UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

The Bumpy Road to the BoP

Addressing the Challenges of Distribution to the Base of the Pyramid

A Ghanaian study

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Master of Science in International Business and Trade
Master Degree Project No. 2011:23
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Tin yi woga, tin mbe di tooni

If a town is far, there is another farther away

Dagbani proverb, Northern Ghana

Se wo were fi na wosankofa a, yenkyi

There is nothing wrong with learning from hindsight

Akan proverb, Ghana

Abstract

The Base of the Pyramid (BoP) represents 4 billion individuals living on less than $2 a day. As growth in mature markets stagnate, businesses are now turning to fast-growing BoP markets as a source of untapped growth. Innovations now exist that can help meet the needs of the BoP, from solar-powered lighting and stoves, to water purification systems and nutritionally-enriched foods. Distribution of these products can also help create thousands of opportunities for employment and entrepreneurship. However, BoP customers are often located in remote areas with poor infrastructure, face low levels of affordability and lack access to finance. As a result, finding ways to distribute to these customers in a low-cost, efficient, scalable and sustainable fashion is a major challenge. This paper, "*The Bumpy Road to the BoP*", seeks to address that challenge.

Based on a review of BoP literature, the paper identifies the key BoP distribution challenges and solutions and categorises these according to the 4As of BoP distribution – Availability, Affordability, Awareness and Acceptability. These challenges and solutions are then further analysed in five BoP ventures in Ghana that distribute lighting products, fast-moving consumer goods, cook stoves, health products and financial services to the poor. Based on this, the author proposes a *BoP Distribution Framework*, incorporating a set of principles and alternatives for addressing the challenge of distribution. The author's hope is that this research contributes to improving the effectiveness of BoP distribution around the world by making the road to the BoP a little less bumpy.

Keywords: BoP, Base of the Pyramid, distribution, inclusive business, micro-finance, Ghana

Acknowledgements

I would like to thank everyone involved in helping me navigate my personal “bumpy road” to completing this paper.

Firstly, I would like to thank Niklas Egels Zandén for encouraging me to challenge the BoP rhetoric and to delve deeper into my own research. I hope we have the chance to work together again.

Special thanks go to Danny Mensah and the HealthKeepers Network team for being so welcoming to Ghana and open to my research. Danny – thank you so much for welcoming me to Accra and for being so helpful and friendly. Sally, Jocelia, Christabel, Ernest and Osimpo – thank you for taking me out to meet the HealthKeepers in person. I wish you all the best of luck with the venture.

Thanks to Suraj Wahab Ologburo and Ernest Kyei from Toyola for inspiring me with their success story. It is great to see how a locally-based initiative can be so successful and grow so quickly.

To Kwaw Albert Eliason, thank you for your insights and assistance. I wish you all the best of luck with the important work you are doing at Lighting Africa.

I would also like to thank all the rest who allowed me to pick their brains about their BoP initiatives, including Hugh Whalan, Kobina Abakah Turkson, Ernest Kofi Obeng, Paul Appiah and Obed Yaw Asamany.

Finally, I would like to thank my wife, Johanna –for marrying me, for letting me drag you to Ghana and for supporting me throughout this process. Tack min älskling!

Abbreviations

BoP	Base of the Pyramid
CSR	Corporate Social Responsibility
GCSCA	Ghana Co-operative Susu Collectors Association
HKN	HealthKeepers Network
IFC	International Finance Corporation
MFI	Micro-Finance Institution
MNC	Multi-National Corporation
MSE	Micro and Small Enterprises
NGO	Non-Government Organisation
SPL	Solar Powered Lights

Contents

Figures and Tables

1 Introduction

1.1 The BoP Challenge

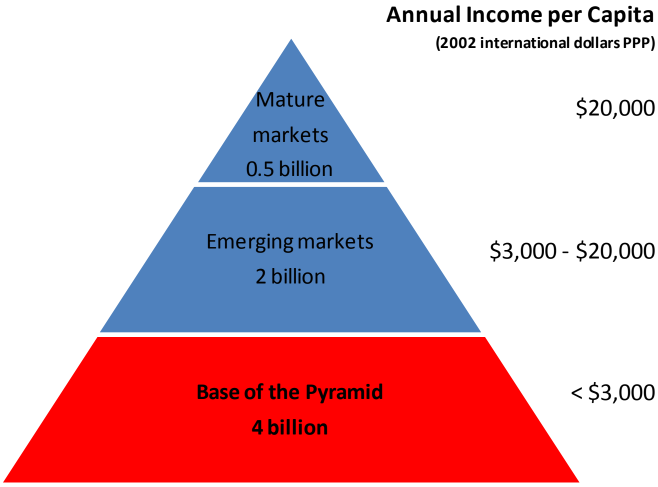

Figure 1: The Economic Pyramid

The Base of the Pyramid (BoP) is a socio-economic designation for the 4 billion individuals, primarily living in developing countries, whose annual per capita income is below $3,000 international dollars purchasing power parity[1] (International Finance Corporation / World Resources Institute, 2007). This is illustrated in the chart above.

The BoP is also used to describe a business strategy that focuses on meeting this segments basic needs by providing them with products, services and enterprises using a market-based approach – this is often termed "inclusive business".

BoP individuals face significant and numerous challenges in their daily lives. Simple needs such as those for food, housing, clean water, energy and health care are largely left unmet. Furthermore, opportunities for employment and entrepreneurship are also lacking in many of these communities. While development organisations seek to assist those in greatest need, many of these needs can also be met by private business, largely in collaboration with non-government organisations (Prahalad C. K., 2004).

As growth in the mature markets begin to stagnate, many businesses are now turning to the BoP market in developing countries as an untapped source of growth potential. The telecommunications and micro-finance industries have been the first to see tremendous success from these ventures (International Finance Corporation / World Resources Institute, 2007). Furthermore, businesses are warming to leveraging BoP strategies to simultaneously grow their businesses while addressing CSR challenges. Firms such as Unilever, Danone and Vodafone (CSR Europe, 2008) have been somewhat successful in applying these strategies.

This concept was best described by C.K Prahalad, author of *The Fortune At The Bottom of the Pyramid*: "The world's most exciting, fastest-growing new markets? It's where you least

[1] In current US dollar terms, these 4 billion people are living on below $2 / day (London & Hart, 2011, p. xxvii).

expect it: at the bottom of the pyramid. Collectively, the world's billions of poor people have immense entrepreneurial capabilities and buying power. It's being done – profitably.“ (Prahalad C. K., 2004, p. 29)

1.2 Research Purpose

Many innovations now exist which can help the poor better meet their needs, from solar powered lighting and stoves, to water purification systems to low cost housing solutions and nutritionally-enriched foods. Even simple products such as antibacterial soap, iodised salt and mosquito nets can help to substantially improve health conditions. Furthermore, distribution of these products and services has the potential to create thousands of opportunities for employment and entrepreneurship, create wealth, develop skills and generally promote development (Jenkins & Ishikawa, 2009).

While these innovations can help meet their needs, create jobs and save lives, BoP customers are often located in remote areas with poor infrastructure and transport, face low levels of affordability and often lack access to finance (Anderson & Billou, 2007). As a result, finding ways to distribute products to these customers in a low-cost, efficient and scalable fashion is often a major challenge. Prahalad and Hammond (2002, p. 50) suggest that "the critical barrier to doing business in rural regions is distribution access". This is broadly what I seek to address in my research.

From a business perspective, while many businesses see the opportunity associated with the BoP, they also need to rethink the way they distribute their products and services. More specifically, this requires a "highly distributed small-scaled operations married to world class capabilities" (Prahalad & Hart, 2002, p. 2)

Distribution to the BoP is a highly under-researched field, but one that has the potential to improve the well-being of millions. Most research in this field has been focussed on the process of innovating for product design, with less focused on distribution. While this research focuses on Ghana, my hope is that this work will create the foundation for a better BoP distribution model which can contribute to poverty alleviation and sustainable development in developing countries around the world.

1.3 Research Questions

Overarching question: *How can the challenges of distributing products and services to "base of the pyramid" customers be addressed?*

Sub-questions:

1. How do organisations distribute their products and services to the BoP market?
2. What are the major challenges and responses associated with distribution to the BoP?

2 Research Design

2.1 Conceptual Framework – An Overview

Modern Base of the Pyramid theory is predominantly based on the work of C.K. Prahalad (University of Michigan Business School) and Stuart Hart (Cornell University's Johnson School of Management).

The conceptual model for this research is based on two previously established frameworks, the "*Commercial Infrastructure at the Bottom of the Pyramid*" from the article "*The Fortune at the Bottom of the Pyramid*" (Prahalad & Hart, 2002) and the "*4As Framework*" proposed in "*Serving the World's Poor: Innovation at the Base of the Economic Pyramid*" (Anderson & Billou, 2007). These two frameworks are used to define both the scope and categorisation for the research as outlined in the following section of this paper.

Furthermore, the research draws on relevant academic and business literature to create a comprehensive list of the challenges and solutions associated with distribution, including the paper "*Socially Responsible Distribution: Distribution Strategies for Reaching the Bottom of the Pyramid*" (Vachani & Smith, 2007) and the recently published book: "*Next Generation Business Strategies for the Base of the Pyramid New Approaches for Building Mutual Value*" by Ted London and Stuart Hart (2011). This book represents some of the latest thinking about the BoP, and seeks to make the shift from "finding a fortune at the BoP" to "creating a fortune with the BoP" (London & Hart, 2011, p. 1)

These theories and their relevant cases, as well as others, are detailed further in the Literature Review section of this paper.

2.2 Conceptual Framework - Scope and Categorisation

This research focuses broadly on "distribution" or the demand side of the BoP in order to investigate the challenges of how products get into the hands of BoP customers. This report bases the definition of "BoP distribution" on the article "*Socially Responsible Distribution: Distribution Strategies for Reaching the Bottom of the Pyramid*" which defines distribution to the BoP as "initiatives that provide poor producers and consumers with market access for goods and services that they can benefit from buying and selling, by helping to neutralize the disadvantages they suffer from inadequate physical links to markets, information asymmetries, and weak bargaining power" (Vachani & Smith, 2007, p. 2).

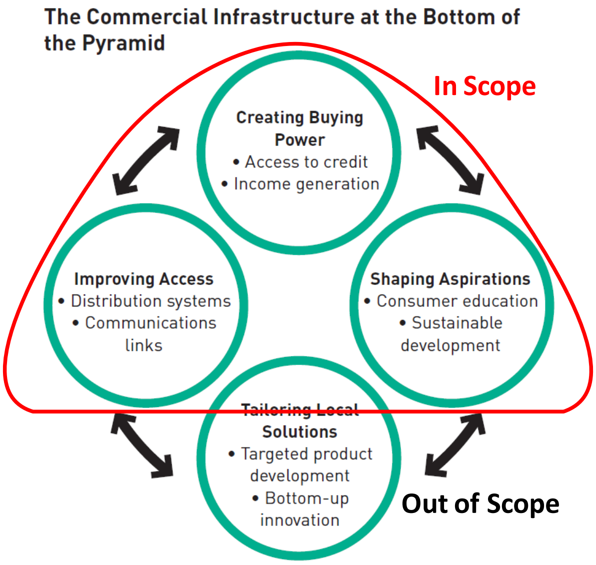

Figure 2: Commercial Infrastructure at the BoP

This paper uses a wide definition of BoP distribution focussing on 3 of the 4 elements of the "*Commercial Infrastructure at the Bottom of the Pyramid*" illustrated beside (Prahalad & Hart, 2002, p. 8) – including Improving Access, Creating Buying Power and Shaping Aspirations. The fourth element, Tailoring Local Solutions, which relates to the development of innovations that meet the needs of the BoP based on deep local insights, is largely product design focused, and is therefore out of scope for this work.

To further define, the main point of focus is on BoP consumers and distributors as opposed to producers. All activities usually used to distribute BoP products to customers is in scope, including both the local physical distribution as well as associated entrepreneurial programmes, micro-financing, communications, education, sales and service activities.

Product innovation, design, development, manufacturing and related activities involved in creating products is out of scope for this research. Financing, funding and administrative activities, as well as international distribution, such as shipping, is also out of scope.

Categorisation for this research is based on the "*4As Framework*" as illustrated below as adapted from Anderson & Billou (2007, p. 15). While this framework was not created with distribution in mind, this nevertheless provides a convenient framework for considering distribution challenges.

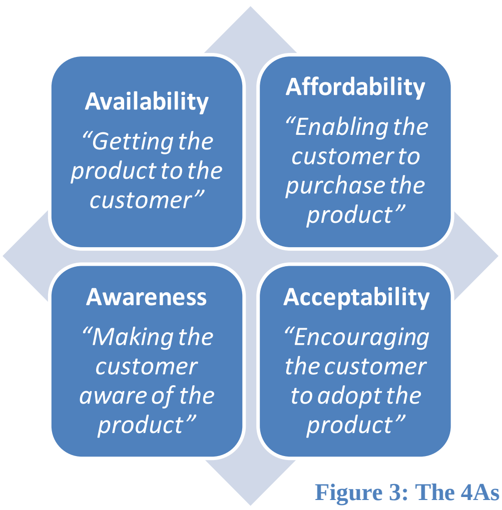

Figure 3: The 4As

It is worth noting that the "*4As Framework*" and the 3 in-scope elements of the "*Commercial Infrastructure at the Bottom of the Pyramid*" represent similar approaches to categorising BoP distribution, with "Improving Access" alike to

"Availability", "Creating Buying Power" to "Affordability", and "Shaping Aspirations" incorporating elements of "Awareness" and "Acceptability". However the "*4As Framework*" was chosen for categorisation due to it being more focussed on distribution activities and in how it separates the need for both awareness and acceptance.

The definitions of the "4As" and how they apply to distribution challenges are included in the Literature Review.

2.3 Approach

This report is predominantly based on qualitative data from academic articles, case studies, interviews and observations. The research focuses on Ghana primary research, and leverages international secondary research, knowledge and case studies.

The research is both descriptive and predictive in form. The descriptive research seeks to identify the key challenges associated with distribution to the BoP, both on an international scale, and from the Ghana-based case studies. The normative research seeks to identify workable solutions to address the key challenges. While normative, the prescribed solutions are based on what measures have worked, to the greatest extent possible.

In addition, the process undertaken sought to ensure that the research is based on a high level of reliability and validity. This is first and foremost achieved by triangulating the challenges and solutions by leveraging various data sources – academic literature, secondary case studies, direct interviews with numerous stakeholders, direct observations and a short survey. This is further enhanced by tying the focus of the research (literature review, interview questions) closely to the purpose of the study, and then confirming that these issues are congruent with reality in field studies.

The research uses both deductive and inductive approaches, where theories are first tested, and either confirmed or rejected. Subsequently new insights and hypotheses are established to create a framework for addressing the challenges of BoP distribution.

2.4 Method

The methodology for creating this report undertook a three-step approach.

2.4.1 Theoretical / Literature Review

The first stage of this process involved an in-depth review of the available literature associated with how products and services are distributed to the BoP. This review identified 18 challenges associated with this which would form the basis for the primary research. For each challenge, suggested solutions and case studies of how these responses were implemented were collated in order to identify proven ways to address each challenge.

