

RICHES AT THE BASE OF THE PYRAMID

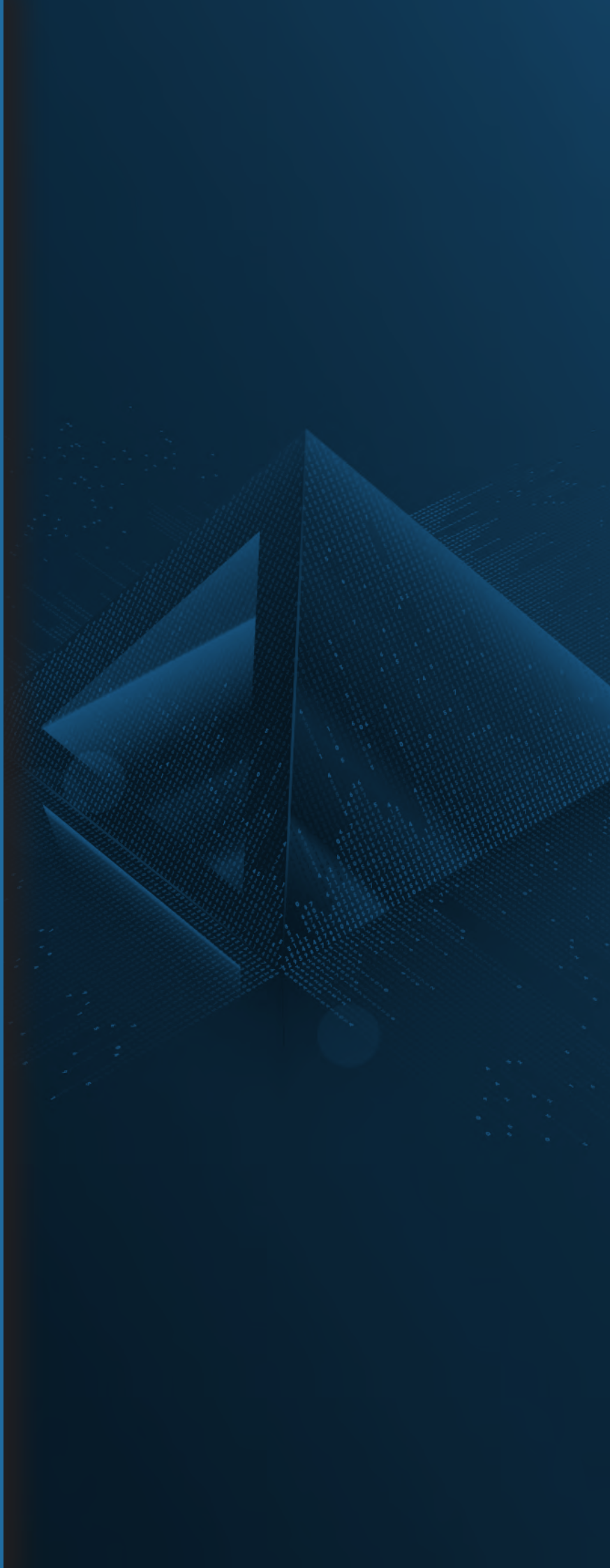
ALLEVIATING POVERTY WITH
GREEN PRODUCTIVITY
AND SUSTAINABILITY



The Asian Productivity Organization (APO) is an intergovernmental organization committed to improving productivity in the Asia-Pacific region. Established in 1961, the APO contributes to the sustainable socioeconomic development of the region through policy advisory services, acting as a think tank, and undertaking smart initiatives in the industry, agriculture, service, and public sectors. The APO is shaping the future of the region by assisting member economies in formulating national strategies for enhanced productivity and through a range of institutional capacity building efforts, including research and centers of excellence in member countries.

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RICHES AT THE BASE OF THE PYRAMID

ALLEVIATING POVERTY WITH GREEN PRODUCTIVITY AND
SUSTAINABILITY



Riches at the Base of the Pyramid

Alleviating poverty with green productivity and sustainability

Prof. Allen H. Hu served as the volume editor.

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FOREWORD

The base of the pyramid (BoP) is a socioeconomic designation for the 4.5 billion individuals who live primarily in developing countries and whose annual per capita incomes fall below USD3,000 in purchasing power parity terms. The term BoP is also used to describe an emerging business strategy focused on meeting the needs of low-income people by engaging them as consumers, suppliers, producers, and entrepreneurs. This requires the business activities of multinational and local companies alike to involve low-income segments in value chains, thereby contributing to poverty reduction and sustainable development (SD) while caring for the environment and generating profits in the long run.

Against that background, the APO conducted a research project on Green Productivity (GP) for the Base of the Pyramid for Sustainable Development in APO Member Countries. It was undertaken by the APO Center of Excellence on GP as part of continuous efforts to achieve economic prosperity along with positive contributions to the environment and SD. The research examined possible contributions and opportunities for BoP-targeted GP activities to improve the quality of life of those at the BoP while supporting SD. The cases collected are examples of strategies implemented for BoP markets which have been evolving in the Asia-Pacific, including products, services, employment, entrepreneurial opportunities, and government programs.

All BoP strategies presented are related to GP, such as eco-businesses, renewable energy, recycling industries, eco-agriculture, CSR etc., to serve the interests of the poor. This publication therefore represents a combined approach to the three concepts of the BoP, GP, and SD, since business strategies to engage BoP markets vary greatly due to differing demographics, development stages, and levels of complexity. Recommendations on enhancing GP integration into potential BoP business strategies are an important feature in this report.

The APO values the contributions of all the experts from the six countries participating in this research. The publication will be useful for relevant government agencies in APO member countries involved in GP, BoP, and SD initiatives as well as for economic policy planners working for poverty reduction.

Dr. AKP Mochtan
Secretary-General

PREAMBLE

Our world faces some grand challenges. Perhaps the greatest of all is the impoverishment faced by the majority of the world's citizens. Often referred to as the base of the pyramid (BoP), the approximately 4.5 billion people living on USD8/day or less deserve the opportunity for a better life [1]. The UN's Sustainable Development Goals (SDGs) highlighted the important role that governments and the development community must play in alleviating income and other types of poverty. Yet if we aspire to be a more just, stable, and peaceful future, the BoP must become a focus for not only the public and development communities, but also the private sector.

The good news is that over the past decade, the conversation about the role of business in alleviating poverty has changed. Rather than, "Should business play a more significant role in alleviating poverty?," the focal question is now "*How* could business play a more significant role in alleviating poverty?" While philanthropic donations are certainly commendable, efforts to positively impact the lives of 4.5 billion people require solutions that are sustainable at scale. In particular, this means creating more businesses that provide the goods and services needed by the BoP in a manner that is affordable, acceptable, and accessible [2]. Addressing this 'how' - how to build sustainable, scalable businesses that generate a net positive impact on the BoP - is a key step in building a world where the power of business can be an even more effective force for good [3].

This book, "Riches at the Base of the Pyramid: Alleviating Poverty with Green Productivity and Sustainability", is a welcome step in the right direction. Recognizing the diversity of the BoP and their needs, this book offers a robust set of case studies from which to draw lessons. Across the world, cultural, political, religious, and geographic differences require recognizing unique aspects of the local context. Furthermore, business strategies can vary across different industrial sectors, such as energy, sanitation, health, agriculture, and others. While building businesses for the BoP requires standardized frameworks and tools that all entrepreneurs can use, business leaders must also develop business models that respond to differences in market context and product or service delivery.

The Asia-Pacific region accounts for the largest portion of the BoP population segment. As such, understanding how to build better BoP businesses in this region can be especially impactful. Addressing impoverishment in a sustainable and scalable manner in India, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam can make a material difference in the lives of millions. The goal of this book is to help deliver

on this promise. I commend the authors and their project leader, Dr. Alan H. Hu, as well as the leadership of the APO in envisioning this book and bringing that vision to life. In the pages that follow, the reader will find both inspiration for taking action and valuable knowledge for ensuring these actions are as effective and impactful as possible.

Ted London
Ross School of Business/William Davidson Institute
University of Michigan

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- [1] Hammond A. L., Kramer W. J., Katz R. S., et al. 2007. The Next Four Billion: Market Size and Business Strategy at the Base of the Pyramid. Washington DC: World Resources Institute and International Finance Corporation; 2007.
- [2] Prahalad C. K. The Fortune at the Bottom of the Pyramid: Eradicating Poverty Through Profits. New Jersey: Wharton School Publishing; 2005
- [3] London T. The Base of the Pyramid Promise: Building Businesses with Impact and Scale. Stanford: Stanford University Press; 2016.

CHAPTER 1

INTRODUCTION

Dr. Allen H. Hu

In 2000, the UN announced eight Millennium Development Goals (MDGs), which ranged from halving extreme poverty rates to halting the spread of HIV/AIDS, and providing universal primary education by target year of 2015 [1]. In September 2015, the UN announced new Sustainable Development Goals (SDGs) to replace MDGs. These SDGs were called the agenda for transforming our world by 2030. Among the 17 SDGs, many basic human rights related issues, such as zero poverty, zero hunger, good health and wellbeing, gender equality, clean water and sanitation, affordable and clean energy, decent work, and economic growth are at the top of the list [2].

As an engine of growth and development, business has a critical role to play in improving the living conditions of the poor. Most notably, companies can do so by engaging in inclusive business ventures, that is, sustainable business solutions that go beyond philanthropy and expand access to goods, services, and livelihood opportunities for low-income communities in commercially viable ways [3–5]. The notion of inclusive business calls for innovative methods of doing business and involves the creation of new forms of employment, new markets, and affordable products and services to spur inclusive economic growth and encourage entrepreneurship.

The Base of the Pyramid (BoP), a term first coined by Prof. C.K Prahalad in 2002, is “a socio-economic designation for the 4.5 billion individuals, primarily living in developing countries, whose annual per capita income is below USD3,000” [6]. The BoP is also used to describe a business strategy that focuses on meeting this segment’s basic needs by engaging them as consumers, producers, and entrepreneurs; an act often termed as “inclusive business”. An inclusive business is a business initiative that keeps its for-profit nature and contributes to poverty reduction through the inclusion of low-income communities in its value chain [3]. The poor in the business process can either be the producers or consumers, and the strategies for enterprises may engage low-income communities through direct employment of low-income people, development of suppliers, and service providers from low-income communities, or providing affordable goods and services targeted at low-income communities.

