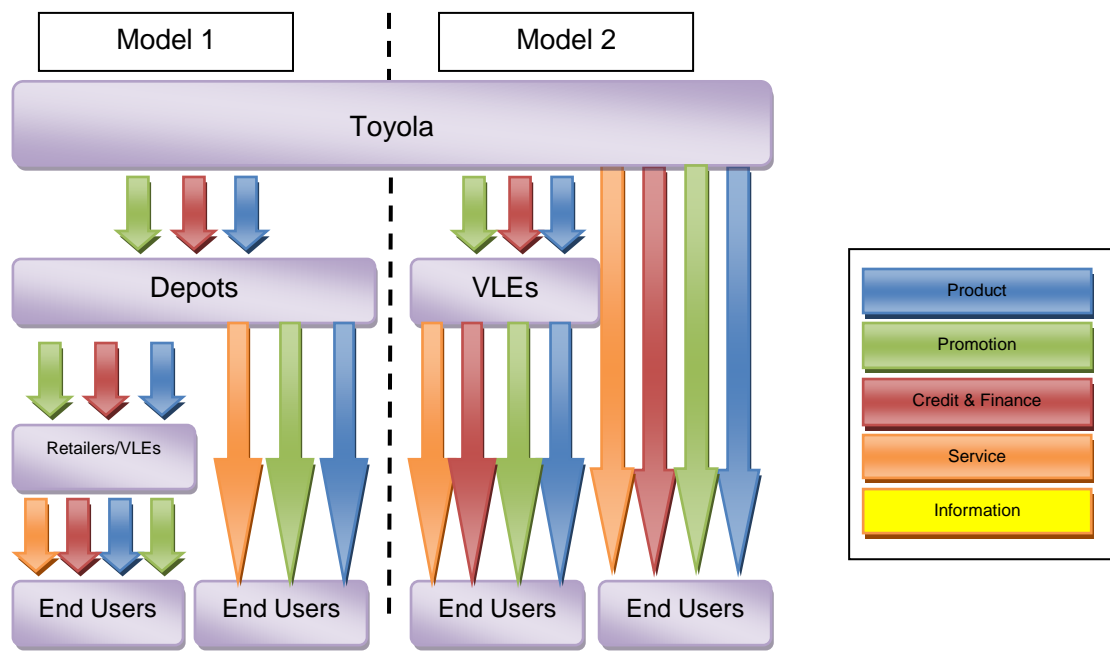


Figure 7.1 Toyola's distribution model

Model 1. Toyola owns vans and trucks that deliver the stoves to the depots located all over the country. These depots are located in more urban areas of the country. Depots, in turn, are responsible to supply local retailers and VLEs that are interested in selling the cook stoves. As depots are located in more urban parts of Ghana they also sell directly to the end users in urban areas. This approach helps to cover wider Ghanaian populations – urban and rural. Company also have implemented so called “Mobile production teams” that take the stove parts to a more distant places of the country where they know there is enough demand and build the stoves on the selling site therefore making sure that the costs of delivery of cook stoves will be as low as possible. This approach allows transporting approximately three times more stoves in parts than finished products per vehicle and thus limits transportation costs (Graf et. al., 2013). Then Toyolas’ agents collect the stoves at production sites or depots and distribute them in peri-urban areas through local retailers, but in rural parts of country through direct delivery.

Company provides capabilities such as product and promotion throughout all distribution networks, starting from company itself finally to the local retailers, VLEs and end customers. Credit as capability is offered only true the one leg of the channel which includes depots, retailers and VLEs and rural people as end customers. Company does not give out loans as

such but instead give the stoves on credit. Toyola has not implemented this approach to the other leg of distribution network where the stoves are sold to the end customers true depots. It is due to the fact, that depots are located in more urban areas of the country and therefore customers are more situated than the people at the rural parts of the country. But service capability is offered only to the end customers in the rural parts of country true VLEs or retailers and in urban parts - true depots.

Taking all this in an account, I can conclude that company is using Rural retail distribution channel, but has adapted to the specific needs of country, customers and market environment.

Model 2. Mobile delivery system – direct delivery. This system operates so it can reach the remotest parts of the rural areas and sell cook stoves to end users that otherwise could not have access to the stoves. Therefore, using this distribution model company sells the stoves directly to households or VLEs in very remote parts of the country. Toyola uses all means they have to reach these customers, therefore as the first step they reach VLEs to whom they provide product, promotion and credit capability. VLEs, in turn, deliver these capabilities to the end users. VLE's also are responsible to change the broken ceramic linings to new ones within the first 6 months after sales, therefore it also delivers service capability. As the other leg of this distribution channel company true their sales agents reaches end customers at the most rural areas of the country. These sales agents use all possible means of transportation and deliver all five capabilities to the end customers.