2.4.2 Ghana Case Studies – Multiple Case Study Approach

In order to consider BoP distribution challenges and solutions across different contexts, and to identify points of likeness and difference, this research has employed a multiple case study approach. These case studies have been chosen because of their diversity. They include cases from different industry contexts, involve the distribution of products and services and leverage different distribution models as identified in section 4.1. The cases include:

Case 1: Lighting Africa and Impact Energies

Lighting Africa is a joint World Bank and IFC initiative with the aim to establish and promote the use of solar light sources by BoP consumers in Sub-Saharan Africa. Through ongoing consultation with stakeholders, including private companies, financiers, governments and NGOs, opportunities are identified to make affordable, safe, durable and environmentally-sustainable solar lights available to the masses (Lighting Africa and Dalberg Global Development Advisors, 2010). Amongst other activities, Lighting Africa in Ghana is working with **Impact Energies**, a USA based holding company with offices in Ghana, who is partnering with MFIs to distribute solar lighting products. The case investigates Lighting Africa's challenges on 3 levels: Africa-wide, in Ghana and with Impact Energies.

Case 2: Unilever and Sonturk

Unilever Ghana Limited manufactures and markets fast moving consumer goods including foods, home care and personal care products to customers throughout Ghana. Their leading brands include BlueBand Margarine, Lipton, Annapurna Salt, Omo, Key Soap, Close-Up, Lux, Geisha, and Sunlight (Unilever, 2011). Like Unilever subsidiaries in most countries, Unilever Ghana targets all customer segments, including the BoP. Unilever Ghana has created a wide-reaching distribution network with various wholesalers and distributors, such as **Sonturk Limited** based on the Cape Coast, to distribute its products to its customers.

Case 3: Toyola Energy

Toyola Energy Limited is a Ghanaian company that produces and distributes energy efficient charcoal stoves and solar lanterns to urban and rural customers. Its major product, the ceramic cook stove, helps to minimise deforestation and carbon emissions and helps users both reduce indoor air pollution and save money. Toyola has been successful in establishing various distribution channels to get its products to customers that largely depend on firewood and charcoal for their domestic cooking and on kerosene for lighting. In the three years to 2010, Toyola supplied about 35,000 households with its products in Ghana (Osei, 2010).

Case 4: HealthKeepers Network

The **HealthKeepers Network** is an organisation that seeks to serve a public health need by delivering health products and information to the BoP. Based on a franchise model, local entrepreneurial women go from door-to-door selling basic health products from a basket on their heads. These products include oral rehydration salts, water-treatment tablets, contraceptives and other health-related products. The franchisees, or HealthKeepers, are also equipped to manage simple ailments, promote good health practices and provide health information (HealthKeepers Network, 2010). This case study incorporates a field study involving direct observations of how the venture distributes to remote communities.

Case 5: Barclays Bank and the GCSCA

Barclays Bank of Ghana Limited is a wholly owned subsidiary of Barclays PLC. With 92 branches and over 130 ATMs, Barclays Bank of Ghana is the biggest foreign bank in Ghana. It offers a significant range of banking and insurance products from retail through corporate (Barclays, 2011). Barclays has partnered with the **Ghana Co-operative Susu Collectors Association** (GCSCA), the umbrella organisation for Susu collectors, the traditional bankers of Ghana, to offer basic banking services to the least affluent in Ghana. Barclays provides savings and lending facilities, known as “dwetiri accounts”, as well as facilitated capacity training and capability building for the Susu Collectors, who could in turn provide basic banking services to BoP customers (Business Action for Africa & Accenture, 2006).

In light of the 18 challenges identified earlier, the key distribution challenges associated with 5 case studies in Ghana have been analysed. The research sought to establish which of the challenges were actually the most significant for these case studies. In addition, the research investigated how these challenges are being addressed, and whether these measures have been effective. This part of the research involved:

- The identification and confirmation of case study subjects prior to travelling to Ghana;
- Reviewing documentation (reports, case studies, etc) and other sources of secondary data on the case studies;
- Conducting and transcribing formal interviews and informal discussions with managers, employees and distributors to get perspectives on the challenges and their responses;
- Following up interviews with a short survey on their distribution challenges;
- Making direct observations on existing distribution models – this included field studies with the HKN and Sonturk.

2.4.3 Interviews and Surveys Completed

The interview and surveys completed for the case studies are outlined in the table below.

Case	Organisation	Interviewee	Title	Survey?
1. Lighting Africa & Impact Energies	IFC / World Bank	Kwaw Albert Eliason	Country Officer, Lighting Africa	✓
	Impact Energies	Hugh Whalan	CEO	✓
2. Unilever and Sonturk	Sonturk Limited	Kobina Abakah Turkson	Executive Director	
3. Toyola Energy	Toyola	Suraj Wahab Ologburo / Ernest Kyei	Founders	
4. HealthKeepers Network	HealthKeepers Network	Daniel Mensah	Executive Director	✓
	Healthkeepers Network	Sally Brew-Hammond et al	Field Support Manager	✓
5. Barclays / GCSCA	Barclays	Paul Appiah	Head of Microbanking / Local Business	✓
	GCSCA	Obed Yaw Asamany	General Secretary	✓

Table 1: Interviews and Surveys Completed

2.4.4 Analysis

The empirical data on the 5 case studies collected from the interviews, surveys, observations and documentation was categorised according to the 18 challenges identified in the literature review. This data was subsequently grouped under the 4As in section 4.2 of this paper.

The final analysis involves generating key insights out of the literature review and case studies. In particular, the analysis identifies the most critical challenges for BoP distribution, and examines whether they are in line with the reality of the Ghanaian case studies.

Finally, this paper defines a framework and identifies the alternatives for addressing the key challenges of BoP distribution.

2.5 Assumptions and Limitations

This analysis is based on various assumptions and faces some limitations. The most important assumption is that successful BoP distribution requires other aspects of the BoP venture to function well. This is particularly true for product and financial aspects. Numerous interviewees mentioned that their success is also dependent on things such as product quality and their organisation's financial health. These non-distribution aspects are assumed to be in order as a prerequisite for successful distribution strategies.

While the validity and reliability of the research is high, based on the ongoing focus of the 4As of distribution and the use of numerous secondary case studies as well as varied data sources for the 5 cases studies in Ghana, there is room for improvement. In particular, validity could have been improved by interviewing more retailers and end customers to get their perspective on distribution. More observational field studies could have also assisted. As a result, there remains space for wider and deeper research in the field.

There are also some data limitations regarding the challenges, solutions and case studies highlighted in the literature review. First of all, most of the data is based on individual qualitative case studies, rather than a rigorous analysis of empirical data over numerous initiatives. Secondly, the cases are taken from various markets, which can vary significantly from a socio-cultural point of view. Also, most cases highlight "success stories" where things have gone relatively well, rather than evaluating what went wrong in the many failed BoP ventures. As such, while the challenges and solutions presented can be used as guidelines, they should be considered carefully in the individual context of the venture.

While the Ghanaian case studies cover most forms of BoP distribution, the case studies do not include an in depth review of a rental / leasing distribution system[2]. However, case examples of this distribution model have been included in the literature review.

Finally, while this research predominantly focussed on Ghana, distribution challenges and the effectiveness of responses can vary significantly across borders. This paper may be more relevant to contexts in other Western African countries than, for example, Asian and Latin American countries. As a result, the level of transferability may be limited. However, by leveraging a range of secondary case studies from around the world, the research did find that the majority of these challenges, and their solutions, and somewhat similar.

[2] Contracting or franchising to micro-entrepreneurs who rent out products and provide related services (Lighting Africa and Dalberg Global Development Advisors, 2010)

3 Literature Review

While references to BoP distribution are spread throughout academic literature, there has been no systematic and comprehensive overview of these challenges to date. Through a comprehensive review of the research, 18 key challenges associated with distribution to the BoP have now been identified. Each of these challenges, and potential solutions, is summarised in the following sections. These form the basis of the primary research in Ghana.

The key challenges are summarised below, and grouped according to the "*4As Framework*"[3].

BoP elements	Challenges
3.1 Availability	3.1.1 Poor Transportation Infrastructure
	3.1.2 Deficient Communication, Electricity and Water Networks
	3.1.3 Geographical Disbursement
	3.1.4 Lack of Established Distribution Networks
	3.1.5 Achieving Scale
	3.1.6 Sales Force Management
	3.1.7 Establishing and Managing Distribution Partnerships
	3.1.8 Network Complexity and Control
3.2 Affordability	3.2.1 Improving Product Affordability
	3.2.2 Improving Purchasing Power
	3.2.3 Barriers for Micro and Small Enterprises
3.3 Awareness	3.3.1 Creating Awareness
	3.3.2 Creating a Market
	3.3.3 Communication Barriers and Illiteracy
3.4 Acceptability	3.4.1 Building Trust with Communities
	3.4.2 Adapting for Cultural Diversity and Barriers
	3.4.3 Localisation of Delivery
	3.4.4 Managing Adoption Processes

Table 2: BoP Distribution Challenges

3.1 Availability

Availability is defined as "the extent to which customers are able to readily acquire and use a product or service" (Anderson & Billou, 2007, p. 15). Established distribution systems are somewhat limited in developing markets, and as a result, organisations need to be innovative in finding ways to distribute their products and services to the BoP (Prahalad & Hart, 2002).

[3] As outlined in the Scope and Categorisation section of this report

3.1.1 Poor Transportation Infrastructure

Challenges: A lack of roads and an effective transportation infrastructure is considered by many to be one of the major challenges associated with distribution to the BoP (London, Anupindi, & Sheth, 2009). Particularly in rural areas, inadequate roads make it difficult and costly to distribute products and leads to higher product prices (Vachani & Smith, 2007).

Potential Solutions: BoP ventures can seek to leverage commonly used transportation modes that already exist in BoP markets in order to deliver products and services, and need to allow for fluid point-of sale conditions, such as on bicycles and carts (London & Hart, 2011, pp. 32, 154). Reinventing the distribution channel through innovation, by finding alternative routes for reaching rural customers, such as by leveraging new technologies, can also help to overcome geographical disbursement. (Vachani & Smith, 2007).

Case Example(s): In India, Grameen Veolia distributed water cans to isolated villages using rickshaws driven by Grameen-financed entrepreneurs (Yunus, Moingeon, & Lehmann-Ortega, 2010). Hindustan Lever Limited has set up networks using motorbikes, bicycles, ox-carts and canoes to distribute their products to remote communities (International Finance Corporation / World Resources Institute, 2007). Smart Communications in the Philippines created a new technology to allow retailers to load customers' mobile phones without the need of phone cards, cutting down on the need for transportation (Anderson & Billou, 2007).

3.1.2 Deficient Communication, Electricity and Water Networks

Challenges: Phone and internet connectivity are very limited in many BoP communities (Vachani & Smith, 2007). Electricity and water provision is also limited (London et al, 2009). Amongst other consequences, this makes it difficult for businesses to operate, or to set up branch or sales offices in remote areas, as well as provides significant challenges for marketing and service delivery (Kennedy & Novogratz, 2011, p. 47)

Potential Solutions: Organisations may need to facilitate internet connectivity through local investments (Vachani & Smith, 2007) or leapfrog traditional networks for newer ones, such as the use of mobile banking instead of branches (Viswanathan, 2011, p. 155). Solar systems or other power sources can also be installed to provide off-grid electricity (International Finance Corporation / World Resources Institute, 2007). However, investment may be required for BoP ventures who seek to bridge the infrastructure gap (Vachani & Smith, 2007).

Case Example(s): ITC, an Indian agricultural commodities trading company, sets up satellite dishes and solar panels on the top of farmers' homes in order to enable their e-Choupal IT-enabled procurement system (Vachani & Smith, 2007).

3.1.3 Geographical Disbursement

Challenges: BoP customers are often broadly disbursed across rural communities or live in densely populated areas such as slums. As a result, they can be somewhat isolated from national or international networks and difficult to access (Rivera-Santos & Rufin, 2010). As distribution penetrates into remote areas, transportation costs increase and the population scarcity limits revenue potential (Vachani & Smith, 2007). Building a distribution network is also considered to be particularly difficult in remote areas (Chelekis & Mudambi, 2010).

Potential Solutions: Firstly, BoP ventures can outsource the "last mile" of distribution to BoP entrepreneurs or franchisees at lower costs than employees (Vachani & Smith, 2007). Identifying local suppliers and localising the final stages of production can also help to reduce distribution costs (Yunus, Moingeon, & Lehmann-Ortega, 2010). In addition, distribution can evolve from uni-directional with a single product line to one which is bi-directional with multiple organisations' products, reducing the unit cost of sale. Clustering retail locations in an efficient way can help maximise distribution effectiveness. Ventures may seek to invest in a central distribution system, and then keep the incremental investment to rural villages low (Vachani & Smith, 2007).

Case Example(s): Grameen Danone secured the supply of milk and the production of its yoghurt products through the creation of one-person micro-farms and encouraged door-to-door selling to reduce distribution costs (Yunus, Moingeon, & Lehmann-Ortega, 2010). ITC built a series of rural mini malls, which not only sold their main products, but also entered into partnerships to offer other products such as consumer goods, white goods and diesel as well as health, insurance and banking services (Vachani & Smith, 2007). Gyan Shala, an Indian educational service, initially focussed on slums near its headquarters, but then expanded into nearby clusters of villages (ibid).

3.1.4 Lack of Established Distribution Networks

Challenges: Few distribution networks exist to BoP markets today. Those that do exist are often informal and/or ineffective. In addition, as purchase sizes are often small, and 1-on-1 interactions may be required for many BoP transactions (Viswanathan, Sridharan, & Ritchie, 2010), ventures require a distribution network that can make personalised sales on a frequent basis (Rivera-Santos & Rufin, 2010).

Potential Solutions: Distribution networks such as franchisees, vendors or self-help groups can be created which leverage the entrepreneurial resources and ability inherent in the local communities (Weidner, Rosa, & Viswanathan, 2010). In addition, many BoP initiatives distribute their products to intermediaries who can then use these products to provide services to the communities (Rivera-Santos & Rufin, 2010).

Case Example(s): Unilever's Shakti initiative in India has established a network of entrepreneurs, primarily women, to distribute products outside Unilever's mainstream network (London & Hart, 2011, p. 33). Vodacom community services launched an entrepreneurial program to open "phone shops" through South Africa (Weidner et al, 2010). SC Johnson partnered with an NGO in Nigeria to provide cleaning products to groups of unemployed youth located in slums, who could then provide cleaning services to the local community for a small fee (Rivera-Santos & Rufin, 2010).

3.1.5 Achieving Scale

Challenges: While a small-scale initiative may be successful within a specific geography, many find it difficult to achieve the scale required to be both sustainable and create significant social value. Ventures may wish to "scale up" by increasing the size of their distribution force and sales in a geography, "scale deep" by offering new products or services to customers in their existing geography, or "scale wide" by targeting new customers in unfamiliar contexts with similar products and services (London & Hart, 2011, p. 34).

Potential Solutions: London & Hart (2011, p. 41) suggest that achieving scale relies of 4 key components: gaining access to and investing in existing platforms, ensuring partners' value creation goals are achieved, generating access to rich and diverse sources of information, and identifying and enhancing "what is right" with a BoP venture. Utilising abundant, low-qualified manpower can also help to ensure scalability (Vachani & Smith, 2007).

Case Example(s): The BoP venture Healthpoint services found local distribution scale quickly by partnering with a local NGO, the Naandi Foundation, that had scale, experience and credibility in the delivery of water treatment solutions. This partnership allowed Healthpoint to distribute their products via the same network (Hammond, 2011, pp. 212-213).

3.1.6 Sales Force Management

Challenges: A venture's sales force, especially that of a third party or shared channel, can be difficult to manage, due to multiple layers, fragmented decision rights and other inefficiencies. Sales force training and incentives need to be managed carefully, and it can be difficult to effectively recruit and retain good sales people at scale (Karamchandani, Kubzansky, & Frandano, 2009).