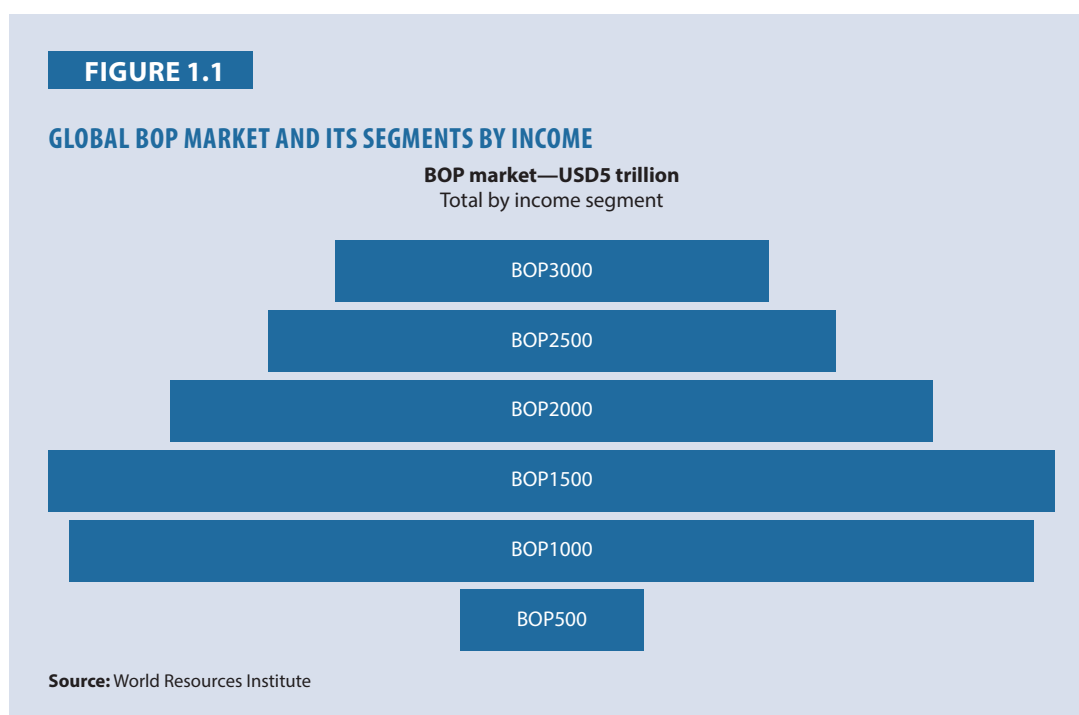
As growth in mature markets begins to stagnate, big brand name companies, such as Unilever, Danone, Microsoft, Vodafone, Nokia, Schneider Electric, and Philips, are now turning to the BoP market as an untapped source of growth, and these companies have been quite successful in applying these strategies. Bill Gates has stated that this model “provides an intriguing blueprint for how to fight poverty with profitability” [7]. Even for basic needs products and services, such as food, water, energy, health, IT, and transportation, the market potential has been estimated at a value of USD5 trillion [6].

The goal of inclusive business is not corporate philanthropy; rather its goal is the search for sustainable business models that “do well by doing good”, and have the potential to become part of the mainstream business model within the companies concerned, which is the key to business having development impact at scale.

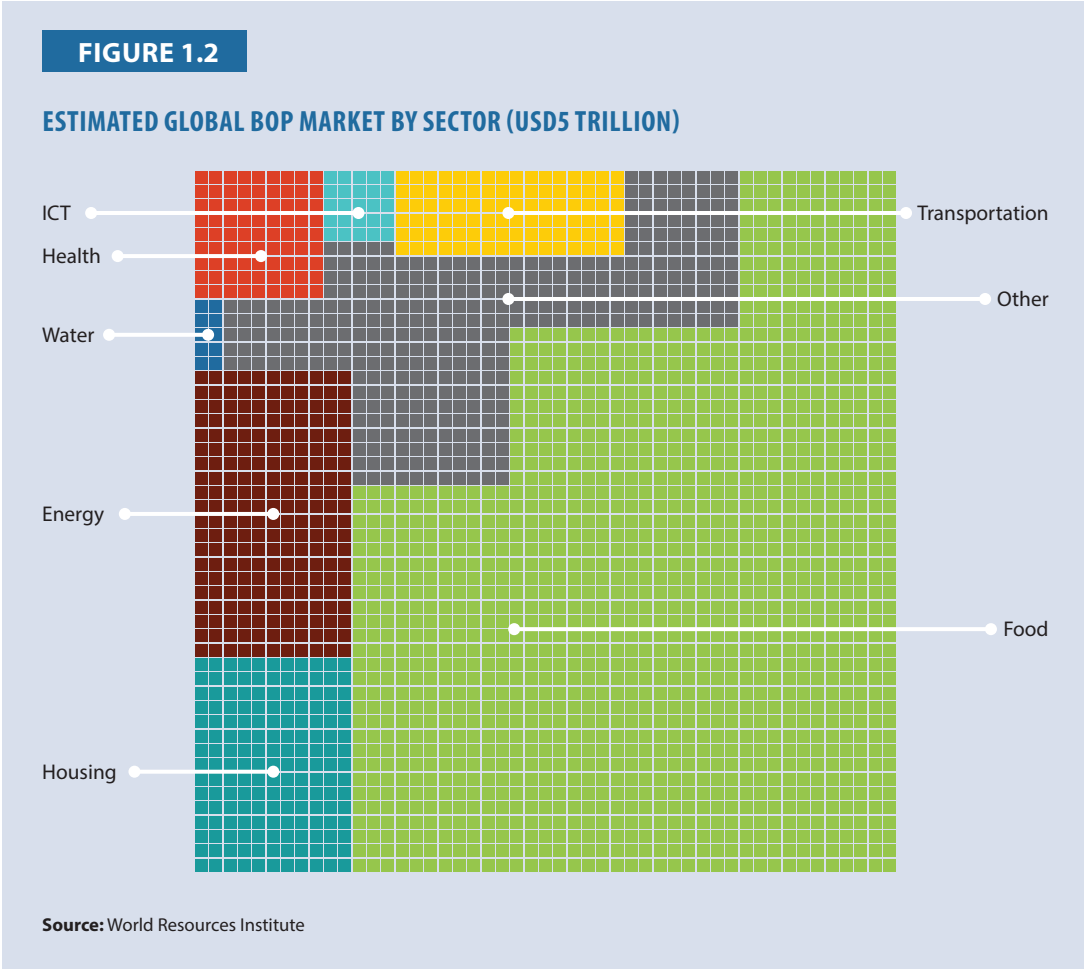
Asian countries are considered to have tremendous opportunities in implementing BoP/inclusive business strategies for enterprises, which led to the Asian Productivity Organization (APO) conducting this project. The APO seeks to promote inclusive business smartly and strategically among BoP markets in APO member countries.

Overview of BoP Markets

According to a report entitled “The Next 4 Billion: Market Size and Business Strategy at the Base of the Pyramid”, which was released by World Resources Institute (WRI) in 2007 [7], the BoP market can be segmented further into six groups based on the yearly income of households (in local purchasing power) from less than USD500 (extremely poor) to up to USD3,000 (not too poor) groups (Figure 1.1). Different countries have different income structures, and hence these countries will have different BoP profiles. In the report written by Rangan et al. (2011), 8 segmented the BoP population into three categories: i) those with low income (the 1.4 billion people living on USD3–5/day), ii) those who live at the subsistence level (the 1.6 billion living on USD1–3/day); and iii) those in extreme poverty (the one billion people living on USD1/day or less) [8]. According to WRI’s report, the BoP comprises 72% of the 5,575 million people recorded by available national household surveys worldwide, and an overwhelming majority of the population can be found in developing countries of Africa, Asia, Eastern Europe, and Latin America and the Caribbean, which are home to nearly all BoP. Together, this population has substantial purchasing power: the BoP constitutes a USD5 trillion global consumer market (Figure 1.2). However, other researchers estimate that the overall scale of the BoP market is over USD9 trillion [9] and up to USD12–30 trillion [10].

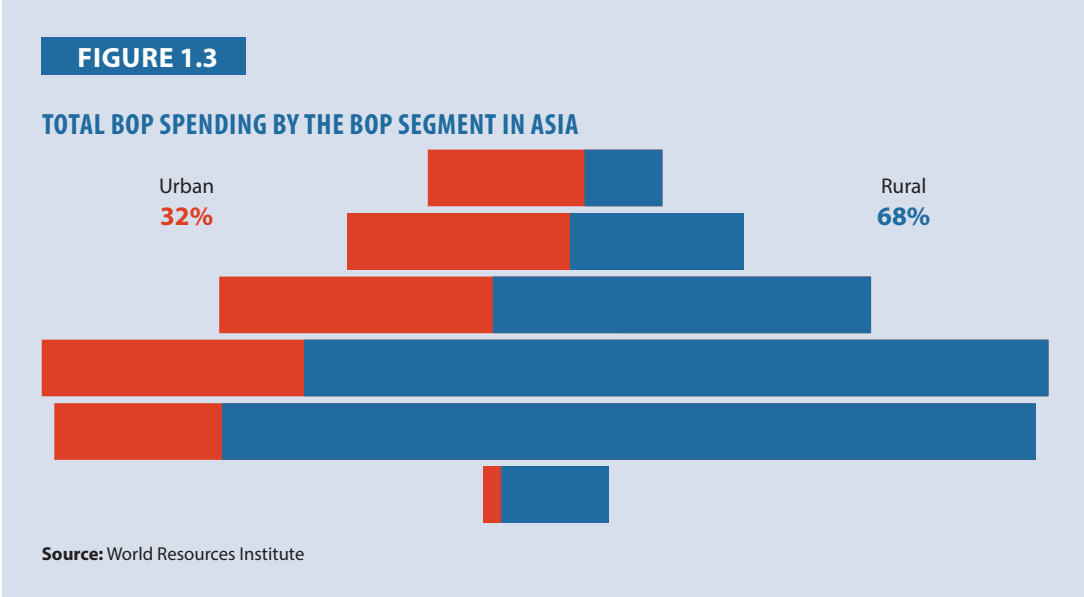


WRI also estimated the sector markets for the four billion BoP consumers; some of these markets are relatively small, such as water (USD20 billion) and ICT (USD51 billion as measured, but is probably twice the amount now because of its rapid growth). Some markets are medium scale, such as health (USD158 billion), transportation (USD179 billion), housing (USD332 billion), and energy (USD433 billion), whereas some markets are truly large, such as food (USD2,895 billion) (Figure 1.2).