In this case Toyola has implemented Proprietary distribution channel. Toyola in this case owns all intermediary levels of distribution to the end-consumer. Although this distribution model could seem expensive in the beginning, Toyola has implemented a approach of using incentives that perfectly reduces costs of hiring sales people. Sales agents instead of salary receive a 10 % commission on each product sold. Companies' estimates show that 50% of sales are done by these VLEs while the rest is done by the companies' salesman (Osei, 2010). In beginning of 2012 Toyola had trained 30 key sales agents that serve both rural villagers and retailers. Very often satisfied cook stove customers spread the word in their local communities, aggregate orders or even collect the money from all new clients, thus simplifying the work of the marketer-distributor (Graf et. al., 2013). As soon as customers themselves have brought 10 new clients to the company's business, they officially become

“evangelists” and are paid for their effort by getting a new cook stove or 1 GHC per stove sold.

Recordkeeping of sales

Toyola working together with E+Co, non-profit company that provided funding for the Toyola project, has implemented an application called ASSIST to develop an SMS-based recordkeeping system for their stove sales (TheBenedict, 2009). With the help of ASSIST rural entrepreneurs and evangelists can use fixed SMS message based template to update information on a sales database about their individual sale directly from the field. The ASSIST originally was designed primarily to track sales for carbon recordkeeping. But as it turned out it also offers limited supply chain management and back office functionality, as it also helps to keep track of the distribution of the stoves as well as calculate stoves in stock, generate supply and demand equitation’s and its forecasts. According to TheBenedict (2009) messages used to track sales looks like this:

sale <user first name> <user last name> <stove serial #> <price paid> <mobile number>
<region code (0-9)> <village> <free text description>

7.4 Channel capabilities

- Physical distribution

Lack of infrastructure – Generally poor infrastructure is one of the aspects that has adversely affected Toyolas business. For example, in Achiansa, one of the Toyola production sites, where they are manufacturing ceramic linings, there is a lack of access to electricity. This has a direct impact on Toyolas business in terms of costs as local manufactures are forced to buy a generator. This leads to the fact that the costs of manufacturing ceramic linings in Achiansa are higher than when using electricity from mains in other locations.

Poor transport infrastructure is also worth mentioning. Osei (2010) in her report mentioned that Ghana is a rural phenomenon as most of the poor lives in dispersed rural areas of the country. Therefore it is very costly and not easy to reach potential clients. To ease the problem and more easily access these remote parts of the country Toyola has purchased tricycles. They also plan to purchase a boat as they believe that it will help to cover wider

distribution areas. Toyola has 11 vehicles that have capacity of 100 to even 1000 stoves each and they are available to agents that distribute the stoves. Retailers also have developed good distribution network that covers parts of the country that is not easy reachable and distribute stoves to the clients that otherwise would not have access to them.

Therefore I can conclude that physical distribution is very crucial capability for the company and their business model as without it company was not able to distribute the products to the poor people and successfully fulfil the targets set in a business plan. Company have successfully adopted the distribution channels to the specifics of Africas geographical and environmental situation and by implementing successful and innovative distribution model have overcome market constrains.

- Promotion

Low awareness level of the stove in rural areas – In the beginning within the USAID sponsored project company had an assistance of a marketing team that helped to promote and sell the stoves. Marketing team was working for three years and showed considerable success as awareness of the product and its sales increased with every year. They distributed posters to local depots, retailers and VLEs that put them out at the entrances of their shops and in the visible spots in local markets where consumer flow was very intensive. They demonstrated the stoves in action to the people to earn they trust.



Figure 7.2 Toyolas New advertisement: "Don't burn your money - use Toyola improved coal pot" (TheBenedict, 2009)

However, after the end of marketing programme, company started to show losses, although they still saw big market potential for the product. But instead of hiring new marketing team,

company started to engage local sales people across the country as they saw the potential of the local people. Company engaged in strategy to give the stoves out on credit as they saw that the one of the factors that discourages rural poor people from buying energy efficient stoves is their inability to pay outright payment at once. They based their strategy on trust to poor people which demonstrated success and enhanced their operations. Although Toyola do not advertise their products in mass media, they rely on people called “evangelists” that believe in the product, sees its effectiveness and true word-of-mouth spread the qualities of the product to others. As owners of the company states, *“we allow the vendors to offer their customers the opportunity to pay by instalments, so they can pay over a period of a few weeks or months. Word of mouth marketing helps our business sell its products – satisfied users are appointed as canvassers. We call them ‘Evangelists’ because they are believers in the efficiency of our products and they are spreading the word to others.”* (Osei, 2010, pg 17).