Potential Solutions: Establishing an assessment framework can help to improve sales force effectiveness (London & Hart, 2011, p. 40). In addition, training should be driven by local trainers in the context of local language, culture and norms (Whitney, 2011, p. 190). Karamchandani et al (2009) suggest the need to align incentives appropriately through the distribution network. Providing the sales force with support services can help them avoid focussing on worries from their daily lives (Business Action for Africa & Accenture, 2006).

Case Example(s): Vision Spring, a venture which provides low-cost reading glasses to the BoP, used a BoP Impact Assessment Framework to identify why successful female entrepreneurs were dropping out of the venture, and were then able to put strategies in place to address these issues (London & Hart, 2011, p. 40). Aravind Eye Care in India has invested heavily in training and builds a strong culture of loyalty in order to retain an effective workforce (Karamchandani et al, 2009).

3.1.7 Establishing and Managing Distribution Partnerships

Challenges: MNCs often need to partner with other parties such as domestic companies, governments and NGOs. These can take the form of distribution or marketing partnerships, to reach or develop a market, or franchising, whereby an organisation helps to establish a network of independent businesses to deliver a product (Hammond, 2011, p. 207). These relationships may be needed to share costs, and can help to provide funding, legitimacy, local knowledge and access to local networks. However, these alliance partners can often be unstable or in short supply (Webb, Kistruck, Ireland, & Ketchen, 2009).

Potential Solutions: A study by the NGO Ashoka identified insights around the success criteria for successful partnerships. The first identified was the primacy of profit, whereby a NGO's role was incorporating into a business eco-system and focussed on business priorities first, and social goals second. Strong personal relationships and trust were another success factor, which could be facilitated by regular communications, retreats and other initiatives. Other important factors included identifying the right people to be involved, leveraging technology for communications and management, continuity, co-dependence, and an appropriate risk/reward ratio for all partners. Global-local partnerships are also seen as being valuable (Hammond, 2011).

Case Example(s): Procter & Gamble partnered with the International Council of Nurses and Population Services International to help educate people on the impact of clean water on health and promote their PuR water purifier (CSR Europe, 2008). Healthpoint, in partnering with the Naandi Foundation, lowered their risks, reduced their operational challenges and gained access to an established distribution network in India (Hammond, 2011).

3.1.8 Network Complexity and Control

Challenges: Distribution networks can consist of and be managed by a number of actors, including the MNC, NGOs and the local communities themselves. As a result, these networks can often be complex and somewhat decentralised, and this poses some difficulty for the management and control of these networks (Rivera-Santos & Rufin, 2010). A lack of formal and legal institutions in developing countries, such as regulatory structures, laws and other government mechanisms (McMullen, 2011) can also be seen to increase risk and limit control.

Potential Solutions: To address this, Vachani & Smith (2007) suggest that it is important to set up strong systems for supervision and control. However, this can be difficult, and in direct conflict with allowing for flexibility and local differentiation required for many BoP initiatives. Others suggest decentralising and externalising, by working with a diverse set of organisations and empowering them to make decisions. They suggest that sellers have to be allowed to make decisions and concessions where appropriate and manage their sales in the context of their own social networks. This can be daunting for an organisation to accept and may be exploited or lead to conflict (Viswanathan, 2011).

Case Example(s): Gyan Shala, an Indian BoP initiative providing low-cost education to the poor, established strong supervisory and control systems to manage the delivery of its services. Supervisors review the work of both teachers and students on a weekly basis to make sure the services are delivered effectively (Vachani & Smith, 2007).

3.2 Affordability

Affordability has been defined as "the degree to which a firm's goods or services are affordable to BOP consumers" (Anderson & Billou, 2007, p. 15). Buying power can be created through providing access to credit and opportunities for income generation. However, income generation opportunities are often limited, and commercial credit is often unavailable to the poor due to lack of banking facilities, lack of access to collateral and associated difficulties in contractual enforcement and risk management (Prahalad & Hart, 2002).

3.2.1 Improving Product Affordability

Challenges: The price of a product can often be prohibitive for BoP customers. As a result, BoP ventures need to identify ways to reduce the price to the end consumer (Anderson & Billou, 2007). This can be particularly challenging when the built-in cost structure associated with distributing products to a disbursed customer base can be quite high (Simanis, 2011B).

Potential Solutions: Shared access models which encourage sharing or paying for a service can be more affordable for individual consumer when compared to the cost of owning a specific product, such as mobile phones (Yunus, Moingeon, & Lehmann-Ortega, 2010). Allowing the poor to make instalment payments for one-time purchases (McMullen, 2011), enabling packaging strategies that reduce purchase barriers, streamlined delivery models and cross-subsidising pricing across different income groups (International Finance Corporation / World Resources Institute, 2007) can also assist.

Case Example(s): Grameen Phone allows consumers who cannot afford their own phone to buy phone time from "Grameen Telephone Ladies" based in Indian villages (Yunus, Moingeon, & Lehmann-Ortega, 2010). CFWshops in Kenya, with 64 franchises, charge an average of $0.50 for a one-off pharmaceutical treatment (International Finance Corporation / World Resources Institute, 2007). Aravind Eye Care Hospitals relies on intensive specialisation to significantly reduce the cost of cataract surgery (Karamchandani et al, 2009).

3.2.2 Improving Purchasing Power

Challenges: BoP consumers typically have low levels of buying power required in order to purchase consumer goods. In addition to poor and fluctuating incomes, the poor often have little or no access to credit in order to make purchases (McMullen, 2011).

Potential Solutions: Financing strategies in the form of micro-loans or consumer finance can allow the poor to make purchases. This can also be provided to villages or groups allowing them to pool resources and improving their ability to repay (McMullen, 2011). Buying power in the community can be increased through franchise or retail strategies that generate income, and by building a local ecosystem of vendors and suppliers in the area (International Finance Corporation / World Resources Institute, 2007). Finally, "bi-directional distribution" networks which can, for example, purchase agricultural products from BoP communities for transportation back to procurement centres can improve local incomes and increase their buying power over the long-term (Vachani & Smith, 2007).

Case Example(s): CEMEX in Mexico partnered with a local NGO to develop a micro-credit system for low cost housing (CSR Europe, 2008). ITC provided products and services to farmers in India which could both provide employment in local communities and improve the incomes of the farmers themselves (Vachani & Smith, 2007).

3.2.3 Barriers for Micro and Small Enterprises

Challenges: Micro and small businesses (MSEs), including entrepreneurs, who are often responsible for distributing products "the last mile" face significant barriers. They are likely to lack finance, or access to credit (International Finance Corporation / World Resources Institute, 2007), or may face barriers associated with regulatory or bureaucratic measures, corruption, or a lack of business skills (Business Action for Africa & Accenture, 2006).

Potential Solutions: Access to investment funds and micro-loans are becoming more prolific, and may be provided to MSEs in order to help them establish themselves (International Finance Corporation / World Resources Institute, 2007).

Case Example(s): In Kenya, Unilever partnered with the Jamii Bora Trust to help provide small retailers with micro-business loans so that they can better stock their shops with retail products (Business Action for Africa & Accenture, 2006).

3.3 Awareness

Awareness is defined as “the degree to which customers are aware of a product or service” (Anderson & Billou, 2007, p. 15). Many BOP customers have limited access to mainstream media, making it difficult to widely increase awareness of products. As a result, BoP ventures need to consider other forms of communication channels (ibid).

3.3.1 Creating Awareness

Challenges: Many BoP customers lack access to conventional mass media channels such as TV or radio (Anderson & Billou, 2007). A lack of information and knowledge available to BoP consumers means that many of them may be unable or hesitant in making informed purchasing decisions (Vachani & Smith, 2007).

Potential Solutions: Unconventional promotion channels based on local environments need to be explored, and combined with grassroots promotion on a person-to-person basis (Anderson & Billou, 2007).

Case Example(s): Smart Communications combined advertising on Jeepneys[4] and point of sale marketing materials with training of agents to promote their services (Anderson & Billou, 2007). The Byrraju Foundation, who offers pay-per-use water purification services, created awareness of the benefits of clean water to communities in India through localised marketing campaigns (Karamchandani et al, 2009).

3.3.2 Creating a Market

Challenges: In many cases with the BoP, while a significant need exists, the market for a specific product may not. In these cases, product non-consumption is the issue, and a significant challenge exists for marketers and distributors to transform the need into a market (Simanis, 2011, pp. 108-109). This requires improving awareness, not only of what the product is, but how it can be used to better meet their needs.

Potential Solutions: Instead of pushing a product, distributors can employ an “open-ended value proposition” whereby BoP distributors and consumers are given a lot of independence to work out how a product fits into their own life. In addition, maintaining social connections,

[4] Public transport jeeps in the Philippines

visibly showcasing to the community the number of people using the offering, and working closely with the communities can help create a wider market (Simanis, 2011, pp. 114-122).

Case Example(s): Solae, a DuPont subsidiary, marketed a soy protein in India by adopting an open value proposition involving a range of food-based events and socialising opportunities for women. Furthermore, after embedding themselves in the community, the women came up with a business idea of a direct-to-home cooking consulting service which would help others cook healthy meals incorporating the soy protein (Simanis, 2011, pp. 114-122).

3.3.3 Communication Barriers and Illiteracy

Challenges: Limited consumer literacy, economic deprivation and short-term thinking makes communication for the BoP challenging (Weidner et al, 2010). In particular, illiterate consumers tend to resist planning purchases, changing buying habits, and have it more difficult evaluating the pros and cons of different product choices (Viswanathan et al, 2010).

Potential Solutions: Innovative communication strategies need to be put in place using demonstrations and social networks, encouraging word of mouth and by working closely with local partners (Weidner et al, 2010). Social networks such as self-help groups can help facilitate communication through 1-1 interactions (Viswanathan et al, 2010).

Case Example(s): Manufacturer Godrej & Boyce realised that they would have to sell the Chotukool cooling device through demonstrations rather than mass media or printed materials. Partnering with a local NGO, the company launched the product at a village fair, and transformed consumers into intermediaries for the product (Whitney, 2011, pp. 185-188).

3.4 Acceptability

Acceptability has been defined as "the extent to which consumers and others in the value chain are willing to consume, distribute or sell a product or service" (Anderson & Billou, 2007, p. 15). In addition to product adaptations, distribution channels need to adapt to unique local conditions. Shaping aspirations through consumer education can help to support innovation and promote development in a sustainable fashion (Prahalad & Hart, 2002).

3.4.1 Building Trust with Communities

Challenges: Dating back to colonialism, local communities may often hold a certain level of distrust of MNCs, which in turn can make it difficult to tap into local informal networks, hindering distribution efforts (Webb et al, 2009). Furthermore, as formal and legal institutions are often lacking or poorly enforced in developing countries (McMullen, 2011), trust is required both ways to manage predominantly informal / relationship-based networks (Rivera-Santos & Rufin, 2010).

Potential Solutions: Building trust can be facilitated through leveraging strong alliances with NGOs. NGOs who have already worked with local communities for years have both access to informal networks and have built a certain level of trust which can help to accelerate the effectiveness of the network (Egels Zandén, 2005). It is also important to draw on social networks, build relations with local leaders, share plans to get buy-in from the community, and select trustworthy retail representatives (Vachani & Smith, 2007). Over time, social entrepreneurs can be encouraged to generate goodwill by leveraging social capital based on positive social interactions, such as performing favours (Viswanathan et al, 2010).

Case Example(s): An alliance between Grameen Bank and Danone allowed Danone to quickly build brand awareness and trust while overcoming distribution challenges for its nutrient-enhanced yoghurt in Bangladesh (Webb et al, 2009).

3.4.2 Adapting for Cultural Diversity and Barriers

Challenges: Even within national markets, cultural diversity can be quite high, and as such distribution channels may need to be adapted to handle different cultural groups. For example, Kenya consists of 40 indigenous tribes, each with differing cultural characteristics, norms, values and beliefs, as well as language differences (Webb et al, 2009). As such, a one-size-fits-all approach to distribution is unlikely to be effective.

Potential Solutions: MNC and NGOs may need to open lines of communication with local community leaders in order to address this challenge. They can also find ways to gain understanding of cultural differences and work closely with a variety of organisations and groups (Viswanathan, 2011, p. 144). Organisations need to navigate in both formal and informal economic mechanisms based on a strong understanding of social contracts and local norms (Weidner et al, 2010). Finally, BoP ventures can work with local groups to tailor specific messages and value propositions to local markets (Whitney, 2011, p. 189).

Case Example(s): Celtel Nigeria negotiated with village chiefs in order to be allowed to recruit local entrepreneurs for distribution purposes (Rivera-Santos & Rufin, 2010). Godrej & Boyce used a process of local co-creation to tailor specific messages to local Indian markets for its Chotukool cooling device (Whitney, 2011, p. 189).

3.4.3 Localisation of Delivery

Challenges: A lack of understanding of local markets demands and preferences can lead to a situation where the products are not effectively localised or socialised within the communities (London et al, 2009).

Potential Solutions: Deep relationships need to be built in local communities through personal experience, or by having staff enter the local communities for a considerable length of time. BoP ventures should also localise and socialise delivery by using the local language for product interfaces, promoting community-level interaction around the product, involving entrepreneurs in product assembly and communications, and facilitating word-of-mouth communications (London & Hart, 2011, pp. 25, 154-155).

Case Example(s): CEMEX, one of the world's largest cement manufacturers, recognised their lack of understanding in serving the low-income housing market in Mexico by making a "declaration of ignorance" for the Patrimonio Hoy initiative. They embedded their leadership team in the community for several months, and established strong, ongoing networks to deepen their understanding of home-building efforts (London & Hart, 2011, p. 25)

3.4.4 Managing Adoption Processes

Challenges: Customers may be reluctant or unable to adopt new products that they may not understand or may not immediately be able to use. For example, SKEPL, who launched an IT-enabled dairy production system, found that farmers were hesitant in adopting a new technology for their activities (Weidner et al, 2010). Many water-related BoP ventures face challenges educating customers about what constitutes clean water and the benefits of drinking clean water (Kennedy & Novogratz, 2011, pp. 67-68). It also may be challenging to consider products with a benefit beyond the short-term (Viswanathan, 2011, p. 135).

Potential Solutions: This issue may be addressed by providing free use of the product for a limited time, and supporting with educational programmes, social marketing campaigns and technical support. Furthermore, benefits can be demonstrated in the local language and with support from peer group members (Weidner et al, 2010).

Case Example(s): WaterHealth International launched village information sessions and fairs (complete with clowns), and showed microscopic images of both clean and contaminated water to promote their water-filtration systems (Whitney, 2011, p. 189). Hindustan Lever Limited uses unconventional marketing techniques, such as festivals and travelling cinema to promote its products (International Finance Corporation / World Resources Institute, 2007).

3.5 Summary of Key Challenges

This literature review represents perhaps the first systematic and comprehensive overview of the challenges and potential responses of distribution to the BoP, and offers various insights into this domain. The first insight is that there are many challenges associated with distributing to the BoP. Furthermore, as some of these challenges share common solutions, it could be recommended that these challenges are tackled in tandem where possible.

Challenges associated with distribution should not be limited to the physical distribution domain. While poor roads and inadequate distribution networks seem like the more obvious challenges, getting the products into the hands of the customer seem just as, if not more, challenging than getting the products to their doorstep. As such, distribution to the BoP requires the interaction of the 4As – Accessibility, Affordability, Awareness and Acceptance (Anderson & Billou, 2007).