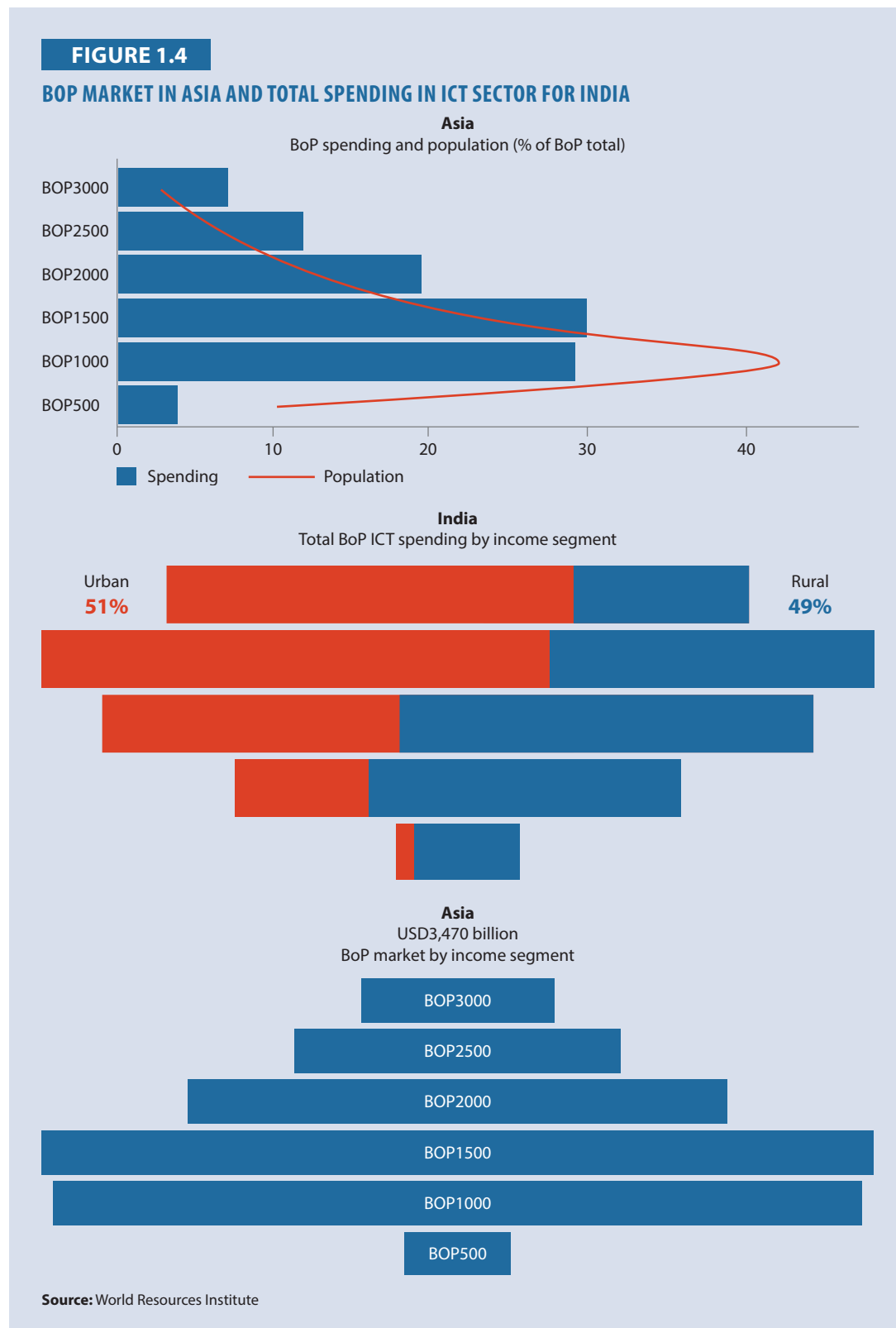


BoP Markets in Asian Countries

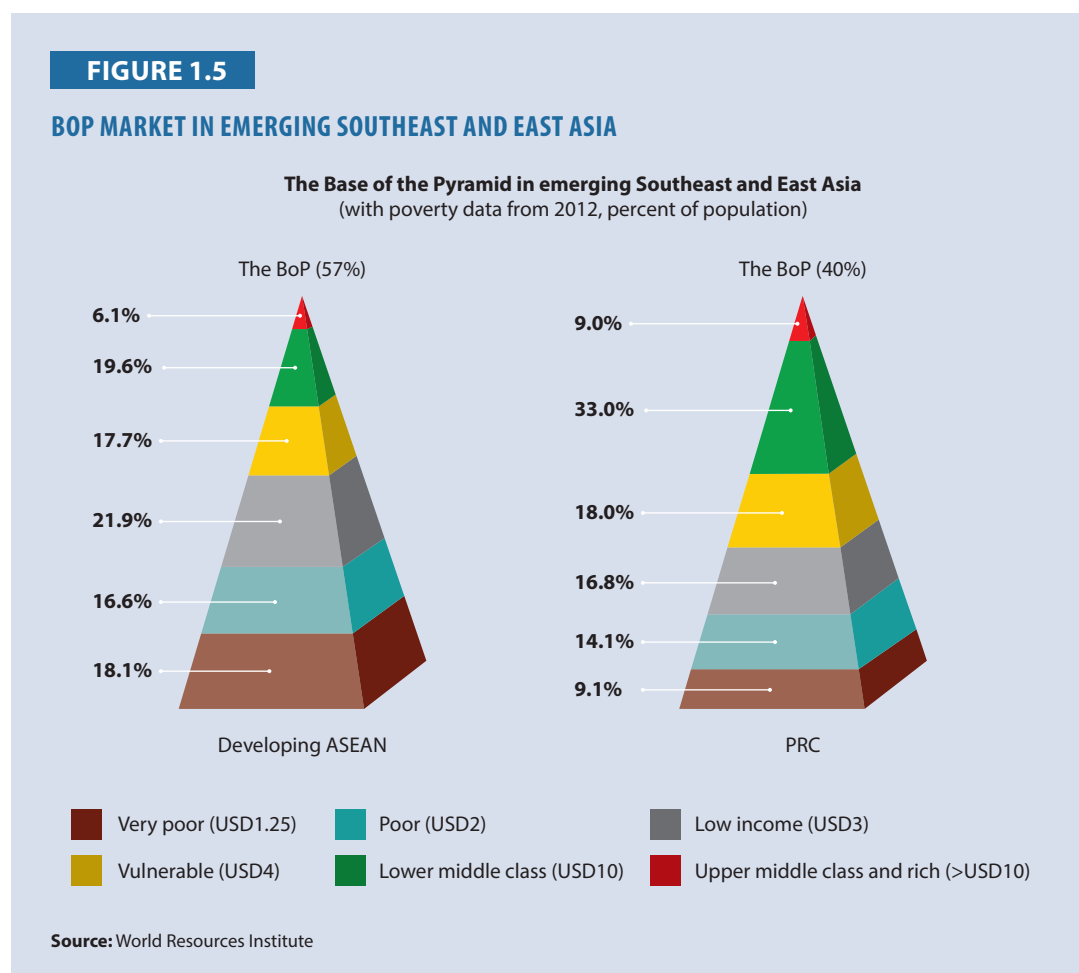
Regional differences can be observed in the composition of the BoP market. Rural areas dominate most BoP markets in Africa and Asia. The total BoP spending by the BoP segment in Asia is shown in Figure 1.3 (urban: 32%; rural: 68%).



Low income does not mean no income. Although the lowest BoP income segments are very poor by any standards, the economic structure of low-income populations varies from region to region and country to country. In addition, very large numbers of people belong to the mid- to high-income segments of the BoP itself, and these populations represent significant purchasing power.



The BoP market in Asia (including the Middle East) is by far the largest: 2.86 billion people in 19 surveyed countries with an aggregate income of USD3.47 trillion. The BoP market in those countries represents 83% of the region's population and 42% of its aggregate purchasing power, representing a significant share of Asia's rapidly growing consumer market. In rural areas, the BoP represents the majority of the market; in rural China, this majority represents 76% of aggregate household income in rural China and effectively 100% in rural India and rural Indonesia.



Business Strategies for BoP Markets

Since its inception in the early 21st century, the business strategies for BoP markets have evolved considerably, having undergone various iterations from BoP 1.0, 2.0, to BoP 3.0. According to Caneque and Harts [11], the BoP 1.0 model, which traces its origins from the BoP groundbreaking book “The Fortune at the Bottom of the Pyramid”, can be characterized as “finding a fortune at the BoP”. After several years of development, BoP 2.0, which “stresses the importance of co-creating products and compelling value propositions with underserved communities, innovating from the bottom-up, leapfrogging to environmentally sustainable technology and creating a dedicated set of metrics and timelines suited to the unique features of the underserved space”, and may be characterized as “finding a fortune with the BoP” [12].

Although new skills, capabilities, and organizational routines for implementing BoP 2.0 are still developing, new challenges compel BoP 2.0 to move toward BoP 3.0, which has six differences

from BoP 2.0, namely from protected space to purpose and mindset, from cocreation to open innovation, from stand alone to innovation ecosystem, from extended distribution to innovation for the last mile, from NGO engagement to cross sector partnership networks, and from poverty alleviation to Sustainable Development [11].

The strategies for engaging the BoP markets should also be varied based on the different characteristics of the BoP population: either by living area (urban or rural area), family income (low, subsistence, or extreme poverty), or by the role in the BoP market (consumers, coproducers, or clients). Different sectors may also have different BoP strategies. As mentioned earlier, the purpose of this project is to integrate Green Productivity (GP) into our development of BoP strategies. Hence, in developing BoP strategies for APO member countries, we need to consider all of the above-mentioned situations.

“The Base of the Pyramid: Building Business with Impact and Scale”, which is based on author’s experience and involvements in BoP markets for more than 25 years, provides excellent recommendations and solutions for enterprises not just to become BoP impact enterprises but also to ensure that the impacts are sufficiently scalable to create sustainable benefits and values for BoP markets [13]. This book “provides integrated sets of tools, frameworks and strategies for improving the chances of billions through entrepreneurship” and the author defines the base of the pyramid as “an aggregation of many different kinds of individuals and groups who represent potential markets for goods or services”. He emphasizes that “these markets are not found at the BoP; rather, they are created with the BoP”. Hence, the author suggested three true understandings that need to be implemented and integrated correctly to build enterprises with impact as follows [13]:

- **Leveraging customizable tools, frameworks, and strategies to enhance enterprise development.** This step requires true understanding of key enterprise activities as they move through the development process. Several questions need to be answered, such as what enterprises should do for success. How do they design with scale in mind from the beginning? Why do so many enterprises never move beyond the pilot stage?
- **Creating value with the BoP by truly understanding the poverty alleviation opportunities.** In this step, the questions that need to be answered include “What is our value proposition? How much and what type of value should be created for the BoP? How do we know the impact or success of poverty alleviation program on value creation? How do we keep learning and delivering more value?”
- **Understanding how to establish an ecosystem of partners to sustain those enterprises.** Findings partners willing to invest in the enterprises and creating markets around them will be crucial to creating sustainable and BoP impact enterprises.