Therefore I can state that promotion is very important and crucial capability for energy products in Africa’s market. Marketing and promotion at the BOP is not an easy task for companies, it can be both costly and sometimes even not possible because of dispersed populations and lack of infrastructure. But Toyola has overcome this barrier by trusting people at the BOP and giving them loans, thus spreading the word-of-mouth. In this case word-of-mouth is the best marketing tool that markets the stoves itself.

- Credit and Financing

Financial constraints – Many companies entering BOP markets face several challenges where financial resources is one of them and Toyola was not an exception. Firstly, Toyola would not be able to achieve any of its success without the help and financial assistance from institutions like KITE and E+Co, who give loans to Toyola to start up and expand its business. Thus, according to Osei (2010) Toyola was able to pre-finance the operations of scrap suppliers and other production units in the various production centres across the country. It is very crucial to their business to make the finances available to the manufactures. Toyola choose to pre-finance the manufacturers *“as it helps to overcome the raw materials constraint they would face otherwise”* (Osei, 2010, pg 16). By using this key component of the business model Toyola have been able to overcome this financial constrain. Secondly, most of the sales agents and majority of end customers are in the situation where they cannot afford to pay for the product at once, which creates demand

bottleneck. Toyola has recognized this financial constrain and therefore is managing the sales to the poor end users or local retailers on credit. This greatly contributes to the Toyolas business as local banks do not offer loans to the poor people. Therefore it is true to say that *“microfinancing of the operations of the various actors in the value chain has become an important part of company’s operations”* (Osei, 2010, pg 15). Interaction between various actors, as manufacturers, suppliers and retailers, in Toyola’s value chain is largely based on trust. Therefore it is evident that Toyolas operations in the value chain have more informal nature, bureaucracy and documentation with the actors in the value chain is kept to a minimum. As the results of this business model have shown zero default rate and company is satisfied with the results, therefore company continues to pre-finances the operations of almost all the actors in the value chain.

Financial capability is one of the most important factors, which determine if company can succeed. Without own financial capital or someone that can give a loan it is almost impossible to succeed in the BOP markets as doing the business at BOP means low profit margins, expensive distribution and promotion and unstable demand.

- Post Sale Services

As stated before Toyolas cook stoves usually lasts for three to five years and company gives six month warranty to all types of cook stoves. But in case where ceramic lining breaks, company offers to replace it asking no extra cost. Exchange of the ceramic linings is done at VLE/retailers as well as at depots. From VLE or retailers linings are transported back to depots. Linings are repaired at depots in case the mobile production team is there, if not then linings are delivered back to the production site where they are taken care of. Providing post sales services to the poor end customers for free, company gains more trust in the eyes of the end customer and therefore creates better environment for word-of-mouth marketing. But, although post sales service capability has positive impact on Toyola business, its absence would not have high impact on its sales. Therefore, I can conclude that in this case, unfavourable post-sales service capability is acceptable while distributing energy products to the poor.

- Information

Toyola would not be profitable and successful without the help of number of institutions that supported the idea of energy efficient cook stoves.

EnterpriceWorks – In 2002 EnterpriceWorks together with Shell Foundation funding and USAID organized a project within which they organized training for 78 artisans on the production of fuel-efficient cook stoves (Osei, 2010). As it was stated before founders of Toyola took part in it and started the company after the project ended.

Kumasi Institute of Technology and Environment (KITE) is a non-profit organization in Ghana with operations located in Accra and Kumasi. Its objective is to facilitate the development of sustainable energy services and systems using energy efficient technologies in rural areas of the country. KITE partnered with Toyola and helps the company with business plan development which enabled Toyola to receive a loan from E+CO.

E+CO is international non-profit organization that helps small and medium size companies that supply energy and energy products to poor households, businesses and communities in developing countries (Osei, 2010). E+Co have granted three loans to Toyola that were paid back to E+Co over the five year period. Thanks to these loans company was able to purchase its first truck as well as to change the roof of a major scrap supplier's premises in Ghana.

Working together with non-profit companies has helped Toyola to start and successfully expand its business. KITE as a non-profit organization evidently had necessary market information that helped Toyola develop its business plan. Therefore I can say that information capability is crucial when distributing energy products to the BOP markets. In most of the cases companies are not familiar with financial, economical, social and political situation at the BOP, therefore it is very important to partner with companies and/or organizations that have necessary market information.