It is also noteworthy to mention that the line between the distributor and the customer can be blurred in BoP ventures. Entrepreneurs can be considered the customer when, for example, they are provided with micro-finance or a mobile phone stand. Entrepreneurs based in the community may also be expected to adopt the product themselves in order to be advocates for a greater use of the products through the community. These examples demonstrate that the distinction between distributor and customer is a lot less clear than at the top of the pyramid.

4 Ghana Case Studies – Empirical Data

4.1 Alternative Distribution Models

Each of the Ghanaian cases studied employ different approaches to distribution. Some employed multiple distribution models to get products into the hands of their customers.

This paper is leveraging the empirical-based typology from the Lighting Africa initiative, which based on interviews with 50+ initiatives across Africa, identified 5 different business models[5] used for distributing Solar Portable Lights (SPL) to its customers (Lighting Africa and Dalberg Global Development Advisors, 2010, pp. 23-40). The distribution models used, and their frequency of use[6] are outlined below:

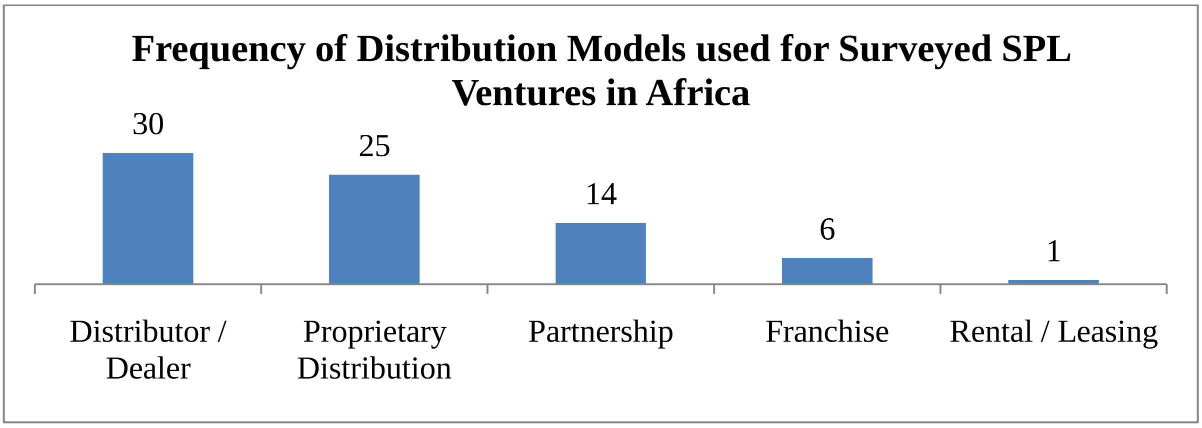

Chart 1: Distribution Models used by Lighting Africa

- Distributor dealer networks – through existing networks of generalist or specialist distributors within the target markets;
- Proprietary / own distribution – through a salaried or contracted sales force to the end customer;
- Institutional partnerships – partnering with an institution (e.g. an NGO or MFI) to market products to their customer base or members;
- Franchise model – offering franchising packages (potentially with training, finance, etc) to micro-entrepreneurs;
- Rental / leasing systems – contracting or franchising to micro-entrepreneurs who rent out products and provide related services.

[5] Then models are outlined in more detail in Appendix 9.3

[6] Based on interviews and research. More than one distribution model is possible, so results are not cumulative.

In cross-checking this categorisation against the previous literature review, each case study presented can fit with at least one or more of these distribution models. As such, these groupings have been used in analysing the Ghanaian cases.

Each model has unique benefits and challenges[7], and the research suggests that the model employed should be based on the characteristics of the industry and the venture, and, as no single model acts as a "silver bullet", a range of approaches may be required.

As an example of one such approach, Impact Energies, facilitated by Lighting Africa, is employing an institutional partnership approach by partnering with MFIs in distributing, and helping to finance, lighting products to their customers. Even within this approach, the venture is using slightly varied business models – by distributing through loan officers in the field and promoting in-branch sales. In addition, Impact Energies is starting to build its own network of entrepreneurs, employing a franchise model (Whalan, 2011).

Unilever combines distributor-dealer networks and franchise models in getting its products to BoP customers. Unilever's Shakti initiative, a franchise programme for women in India, is often cited as a successful case study of distribution to the BoP (Unilever, 2009). In Ghana, Unilever predominantly focuses on production, with much of the distribution carried out by local wholesalers, such as Sonturk. Sonturk, in turn, distributes products to other wholesalers who sell products predominantly to urban centres. In addition, Sonturk has its own full-time employed sales people who go from "village to village" covering the rural areas where the other wholesalers are unwilling or unable to reach (Turkson, 2011).

Toyola uses both its own distribution as well as a franchise model. The company distributes the products in vans and trucks to depots throughout Ghana, and their own franchised sales force sell to retailers and end users in remote rural areas. Their franchised sales force is provided with vehicles for transportation, are able to employ their own agents, and earn a commission on whatever products are sold (Osei, 2010).

The Healthkeepers Network employs a franchise model, providing their franchisees, the HealthKeepers, with training on sales, health promotion, and health products as well as on how to manage simple, common ailments. The franchisees go from door to door selling health

[7] Outlined in Appendix 9.4

products from baskets on their heads, and providing related health services to the community (HealthKeepers Network, 2010).

Barclays, in their efforts to offer micro-finance to the BoP also identified that going through an intermediary was the “best and most cost effective approach” (Appiah, 2011). In their case, they partnered with the GCSCA, the umbrella organisation for Susu Collectors, the traditional bankers of Ghana. This system involved having the GCSCA recommend Susu Collectors to Barclays, who could then commence a process of providing both savings and lending products to them, which they could use to provide financial services to the end users.

In summary, the five cases studies cover all five of the distribution models identified below.

Distribution Models Used	Lighting Africa	Unilever / Sonturk	Toyola	HKN	Barclays / GCSCA
Distribution / Dealer	✓	✓			
Own Distribution	✓		✓		
Partnership	✓				✓
Franchise	✓	✓	✓	✓	
Rental / Leasing	✓				

Table 3: Distribution Models Used in Ghanaian Case Studies

4.2 Key Challenges and Responses

4.2.1 Availability

Lighting Africa

In-depth research conducted of SPL distributors as part of the Lighting Africa initiative identified the physical aspects of distribution as being the second most significant barrier to growth as outlined over the page (Lighting Africa and Dalberg Global Development Advisors, 2010). As seen from the chart over the page, the difficulty in reaching rural markets, the capability of dealers and building out distribution networks are also particularly challenging.

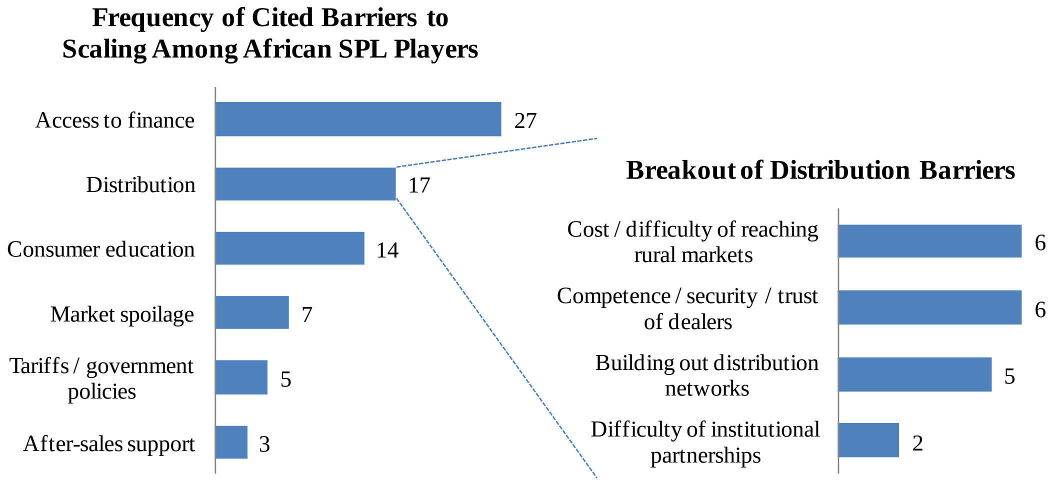

Chart 2: Lighting Africa Barriers to Scaling

Kwaw Albert Eliason of Lighting Africa Ghana summarised it by saying that the major challenge "boils down to cost of distributing over rough terrain, and also to people who will not buy enough to cover your costs". With a poor road network, distributors might just get to district capitals or peri-urban centres, rather than the "last mile", or others might "cut corners" to reduce costs. In response, the initiative tries to sell through retail outlets in "urban centres where people commute to" from rural areas. The distributors that Lighting Africa Ghana work with "are really small scale" making it difficult to gain economies of scale (Eliason, 2011).

The Lighting Africa initiative has identified a few methods for addressing some of these distribution challenges. The first is to reduce the number of intermediaries in the chain by enabling the direct presence of distributors in rural areas or taking advantage of existing rural distribution networks. They also develop distribution partnerships with market "aggregators", MFIs and co-operatives. Finally, partnering with mobile operators, and taking advantage of their technology and their network, can facilitate the scale-up of distribution activities and reduce costs (Lighting Africa and Dalberg Global Development Advisors, 2010).

As a US-based holding company partnering with the Lighting Africa initiative, Impact Energies does not have its own distribution network in Ghana. As a result, they are seeking to distribute through "micro-finance channels" such as the "Christian Rural Aid Network", a local NGO providing social development programmes and micro-finance. As Impact Energies CEO, Hugh Whalan, explains "our entire strategy is based around focussing on MFIs because we can reach a segment of the market that no one touches through micro-finance, and we can leverage their infrastructure" (2011).

Impact Energies imports solar lighting products, and is distributing them through three channels: “the MFI loan officers themselves, in-branch sales… and through the network of entrepreneurs that we are building”. Some MFIs see this additional role as “a distraction” or may consider it a “reputational risk” if the product is of low quality, while others see it as “an additional source of income that they can leverage”. Regardless, good partnerships with MFIs are “very intensive to set up” (Whalan, 2011).

MFIs are usually well-placed to store the products, as they usually have a security presence and space in their offices. However, MFIs can often be concentrated in urban areas, and therefore some are not well placed to target BoP customers in rural markets (Lighting Africa and Dalberg Global Development Advisors, 2010).

Whalan (2011) suggests that it is difficult to get loan officers to commit a lot of additional time in marketing the product – “they might give it a few extra seconds”. To address this, Impact Energies has put in a remuneration system based on client feedback, and is investing in a sophisticated IT system.

In his experience with other BoP initiatives, Whalan (2011) admits that: “a lot of the efforts out there are prototype only efforts, and never get to a point where they can actually prove it or disprove it, whether it is working or not… they never get scale. The only way to figure out whether it works is to pour money into it and go for broke.”

Whalan (2011) also acknowledges that he does not think that “anyone has done multi-product distribution through a micro-finance mechanism effectively”. He references SKS in India who tried to sell phones, solar home systems, solar lanterns and water purifiers, but “never got past the pilot stage” as “felt they were distracted”.

Impact Energies considers it important to set up an after-sales service network and are investing in technologies to support this (Whalan, 2011). This is also a priority for the Lighting Africa initiative (Lighting Africa and Dalberg Global Development Advisors, 2010).

Unilever

Despite its significant resource base and global reach, Unilever across Africa still faces challenges to reach the BoP. In 2006, Unilever clarified that it wanted to engage with value chain partners both up and down the value chain because it “wishes to expand but not invest, does not have scale in operations, does not have geographic reach and seeks synergies with local partners" (Lewis, 2006, p. 4).

Over time, Unilever has also faced many other distribution issues with the BoP, including "difficulty delivering products on-time, when needed, leading to an unavailability at relevant point-of-purchase, poor service to BOP vendors, long lead-times in processing orders" and "high costs of distribution" (Eliason, 2011B).

Scaling operations across borders is also not so simple. While Hindustan Unilever Limited's[8] Shakti initiative, an extensive distribution and sales network of entrepreneurial women, has been very successful in India, Unilever "is still talking about implementing it in the rest of the world" (Jenkins, Ishikawa, Barthes, & Giacomelli, 2008, p. 28).

In its initiative to promote and distribute iodised salt to customer in Ghana, Unilever cited that "iodine deficiency is greatest in the most remote parts of the country, where roads and transport are poor and retail distribution channels are almost non-existent" (Unilever PLC, 2005, p. 3). In reaching these customers, Unilever leveraged not only their existing third party distributors, but needed to appoint additional third party distributors in this campaign. In addition, they localised production through 4 local producers. In the end, this resulted in a 25%+ market share of salt after just 2 years (Lewis, 2006).

Unilever also introduced a concept they termed "Key Distribution" which involved "setting up mini-Unilever depots in regional centres created using customer concentration, turnover and accessibility… managed by independent 3rd party distributors, with warehousing, dedicated sales representatives and vans". They also implemented a "Sub Key Distribution" scheme to work under distributors with a specific focus on the BoP, incorporating rewards, incentives and monitoring (Eliason, 2011B).

Unilever has outsourced much of its transport and distribution activities across Africa (Lewis, 2006). As a result, Unilever's main activities in Africa focus on production, and they rely on distributors, such as Sonturk, based on the Cape Coast in Ghana, to carry out much of the physical distribution. According to the company's Executive Director, Kobina Abakah Turkson (2011), Sonturk distributes products to 12 districts in the region via wholesalers and their proprietary sales force. In effect, Sonturk distributes Unilever's products to wholesalers

[8] Unilever's subsidiary in India.

who sell to retailers in “some of the biggest towns” while their own sales people “go to the rural areas”.

Turkson (2011) claims that the poor road network is one of Sonturk’s biggest challenges, making it costly to distribute to end customers in rural areas. However, he seems to take some pride in saying that “the salesmen go out from village to village… every corner, they have to be there”. Furthermore, Sonturk has put in an incentive scheme for retailers, awarding them gadgets such as radios and cook stoves for their performance and loyalty.

In addition, distributors such as Sonturk find ways to spread their costs of transportation by distributing multiple product lines, as ex Unilever employee Eliason (2011) explains “sometimes you find that the Unilever distributors supply Nestle products, because either the people are asking for those products, or they want to spread their costs.”

Toyola

The bulk of Toyola’s customers are in rural areas which can be difficult to reach due to the poor transport infrastructure. In some cases, the roads are so bad that the ceramic lining in their cook stoves can actually crack before reaching the customer. Toyola addresses this by purchasing tricycles to reach some of these areas (Osei, 2010).

The founder of Toyola, Suraj Wahab Ologburo (2011), speaks proudly of their accomplishments over the last few years. Toyola studies their markets to identify the “best ways to reach the customer”, and uses a range of vehicles, including the one shown below (Osei, 2010) which they finance: “On the lake we use the boats, and on land we use bicycles, donkey carts, and anything that will move us from one place to the other. With the solar lanterns, we use a lot of motorcycles to get to the remote communities” (Ologburo, 2011).

They call their 17 vehicles “mobile shops”, and with each staffed by a driver and a sales person, take their product to retailers or end customers. Each team has an area of operation in which they sell, managing their own retailers and customers. Additional trucks carry thousands of their products to depots around the country so that their sales force “don’t have to make that long trip back” (Ologburo,

2011).

Toyola also subcontracts with local vendors who purchase their products in credit, allowing them to expand distribution without employing staff, and providing them with access to a larger distribution network at low costs (Osei, 2010). Toyola also “build incentives for everybody along the line”. Ologburo claims that “Toyola does not create jobs, we create businesses” (2011).

Toyola’s sales force also recruits and trains agents, and there are about 350 agents across the country, who take stock of products from their mobile sales force. This ensures that if somebody in the village wants a product after Toyola sales representatives have left, there is “somebody you can go to” (Ologburo, 2011).