The Objective of This Project

In order to make inclusive business popular in APO member countries, and in light of the fact that the BoP concept and its practices are not well known in the Asia-Pacific region, a research workshop on GP for the Base of the Pyramid for Sustainable Development in APO Member Countries was held in Taipei from 3–5 May 2016, where the APO laid out the groundwork for promoting BoP in the future. During this 3-day workshop, led by the Chief Expert of the project, Prof. Allen H. Hu, and APO experts from six countries - India, Indonesia, Malaysia, the Philippines, Thailand, and

Vietnam - were invited to share their respective BoP situation and practices. One internationally recognized BoP scholar, Dr. Ted London from USA, was also invited to this workshop to share his experience on how to bridge business and social issues in developing countries. Several targets were proposed and accomplished after the meeting. They include:

- i. General understanding of BoP knowledge and strategies as well as the scale of BoP markets within APO member countries
- ii. An understanding of BoP markets, BoP examples, and impact created specifically for the six participating countries
- iii. Learning strategies and principles for BoP markets to co-create value and impact with stakeholders
- iv. A publication to compile selected APO member countries' BoP experience and to be published by the APO

The first three targets had been achieved right after the expert meeting, and the fourth target which is this work presented here. This report, the fourth target, is the most concrete outcome of that workshop where each expert was asked to write their respective country reports including the following contents:

- **Introduction**

In the Introduction, background information including individual/family average income (GDP), general poverty situation, social problems/issues related to poverty, and government initiatives on eradicating poverty need to be provided. In addition, poverty line (if any) for identifying BoP group/BoP market may also be provided. It is noted that the BoP concept in conducting this project should involve the private sector and its core competencies.

- **BoP Case Studies**

In this section, three case studies related to BoP of the individual country need to be provided. The first two case studies are BoP practices, business models, and products/services/solutions specifically related to GP with in-depth analysis of the cases being studied including their success or failure factors, social impact created, lessons learned, and other critical aspects of the enterprises. The third case study will be an on-site study; the expert needs to first identify a company which is implementing BoP, then conduct a questionnaire survey or personnel interview to gain information similar to in-depth analysis, including product/service supply chain or full value chain perspective.

- **Lessons Learned and Recommendations**

The lessons learned and recommendations should be able to make proposals that will enhance GP integration into potential BoP business model strategy. Specific contents include the following:

- Based on expert's experience after this study, identify sector(s) which should be prioritized or focused for BoP implementation in respective countries

- Give suggestions on how to sustain and scale-up those successful or best practices
- Provide recommendations to the COE on GP in promoting further GP in the region BoP business model strategy

FIGURE 1.6

PARTICIPANTS OF THE RESEARCH ON GP FOR THE BASE OF THE PYRAMID FOR SUSTAINABLE DEVELOPMENT IN APO MEMBER COUNTRIES HELD IN MAY 2016, TAIPEI



First row from the left: Dr. Prasert Tapaneeyangkul (Thailand), Dr. Eugene Lin (CPC, ROC.), Dr. Jose Elvinia (APO), Dr. Liang-Tung, Chen (IDB, ROC), Dr. Ted London (USA), Dr. Prof. Allen H. Hu (ROC).
Back row from the left: Dr. Prof. Sadhan K Ghosh (India), Dr. Shaik Roslinah Bux (Malaysia), Dr. Nguyễn Thị Thu Huyền (Vietnam), Lihkuan Lee (CPC, ROC), Dr. Semerdanta Pusaka (Indonesia)

Summary on BoP Practices in the APO's Member Countries

In this report, six APO member countries, mainly from Southern and Southeast Asia, were selected for sharing their BoP practices. With different cultures and backgrounds, each country has its own uniqueness and emphasis. For instance, India has the longest history and most experience in BoP and the country sees the most diversified BoP practices, thus providing more case studies in this report. Indonesia, a democratic country where the majority of the citizens are Moslems, has its unique BoP practice based on Islamic law. The Philippines' BoP practices emphasize on empowering BoP groups to create a sustainable living standard. And although BoP is mainly related to businesses and enterprises, governments also play an important role in promoting BoP practices. Academic studies and governmental organizations, such as ADB, United Nations Development Programme, and G20 are advocating this practice [14–17]. In this regard, among these six countries, Malaysia and Vietnam present mainly on how their government initiatives mobilize businesses to help BoP groups in improving their living standard. The BoP case studies of each country are briefly summarized.

India

Case Study 1: d.light Energy

d.light supplies solar-powered LED lighting products that help replace kerosene lamps in rural households and also in areas where there is erratic power supply. It is a 'commercial social for-profit' enterprise, and its business model relies on channel partners and the open market for product sales and promotion, as well as subsidies and financing for the end users in certain markets. It also runs a subsidiary charitable initiative which provides solar lanterns to extremely poor rural households around the world. The distribution network of d.light also partners with NGOs to distribute the grant-subsidized products. d.light also uses rural entrepreneurs to distribute products in rural areas. The environmental and social impacts include reducing carbon footprint, income generation from distributing LED lighting products, and the civilians get to save money.

Case Study 2: Various "Bachat Gat" (Self-help Group) Examples

i. [Bachat Gat Bank \(BGB\) and associated business in rural India in Maharashtra](#)

"Bachat Gat", may be called "Self-help Group" (SHG), is a small group of (10–20) individuals (generally women) living in close proximity who undertake income generating activities. This is achieved through their own meagre savings deposited into a common bank account which then enables them to borrow bank loans on a nominal interest rate. The "Bachat Gat Bank" is a financial institution that was formed in 2009–10 in several locations by women. It provides an array of financial services, including loans, savings, and self-security and reliance, which is provided to poor entrepreneurs and small business owners who have no collateral and wouldn't otherwise qualify for a standard bank loan. The Bachat Gat Bank and associated business helps the BoP people in earning their livelihood and gives confidence to the members.

ii. [Handicraft: Leather and bamboo bags by a BoP group](#)

- Handicraft bag manufacturing

This BoP practice falls under the SHG which consists of 12 women who make handicraft bags. This is a profit commercial social enterprise which relies heavily on its members for the selling and distribution of bags. They sell to retailers, and wholesale markets, and people of all social classes buy this bag due to its quality and affordable price. They buy their raw materials from a neighbouring town. In order to minimize the consumption of raw materials they use specially crafted designs and the waste generated is further utilized. Further, the chemicals used for colouring are environmentally friendly. This Green Product has empowered women, enhanced their livelihood, and improved their health and nutrition.

- Bamboo handicraft business

This business is carried out by six artisans that deals in bamboo products. The business is in line with GP. They buy raw materials in bulk to minimize transportation cost from neighbouring states and towns while other raw materials are bought locally. This is a profit commercial social enterprise which employ the local youth to sell their products in different households thus creating employment opportunities. These products are mainly sold at annual fairs and most of these products are made at their respective homes. They plan on changing this by setting up a permanent store where they can sell and make their products under a single roof.

iii. Sonarpur sari design business

The business was started in 2012 by Rita di after securing a loan from a government scheme. It employs 20–25 ladies who are trained in private institutions and their fellow colleagues to design and sew saris at their respective homes. They generate 20% profit if their sari is sold to a wholesaler and 30% if bought by customers. This is also a profit commercial social enterprise and annual fairs are a medium of selling saris. This business employs people to sell their products thus creating employment opportunities. Leftover pieces of cloth are further used to make door mats to minimize waste while green chemicals and gas are used instead of coal and wood which reduces the carbon footprint.

Case Study 3: Hindustan Lever's Project 'Shakti' - Marketing FMCG in Rural India (On-site Study)

This is a case study of Hindustan Unilever Limited (HUL), one of India's largest Fast-Moving Consumer Goods (FMCG) companies and exporters. The organization's business objectives are to extend HUL's reach into untapped markets and to develop its brands through local influencers. Its social objective was to provide sustainable livelihood opportunities for underprivileged rural women. HUL's Project Shakti was launched in 2001, with partnership with SHG of rural women and covers 5,000 villages in 52 districts in different states. SHAKTI was extended to 80,000 villages in 15 states with 45,000 women entrepreneurs. SHAKTI targets small villages with the population of less than 2,000 to provide health and hygiene education through Shakti Vani program. "Vani" is Hindi for voice and the idea was to appoint, train, and position local women as experts on matters relating to personal and community health and hygiene.

The business model for this BoP practice is that small member contributions are put into a common pool and the sponsoring agency gives microcredit. Shakti entrepreneur borrows money from SHG for purchases. HUL partners with SHGs to extend its reach in rural markets. The sponsoring agencies include NGOs, multilateral agencies, government bodies, and public-sector banks. Rural women constituted the most marginalized group in society. Rural women were more likely to appreciate the additional income than affluent ones in urban areas. Women were more likely to access into homes of potential consumers in villages. Focus on women have greater impact on the entire household as it led to improvement in health, hygiene, and education levels. Products are sold in a combination of three ways; i) door-to-door selling (11% margin on sales), ii) selling from own home (11% margin on sales), and iii) retailers (3% margin). Average sales of INR10,000–15,000/month gives a profit of INR1,000 per month.

Products are made available in sachets and small packs as rural consumers are price sensitive. Microfinancing helps microenterprises. The products helped reduce material waste and customers had access to quality products at low prices.

Indonesia

Case Study 1: Bank BTPN Syariah Community-based Banking Business

The Sharia banking business is designed to support the BoP market, especially the microscale businesswoman in rural areas. It is managed by adhering to the Islamic law (Sharia). One of the applications is profit and loss sharing (Mudarabah) because Sharia prohibits Riba, which is defined as the interest paid on all loans of money. Bank BTPN Syariah provides an integrated loan and saving program. The program provides one-year loans amounting from IDR1 million to IDR50 million (about USD70 to USD3600). Customers are formed in small community groups consisting

of 10–15 microscale businesswomen per community group in villages. A bank staff called Pembina Sentra is assigned as a patron for several community groups. The patrons facilitate banking transactions, such as loan disbursements and repayments of profits. In addition to loan benefits, insurance benefits are also covered. Regularly, the patrons deliver training materials to the BoP customers during their visits to the community groups. Patrons also take on the role as a partner and see the BoP customers under partnership basis rather than a bank-client relationship. These microbusinesses ran by businesswomen provide additional income for BoP households which encourage socioeconomic empowerment that encompass religion, cultures, and customs.