- Risk taking

Toyola has recognized its financial and operational risks and has taken actions to avoid them or minimize their impact of companies business. Company, has implemented business model “hire purchase based on trust” where the company's sales agents in the beginning of business relationship with local VLE, gives 2 stoves for free. When VLE sells the stoves, they give 5 additional cook stoves to sell. VLE receives profit of 1 GHC per stove sold. Company minimizes the risks by setting higher prices for those customers that take stoves on credit.

In this case I would say that favourable risk taking capability is necessary for energy product companies that want to do a successful business at the BOP. Companies face several risks while doing business with the poor, like uncertainty of demand of the product due to unstable income levels of the poor people. Therefore successful company should be aware of all risks and need to secure itself against them by applying smart business strategy that would minimize their impact on companies' stability.

- Negotiation

Toyola has set prices for different cook stoves (see table 7.2). And even has taken into account situation where end users would take stoves on credit. If customers take stove on credit, company increase the price of the stove. Therefore it covers the costs that could appear if some other costumers would not be able to pay back the loan. As prices for the stoves are defined and retailers receive certain percentage from the deal, it is not possible for customers to negotiate the price of the stove. Toyola also has set the prices as low as possible, therefore do not leave space for price negotiation.

Size of Cook Stove	Price for direct payment		Price for product bought on credit	
	GHC	US\$	GHC	US\$
Small	7	5	9	6
Medium	8	6	10	7
Commercial small	25	18	30	21
Commercial large	30	21	40	29

Table 7.2 Prices of Toyola fuel efficient cook stoves (Osei, 2010, pg 15)

This leads me to the conclusion that negotiation capability in the distribution process to the poor plays secondary role on Toyolas business and in energy products market in general.

- Matching

Although this capability was not considered as important for distribution model of consumer durables and according to Shukla and Bairiganjan could be left out from consideration, Toyola has seen opportunity, that satisfying needs of different market segments, will generate more revenues for the company.

Toyola offers 4 types of energy efficient stoves: small and medium cook stoves for private customers and commercial small and commercial large cook stoves for commercial customers. Commercial cook stoves are bigger than standard stoves and are more suitable for preparing food in bigger quantities. Therefore it is evident that Toyola sees and understands that although customer at the BOP is poor, he/she has different needs that shape demand of companies offering. To suit the needs of wider customer base company has an offer to several segments of cook stove market.

From the above I conclude that Toyola is using Rural retail distribution model where the distribution channel consists of multiple players, such as wholesalers or distributors (in Toyolas case – Depots), that act as intermediaries and retailers that act as a last-mile distributors and sell products to the end customers. Toyola also use Rural retail distribution channel variant where company engage directly with the distributors or retailers (in Toyolas case – VLEs) who in turn sell stoves directly to the end users. Rural retailers have means to physically distribute products to rural parts of the country and they have well adapted warehousing and storage as well as material-handling capability that perfectly suits Toyola's business model. Toyola also has implemented Proprietary distribution model, that with different means, such as tricycles, vans and trucks delivers products straight to the most rural poor customers and VLEs. And with the help of RapidSMS company can keep track of sales and, therefore are efficient in terms of inventory planning and forecasting future supply and demand. Initially company had a marketing team that successfully took care of product promotion, but after 3 years of successful marketing strategy they did not hire new marketing team. Although now company does not use any active and official marketing strategy to promote its products, they successfully promote their products with the help of so called evangelists and word-of-mouth marketing. Successful partnerships with non-profit organizations have helped to gain so necessary market information in order to develop successful business plan and later business as well. Post sales services and possibility to buy stoves on credit have positively contributed to the business.

From the above I can conclude that the goal of the company founders to have economically sustainable business as well as to provide an important social good has been reached. Company producing and selling energy efficient cook stoves help poor people to save money by using less charcoal and save environment as reduced consumption of charcoal leads to reduced levels of pollution. They also increase income and job opportunities of the poor

people by involving them in the production and distribution process. They have found the way to reach most rural regions of the country and involve people that otherwise would stay unemployed in social economic activities.