Toyola has purchased a boat to service communities on the Volta Lake. This seems to have been effective as “nobody every goes there to serve them, and there are more accessible on the lake” (Ologburo, 2011). In one week, they managed to sell all their stock, approximately 1000 solar lanterns, on the lake.

Toyola has set up 6 production sites in Ghana in order to localise production as much as possible, and make it easier to distribute. Toyola has also scaled across the border to Togo, and plans to expand to Burkina Faso next year (Ologburo, 2011).

Toyola has scaled deep by selling solar lanterns in addition to their initial cook stove business. They claim that the “shift from selling just cook stoves to lanterns was very natural”. They have also scaled up quickly over the last few years. Ologburo admits that “accessibility” is “admittedly expensive”, but claims that “when you get it right, as the volume comes, it becomes reasonable” (Ologburo, 2011). This highlights the importance of scaling up.

HealthKeepers Nework

The HealthKeepers Network (HKN) uses a franchise approach by engaging entrepreneurial women who distribute health products and information door-to-door, “right from a basket on their heads” (HealthKeepers Network, 2010) as shown in the photo beside[9].

[9] Photo: Mike Debelak

According to the HKN Executive Director, Daniel Mensah, their “challenges are in logistics and human resources”. Their limited resources have been “spread out thin” in delivering products to their franchised sales force, the HealthKeepers. They are required to meet with their HealthKeepers every fortnight in order to bring products to them and collect payments. As a result, the “cost of delivery is high”, where in some cases “the value of the products in the truck is less than the cost of fuel to reach the people” (Mensah, 2011).

In addition, reaching HealthKeepers can also be challenging due to poor roads. Travelling out to their communities east from Accra with the HKN team, I personally observed the poor conditions of some of the roads. When I asked about the condition of some of their other routes, Sally Brew-Hammond, HKN’s Field Support Manager replied with a laugh “the other routes are really bad. This is one of the best. We manage to get there, but many of the women are unable to come” (2011).

HKN meets their HealthKeepers in groups who come in from villages usually 1-3 kilometres away to a central meeting spot in order “to minimise the numbers we need to reach out to”. This effectively means the “last mile” distribution is left to the entrepreneurs. There are a number of activities that can be carried out at these group meetings: “administration, supply information, training, educational on health, business and management, restock products and collect payments, encourage peer pressure to encourage health practices, help mobilise others to join the network, reduce costs of operations, set meeting times, discuss incentives, select group leaders” (Mensah, 2011).

However, this also leads to significant challenges “in sustaining groups and group interest” where HealthKeepers “may not show up to a meeting”. Recruitment and retention of HealthKeepers can also be difficult and costly, especially in remote areas. Recruitment can also be difficult in “some of the geographic areas where you want people who can read and write”. To sustain group interest, HKN organises “other activities such as discussions on health or women’s issues, information meetings, batik making, etc”. Mensah (2011) believes that it is not about “just being interested in buying and selling, but being interested in all of their activities. They must see you as one of them… show that you are there… be interested in all the things that they do… respond to their needs in a timely manner, and build a strong relationship”. Other motivational systems can also help.

Some of these challenges were observed when we stopped at Ada Kasseh. Due to rains the night before, only a handful of the 23 HealthKeepers made it to their group meeting, and those that came were late, saying that "the weather is deceiving them"[10]. As they arrived, the field managers shouted "Prevention" to which the HealthKeepers replied "Better than Cure", the HKN slogan. The HealthKeepers sat with the field managers to order their products and pay back their loans as shown in the photo above[11]. The HealthKeepers, and some of their apprentices, joined to place their orders and discuss selling techniques. The HealthKeepers ordered a range of products, including quite a lot of soap, the "fast seller" with low margins. While the process worked, it would be difficult to see how this format could scale up effectively if a greater number of HealthKeepers were to be recruited.

In order to address some of their issues associated with physical distribution, HKN has spent some time planning "a longer route for supply" where their field officers visit "a number of groups on a route" which they can manage in a day. This helps to avoid the need to "drive all the way to one group and back". They have also formed clusters of concentrated communities within an area rather than trying to spread too far out (Mensah, 2011). Brew-Hammond (2011) echoes this point by saying "we also need to find communities with more people".

HKN are also creating hubs with hub managers who can supply and manage the HealthKeepers. In his previous experience with the Ghana Social Marketing Foundation, Mensah (2011) claims that this was "one of the things that worked so well". Small groups can also have leaders appointed who can be responsible for some of the communications and administrative activities.

Barclays / GCSCA

Barclays saw leveraging the Susu Collectors as a way to reach many customers in remote regions who were difficult to reach "due to lack of infrastructure such as roads and energy" (Business Action for Africa & Accenture, 2006, p. 16).

[10] Due to overcast conditions, they were claiming they did not know what time it was.
[11] Photo: Mike Debelak

Paul Appiah (2011), the Head of Microbanking / Local Business for Barclays Ghana, explained that tapping into the Susu network was considered to be a "cost effective" approach for promoting inclusive business and meeting the financial needs of the poor. The partnership enabled Susu collectors to open "dwetiri" (capital) accounts with Barclays, from which they could provide banking services to their customers. They provided additional capacity building and training from 10 regional bases to equip the Susu Collectors.

While this approach was piloted effectively, they faced several challenges in rolling out to scale. Firstly, Barclays found that the GCSCA, the association they partnered with, was "not healthy enough", and faced resource constraints and managerial issues which required Barclays to provide a lot of capacity support. Their management information systems were also lacking, making it difficult to track progress and delinquencies. Despite "round table discussions", they were unable to fully address all these issues. In the end, it came down to weaknesses in the capability of the partnership (Appiah, 2011).

From the perspective of the Susu Collectors, reaching the customers is less of a challenge. According to Obed Yaw Asamany (2011), General Secretary of the GCSCA, "most collectors walk to their clients to take daily deposits and their operations are not directly affected by the poor infrastructure". Some have motorbikes to get there while others engage agents to visit them when required.

4.2.2 Affordability

Lighting Africa

Based on Chart 2, access to finance is the most significant issue for Lighting Africa initiatives. This issue is applicable across the entire value chain, from distributors to retailers to the consumer. Wholesalers and distributors face working capital constraints as are offered little credit from producers, face high inventory levels and are often required to extend credit to dealers (Lighting Africa and Dalberg Global Development Advisors, 2010).

Based on the cost of kerosene for lighting, the payback period for solar lighting today is 8 months, and decreasing. However, BoP consumers often cannot afford to pay a lump sum for the product, but have been found to be willing to buy these products with an appropriate financing scheme (Lighting Africa and Dalberg Global Development Advisors, 2010).

Proposed financing schemes are numerous, from energy product financing funds made available to MFIs, to product-linked savings accounts, mobile payment-enabled micro-lending and payroll finance (Lighting Africa and Dalberg Global Development Advisors, 2010).

In addition to access to finance, finding ways to reduce the price to the end customer can also help to improve affordability. While the cost of manufacturing SPLs are likely to continue to decrease, there are also opportunities to reduce the price by improving distribution efficiency. Today, the wholesale and retail costs of distribution make up between 13% - 47% of the final price (Lighting Africa and Dalberg Global Development Advisors, 2010, p. 51).

In Ghana, test results have shown that the limited purchasing power is one of the key challenges for Lighting Africa. This includes not only the high cost of purchase of SPLs[12] (Lighting Africa, 2009), but also the seasonal income variations of the BoP (Eliason, 2011).

One of Lighting Africa's distributors, Toyola, has been using some innovative ways to enable affordability. For example, they provide customers with a locked box in which customers can put money they would have otherwise used for kerosene. They are also structuring their ordering and distribution in time for the harvesting season, where customers are likely to have more income (Eliason, 2011).

Impact Energies is seeking to address both the physical distribution and financing issue in one shot, by partnering with MFIs to do the distribution with access to financing. Inventory loans are provided to through the MFIs in order for them to purchase the product (Whalan, 2011).

Unilever

Sonturk and its wholesalers distribute products to "table top" retailers[13] as shown below[14], who often have limited purchasing power and access to finance. To keep costs low, Sonturk's sales force often have to break the packaged item into smaller pieces to sell to the retailers. They attempt to shield these retailers from high delivery costs by delivering "free of charge" and retaining a commission from Unilever. Unilever

12 Currently estimated at around $25 for a standard-feature SPL intended for home or small business lighting
13 Retailers who sell products from a small table or kiosk, often at the side of the road or in a village
14 Photo: Mike Debelak

will pay them a higher commission in especially hard to reach places (Turkson, 2011). However, Eliason (2011B) identified that the high costs of distribution and the product cost to the BoP customer can also be a challenge.

Access to credit is limited, and Sonturk’s strategy is to “sell on cash, but there is some flexibility”. Good customers are given interest-free credit for a week. However, Sonturk does face “some problems with one or two” and “the risk to get bad debts is high” (Turkson, 2011).

Toyola

Like many other BoP initiatives, Toyola originally faced significant challenges in enabling their customers and distributors to afford their products. However, Ologoburo suggests that “price is not the key”, but instead the key is to have a good product that “serves the claims it makes for it” and to “offer consumer finance” (2011).

Much of this consumer finance is based predominantly on trust. As the founders of Toyola state, their strategy is based on the premise that “poor people are good people”. While this seems to work in practice, financing activities have a limiting effect on the company’s cashflow (Osei, 2010, p. 16).

Toyola has “integrated the financing into our distribution network”. Sales agents in the village act as the “seller of the product” and the “collector of the money owed”. Ologburo claims “it’s a simple solution and it works” (2011).

Toyola’s approach to financing is based on the idea that BoP customers “have the money” they need for the products “because they already spend the money on fuel”. The only thing is they cannot often spend that money in one go. So, in order to sell their cook stoves and lanterns, Toyola distributors initially provide the product for free, and give their customers a “Toyola box” – effectively a small can used as a money box. As customers spend less on coal for their cook stoves or kerosene for lighting, they are encouraged to put the money saved in the Toyola box. Ologburo (2011) claims that customers are surprised when they open the box weeks later, saying “What do you mean, I have this money?”. Toyola’s slogan to accentuate this point is “Don’t boil your money, use a Toyola cook stove”.

Toyola sometimes also provides the product based on a barter system, recovering the money for the products by selling agricultural products acquired from the communities (Osei, 2010).

Healthkeepers Network

The Healthkeepers themselves have little income, and so HKN provides the first basket of products on credit, which they are expected to pay back in instalments over the 4 meetings[15]. The concept is that with the sales they make, they should be able to afford buying additional products to grow their business. According to Mensah (2011), this approach is "our own way of assessing their credit worthiness" so that you don't "burn your fingers if they do not pay you". HKN's Field Manager states "after they have paid the initial loan, if you realise that the person is trustworthy and regular, we give her the cash" (Brew-Hammond, 2011).

However, few HealthKeepers have "grown from the initial basket". Many "blow their margins, or they are financially challenged, or just use the money for something else". This makes it challenging to grow the business financially. Many then come back to ask for new credit (Mensah, 2011), which HKN sometimes provides. Brew-Hammond (2011) claims that they "have not got their own money to come and do business" and that they sometimes get "a few bad nuts". This constraint was observed in the field visit to Ada Kasseh. Both the Field Officers and the HealthKeepers themselves identified financial constraints as the major obstacle to growth of the venture.

Mensah (2011) has also investigated the possibility of selling to urban centres in order to cross-subsidise margins to make products less expensive for the rural areas. However, the "demand for the product is not as strong" as there other "many other channels… to supply the same product", resulting in much greater competition.

Barclays / GCSCA

Susu Collectors have traditionally serviced the least affluent in Ghana, "like the small trader at the market or the micro-entrepreneur selling from road-side stalls". For a small fee, the collectors "personally gathers the income of their clients and returns it at the end of each month, providing greater security for their client's money".
They travel directly to customers wearing their distinctive many-pocketed coats, often on a daily basis, to collect this money, as shown in the photo opposite (Barclays, 2006).

[15] 2 months

In doing so, the Susu Collectors take a small proportion of whatever income they collect, making it affordable to the end customer. In the deal with Barclays, micro-finance was provided to the Susu Collctors based on their deposits over a 3 month period, in order to ensure they were not extended beyond what they could pay back. Barclays lent this at the base rate, which could be 18-20% at the time, plus an additional 7%, a fairly standard lending rate in Ghana[16]. This rate would be passed on to the end customers, who would often need to take the micro-finance on a very short term basis in order to pay it back (Appiah, 2011).

Obed Yaw Asamany (2011) accentuates this point by saying “the cost of borrowing is so high… the interest will mean you end up with much more money to pay back”. He states that “if Barclays gave us a rate of 28%, we added a margin making it 33%, part for the collector and part for association.” Despite the partnership with Barclays, Obed admits “our biggest challenge is access to funds or credit”.

The GCSCA also partnered with a local NGO called KITE (Kumasi Institute of Technology and Environment) and UNEP (United Nations Environment Programme) to help provide finance and improve the affordability of energy-efficient equipment for houses such as solar lanterns and LPG gas stoves. The organisations wanted to “create a linkage with a credit line so the end users would be able to access the product. “In this case, the end customer can make “repayments on a daily basis” spreading “the money in terms of margin payments of 1 or 2 cedis[17], it becomes easier to pay than monthly” (Asamany, 2011).

4.2.3 Awareness

Lighting Africa

In the case of Lighting Africa, consumer awareness means not only promoting the products, but communicating how solar lighting works, as well as the health and economic benefits of solar lighting over existing forms (Lighting Africa and Dalberg Global Development Advisors, 2010).

In Ghana, Eliason (2011) claimed that many of the target customers need to be first made aware of the concept of solar as an energy form before introducing the specific product range. To achieve this, the Lighting Africa initiative is investing $1-5 - $2 million over 2 years in

[16] While this rate may seem high, this is a fairly standard rate for lending in Ghana.
[17] Approximately $0.70 - $1.40

direct consumer education above-the-line and below-the-line marketing. In addition to some localised radio, the campaign is predominantly driven by below-the-line mediums such as “door to door campaigns, shows, night storms, market storms, and so forth” (Eliason, 2011).

Impact Energies is following a local approach to creating awareness. They are currently in the process of organising local events and roadshows to promote the benefits of solar powered lighting (Whalan, 2011).

Unilever

Unilever Ghana spends a significant proportion of its expenses on advertising and promotions to create awareness and preference for its range of products. In 2008, Unilever Ghana spent approximately $3.1m[18] on advertising and promotion, compared with just $2.1m on freight and distribution management. This spend represents approximately 4% of the cost of sales (Unilever Ghana Limited, 2009, p. 15).

These promotions are evident as one travels throughout Ghana. Many houses are painted with the “Omo” logo, while products such as “Key Soap” and “Blue Band” spreads are also promoted widely, and through multiple channels. An example of the type of advertising used in these communities can be seen in the photo below. Unilever also actively promotes itself through sustainability initiatives, such as the Unilever Foundation for Education and Development (Unilever Ghana Limited, 2011). With this level of wide-spread investment, Unilever seems to have few problems with creating awareness, but it has required significant investment over numerous years.

Sonturk relies heavily on local market activities and market days[19] in creating awareness for their products. On these days, Sonturk may give out product samples, t-shirts and flyers, or hold forums about their products (Turkson, 2011). The more localised promotional activities of Sonturk seek to complement the top-down promotions from Unilever.

[18] USD based on current exchange rates
[19] Market days are regular forums in towns where people come from the surrounding communities to trade.