Case Study 2: Low-cost Sanitation Package “Dewa Ruci”

In 2013, the Youth Organization Dewa Ruci (KTDR) began to operate by promoting low-cost toilets and septic tanks to low-income households in Tabalong Regency. This is a social entrepreneurship supported by PT Adaro Indonesia’s community development program aiming at BoP customers. The company initially funded and mentored the project, then it further collaborated with a sanitation and microfinance group to stimulate development. The program has been able to change the social behaviour of the community, especially in using toilets and maintaining sanitation in houses. The business provides jobs and generates income for the local youth in Tabalong. The business also encourages better household sanitation and healthier environment - driving people to have a healthier attitude and behavior. GP is also practiced, where fiberglass mold is used for construction and it ensures no construction waste. This initiative is limited to local people who do not have septic tank and adequate water and sanitation infrastructure. In order to be sustainable, the business must find BoP customers in other areas.

Case Study 3: Sumedang Tofu (On-site Study)

This business is run by Haj Nono, an entrepreneur and factory owner that produces and sells ready-to-eat Sumedang Tofu, which is affordable for low-income households in Indonesia. The business model is very simple: input-process-output with 12 factory employees. It also employs a simple marketing strategy - stores are located at the main road of the village, making it very accessible for the targeted BoP customers. The customers are not only BoP customers but also the middle-income bracket group. Creating employment opportunities, some customers became resellers who buy semifinished goods or ready-to-fry tofu in the morning and sell hot and fresh Sumedang Tofu in other market places. The Haj Nono’s Sumedang Tofu business has proven that small- and medium-sized entrepreneurs can run BoP businesses. It was identified that wastewater is the critical issue in tofu production and the implementation of GP is needed to solve this problem.

Malaysia

Case Study 1: Raising the Living Standards of Low-income Households National Key Result Areas (NKRA) through Gerakan 1Azam

The Raising Living Standards of Low-income Households (LIH) NKRA, a governmental program, is committed to the betterment of the lives and livelihood of low-income Malaysians in line with the country’s development philosophy of inclusivity. The government recognizes that winning the fight against poverty cannot be an individual effort and has enlisted the help of partners including NGOs and the private sector to fund and support programs. 1AZAM offers support and training in five key work streams to both rural and urban poor. The five key work streams are 1AZAM *Kerja*, 1AZAM *Niaga*, 1AZAM *Khidmat*, 1AZAM *Tani*, and 1AZAM *Bandar*. A subsequent program called Beyond 1AZAM began in September 2014 with the aim to help successful 1AZAM participants to further develop their capacities and income opportunities. The Beyond 1AZAM

program aspires to arm participants with advance entrepreneurial and business skills, such as online marketing, market diversification, and distribution to help them further enhance their earning potential.

Case Study 2: Rural Development-NKRA (RD-NKRA)

The RD-NKRA has accelerated the delivery of basic amenities, such as treated water, electricity, and Internet access to the village; thereby improving the livelihoods of the Bario people. Prior to this, people from the outskirts of Bario had to walk for an hour to get into town. Now, with infrastructure in place, local enterprises blossomed, creating opportunities for residents in the areas of cottage industries and tourism. Connectivity that facilitates the transportation of people and goods has been a key enabler for better quality of life and economic empowerment in Bario. With ecotourism being a big thing at Bario, many residents want to be tour guides. Today, three flights land in Bario daily. The increased arrival of tourists to Bario sees an increase in homestay businesses. As ecotourism is a niche market, sustainability becomes a big focus at Bario as to preserve the ecosystem for the future generations of the Kelabit tribe. There are four initiatives in the RD-NKRA, namely building of roads, provision of clean water, brightening households, and building quality homes.

Besides the delivery of basic infrastructure, the RD-NKRA team also introduced the 21st century village (21CV) program in 2012 to boost rural economies and make them more attractive to the youth in the community. The program aimed to catalyze economic development and transform rural areas into thriving and sustainable centers of commerce. 21CV comprises four distinct pillars of transformation; namely, i) investing in youth through the Rural Business Challenge (RBC), ii) investing in the agricultural potential of rural areas by leveraging on premium fruits and vegetables of Entry Point Project (EPP), iii) investing in villages through the *Desa Lestari* (Sustainable Village) program, and iv) creating integrated villages through the *Rimbunan Kaseh* program.

Case Study 3: Axiata - Serving Asia with its Sustainability Pillars

Axiata is one of the largest Asian telecommunication groups with over 275 million customers. It has the vision to be the best throughout the region in connectivity, technology, and talent, uniting them toward a single goal: Advancing Asia. In line with its triple bottom-line management (Economic, Environment and Social/EES) and its two core values of uncompromising integrity and exceptional performance, Axiata remains committed to people's lives and help transform the countries in which it operates. In facilitating its journey of advancing Asia, Axiata has established its sustainability framework that comprises four sustainability pillars (4P's). They are:

- **Pillar 1:** Beyond short-term profits. It focuses on long-term value creation in all its different markets to increase connectivity, enhance reliability and facilitate access across its network.
- **Pillar 2:** Nurturing People. The aim is to build a sustainable supply of excellent talent for the Group. Through its core culture of UI-EP (uncompromising integrity-exceptional performance) values, employees are guided on meeting the Group's high expectations while ensuring them a safe workplace conducive to productivity. Besides the accelerated development program for employees, the company also has the Axiata Young Talent Programme (AYTP) to source and develop new talent. Axiata through its local operating company, Celcom launched its *Skim Latihan 1Malaysia* (1Malaysia Training Scheme) program in 2011 to develop and train fresh Malaysian graduates to hone their soft skills and functional development, as well as acquire on-the-job skills to raise their employability.

- **Pillar 3: Process Excellence & Governance.** This focuses on upholding strong governance and the best practices of supply chain management as the company believes that sustainable governance processes are integral to sustainable operations. As a support for domestic entrepreneurs, more than 50% of its Malaysia capital expenditure is spent on procurement from local vendors. In its commitment to digitization, Axiata revamped all its key processes, especially those in servicing and sales across all its operating companies. Even the employee communication platform “Prism” is put on digital to enable group-wide communication and networking as Axiata believes that sustainability requires the business to empower and enhance the experiences of all stakeholders. Axiata also recognizes the importance of regulatory requirements in maintaining the sustainability of the industries as a whole.
- **Pillar 4: Responsibility to Planet & Society.** Axiata’s effort is looked into mitigating the environment’s impact of its operations and to create value in the communities of the countries where the Group operates.

Axiata has also introduced the “4i” aspects for each of the stated sustainability pillars in 2014. The four “i” are: improvement in its processes; innovation through continuous review of new projects and initiatives; investment in significant projects; and impact in terms of socioeconomic for its projects and initiatives. Axiata’s approach to sustainability is beyond expanding into new markets. It includes providing affordable products using quality technology to meet the diverse needs of its socially diverse groups of customers, linking to their productivity and output.

Philippines

Case Study 1: Rags2Riches

Rags2Riches (R2R) is the corporate name of “a fashion and design house empowering community artisans” and to “proof that style and sustainability can coexist”. The process begins from the finished products of which the women weavers from Payatas dumpsite first look at sample products to copy as well as identify defects that did not pass the quality standards. As per company foundational values of the 4Ps (people, planet, profit, and positive influence to other people, their community, and the world) to be a weaver, women need to attend trainings and seminars on basic sewing, pattern making, basic design, quality control, values and religious formation, leadership, handling finances, and running a cooperative venture. R2R works with local foundations, NGOs, church-based institutions, and partner communities to identify and engage the communities that supply R2R’s products. R2R has three basic building blocks to scale and sustainability:

- i. Transforms scrap, organic, and indigenous raw materials into stylish home and fashion accessories by partnering with a team of well-known local and international designers
- ii. Equips community artisans with the necessary skills and tools to create the products launched in the market. R2R creates access to the artisans’ products in the formal economy by penetrating both retail and corporate markets with a brand positioned as stylish, sustainable, and handmade
- iii. Empowers the communities and its artisans by engaging them in dialogues and consultations on matters regarding production, training, pricing, and other services. Artisans have the potential to earn between USD4.50 and USD15 per day, depending on the number of hours worked.

Case Study 2: Don Bosco Foundation on Biodynamic Agriculture

The institution adopted the biodynamic agriculture (BA) in 1994 with a holistic approach, taking into consideration the interrelatedness of plants, animals, climate, soil, and other biotic and abiotic factors in an ecosystem. This led to increase in yield, better crop quality, and improved soil fertility. Since then, more farming communities shifted to BA producing rice, vegetables, fruits, and root crops. It also developed the Integrated Sustainable Agriculture Research and Development (ISARD) program, doing R&D in a 21-hectare farm on sustainable self-financed agriculture and off-farm technologies. The institution also developed an operations training center known as the Youth Camp of which different institutions make use of its facilities for their workshops, seminars, and retreats. In partnership with Broederlijk Delen, a European funding agency, Don Bosco had launched another program on “The Community Seeds Conservation and Development” (COMSEEDCODE) to empower the biodynamic farmers on seeds research.

The business model of Don Bosco is from seeds to shelves consisting of three main programs, such as Extension, Credit, and R&D that aid farming families who are adopters or partners of the sustainable agricultural program. The extension program consists of four different services, such as surplus production, institutional development services, green women assistance, and agrarian redemption program. Credit program only consists of alternative saving and credit services that respond to farmer’s financial production needs either through seeds, planting materials, and other production costs. One of the goals of the R&D program is to provide technology support to farmers through scientific R&D studies in the laboratory, such as Bios Dynamis Research Farm 1 and 2, Bios Dynamis Dairy Farm, and farms with farmers participatory.

The yield is almost the same to conventional farming but higher profits in biodynamic agriculture. Thus the farmers and workers are able to provide college or vocational education for their children and no longer resort to loan sharks for chemical inputs. Farmers and their families have good health since they are no longer exposed to chemicals and the food consumption are chemical and pesticide free. Don Bosco has 2,629 farming families as partners and beneficiaries from more than 80 extension impact communities covering 2,527.2 ha and with 11,633 active project installations. The farming families now have regular jobs with the businesses of their cooperatives, hence achieving food security. They have electricity and home appliances installed in their houses.

Case Study 3: Bayani Brew (On-site Study)

The enterprise sells locally prepared iced teas with two variants namely, Kickass Lemongrass and Camotea Commotion at a retail price of PHP48.00 per bottle in restaurants, coffee shops, and social enterprise stores. The target markets are young adults and parents concerned with the health of their children. The raw materials are organically grown in Gawad Kalinga Enchanted Farm to help improve the standard of living of the farmers and ensure the health of the consumers. Bayani Brew likewise does not use any preservatives and the packaging of the tea is BPA-free recycled bottles which can be returned for recycling purposes. The label of the bottle is made of rock paper which means it is water-resistant and does not harm the forests. Further, the gift packs are made of recycled materials.