8 Analysis

The final analysis of Toyola was done in order to generate key insights out of the literature review provided in the first chapters of the paper. In particular, the analysis identifies the most critical challenges that Toyola faces producing and distributing cook stoves to the people at the BOP, and examines most crucial distribution capabilities identified in the case study. Further analysis of Toyolas distribution channel is done by introducing the reader to the distribution channel the company uses to reach its customers in Ghana. During the literature review I discovered that there is a very limited research done on the models used to distribute consumer durables to the BOP consumers in Africa. Finally, in order to answer the central research question I used extensive research done on distribution models in India and by exploring their structure tried to identify if the same distribution models could be used when distributing consumer durables in Africa. Therefore, Toyolas distribution channel was compared with the distribution channels used by companies in India (chapter 5). From this comparison, I was able to identify the distribution channels used by energy companies at the BOP in Africa and give an insight for MNC's on how to successfully enter challenging African markets.

MNC's that have plans to do business at the BOP and distribute products to the rural poor should be aware of distribution requirements of the products and distribution model capabilities to match these requirements. Based on these requirements, they should decide which approach to reach the BOP customers. Therefore, as it is shown in table 8.1 below, Shukla and Bairiganjan made the assumption that the distribution models for consumer durables should involve and exploit distribution capabilities such as physical distribution, promotion, credit and financing, post sales services, information, matching and contact. They assumed companies should not prioritize negotiation and risk taking capabilities as they have low influence on successful distribution of consumer durables to the people at the BOP.



















Distribution Capabilities	Shukla and Bairiganjan business model capabilities for India's consumer durables	Toyolas business model capabilities in Africa
Physical distribution		
Promotion		
Credit and Financing		
Post Sales Services		
Information		
Contact		
Matching		
Negotiation		
Risk taking		

Table 8.1 Comparison of distribution capabilities for distribution model in India vs. distribution model in Africa

As the table 8.1 above reflects, there are considerable deviation in the set of capabilities mentioned by Shukla and Bairiganjan and the outcome of my research. Physical distribution, promotion, credit and financing, information and contact are very crucial capabilities when choosing right distribution model for consumer durables both in India and in Africa. Authors of this approach also mentioned that energy products can be distributed through the channels where negotiation and risk taking as capabilities are low, whereas I found that energy products can be distributed through channels that require favourable risk taking and

matching capabilities, require less favourable post-sales services capability. Africa's example also showed that negotiation does not play that important role, but it is very favourable to consider these capabilities and can be not considered. In turn, Shukla and Bairiganjan approached showed that matching is a capability that does not play a pivotal role in the distribution process for consumer durables at the BOP. As research shows, company entering BOP in Africa and implementing good financial plan, avoids uncertainty of product price determination and thus do not even need to consider negotiation capability as a part of the business model.

In addition, a careful and extensive analysis of Toyola's distribution approach, I realized that matching is a capability that is advantageous if a company wants to diversify the risks and introduce the product/products to the wider consumer range. Customers at the BOP do not reflect homogeneity in their purchase intentions; their needs are unique from the segment to the segment and require alteration of product attributes. In Toyolas case it was the size of the cook stoves – the company produces four different cook stoves for two customer segments, for commercial and non-commercial customers to meet the needs of bigger populations and gain bigger market share.

Moreover, It was also assumes that negotiation and risk taking capabilities are playing trivial role in the distribution process to the poor as consumer durables usually are not perishable, they do not require special distribution requirements, they do not involve significant transportation and inventory costs and the price of consumer durables is defined. During the case analysis, I discovered that Toyola has already established a pricing system for all cook stoves it offers. It also has set defined prices for those who buy cook stoves at once and to those who use credit, thus not leaving space for price negotiation. Therefore, it is obvious that negotiation is not crucial capability for successful distribution of consumer durables, but only in case, if the company has established a pricing system that already determines the prices for their products. While risk taking, as Shukla and Bairiganjan predicted and stated in their research, has a favourable impact on business, as it is obvious that detecting risks and securing companies activities against them is very crucial requirement especially in very changing environment as it is at the BOP.

Distribution models

Shukla and Bairiganjan identified the following distribution methods to enter the concerned markets: proprietary distribution, non-governmental organizations, cooperatives, self-help groups, microfinance institutions and rural retail. Later by analyzing Toyolas case, I discovered that the company uses two models identified in Shukla and Bairiganjan's research. Toyola is using very similar approach to enter BOP markets in Africa as companies do when entering BOP markets in India. In the figure 8.1, I have reflected two Toyola's distribution models, but in figure 8.2 and 8.3, rural distribution channels and proprietary distribution channels both used in India's BOP market. It is obvious that there are few differences, but in general, the distribution models used in Africa and India have the same characteristics and are comparable.