Toyola

Ologburo (2011) claims that they have seen a lot of products which are good for the base of the pyramid "which they are not even aware of".

While Toyola initially had a USAID-sponsored marketing team to drive awareness, they started incurring losses soon after that programme ended. To address this, Toyola now promotes awareness through word-of-mouth, simply by encouraging satisfied users to spread the word (Osei, 2010). Toyola's founder reiterates that local awareness raising is much more important than mass media channels: "The thing that has worked for us is to copy from local practices. We are never in the newspaper or television or radio or whatever, because we found out that word-of-mouth from our satisfied customers is much more effective. We also found that taking products to a village on a market day is much more effective than paying a television station. We have a saying here: The television and radio is something that talks to you but does not wait for a reply" (Ologburo, 2011).

HealthKeepers Network

The awareness of the products that HKN sells varies widely. Some products, such as the Unilever soaps "are well known and have been promoted very well". Soaps sell fast, as the "awareness for washing hands is good". Some products, such as condoms, are "socially marketed products" for which there is good awareness, but "some people feel shy", so the HealthKeepers make it easier to purchase (Mensah, 2011).

Regarding the HealthKeepers themselves, HKN does some basic branding to promote awareness so that anyone that "sees the logo knows there is a HealthKeeper in the community" (Brew-Hammond, 2011). The logos are shown prominently on stickers given to the HealthKeeper, which they can put on their home, as well as on their aprons and baskets, as shown beside[20].

Barclays / GCSCA

Having originated from Nigeria, the system of Susu Collection has been in Ghana from the 16th century, and over the years has become an integral part of micro-

[20] Photo: Mike Debelak

finance in many West African nations. Over the years, for many "petty traders, market women, apprentices and artisans, susu is believed to have been a trusted, reliable and friendlier means of getting started" (Alabi, Alabi, & Ahiawodzi, 2007). With this history, with over 4,000 Susu collectors throughout Ghana, and with Barclays being one of the strongest banking brands in Ghana (Barclays, 2006), awareness of these services is not a major issue for this venture.

4.2.4 Acceptability

Lighting Africa

Test results for Lighting Africa products in Ghana have shown that unfamiliarity with SPLs, a lack of willingness to convert away from current light sources and difficulties associated with using the product are significant barriers to acceptability (Lighting Africa, 2009). Eliason echoes this sentiment by suggesting that "it's about getting a switch" (Eliason, 2011). He furthermore suggests that while manufacturers may wish to sell their products, their limited knowledge of the African market makes it difficult for them to get customers to adopt the product.

Adoption is also a challenge. As one Ghanaian distributor puts it "We need to have a culture shift that makes people comfortable with using solar lighting as they are with the kerosene lantern". However, research suggests that consumer experience with the product can increase the willingness to buy by as much as fivefold[21]. (Lighting Africa and Dalberg Global Development Advisors, 2010, p. 65).

Distributors involved with Lighting Africa have suggested that door-to-door marketing is still the most effective strategy. However, this should be supported by widely spread messages from government and NGOs where possible (Lighting Africa and Dalberg Global Development Advisors, 2010).

According to Whalan (2011), the "benefit of working in areas with very little electrification is that the product does a lot of the advertising itself, particularly if you go there at night".

[21] After 5 days of using the product

Unilever

Unilever uses wide-spread campaigns to improve adoption of its products. For example, in seeking to promote the benefits of its iodised Annapurna salt, Unilever Ghana partnered with UNICEF and the Ghanaian Ministry of Health to implement a social marketing programme, which was largely successful (Cescau, 2007). Another initiative called Hororo Wonsa (Truly Clean Hands) partnered Unilever with the World Bank and UNICEF to promoted the benefits of washing hands with soap, and involved a mass media campaign involving television, radio and billboards as well as direct consumer contact in communities and schools (Curtis, Garbrah-Aidoo, & Scott, 2007).

In addition to the heavy investments in promotions and advertising from Unilever, Sonturk's sales force performs some consumer education activities for retailers and customers in order to encourage them to adopt their products. For example, they will pull together forums on hygiene in order to promote their soaps. These activities are performed in tandem with broader campaigns carried out by Unilever (Turkson, 2011).

Toyola

Toyola admits that initially, customers believe "products cannot do what they are claiming to do". For example, "most people in the community do not believe they will get power from sunlight". At this stage, these customers are called "non-believers" (Ologburo, 2011).

Toyola's approach to getting customers to accept their products is "Don't tell them. Show them." To encourage people to buy, Toyola makes presentations based "on what traditionally happens in these villages". They make use "of the village crier, who makes an announcement using the gong gong"[22], then make a presentation to the village which are "very interactive". Potential customers are encouraged to ask questions and compare the products to what they currently use. Toyola will often sell the solar lanterns at night, and place their lanterns "beside what they currently use" (Ologburo, 2011).

If customers are still not convinced about the products, Toyola distributors can leave the product for trial "just like test driving vehicles in the developed world", saying they can take it back next time if not satisfied. However, if satisfied, they are encouraged to tell others.

[22] The town crier is charged with alerting villagers to gather for a meeting by banging on a hand-forged cowbell-type instrument that Ghanaians call a gong gong

Ologburo (2011) claims that many of these people eventually shift from “non-believers” to “evangelists”, who tell other people, and even “turn it into a business” by selling their products. Toyola provides them with training, and learns about their successful selling techniques, which “become best practices of selling, and we disseminate it across the system”.

Toyola uses traditional networks to “break down resistance” to their products. For example, they will install solar lighting in the chief’s house, or give a solar product to the Queen Mother[23] in order to promote usage.

HealthKeepers Network

Some products are not well-known or readily accepted in the rural communities. For example, water treatment tablets[24] were not initially understood. “People had their doubts” claims Mensah (2011), as they had been using untreated water for years. HKN addressed this by inviting the manufacturer to the HealthKeeper training programme to provide training on the product. It was also incorporated into the training manual. From that point, they “started recording better sales”.

Training may also be required to help customers understand how to use the product. While some people realised that oral rehydration salts were good for diarrhoea, some did not know how it mix it. In addition, the HealthKeepers have been “trained to find out that this condition should be referred to the clinic” (Mensah, 2011).

Barclays / GCSCA

In partnering with the GCSCA, Barclays is linking in with a distribution network that is fairly well integrated into its target communities. Susu Collectors traditionally “service a set area or group of families with whom they have developed a long relationship” (Barclays, 2006). According to Asamany (2011), “trust has been there for a long time… the Susu collector is ready available to do banking at your doorstep on your behalf”.

However, the trust between the collectors and their agents “is not 100%”. Some agents have absconded with their clients’ money, and as a result “the trust level is waning”. In response to this, the GCSCA is introducing a modern technology solution where “deposits are mobilised, receipts are printed, and you can track it all” (Asamany, 2011).

[23] The traditional head woman in the village
[24] Which purify 20 litres of water for drinking

4.3 Survey Results

A short survey was provided to each of the interviewees to complete after the initial interview. The survey template is provided in Appendix 9.2. The results of the survey help to confirm the significance of the 18 challenges for each venture. Average responses for each challenge are outlined in the chart below.

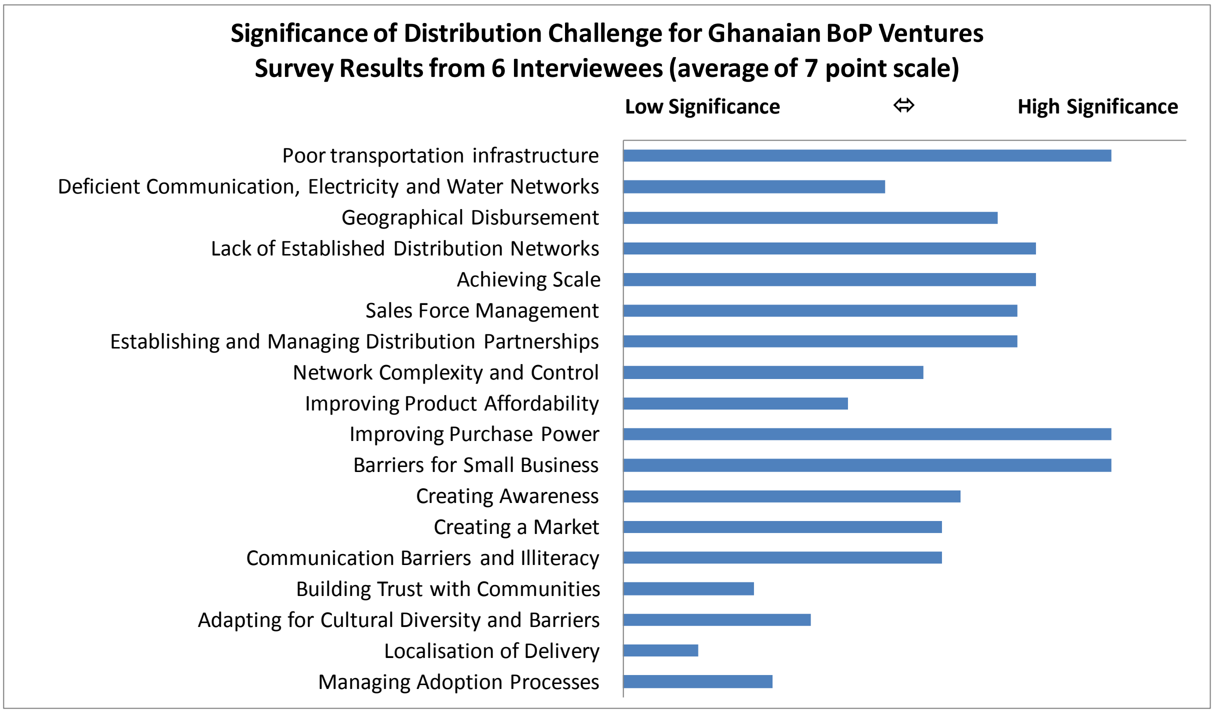

Chart 3: Ghanaian Survey Results on Distribution Challenges

4.4 Primary Distribution Challenges by Case

Key distribution challenges for the 5 cases studied were identified through interviews (I), the survey (S), written documentation (W) and observations (O). The challenges identified as being significant through these four methods are summarised in the table over the page for the case studies. Triangulation of these sources allows us to identify the top distribution challenges for each initiative, as highlighted in yellow.

4As	Challenges	Lighting Africa	Unilever Sonturk	Toyola	HKN	Barclays GCSCA
Sources Used for Case		I S W	I W	I W	I S O	I S W
Availability	Poor Transportation Infrastructure	I S W	I W	I W	I S O	I
	Deficient Communication, Electricity and Water Networks	S				I
	Geographical Disbursement	I S W	I W	I W	I S O	
	Lack of Established Distribution Networks	I S W	I W		S	
	Achieving Scale	I S W	W	I	I S O	I
	Sales Force Management	S W	I		I S O	I
	Establishing and Managing Distribution Partnerships	I S W	W		S	I
	Network Complexity and Control				S	
Afford-ability	Improving Product Affordability	I W	W		S	I
	Improving Purchasing Power	I S W	I	I	I S O	I S
	Barriers for MSEs	S	I		I S O	I S
Aware-ness	Creating Awareness	I W	W	I W	I	S
	Creating a Market	S W				
	Communication Barriers and Illiteracy	S			I O	
Accept-ability	Building Trust with Communities					I
	Adapting for Cultural Diversity / Barriers					
	Localisation of Delivery					
	Managing Adoption Processes	I W	I W	I	I	

Table 4: Significant Challenges Identified for the Ghanaian Cases[25,26]

Based on this, the following 4 challenges can be identified as being most significant across the case studies[27]:

- Poor Transportation Infrastructure
- Geographical Disbursement
- Achieving Scale
- Improving Purchasing Power

In addition, the following 6 challenges were also identified as being significant:

- Lack of Established Distribution Networks
- Sales Force Management
- Managing Distribution Partnerships
- Barriers for MSEs
- Creating Awareness
- Managing Adoption

[25] "I" represents challenges identified as significant in the interviews
"S" represents challenges identified as significant in the survey – rated 6-7 out of a 7 point scale
"W" represents challenges identified as significant in the written documentation
"O" represents significant challenges observed on the field study

[26] Challenges highlighted in yellow are not only based on whether they were identified in the interviews, observations and documentation, but to what extent they were highlighted from these data sources.

[27] Identified as highly significant in at least 4 out of 5 case studies

5 Analysis

5.1 Overview

The major BoP distribution challenges faced by our 5 case studies fit largely in line with the academic thinking and the case studies highlighted in the literature review. However, while the 4As framework (Anderson & Billou, 2007) provides a good basis for categorising this work, the challenges associated with availability and affordability were considered to be much greater than those of awareness and acceptability. While the literature review identified 8 "availability" challenges out of 18 challenges, 6 of these were identified as being significant by two or more of the Ghanaian case studies. Of the "affordability" challenges, improving purchasing power was identified by all 5 case studies and rated the highest of all challenges across the surveys. Comparatively, the "awareness" and "acceptability" challenges were not rated as significant for most of the case studies.

While Anderson & Billou make no specific reference to which of the 4As is more challenging than the other, they do suggest that "one of the biggest challenges of serving BOP markets is to ensure *availability* of products and services" (2007, p. 14). Other academic research on distribution has used too narrow a definition, focussing on the physical aspects of the topic (Vachani & Smith, 2007), while Prahalad & Hart (2002, p. 50) suggest that "the critical barrier to doing business in rural regions is distribution access". However, this paper would suggest that affordability is just as, if not more, challenging and important, and that the other aspects of awareness and acceptance are also of some importance.

In establishing distribution for BoP ventures, it is also important to carefully consider which distribution model should be employed. As highlighted by the Lighting Africa study (Lighting Africa and Dalberg Global Development Advisors, 2010), each approach has its own benefits and challenges, and should be carefully considered in light of the intended goals of the initiative and the context of the venture.

Whatever distribution model employed, organisations should not attempt to "fly solo" in trying to get products into the hands of the end customer, as the complexity of distribution and financing the BoP has many moving parts. An in depth-study of 36 BoP initiatives found that creating a proprietary sales force incorporating service and other primary functions was the single most frequently occurring mistake as it resulted in uncompetitive product prices and non-scalable business models (Karamchandani et al, 2009).

To address this, an organisation needs to either find a good partner for distribution and/or finance (Hammond, 2011), and/or effectively set up a healthy ecosystem of franchises or entrepreneurs (International Finance Corporation / World Resources Institute, 2007) to carry out these activities. In the cases of Impact Energies, Unilever and Barclays, they partnered with distributors and MFIs to get their products and services to their customers. Alternatively, Toyola and HKN set up small franchises in and around the communities. While the success of these cases varies, none of the organisations attempt to both distribute and finance the products to the end customer through wholly proprietary channels.

Ideally, across each of the 4As, bottom-up and top-down approaches should be combined for the greatest benefit. For example, Unilever's widespread promotions for its soap products combined with localised campaigns for washing hands have resulted in good sales results to the BoP. This approach can be seen to be in line with Prahalad and Hart's proposition of "highly distributed small-scaled operations married to world class capabilities" (2002, p. 2) as well as the co-creation logic proposed by "*The Base of the Pyramid Protocol*" (Simanis, Hart, & Duke, 2008) where a project team engages the communities.

However, in the absence of unlimited resources and finances for BoP ventures, bottom-up approaches often seem to be more effective than top-down approaches. For example, while Unilever's significant resource base allows it to employ bottom-up and town-down approaches world-wide, Toyola's approach of demonstrating their products in local communities by local people is also effective. However, in order to achieve scale, some top-down strategies need to be in place in order to enable growth from the bottom-up. This can be facilitated by establishing a global-local partnership (Hammond, 2011).