Bayani Brew’s primary responsibility to farmers-suppliers is to educate the farmers on sustainable farming practices and purchase the brew raw materials at higher than market price. The company also provides farmers interest-free loans through microfinancing for farm implements. In return, the farmers ensure the supply of brew raw materials. It trains farmers and other suppliers and ensures that all production inputs are locally sourced. Bayani Brew increases consumer awareness

on making more responsible purchase choices and understand the benefits and social impacts of sourcing products locally. They further maintain a stable revenue from customers paying for the product and save cost by promoting their products through social media. Bayani Brew commenced exploring different distribution channels particularly, coffee shops, restaurants, convenience stores, S & R (exclusive wholesale and retail supermarket chain), and other social enterprises, such as Human Nature, Souvenir Shop, and Dairy Hut.

Thailand

Case Study 1: Fruitful Sustainability Endeavors by PTT Public Company Limited (PTT)

PTT carries out two very important things. First, initiate the demand to turn agricultural product - palm oil, sugar cane, and cassava into bioenergy, gasohol (ethanol), and bioplastic. These not only help lessen the use of fossil fuel, which is a major cause of pollution, but also enhance alternative renewable energy that is cleaner and greener. The project is a win-win story with the farmers getting better and more secured income as sugar cane, cassava, and oil palm farmers suffer from price fluctuation. In the second project, PTT initiates the growing of forest in Bangkok and reforestation in all of Thailand to enhance greenhouse gases reduction for better environmental quality.

PTT is committed to develop Thailand to become the center of production and trading of biofuels and bioplastics or Bio-Hub within 20 years. PTT Bio-Hub fits into the BoP model and alleviates the plight of these farmers who are the backbone of the nation. Currently, PTT has invested in two large bioplastic plants. They also focus on conducting life cycle assessments (LCA) for products from the Petroleum Exploration and Production Business Unit, Natural Gas, Petrochemical and Refinery Business Unit, and fuels to achieve water and carbon footprint assessments.

Committed to be a good corporate citizen, PTT's activities focus on community and social development and natural resources conservation. PTT contributed a total of THB1,407.88 million, channelling 1.67% into commercial initiatives, 64.22% in community investments, and 34.11% in charitable donations. The outstanding achievements are 193,136 ha of tree reforestation which absorbs almost 2 million tonnes of CO₂. Other useful projects are community biogas system from pig farming (130 households, 7,936 kg LPG less consumption per year equivalent to 23.69 tons CO₂eq per year reduction, 10,800 liters of diesel less consumption per year, 6,491 units of electricity less consumption per year equivalent to 3.89 tons CO₂eq per year, greenhouse gas reduction of 56.88 tons CO₂eq per year, resulting in a total cost saving of THB518,980 per year/increase in agricultural revenue by THB423,780 per year including from increasing yields of sugar cane plantation by using sludge from biogas production instead of chemical fertilizer); community energy training course, and the Royal Princess Herbal Garden throughout Thailand.

Case Study 2: Creating Better Quality of Life with Water Sustainability by SCG Public Company Limited (SCG)

SCG spearheads two important pilot projects. The first is to revive community forests by improving deteriorated soil conditions and secure water in checked dams to assure water sufficiency during dry season and preventing flooding in the wet season. These two factors rekindle the fertility of the land and bring back a healthy ecosystem. The forest serves as a resource for the villagers' livelihood, such as collecting wild mushroom and honey. Their income increased two to three-fold from the minimum wage. In the second project, SCG donated off-spec PE pipes to build artificial coral in the Rayong province (250 km east of Bangkok). The number of fish has increased and the fishermen earn better income which makes their living more sustainable.

SCG's core business consists of cement, building materials, chemical, and pulp and paper. SCG operates their business within the sustainability framework and is a member of the World Business Council for Sustainable Development since 2000. CSR activities at SCG are divided into two components. The CSR Committee for Sustainable Development supervises the first component addressing a broad social impact so that SCG can optimize the use of resources and capacity, and identify and select critical issues having impact upon people's life. The second component involves communities around SCG's manufacturing areas. Among the company's good practices for sustainability are SCG Conserving Water for Tomorrow Project, which was established in 2003. There is also the community learning center in Lampang (Northern Thailand) that captures the local real-life knowledge and experience, resulting success stories which leads to the partnership between SCG and the community in building checked dams to resolve a variety of problems gripping the community. The Innovative Technology for Land Remediation Project has been launched in the same manner to establish the Community Learning Center in Nakhon Ratchasima province (northeastern Thailand).

Among SCG's key results are increases in rice output in the area of Ban Toey community from previously 300–350 kg per rai (1,600 sq m) to 600–1,000 kg per rai. The local villagers have also earned more income since the desalinated soil enables them to carry out integrated farming and production of organic fertilizers sold at the rate of 2 tons per day with daily proceeds of THB3,200. The community now generates a revolving fund of THB300,000 per year. They also have Fish Habitat & Beautiful Beach Project which engages all stakeholders on-board including SCG Chemical staff, coastal resource conservationists, and local fishing folks in Rayong Province (eastern Thailand). The project uses PE pipes that are disposed of after plastic pallet testing process but contains no toxic chemical substance to assemble fish home (artificial coral). The new fish habitat helps local fishermen to generate more income while raising awareness on the importance of marine resource conservation.

Case Study 3: EGAT's Sustainable Development Approach for the High Voltage Transmission Line's Right of Way in Kok Saya Community, Narathiwat (On-site Study)

The Electricity Generating Authority of Thailand (EGAT) initiated the utilization of unused land under high voltage transmission line at Kok Saya in Narathiwat (1,178 km south of Bangkok). This project received the National Best CSR and Environmental Award in 2014. EGAT also introduced the concept of putting added value in villagers' agricultural products. Together with the relevant government department, EGAT and its counterpart extended training, trading, and modern marketing courses to help villagers position their products in appropriate markets, among others. The project uses the framework of His Majesty the late King Bhumibhol Adyadej's philosophy of "sufficiency economy" and it is now the living proof that sufficiency economy does work even in the region that experiences serious ethnic and religious separatist insurgency.

EGAT also launched a basic sanitation training program and biological way of life for sustainable development for volunteers. This increased EGAT's exposure to local communities and villages in Kok Saya area surrounding the high voltage posts. This allowed for the transfer of knowledge to the local and village leaders, enabling them to take care of their community, leading to the acceptance of EGAT's presence.

In the evaluation of success, it is found that the production from the biological way of living, driven by the sufficiency economy philosophy and adhering to good governance under the EGAT's management, has both direct and indirect effect on the sustainable development in Kok Saya Community of Paluroo subdistrict in Su-ngai Padee district of Narathiwat province. The Kok Saya

Model has attracted other nearby communities to participate in the project, becoming communities that are self-reliant. Surplus production is also sold to other communities.

In conclusion, three key factors led to the success of the project:

- Participation of the people in the community - Ban Kok Saya and Paluroo subdistrict (50%)
- Support from the government sectors network in the area, provincial levels, and community heads (30%)
- Support from EGAT in policy, budget, and personnel in the area (20%)

Vietnam

Case Study 1: Ecotourism in Hon Village, Tam Duong District, Lai Chau Province

North Vietnam possesses great ecotourism potential with majestic mountains, cool air, and multiethnic culture living. This is also the place with the highest poverty rate in Vietnam, where ethnic people live in shifting cultivation and long residences. With Vietnam's policy on the development of craft village tourism, ecotourism is seen as the means of poverty reduction in the locality. Based on the new infrastructure system, the local people have been actively coordinating with tour operators to research their ecotourism needs to design attractive tours.

The implementation of the community tourism development project linked to sustainable poverty reduction is synthesis of solutions to support local people to have access to market economy, develop tourism services, and stabilize living conditions. It also promotes sustainable poverty reduction in mountainous and remote areas inhabited by ethnic minorities. Due to the dynamics of the operational agency and the determination to eliminate poverty, the people in north Vietnam today have a better life.

The operational agency is the Center of Information and Tourism Promotion in Lai Chau province. Their functions are to promote the construction of tourist destinations, connect the travel units, establish tourist routes to provide information, and facilitate the activities of tourists in the province. A model of community-based tourism development in Lai Chau province was set up, where the local authorities take the role of supplying infrastructure, training labors, and finding financial support. The community took the initiative in coordinating with NGOs for funding local community for macro environment, and set up fitting business model. This model appeared suitable for start-up businesses for a small community in the remote area.

The Hon village today is a friendly destination, easily accessible for tourists. Investments was made in technical infrastructure, such as roads, public housing, sanitation, clean water, electricity, telecommunications, and good service system. Ecotourism in the Hon village had increased at least 20% of the local population's earnings in the process of poverty reduction. The model of community-based tourism development in the province reduced poverty reduction and enabled people, especially the ethnic minorities to overcome difficulties of rising poverty for themselves. The model will be replicated for other communities as well.

Case Study 2: Growing Safe and Clean Vegetables with Vingroup

The demand for clean food has led to many models of clean vegetable farms and organic products in Vietnam. Most of them have failed. However, VINECO vegetable growing model is a successful

model that provided livelihood for the poor people in Phu Yen, a province heavily affected by climate change. With the technology and support of Vingroup, a supermarket chain in Vietnam, farmers have been assisted by technicians on production technology and processing fresh vegetables. Technical stages were closely monitored from sowing to harvesting to ensure high quality produce. Old farming practices had to be abandoned in order to move toward a more productive way of farming. The social efficiency of this project was highly appreciated as it ensured the supply of clean vegetables for people. Due to the affluence and reputation of Vingroup in Vietnam, the project has impacted on better cultivation method that can be practiced by farmers.

The biggest goal of the program was to provide safe food for consumers. The second was to support farmers with technical approach, innovative technologies to change, and optimizing agricultural production, which gradually made way to build international Vietnamese brand of agricultural products. The program deployed a new type of cooperative model with the linkages of "four houses" - farmers, scientists, businesses, and the state. Initial results show that this business model helped to raise farmers' income and ensure the safety standards of food hygiene. Specifically, the Company for Investment and Development of Agricultural Production (VINECO) gave direct training and guidance for farmers on i) clean production processes, ii) technology, engineering, and breeding, and iii) quality control in the manufacturing process. VINECO committed to buying the produce for household production on the market. In particular, a portion of the output is consumed in the retail system under the brand of VINECO Vingroup or partner's own brand.