Based on the information found in several literature sources and Toyola's case studies I have developed Toyola's distribution model that the company is using to sell energy efficient cook stoves. As it is possible to see in the figure 8.1, Toyola has implemented two distribution models, thus it allows serving larger BOP populations. In model 1 Toyola distributes the stoves through depots, local distributors, that are reselling the stoves to the various market players like retailers, industrial users and even other wholesalers and end customers as well, therefore covering more urban areas of the country. Toyola even uses some depots as places to assemble the stoves and after sales services, like changing of ceramic lining. From these depots or wholesalers, Toyola reaches final (mainly urban than rural) customers as well as the VLE that in turn sells the stoves to the most rural parts of Ghana. Throughout the distribution process, Toyola makes sure that the physical distribution and promotion of the product is in place. Toyola in the distribution model 1 also offers credit, only example is when depots are serving end customer. In this case, depots sell to the customers in more urban parts of the country where clients have higher income levels and do not require additional financing. Otherwise, Toyola offered credit throughout the distribution chain to the rural poor. Toyola also offers its end customers after sales services. Customers in urban areas can change the linings at depots, whereas rural clients can change them in local retail shops or VLE, which in turn delivers the linings to the depots for exchange. Here I could mention that Shukla and Bairiganjan in their research mentioned that the retailers in India are owners of small department stores, boutiques or "kirana shops" that sell in small or individual quantities to the end users. In Toyolas case, these VLE or local small retailers sell to the rural clients in

Africa. Taking all these into consideration I can conclude that this distribution approach in both countries (Africa and India) have the same distribution effect.

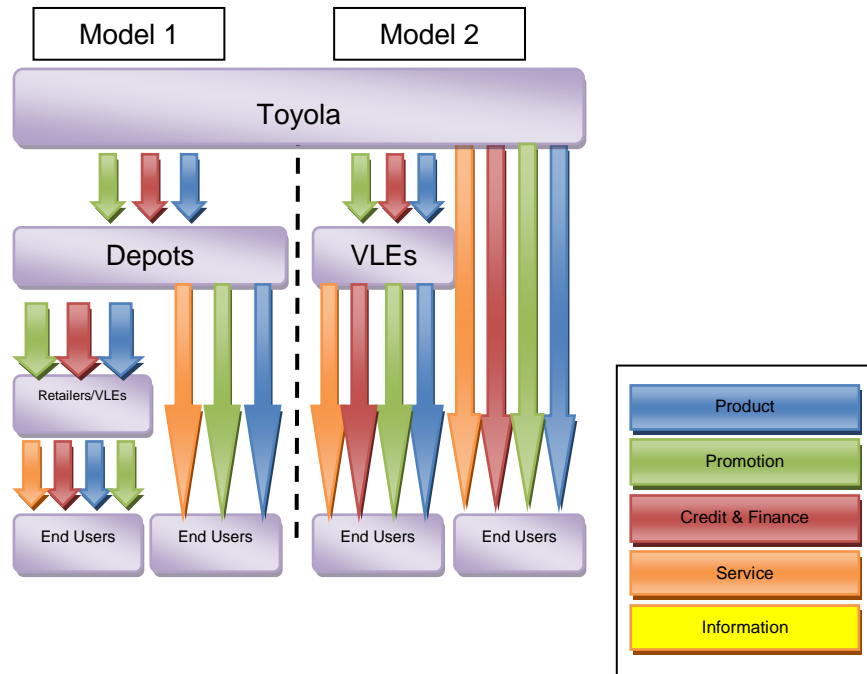


Figure 8.1. Toyola's distribution channels

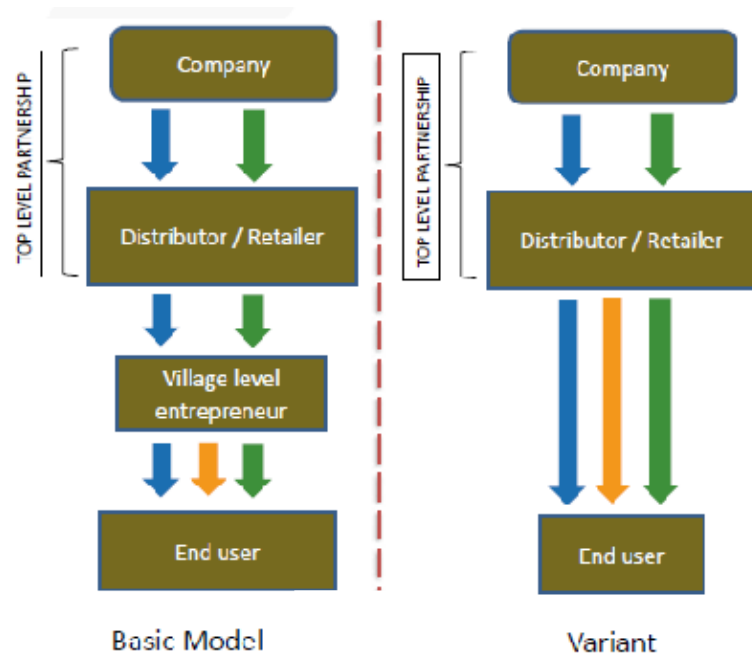


Figure 8.2. Rural retail distribution channel and its variant (Shukla and Bairiganjan, 2011, pg 46)