Innovative thinking also seems to be a common theme in addressing many of these challenges. Like product development for the BoP, effective distribution requires managers to employ unconventional methods around marketing, sales, transportation and payment mechanisms. Furthermore, most of these activities also require bottom-up approaches.

However, while the terms "innovation", "bottom-up" and "empowerment" appear frequently throughout the BoP literature (Prahalad, 2004; Simanis et al, 2008; Vachani & Smith, 2007), there appears to be no clear or consistent definition of what they mean or how they are applied. Some practitioners (Hammond, 2011, p. 194) question the limitations of bottom up approaches in achieving scale. In addition, one could question that if innovative, bottom-up approaches were all that was needed to create wealth with the BoP, why are MNCs required (from the top-down) to implement these ventures? Can independently-run, bottom-up approaches achieve the scale to both be profitable and go far enough to achieve social goals without proper planning, clear objectives and knowledge sharing? Perhaps it is worth identifying and defining the role of both bottom-up and town-down actors, and clearly articulating how these activities should be co-ordinated for better benefit.

Relying too heavily on bottom-up approaches can also be risky to a MNCs brand and CSR positioning. For example, relying on village leaders to decide who should be the entrepreneurs in the community may further cement existing power structures such as gender inequality (Egels Zandén, 2005). Alternatively, BoP Ventures may result in entrepreneurs getting paid below market wage rates (Jaiswal, 2007). As such, MNCs may need to at least establish some guidelines to manage that risk.

On a related point, the challenge of "complexity and control" flies in the face of many of the solutions proposed. While Vachani & Smith (2007) suggest strong systems for supervision and control, it seems that BoP initiatives need to accept a high level of complexity and relinquish control in order to allow entrepreneurs to distribute products in an innovative and flexible fashion. This may be a daunting task for MNCs to be involved with, as it may involve accepting a high level of risk, and potentially even threaten their legitimacy or brand (Egels Zandén, 2005). Furthermore, a BoP venture may benefit from transferring good ideas and "best practice" from one geography to another, but may struggle to do this in an effective manner if completely driven by bottom-up activities. This leads us to the question of whether a BoP distribution strategies should, in fact, seek to be "open", driven up by bottom-up approaches and high levels of innovation, or whether it should in fact be "controlled".

Mintzberg & Waters (1985) make the distinction of "deliberate" or "emergent" strategies as two extremities which may be considered equivalent to our "controlled" or "open" strategic options outlined above. Within these extremes, the authors define other strategies labelled planned, entrepreneurial, ideological, umbrella, process, unconnected, consensus and imposed. Of these, many of the BoP distribution strategies studies could be placed into the "umbrella" or "unconnected" categories. "Umbrella" strategies allow actors to respond to their environment in their own way, but within certain guidelines and constraints defined by the organisation's leadership – these strategies may be partly deliberate and partly emergent or deliberately emergent. "Unconnected" strategies are largely emergent and originate in enclaves, but are loosely coupled to central intentions and patterns.

The decision to make a BoP distribution strategy more deliberate or emergent is a difficult one. While there is much discussion on bottom-up approaches to BoP distribution, a completely uninhibited and unmonitored approach could be either ineffective or unsustainable. As a result, the "umbrella" strategic approach outlined earlier could be the most effective. Furthermore, setting guidelines and constraints using this approach could lead to the definition of deliberately emergent initiatives at the grass roots level.

Delivering on the 4As of BoP distribution is not simple, cheap or quick. All interviewees identified financial constraints for the venture itself as a major limiting factor in scaling up distribution. Furthermore, the more successful ventures did say that it took time, and a learning process, to "get it right". Successful BoP distribution also requires commitment, patience and stable and consistent financing for all partners. With a large investment often required (Simanis, 2011B), we could question whether these ventures can in fact be profitable over the long-term. Even if they can, this would suggest that a significant amount of patience is required for ventures to be fully scaled and effective using bottom-up approaches.

However, the common themes are clear. While the challenges for distribution are many, most can be addressed with innovative and patient bottom-up approaches by "partnering" with the BoP as opposed to just "selling" to them. This can be seen to be consist with London and Hart's (2011, p. 1) proposal that we should seek to "create a fortune with the BoP" as opposed to simply "finding a fortune at the BoP". However, it should be noted that some top-down management of these activities is required for the sustainability and scalability of the venture.

5.2 Availability

The challenges associated with availability were significant across all the case studies. More specifically, poor transportation infrastructure, geographical disbursement, the lack of established distribution networks, achieving scale, sales force management and establishing and managing distribution partnerships were identified on numerous occasions.

As mentioned previously, BoP ventures need to either build a solid partnership and/or create an ecosystem of entrepreneurs to be successful. Where an alliance is required, finding a good partner was a pivotal factor (Simanis et al, 2008). Practitioners identify this aspect as being crucial in moving beyond the pilot stage (Hammond, 2011, p. 198). The Barclays / GCSCA case illustrates how, when a partnership is not a good match, it is difficult to scale up.

In building an ecosystem, the network structure is also important (Vachani & Smith, 2007). In the case of Toyola, the network relied on a sales force that would travel around designated areas over days to distribute their products, stocking up at depots along the way, and leaving products with agents who could continue to sell when they are gone. This form of mobile / roving sales force, also employed by Sonturk, is more efficient than that of HKN, who sent their field team out and back to restock their franchisees once every two weeks.

The issue of achieving scale is particularly interesting as many initiatives do not manage to achieve significant scale (Karamchandani et al, 2009). This was apparent in our Barclays / GCSCA case. Methods of scaling can vary significantly, with quite different features and implications: “scale up” vs “scale deep” vs “scale wide” (London & Hart, 2011, p. 34). If a venture seeks to “scale up”, such as by the HKN trying to employ more HealthKeepers, they may find that their limited resources are spread too wide to enable these HealthKeepers to grow their businesses in these communities. “Scaling deep”, by introducing more products or services through an existing channel, such as when Toyola started selling solar lanterns through its sales force, can provide for an additional source of income and thereby spread costs, but can also be a distractive force or introduce greater levels of complexity. Finally, “scaling wide” as Lighting Africa is attempting to do across African borders may allow for knowledge sharing and economies of scale, but may fail if different cultural and contextual aspects are not taken into consideration when entering markets. As a result, the question for a BoP venture should not be “Should we scale?” but “How should we scale?”

Karamchandani et al (2009) suggests that scale can be achieved by building an entire eco-system incorporating the whole value chain with a very narrow product focus. This is true in the case of Toyola, who is managing to scale quickly from a small business by controlling all elements from manufacturing through to sales. However, the case of Unilever worldwide suggests that this does not always hold true. Unilever, which covers a wide range of products, has kept its manufacturing activties while outsourcing the majority of its distribution activities in order to achieve scale. Based on these extremes, this paper would suggest that scale can be achieved through product specialisation or value chain specialisation.

While it has been acknowledged that "last mile" distribution should be left to entrepreneurs and retailers in the local environment (Vachani & Smith, 2007), this last mile should be stretched as long as possible. That is, BoP ventures should try to "outsource" as much of the "last mile" of distribution to the local community as possible. Toyola does this by engaging local sales people, agents, retailers and even "evangelists" as intermediaries, and incentivising each of them based on their sales. This allows for scalability, keeps costs to a minimum, improves buying power and allows them to tap into the social network to help provide advocacy for their brand and products (ibid). However, MNCs may need to manage their brand risk where entrepreneurs get paid below market wage rates (Jaiswal, 2007).

Numerous other options for addressing availability challenges have also been identified, such as leveraging existing modes of transport and networks, clustering retail locations and creating hubs, better managing the sales force through the use of training and incentives, and investing in people, technologies and related capabilities. Selecting which of these tactics to use will depend very much on the individual context.

5.3 Affordability

Financial constraints across the value chain were typically the highest issue on the agenda of most of the case studies. In addition to providing finance options for the end customer, MSEs and the sales force often want to get products on credit. With typical bank lending rates in Ghana being over 30% (Eliason, 2011), this not only puts pressure on customers and distributors, but has significant cashflow implications for the organisations themselves. As a result, the extent to which a BoP venture can finance their retailers and customers needs to be dependent on their own financial position.

While Vachani and Smith (2007, p.8, 29) claim that "taking out… and aggressively controlling costs" is a key strategy for improved distribution, this research suggests that improving purchasing power is more important than improving product affordability. That is, providing access to finance is more important than reducing the price of the product. Of course, a product has to be low-priced for the BoP to have any chance to afford it, but if customers have the opportunity to receive reasonable micro-finance or pay-off the product in instalments, they are more likely to be able to purchase the product.

However, as McMullen (2011) notes, financial capital limitations are not the only limitation to economic growth and development. He argues that financial aid has been tried, and that those who advocate micro-finance take a static view of the poor, their capabilities and their context. McMullen suggests that institutional and human capital limitations are just as, if not more, critical. This is highly relevant to other identified challenge of barriers to MSEs. Some of these additional limitations were evident when meeting with the franchisees from HKN.

Furthermore, one needs to be wary when considering how financing can meet the economic and social goals of BoP ventures. As Karamchandani et al (2009) suggests, the additonal costs of credit can reduce the economic benefits of low-cost products. A flush of financing throughout BoP communities can lead to credit problems in the long term. HKN, Unilever and Barclays cases all identified problems with delinquencies in some communities.

In response, many BoP ventures are working with, or seeking to work with, MFIs who could potentially meet both their distribution and financing needs. However, with a number of ventures seeking this angle, there may be doubts on the capacity, capability and willingness of MFIs to effectively partner with these organisations. The interviewees from Impact Energies and Barclays have warned us of some of the dangers of relying on MFIs to distribute products and services, and so partnerships with MFIs should be entered into thoughtfully.

The ventures studied also sought ways to reduce costs through such methods as streamlining operations, tapping into subsidies or reducing taxes. But the main focus remains on financing. Whatever solution employed, it is critical that finance is integrated into distribution.

5.4 Awareness and Acceptability

While all the 4As are required for effective distribution to the BoP, they can and do overlap somewhat. This is particularly true for awareness and acceptability. For example, Lighting Africa’s attempts to improve awareness of solar as a power source could, and should, lead to the eventual acceptance and adoption of the products. The “*Commercial Infrastructure at the Bottom of the Pyramid*” framework also makes no distinction between awareness and acceptance, suggesting the main goal should be to “shape aspirations” (Prahalad & Hart, 2002, p. 8). Rather than dividing these two aspects, this research would suggest that activities towards these should be performed in tandem wherever possible. This, for example, is evident in Toyola's "Don't tell them - show them" (Ologburo, 2011) approach which seeks to address awareness and acceptance simultaneously.

While issues of creating a general awareness and customers adopting the products were identified in the Ghanaian case studies, local issues of trust, cultural diversity and communication barriers did not feature as prominently. This may be, however, due to the fact that the cases studied were somewhat already embedded in the country through local ownership or partnerships with local organisations. Admittedly, these challenges may be more relevant to greenfield BoP initiatives.

The cases studies support Weidner et al's (2010) suggestion that bottom-up methods for awareness and acceptance are more effective than top-down methods. Demonstrating the products in the communities, promoting at market days and events, and using local people to sell the product were commonly identified tactics to achieving production adoption. While mass media channels such as television and radio may assist in promoting awareness, they need only be employed if resources allow. With the capital constraints on many BoP ventures, bottom-up activities seem to be much more cost-effective approach.

These bottom-up activities do not always need to be 1-to-1, as suggested in some of the academic literature (Simanis et al, 2008; Viswanathan et al, 2010). Group or community-based approaches prove to be effective as demonstrated by Toyola. Whatever the forum, products often need to be demonstrated or tested in order to promote interest and adoption.

6 Theoretical Development

6.1 BoP Distribution Framework

While it is acknowledged that each BoP distribution strategy needs to be tailored to the individual context, the previous analysis suggests that certain principles can be applied and certain questions should be asked when establishing or improving a BoP distribution strategy. On that basis, the following *BoP Distribution Framework* is proposed:

What distribution model or combination of models should we use?
Distributor dealer networks
Proprietary distribution
Institutional partnerships
Franchise model
Other

	Availability	*Affordability*	*Awareness & Acceptability*
Guiding Principles	• Never fly solo – find good partners and/or build an ecosystem of entrepreneurs • Combine bottom-up and top-down activities to achieve scale • Leave the last mile to the BoP themselves • Enable a highly efficient sales network • Create businesses, not jobs	• Build finance into distribution • Access to finance is more important than reducing the price of the product • Finance is often required for intermediaries and end users • Remove financial and other barriers for MSEs • Simplify and streamline to reduce costs	• Create awareness and acceptance simultaneously • Don't tell them, show them - products should be demonstrated and/or test driven • Local / below-the-line campaigns more effective than top-down / mass media • Engage advocates from within local communities
Key Questions	• What are our major obstacles to scale? • How should we scale - scale up, scale wide or scale deep? • What sales network or ecosystem is most effective? • How much of the last mile can we outsource to entrepreneurs?	• How will our customers be able to afford our products? • What are our financial limitations? • How can our organisation finance and support our distributors and customers? • How should or could we work with MFIs?	• How can our target customers experience the product prior to purchase? • What local, cost-effective channels can we use to promote our products? • How can we make customers advocates, and then engage them in sales efforts?

What do we need to be successful?
Distribution partners
Financing
Resources
Timeframe

Figure 4: BoP Distribution Framework

6.2 Options for Addressing Distribution Challenges

In addition to the framework, it is worth highlighting some of the more successful responses used for each distribution challenge. Based on the literature review and the case studies, the options for addressing each challenge are highlighted below. Rather than being used in a prescriptive format, this can be seen as a "toolbox" for practitioners seeking to establish or improve their distribution activities to the BoP:

4As	Challenge	Options for Addressing Challenge
Availability	Poor Transportation Infrastructure	• Leverage common modes of transport – carts, bikes, boats, etc • Substitute physical distribution with other technologies
	Deficient Comms, Electricity and Water Networks	• Invest in local, small-scale infrastructure – including off-grid systems • Leverage widespread mobile phone use
	Geographical Disbursement	• Outsource "last mile" distribution to entrepreneurs or franchisees • Begin with slightly higher populations who are underserved • Tap into existing distribution networks • Cluster retail locations and create hubs • Enable greater mobility of sales force • Set up depots so that stock is located closer to the customer • Localise production if possible
	Lack of Established Distribution Networks	• Build an ecosystem of entrepreneurs • Tap into 3rd party distribution network (MFIs, NGOs, etc) • Build alliances to distribute aggregated products and services and share costs – multi-product distribution
	Achieving Scale	• Choose scaling approach carefully –up, deep or wide • Tap into established networks • Invest in platforms, partners and people • Draw on abundant low-skilled human resources • Enable sales force to recruit agents or apprentices
	Sales Force Management	• Align incentives through the distribution network • Monitor, assess and address sales force issues • Train staff appropriately • Appoint leaders and supervisors in the communities
	Establishing and Managing Distribution Partnerships	• Assess potential partners carefully before commitment • Focus on shared business and social goals • Invest time to develop strong personal relationships • Identify and involve the right people, technology and capabilities
	Network Complexity and Control	• Employ an "umbrella" strategy by setting guidelines and constraints, but allowing for autonomy and flexibility • Decentralise and externalise authority

Table 5: Options for Addressing BoP Distribution Challenges (continued over)

4A	Challenge	Options for Addressing Challenge
Affordability	Improving Product Affordability	• Offered shared access models for communities • Simplify, specialise or streamline to drive costs down • Tap subsidies or finance schemes to reduce costs
	Improving Purchasing Power	• Enable micro-financing or instalment payments for end customers • Integrate financing into distribution - potentially with an MFI • Create systems for measuring and monitoring credit • Generate local income through franchises / entrepreneurship • Enable bartered payments and bi-directional distribution • Time sales activities with high-income seasons (e.g. harvesting)
	Barriers for Micro and Small Enterprises	• Enable micro-financing for MSEs • Provide other incentives, training and support
Awareness	Creating Awareness	• Promote through community groups, events and markets • Engage government agencies and NGOs • Use mass media channels in support if resources allow
	Creating a Market	• Employ open ended value propositions • Visibly showcase products – compare with existing behaviours
	Communication Barriers and Illiteracy	• Use non-written channels – demonstrations, social networks, word-of-mouth
Acceptability	Building Trust with Communities	• Create alliances with local organisations and networks • Build relationships with community leaders • Recruit and support reliable distributors • Encourage vocal advocacy from satisfied customers • Engage government agencies and NGOs
	Adapting for Cultural Diversity and Barriers	• Build relationships with community leaders • Co-create tailored messages to targeted communities
	Localisation of Delivery	• Engage distributors and entrepreneurs from within the community • Visit the communities to better understand needs and preferences
	Managing Adoption Processes	• Allow customers to “test drive” product • Demonstrate product use to groups in fun and interesting ways • Deliver educational programmes and social marketing campaigns

Table 6: Options for Addressing BoP Distribution Challenges (continued)

7 Conclusion

The research shows that challenges associated with distributing to the BoP are many. However, based on the background literature, and the 5 Ghanaian case studies investigated, the following top 10 challenges can be identified, with the top 4 being the most significant:

- *Poor Transportation Infrastructure*
- *Geographical Disbursement*
- Lack of Established Distribution Networks
- Sales Force Management
- Managing Distribution Partnerships
- *Achieving Scale*
- *Improving Purchasing Power*
- Barriers for MSEs
- Creating Awareness
- Managing Adoption

The 4As framework provided a good basis for analysing BoP distribution. However, the challenges of availability and affordability were seen to be the most significant, while the means of addressing awareness and acceptability were closely intertwined.