The planting of vegetable VietGAP standard provided a lot of jobs to people in the local population. The province had created jobs for 13 communes with the most difficult social economic conditions. 112 VietGAP certification for individuals and organizations with a total land area of 68,2003 ha, expected yield of 8,396 tons/year. A total of 4,993 farmers were granted training certificates in 'produce processing safety' for fruit and vegetables. Other results, such as business training, advocacy, guidance, and modeling transfer production techniques, have educated producers and consumers on production, sales, and consumption of vegetables by ensuring food safety and hygiene. Business models of production associated with the consumption of vegetables has proven to be effective, especially for vegetable production model VietGAP processes. The effective organic vegetable farming model has been expanded to neighboring areas.

Case Study 3: Production of Medical Plants in Ethnic Community in Lao Cai Province

Vietnam lacks a large supply of medicinal plants, which are now heavily imported from China. The mountainous area in north Vietnam is very suitable for growing medicinal plants. It has been customary for the ethnic people to sell to Chinese traders. Traphaco Pharmaceutical Joint Stock Company is the leading unit of the pharmaceutical industry in Vietnam. Under the policies of Vietnam's social security, Traphaco have developed a program to help farmers out of poverty in a sustainable way. They approached farmers in mountainous and remote areas to jointly develop medicinal plantations. Competitions are held among farmers to improve their capacity in cultivation and processing the plants to maintain its highest quality.

In 2015, Traphaco was certified by the Department of Traditional Medicine Management under the Ministry of Health to plant and collect GACP-WHO herbal medicinal herbs, increasing the total amount of GACP-WHO herbal medicines in Vietnam. Traphaco is one of the few companies that bravely invest in R&D to create a breakthrough and quickly become the leading brand in the pharmaceutical industry of Vietnam. One of Traphaco's biggest achievement is the production of raw materials from Vietnam's poorest people.

The project was implemented with the participation of many partners operating under the coordination and management of Traphaco. Traphaco has put low-income workers to operate its core business as a producer. Farmers are provided seeds, fertilizers, technical assistance, and cash advances for growing medicinal plants. In return, they will sell their produce to the company at an agreed price, which raises farmers' income. The Vietnam Enterprise Challenge Fund was held with the assistance of UK government's international development funding. The Fund pledged to invest more than GBP100,000 for business projects with low-income people for two years. The Fund aims to support private enterprises in Vietnam to build innovative business model with low-income people. Scientists from the Sapa Institute of Medicine and the Sapa Centre for Research and Development were enlisted to guide the farmers in the planting project.

In meeting its business objectives, Traphaco cooperated with the provincial committee to organize two competitions - Idea for Livelihood Creation and Traphaco and Friends. The two competitions generated the selection of 17 ideas for livelihood creation; total capital of UK's Department for International Development (DFID) support VND2.177 billion, supporting 17 groups with a total of 104 households involved. The Project has raised several creative ideas for supporting peasants in drying medicinal plants and grow new trees like geranium in Sapa.

The advantages of the program encompass the following:

- **Trade:** This project brings benefits to businesses and ensures the parent company possesses raw materials at GACP-WHO standards for the production of major products.
- **Social:** Many jobs were created and raised incomes for hundreds of low-income households, of which 70% were ethnic minorities. Income from growing pharmaceuticals plants are often 2–3 times higher than rice or maize. Traphaco also has an active charity unit dedicated to humanitarian and charitable activities with the desire to create happiness and more prosperity for low-income people.
- **Environment:** Planting medical trees under GACP-WHO standards ensures environmental friendliness due to proper use of fertilizers and pesticides. This also ensures the strict requirements of environmental protection toward sustainable development is always met.

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CHAPTER 2

COUNTRY REPORT - INDIA

Dr. Sadhan Kumar Ghosh

Executive Summary

The 'bottom of the pyramid' concept is the theory that even the poorest markets in the world can be revenue generating for companies if they tailor their product and packaging to these markets. The strength of the Base of the Pyramid (BoP) market comes from its numbers, its vast size, and represents a multitrillion dollar market. The BoP segments the market into layers, including a substantial base comprising the low-income group in the economic strata with 4 billion individuals at present that live primarily in developing countries. In India, a segment of 700 million people in India whose annual per capita income fall below USD1,500 at purchasing power parity (PPP). Companies that want to tap into this latent market potential must strike a balance between profit-creation for themselves and value-creation for their consumers at the BoP. Recent studies have indicated that the BoP represents the idea of integrating people at the base of the income pyramid into the activities of multinational companies as consumers, suppliers, or partners thus contributing to poverty reduction and sustainable development in the long run.

India has one of the largest BoP groups in the world. The country has a great potential to carry out businesses for the BoP group, tapping into a huge market. A large number of businesses that focus on the BoP market have both failure and success stories. Analysts predict that by 2020, for the first time in history, the number of deprived households in rural India will be less than the group of Aspirers and Seekers due to faster migration to urban India. The cause of this massive transformation lies in a rise in discretionary incomes from increasing productivity and integration of rural markets. While the number of rural Indian consumers earning USD1/day would fall from 400 million to 250 million by 2020, consumers earning over USD5/day would increase from 50 million to 150 million. The economic and social shifts underway will have far-reaching effects for companies large and small, policymakers, and all stakeholders in rural India's wellbeing. The Asian Productivity Organization (APO) has long promoted the adoption of Green Productivity (GP) as an approach to achieve economic prosperity along with sustainable development. GP has been regarded as a key strategy to not only increase productivity, but also contribute positively to the environment with the vision of producing efficiently, perform effectively, and share equitably.

The dynamics of rural consumption in India has grown remarkably with rapid economic growth and is expected to change drastically. At present, the average rural Indian household spends about 75% of its annual income on food, beverages, and tobacco, 12% on energy needs, and merely 2–3% on housing and health. Just recently, communication has emerged as a new area of expenditure. In the near future, rural population, supported by development policies like MNREGA (Mahatma Gandhi National Rural Employment Guarantee Act), PMRY (Prime Minister Rozgar Yojana), farm loan waivers, and enhanced rural infrastructure, are likely to spend proportionally on discretionary items and new product categories, such as healthcare, education, transportation, communication, and personal consumption expenditure. The compelling case of rural markets has lured large corporations, MNCs, small- and medium-enterprises (SMEs), and even the small businesses by the BoP group of people.

India's largest fast-moving consumer goods (FMCG), consumer durables, automobiles, and mobile communication systems have risen 20–40% of their annual revenues from rural markets, beating the growth rate estimates of their urban counterpart's year-on-year. Success in encouraging growth of BoP markets will depend extensively on continuous innovation in alternate products and its distribution channels. Rural markets are ready for large scale interventions. Only those who can create win-win possibilities in this market will get a shot at the fortune lying in millions of India's poorest households.

This research project in India, supported by the APO and CPC Corporation in Taiwan, has examined the contributions and opportunities under the BoP as a strategy to improve economic activities while underpinning sustainable development. The study involves the demographic data and the government initiatives for the BoP groups in India. The research also explores how the BoP approach interacts with different issues while serving the interests of the poor through case studies. The case study involves the businesses for the BoP group and also the businesses by the BoP groups of people in India. The output of this research will support the overall GP approaches under the APO in spreading environmentally sustainable solutions and development in the region.

Introduction

More than one fifth of the world's population lives in extreme poverty, surviving on less than USD1.902 a day at PPP. There is a growing international consensus that this number can and must be reduced to zero by 2030, substantiated by the UN General Assembly's adoption of the Sustainable Development Goals (SDG), which call for the collaborative efforts of all sectors, private, and public alike, to achieve this goal [1]. There is also widespread acknowledgement that many individuals, households, and communities have largely been excluded from the benefits of economic growth and development programs.

The BoP theory suggests that new business opportunities lie in designing and distributing goods and services for poor communities. The idea is espoused by influential USA business school academics CK Prahalad and Stuart Hart, who argue that companies can help eradicate poverty by providing goods and services for the 4 billion people who live on less than USD2 a day - this group is also known as the BoP. Few companies have so far addressed the opportunities in delivering goods to this group, whose purchasing power is USD5,000 billion a year according to the International Finance Corporation, the private sector arm of the World Bank. These excluded segments that are disproportionately the poorest, and their circumstances make them challenging to serve. They often live in geographically isolated areas with substandard or no infrastructure and weak markets, and are characterized by insecure livelihoods and few productive assets. Building sustainable livelihood options for these "last mile" families - those most difficult to reach and at greatest risk of being left behind - is a critical component in the effort to eradicate extreme poverty. As a business strategy the BoP model aims to improve the quality of life of the people. However, there has been extensive debate on the approaches of environment-related issues in the literature of sustainable development when discussing about business strategies. In this research within the BoP context, these issues will be assessed especially the interdependencies between environment and business/economic activities in which BoP is believed to be just another strategy [2].

India's promise is driven by fundamental growth drivers including a favorable demographic profile, a skilled workforce, an emerging middle class, a strong entrepreneurial culture, rising productivity, and a resilient private sector. The country's strong economic fundamentals, high rates of GDP

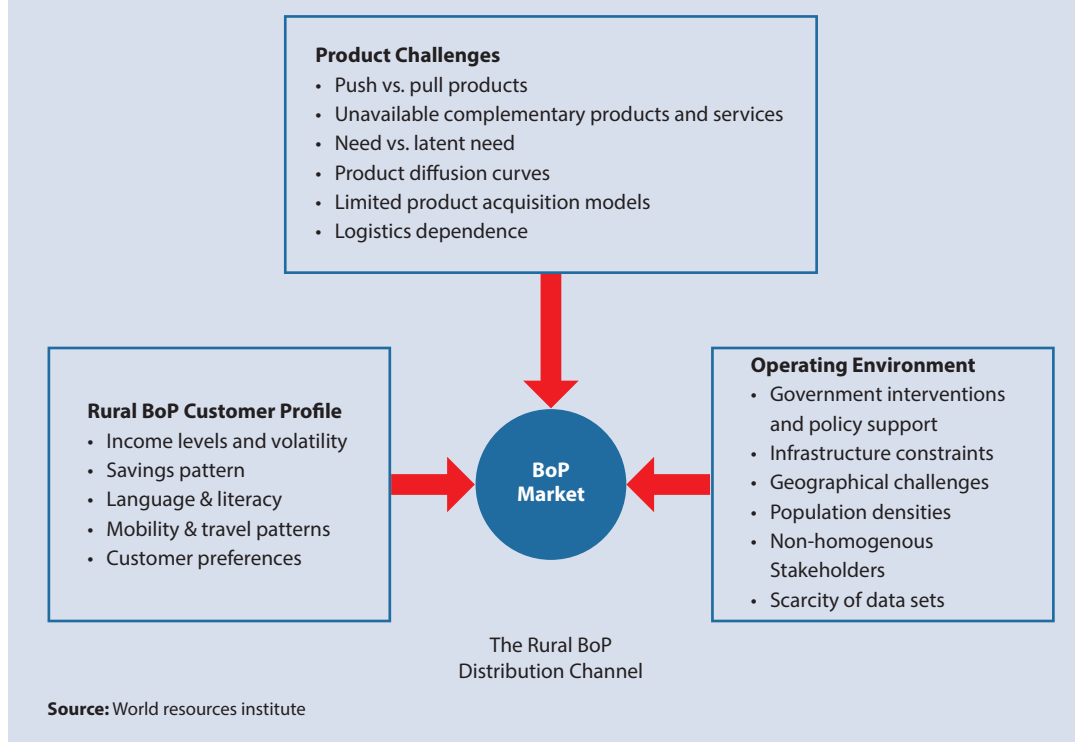
growth, and long-term potential make it an attractive destination for business and investment across borders. With a growth rate of 7.7% in the fourth quarter of 2017–18 the Indian economy regained the tag of being the fastest growing economy globally.