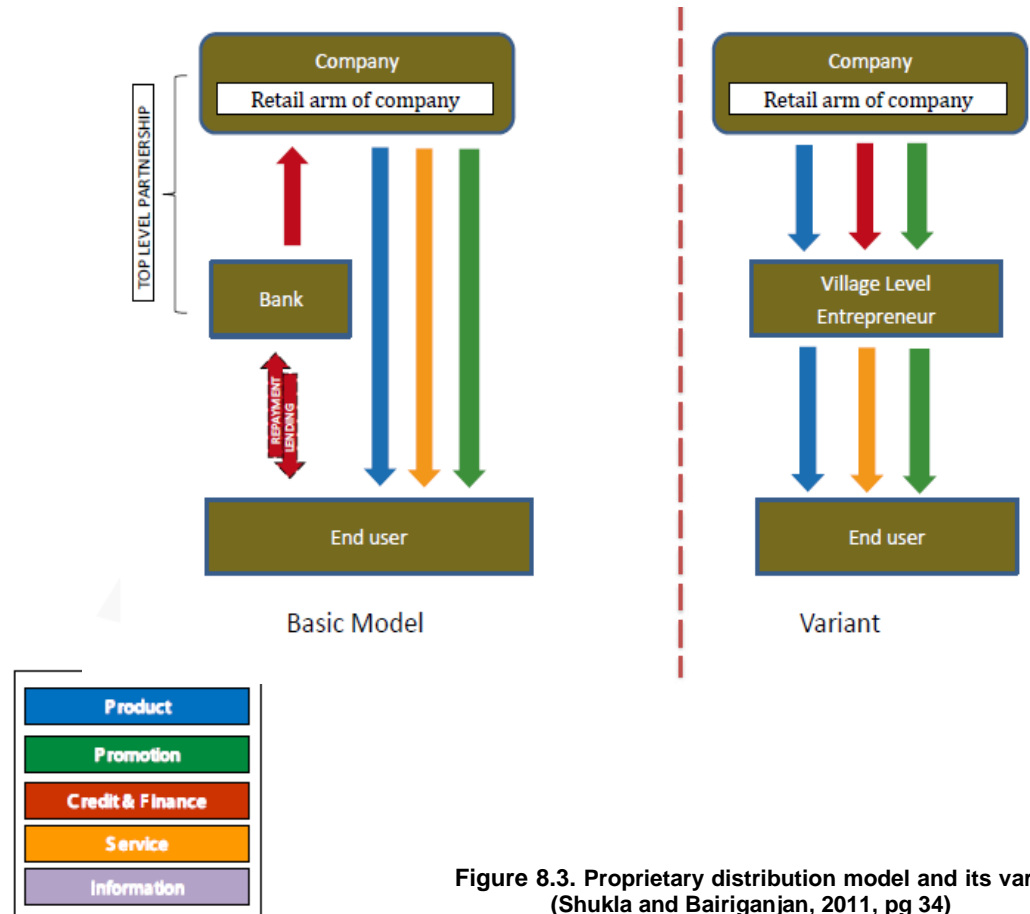


Figure 8.3. Proprietary distribution model and its variant (Shukla and Bairiganjan, 2011, pg 34)

Model 2 in turn serves the rural poor people in very remote parts of the country, reaching the customers that not all companies would be able to reach. In this model Toyola makes use of almost all capabilities: physical distribution, promotion, post-sales services and credit. All these capabilities offered directly from the company to the end customer, or through VLE. In distribution model's leg where company uses VLE as intermediaries, VLE changes the linings, and the bad ones are sent back to Toyola. This model also shows considerable similarities as Shukla and Bairiganjan's research shows that the company that has applied proprietary distribution model distributes its products to the local retailers/distributors, which in turn sell to the rural poor. In this case, there are considerable similarities between these two distribution models.