It was found that there is no “silver bullet” for establishing an effective and efficient BoP distribution system, but that these systems need to be tailored to both the local context as well as the organisational capabilities available. Organisations establishing BoP distribution networks should consider which distribution model or models are most appropriate, establish effective strategies for availability, affordability, awareness and acceptability, and support the activities with appropriate partnerships, financing and resources.

While many BoP ventures wish to achieve scale, they need to consider whether it is more beneficial to scale up, scale deep or scale wide. Organisations also need to set up healthy ecosystems for entrepreneurs and / or establish strong alliances for distribution in order to be successful. In addition, appropriate customer and retailer financing needs to be build in to distribution. While bottom-up and top-down tactics can be employed across the 4As, bottom-up approaches are often more cost-effective and better integrated within the local communities.

While most of the BoP literature proposes “bottom up” and “innovative” solutions to BoP challenges, this must be balanced against the need to achieve scale. Bottom-up approaches are unlikely to automatically and organically grow past the pilot stage, but may achieve scale if appropriately supported and nurtured. Organisations can achieve this by establishing suitable ecosystems to support growth and providing adequate investment and financing for the venture.

While it is clear that financing is an important issue for BoP ventures, the research did not clarify what form of financing is most effective. The use of different financing mechanisms, such as micro-loans, instalment payments or providing products on short-term credit, may have different implications on customers, retailers and the BoP venture itself. This topic could be the subject of further research.

There are a diverse set of challenges associated with distributing products and services to the BoP, and navigating these challenges is no simple task. It requires time and investment as well as trial and error. However, the process can be simplified by applying a set of principles as outlined in the *BoP Distribution Framework*, and by carefully considering the alternatives to achieve availability, affordability, awareness and acceptability. By thoughtfully planning the journey, the road to the BoP can be made a little less bumpy.

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9 Appendix

9.1 Interview Guide

Introduction to research:

- Focus on BoP distribution, including the 4As
- Clarify that scope excludes product design, manufacturing, etc
- Focus of initial interviews – what have been the challenges of distribution and how are they / have they been addressed

Questions for interviewee:

- Could you begin by giving me a brief overview of the venture – what are its main objectives, activities, products and services, and key players involved?
- Please describe how you distribute your products and services – the key steps / people involved in getting the products from the source to the end customer?
- Can you describe how your distribution network is structured?
- What is the relationship like between you and your distributors / retailers / end customers?
- What challenges do you face in distributing your products and services?
    - Physical distribution
    - Enabling affordability
    - Awareness and adoption
- What are the main challenges you face in managing your sales force / retailers?
- What have been the main obstacles to scaling up distribution?
- How have you been addressing these challenges?
- Have these responses been successful?
- What would you have done differently?
- If you had more resources to dedicate to distribution, how would you use them?
- What would you change for the venture to be more successful?
- What advice would you like to give to other BoP ventures that are distributing to the BoP?

Concluding:

- Request additional materials and survey completion
- Follow-up interview if required?
- Thank you for your time

9.2 BoP Distribution Survey

Thank you for taking the time to complete the following survey. The survey should not take you longer than 10-20 minutes to complete.

The survey will be used for research to address the following question: *How can the challenges of distributing products and services to "base of the pyramid" customers be addressed?* More specifically, this survey attempts to identify the most critical or important challenges faced when attempting to distribute products to the base of the pyramid.

For the purposes of this research, we have defined distribution to the BoP as "initiatives that provide poor consumers with market access for goods and services that they can benefit from buying and selling, by helping to neutralize the disadvantages they suffer from inadequate physical links to markets, information asymmetries, and weak bargaining power". This includes not just physical distribution, but all activities that are usually used to distribute BoP products to customers, including associated entrepreneurial programmes, micro-financing, communications, education, sales and service activities. As such, we have grouped the challenges into the following categories:

The survey involves answering a simple question for each of the 18 challenges identified in distributing products and services to the base of the pyramid. Each challenge is paired with a statement. For each statement, the respondee is asked to select one box identifying to what extent they agree or disagree with the statement for their initiative. The respondee should only select one box from a 7-point scale from "strongly disagree" to "strongly agree". The middle box would signify a response of "neither agree nor disagree" Please note that this should be a relative scale, and therefore not all responses should be "strongly agree".

The respondee then has the option to include additional comments regarding the challenge (including any more specifics about the challenge, or to outline how they are currently addressing the challenge).

An example of how to answer is outlined below:

Challenge	Statement	To what extent do you agree or disagree with the statement?	Additional Comments
Customer Identification	It is difficult to identify who our target customers are and where they reside	Strongly disagree Strongly agree ☐ ☒ ☐ ☐ ☐ ☐ ☐	We have performed a comprehensive market analysis and have a clear understanding of where our customers are located
Customer Awareness	Customers are now aware of our products and services	Strongly disagree Strongly agree ☐ ☐ ☐ ☐ ☐ ☒ ☐	We have commenced a significant marketing campaign to address this issue

Once again, thank you for taking the time to complete the survey. If you have any questions, please feel free to contact Mike Debelak on mike.debelak@daxam.se or 0240 827 574.

Please complete the grey fields over the page.

BoP Venture / Organisation name:

Your name:
Your position:
Date survey completed:

Challenge	Statement	To what extent do you agree or disagree with the statement?	Additional Comments (optional)
Availability			
Poor transportation infrastructure	A lack of roads and an effective transportation infrastructure makes it difficult and costly to distribute products and services to our customers	Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree	
Deficient Communication, Electricity and Water Networks	Limited phone, internet, electricity and water services make it difficult to market and distribute our products and services	Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree	
Geographical Disbursement	Our customers are broadly distributed across a wide geographic area making them difficult to access	Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree	
Lack of Established Distribution Networks	Established distribution networks to our target customers are few and/or ineffective	Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree	
Achieving Scale	Our venture struggles to achieve scale in terms of sales and/or expanding across geographies	Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree	
Sales Force Management	It is difficult to recruit, retain, manage and improve the effectiveness of our sales force	Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree	
Establishing and Managing Distribution Partnerships	Setting up and managing partnerships or alliances that improve our distribution capacity is difficult	Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree	
Network Complexity and Control	Our network of stakeholders and distributors is highly complex and makes it difficult to maintain control of our distribution activities	Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree	
Affordability			
Improving Product Affordability	As prices of our products are high for the end customer, it is difficult to find ways to make them more affordable	Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree	
Improving Purchase Power	Our customers have inadequate incomes and poor access to credit making it difficult for them to afford our products	Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree	
Barriers for Micro and Small Enterprises	Our small business partners (such as entrepreneurs) face significant financial and other barriers in distributing products to the end customer	Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree	
Awareness			

Creating Awareness	It is difficult to create broad awareness of our brand, products and services across our target market	Strongly disagree Strongly agree ☐ ☐ ☐ ☐ ☐ ☐ ☐	
Creating a Market	While needs exist in our target communities, it is difficult to transform these needs into a real market opportunity	Strongly disagree Strongly agree ☐ ☐ ☐ ☐ ☐ ☐ ☐	
Communication Barriers and Illiteracy	Communication barriers with our target market are high, and illiteracy makes it particularly difficult to communicate effectively	Strongly disagree Strongly agree ☐ ☐ ☐ ☐ ☐ ☐ ☐	
Acceptability			
Building Trust with Communities	Our target communities do not fully trust our organisation and/or ventures, hindering distribution efforts	Strongly disagree Strongly agree ☐ ☐ ☐ ☐ ☐ ☐ ☐	
Adapting for Cultural Diversity and Barriers	Cultural diversity of our target markets is high and requires highly differentiated distribution strategies which are difficult to manage	Strongly disagree Strongly agree ☐ ☐ ☐ ☐ ☐ ☐ ☐	
Localisation of Delivery	We struggle to understand our local markets, their demands and their preferences	Strongly disagree Strongly agree ☐ ☐ ☐ ☐ ☐ ☐ ☐	
Managing Adoption Processes	Many of our target customers are reluctant, unwilling or unable to adopt new products and services	Strongly disagree Strongly agree ☐ ☐ ☐ ☐ ☐ ☐ ☐	

What are some of the other major distribution challenges you face that are not listed above?

Any other comments?

Please e-mail the completed survey to mike.debelak@daxam.se. Thank you for completing this survey.

9.3 Lighting Africa Distribution Models

Distribution Model	Product range	Company gross margin	Marketing	Distribution/Logistics	Last-mile sales
Distributor - Dealer Network	Broad range of complimentary, competitive and sometimes unrelated products	10-40%	Materials: company Cost: dealer	Logistics: company Cost: distributor	• Final sales: handled by dealer • Product financing: informal • After-sales support: distributor
Own distribution/Direct-to-Consumer	Exclusive to company	20-50%	Materials: company Cost: company	Logistics: company Cost: company	• Final sales: handled by sales team • Product financing: rarely formalized • After-sales support: sales team
Institutional Partnership	Typically exclusive or limited to other value-added products	10-30%	Materials: company Cost: shared	Logistics: company Cost: shared	• Final sales: handled by partner • Product financing: if partner is a financing institution (MFI, SHG network, etc); rental/charging kiosk model is optional • After-sales support: partner
Franchise	Exclusive to company	10-30%	Materials: company Cost: shared	Logistics: company Cost: shared	• Final sales: handled by franchisee • Product financing: rarely formalized • After-sales support: franchisee
Rental/Leasing System	Typically exclusive or limited to other value-added products	10-30%	Materials: company Cost: shared	Logistics: company Cost: shared	• Final sales: handled by leaser • Product financing: rental model enables small cash payments • After-sales support: leaser

Table 7: Lighting Africa Distribution Models

(Lighting Africa and Dalberg Global Development Advisors, 2010, p. 36)

9.4 Lighting Africa Distribution Models – Benefits and Challenges

Distribution Model	Benefits	Challenges
Distributor – Dealer Network	• Often the most common and well-understood model in developing markets • Greater market penetration - leveraging existing infrastructure, particularly for a deep reach into rural areas • Some control of market price • Share in marketing & logistics expense • Moves inventory closer to the end-consumer for "just in time" delivery to respond to demand • Gain from distributor's/dealer's knowledge of the market & customer	• Gross margin must be shared amongst multiple players, forcing the manufacturer to forfeit at least 20% more than in other options • Requires qualified master distributors which have historically been difficult to find • Oversight into the "last mile" of distribution - less leverage to aggressively market and push consumer sales, challenge to compete with other basket of goods in retailer's shop, and difficult to ensure that the retailer completes after-sale support • Distributors and dealers are often SMEs with limited working capital, which can constrain volumes of sales or demand that the manufacturer/company offer lines of credit. • Brand dilution risk, if inadequate training and oversight
Own Distribution	• Complete control over pricing and quality/brand image • Avoids dealing with external players that would require special arrangements, such as extending of credit, price control of the product in the outlets, quality of goods, after-sale services and the sale of competitive products	• High fixed cost investment in local sales staff/infrastructure for a small basket of goods; there is a considerable risk that, the local market will become saturated before recouping the cost of sales/distribution in that area • Decentralized web of sales/marketing staff can be challenging to manage

	• Maintain gross margins in-house • Proximity to consumer ensures responsiveness in after-sales support, continual product feedback, and growing market knowledge • Clean inventory controls	• Difficult to adapt quickly, change geographies, etc. • International companies may find it difficult to establish sales locations, hire personnel to operate the business, understand and comply with government regulations and local business practices
Institutional Partnership	• Allows for rapid implementation: potential for high volume orders with lower operating costs • Leverage an existing network of customers; gain from partner's deep knowledge of the customer base • Opportunity for product financing, if the partnership is with a finance/credit institution • Often ensures social impact, depending on the partner institution's mission	• Risk that government and NGO players could distort the market with subsidies and make the market uncompetitive for private sector players • Distribution may be dependent on a finite level of funding available to the partner institution • Time and cost to source and manage one institution often far exceeds projected budgets/timelines • Often partnership with large institutions puts the small lantern company in a position of limited bargaining power • Frequent disputes over cost sharing, risk sharing, roles and responsibilities
Franchise	• Rapid scale-up by outsourcing the product retail to a player that will be incentivized to increase sale volumes and raise brand awareness. • Share in marketing and logistics expense • Farther reach for product distribution	• Gross margin must be shared amongst multiple players, forcing the manufacturer to forfeit at least 20% • Significant branding risk, as well as IP risk (if the technology is proprietary)
Rental / Leasing System	• Outsourcing last mile for more rapid scale-up • Customer affordability - reach customers that cannot afford the full product cost by mimicking the cash flows of kerosene • Customers benefit from convenience, minimized risk of device theft due to charging in a secure location and better product performance due to a standardized, supervised charging process. • Offers a platform for other adjacent enterprises (i.e., other appliance/battery charging, the sale of complimentary products, computer access) • Potentially better product maintenance, as the rental business has a greater incentive to prolong the product life.	• High capital investment required by the local entrepreneur - land, building, recharge systems, product inventory • Unproven commercially; often insufficient incentive to the micro-entrepreneur unless overly subsidized (because there is a high capital expenditure for a limited geographic radius) • Restricts end-user choice (customer feedback in some pilots have shown that, ultimately, customers want to own their light & power source – sometimes a "rent-to-own" model is most suitable.) • Challenges with maintenance and quality control, as well as potential loss of rental unit. • Lower ability to up-take latest innovations in the market due to sunk costs

Table 8: Lighting Africa Distribution Models - Benefits and Challenges

(Lighting Africa and Dalberg Global Development Advisors, 2010, pp. 36-40)