Looking at the findings in this research, I can conclude that Toyola has implemented a business model that is very similar to the business models used in India. It is obvious that the company has done very good research when working on the company's business plan and before doing business at the BOP, recognized the challenges of target market, adapted and innovated the business model in order to serve end the customers better. The company also recognized the fact that a single distribution model does not suit the needs of the product for BOP markets and delivered the product according to the expectations of the business plan. Instead of using, only one distribution channel the company uses hybrid approaches, which means that the company recognizes key aspects and approaches from several distribution models and implemented in its own distribution model to deliver products to the BOP markets effectively.

9 Conclusion

There are various challenges mentioned in this paper associated with the process of product distribution to the poor people in Africa, and mastering these challenges is not an easy task for MNC's. It requires a lot of time and investment and it does not guarantee a successful outcome. From the research, to establish an effective and efficient distribution system that would serve poor people at the BOP, MNC's needs to tailor their organisational capabilities and adapt them to the local market context. In addition, MNC's putting in place effective distribution networks at the BOP must consider which distribution model or models are most suited to distribute their products to the larger numbers of poor populations as possible. Companies should support their activities with the right resources and funding, as well as to establish effective strategies for availability of their products and enter into appropriate partnerships for more effective segregation of duties.

It is evident that in order to be successful MNC's must set up strong partnerships or create healthy ecosystems for local entrepreneurs. A strong partnership open access to the partners' financial resources, market knowledge, connections in legal entities or minimizes the risks. More so, appropriate attention should be paid not only on building effective financing models for local poor customers and retailers, but also to involve them in the company's business activities, thus increasing their income levels. The Toyola case analyzed in this research is a good example of mastering their capabilities in order to overcome challenges they face in the BOP market in Africa.

As Shown in the theoretical part, each member in the distribution network is undertaking a part of the responsibility. Moreover, MNC's that want to enter BOP markets must develop the ability to manage all factors of the channel throughout the whole value chain. As this is not an easy task, the distribution channel decision is very crucial for successful product promotion. Although from the first sight, it seems that rural retail and proprietary distribution models used in India is quite similar to the ones used in Toyolas case, after deeper analysis, I can conclude that Toyola has adapted it to the specific market needs of the poor people in Africa. The Company has taken into consideration that BOP markets in Africa are dispersed geographically than the markets in India, therefore has paid a lot of attention to the innovation and adaptation of physical distribution of the product. In this way, the company

makes sure that distribution channels covers as much rural poor populations as it can. The role of partnerships at the BOP is very crucial and it helps in great extent to overcome challenges that this market offers. Collaborating with the organizations and companies it is possible to get access to the capabilities that otherwise would not be possible to obtain. Partnerships can provide the company with necessary consumer and market information and sponsor the activities or help to distribute the products.

From the above, I can answer the following sub-questions:

“What distribution capabilities are essential for Toyola Energy Ltd. targeting BOP markets in Africa?”

Toyola, targeting Africa’s rural poor customers, sees following distribution capabilities as essential to its business: physical distribution, promotion, post-sales service, credit and financing, information, contact. The company also has implemented matching capability, as it has adopted the stoves to the local customers needs, by segmentation of the market. The company also has recognized the risk taking capability, but as the business is running very successfully, the company does not need to take harsh techniques in order to keep business running.

“What distribution model Toyola has implemented?”

Toyola has implemented rural retail and proprietary distribution model, but has adopted the distribution model to some extent, to meet the market needs and its specifications. Toyolas model is more innovated in terms of broader distribution coverage of the stoves to the BOP markets. Toyola is using different means of transportation as well as involving more rural poor people as their distributors.

“What aspects make distribution of Toyola’s cook stoves to the BOP successful?”

Several aspects make distribution of Toyolas cook stoves to the BOP successful. Firstly, it is an innovative business model Toyola has implemented. It involves manufacturers and rural poor at the BOP throughout all value chain of the product creation and distribution. In a way the company is a part of the community, that involves locals in the product creation, increases their income levels.

Secondly, through the trust between customers and retailers. The company is giving cook stoves on credit without any legal agreement. Thirdly, through efficient product that saves money of poor people, by spending less on charcoal as well as reducing the emission of the carbon dioxide. Above all, with the wide distribution channels, that reaches in the remotest parts of the country, word-of-mouth marketing and successful partnerships.

“Can MNC’s producing energy products enter Africa’s energy market using already existing distribution models based on India’s experience?”

Companies producing energy products can enter Africa’s energy market using already existing distribution channels, but in order to be successful and make a profit, MNC’s must innovate the existing business model or create a new business model that suits unique needs of the BOP markets. Distribution channel models developed based on the specific market concerned.

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