India's rural BoP, specifically the BPL (below poverty line) market presents itself as a significant opportunity not only for multinational corporations but also for small, medium, and micro manufacturers, producers, and service providers with an approximate population segment of 700 million people. Analysts predict the revenue opportunity in this market to be growing almost at pace with urban markets [3]. While numerous experiments have been conducted in pursuit of first mover advantage in Indian rural BoP markets, in reality, the success in this segment to date has remained elusive. So far, attempts to exploit opportunity in BoP markets have emphasized on product and process improvements. Success stories of increasing market penetration by certain fast-moving consumer goods (FMCGs) with modified packaging, such as shampoo sachets, economy soap pack, economy detergent pack, economy food pack, the prepaid SIM cards are encouraging but offer limited insights that can be put to use in other product classes. The Tier 4 market, i.e., the BoP market is wide open for technological innovation. Among the many possibilities for innovation, multinational companies (MNC) can be leaders in leapfrogging to products that don't repeat the environmental mistakes of developed countries over the last 50 years. Today's MNCs evolved in an era of abundant natural resources and thus tended to make products and services that were resource-intensive and excessively polluting. The USA's 270 million people - only about 4% of the world's population - consume more than 25% of the planet's energy resources. To recreate similar consumption patterns in developing countries would be disastrous.

The BoP population is characterized by unmet basic needs (access to basic healthcare, water and sanitation, financial services, nutritious food, education, etc.) and a "BoP-penalty" that results in higher prices for BoP customers than their wealthier counterparts for basic products and services [4]. The "BoP-penalty" is primarily an outcome of local monopolies, inadequate access, poor distribution, and strong traditional intermediaries [5]. BoP markets, mostly rural India, are poorly served, dominated by local informal economies, and consequently, relatively uncompetitive and inefficient. With the Jan Dhan, Aadhaar, and Mobile (JAM) trinity taking hold, in tandem with the initiatives like Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Pradhan Mantri Jan Dhan Yojana (PMJDY), Direct Benefit Transfer (DBT), and other schemes may connect individuals directly to bank accounts with regard to activities related to deposits and payments, to enable unbanked individuals to avail of credit facilities. The Self-Help Group (SHG)-Bank Linkage Programme (SBLP) is an ideal opportunity to seamlessly integrate access and use, and, in the process, ensure that leakages in financial transfers are substantially lowered. These help in increasing the purchase power of the BoP group of people in India. Population residing in urban areas in India, according to 1901 census, was 11.4%. This count increased to 28.53% in the 2001 census, and crossing 30% as per 2011 census, standing at 31.16% presently. According to a survey by UN State of the World Population report in 2007, 40.76% of the country's population is expected to reside in urban areas by 2030. Mumbai saw large scale rural-urban migration in the 20th century accommodating 12.5 million people, and is the largest metropolis by population in India, followed by Delhi with 11 million inhabitants. Witnessing the fastest rate of and urbanization in the world, as per 2011 census, Delhi's population rose by 4.1%, Mumbai's by 3.1%, and Kolkata's by 2% compared to 2001 census [6]. The cause of this massive transformation lies in a rise of discretionary incomes from increasing productivity and integration of rural markets. The success of the business for the BoP markets depends on the rural BoP customer profile, operating environment associated with product challenges which is elaborated in Figure 2.1.

FIGURE 2.1

BOP MARKET COMPLEXITY AND CHALLENGES



This research project supported by the APO in India has examined the contributions and opportunities under the BoP as a strategy to improve economic activities while underpinning sustainable development. The study involves the demographic data and the government initiatives for the BoP groups in India, exploring through case studies how the BoP approach interacts with different issues while serving the interests of the poor. The country report on India is divided into Introduction, followed by national information on a) individual/family average income (GDP) of respective country, b) general poverty situation in respective country, c) social problems/issues related to poverty, d) government initiatives on eradicating poverty, and e) poverty identifying BoP group/BoP market. This section is followed by two cases in BoP markets that uses GP, while the third case looks into a BoP market that is based on an on-site study through personnel interview. The last section describes the lessons learned and recommendations based on objective three of the Project Implementation (PIP) issued by the APO which is to make proposals that will enhance GP integration into potential BoP business model strategy. Output of this research will support the APO's overall GP approaches in spreading environmentally sustainable solutions and development in the region.

Individual/Family Average Income (GDP) in India

The GDP measures the national income and output for a given country's economy. The GDP is equal to the total expenditures for all final goods and services produced within the country in a stipulated period of time. The Per Capita Income in real terms (at 2011–12 prices) during 2018–19 is likely to attain a level of INR91,921 as compared to INR86,668 in 2017–18. The growth rate in Per Capita Income is estimated at 6.1% during 2018–19, - as against to 5.4% in the previous year. The income limit for households for qualifying as a beneficiary under the BPL (below poverty line) list has been pegged at about INR27,000 per annum. If a person earns less than this

amount, he can get a Below Poverty Line Certificate issued to avail the different subsidies offered by the government using this service according to the methodology approved by the Union Cabinet [7]. The rural Indian BoP market is defined as households in the bottom four expenditure quintiles that spend less than INR3,453 (USD75) on goods and services per month. This definition represents a market of 114 million households, or 76% of the total rural population in India. The upper limit was defined by allowing five earning persons in a household with a per capita monthly income of about INR447 in the rural areas, which works out roughly of a monthly income of INR2,250 per household.

In the past 15 years, India has experienced tremendous economic growth and transformation; however, this growth has been highly unequal. Despite becoming a middle-income country and significantly decreasing the percentage of its population who live in extreme poverty, India is still home to one-third of the global population of people living in extreme poverty (defined as living on less than USD 1.90 a day). A quarter of the population of India belongs to a Scheduled Caste or Scheduled Tribe, which are official designations given to groups of historically disadvantaged indigenous people in India. Members of the many indigenous peoples of India self-identify as Adivasi, which is commonly translated as “original inhabitants” and encompasses over distinct groups of people speaking more than 100 languages. The Adivasi are disproportionately represented among the poorest and overwhelmingly live in rural areas. They are concentrated primarily in villages in the states of Bihar, Jharkhand, Odisha, Madhya Pradesh, Chattisgarh, Uttar Pradesh, and Uttarakhand. Women in India are largely excluded from economic opportunities to bring themselves and their families out of extreme poverty, like financial services, earning an income, and land ownership [8–10].

According to International Monetary Fund World Economic Outlook (October 2018), India's GDP (nominal) in 2018 at current prices is USD2,690 billion. India contributes 3.17% of total world's GDP in exchange rate basis. India shares 17.5% of the total world population and 2.4% of the world surface area. India is now the seventh largest economy of the world. India is behind by only USD105 and USD119 billion from sixth and fifth ranked France and United Kingdom, respectively. India is at the third position after China and Japan among Asian countries. India shares around 9% of total Asia's GDP (nominal). The Central Statistics Office (CSO) has projected Indian economy to grow at 7.2% for 2019 fiscal under its first advance estimates. Real GDP at constant prices (2011–12) in 2018–19 is likely to attain a level of INR141 lakh-crore (INR141 trillion), as against the First Revised Estimate of GDP for the year 2017–18 of INR131.80 lakh-crore (INR13.8 trillion), released on 31st January 2019. India's GDP growth was revised down to 7% from 7.1% in the second quarter ended 30 September 2018, according to data released by the Ministry of Statistics and Programme Implementation [11–12].

Currently, India retains the tag of the world's fastest growing large economy. The growth in GDP during 2018–19 is estimated at 7% as compared to the growth rate of 7.2% in 2017–18. The Annual Growth Rate of GDP (adjusted to price changes) per capita and Annual Estimates of GDP at Current Prices 2011–12 Series have been presented in Tables 2.1 and 2.2. Real GDP at constant (2011–12) prices in the year 2018–19 is likely to attain a level of INR139.52 lakh-crore (INR139.52 trillion), with growth rate of 7.23% over the GDP for the year 2017–18 of INR130.11 lakh-crore (INR130.11 trillion). Nominal GDP or GDP at current prices in the year 2018–19 is projected at INR188.41 lakh-crore (INR188.41 trillion), with growth rate of 12.33% against INR167.73 lakh-crore (INR167.73 trillion) for 2017–18. In the new series, figures are available from 2004–05 onwards. The GDP of India has expanded by 2.55 times from 2004–05 to 2018–19 [11–12].

TABLE 2.1**ANNUAL GROWTH RATE OF GDP (ADJUSTED TO PRICE CHANGES PER CAPITA) [8]**

GDP	2013-14	2014-15	2015-16	2016-17	2017-18
Estimated at current prices	11.5	9.6	9	9.5	8.4
Estimated at constant (2011-12) prices	5	6.1	6.8	5.8	5.2

TABLE 2.2**ANNUAL ESTIMATES OF GDP AT CURRENT PRICES 2011-12 SERIES (INR IN CRORE) [8]**

ITEM	2013-14	2014-15	2015-16	2016-17	2017-18
Gross Value Added (GVA) at Basic Prices From			2nd Revised Estimate	1st Revised Estimate	2nd Advance Estimate
1. Agriculture, forestry, and fishing	19,26,372	20,93,612	22,25,368	24,84,005	25,88,180
2. Mining and quarrying	2,95,794	3,08,476	3,01,230	3,32,947	3,77,197
3. Manufacturing	17,13,452	18,78,369	21,16,119	23,29,220	25,12,008
4. Electricity, gas, water supply, and other utility services	2,60,155	2,82,258	3,36,978	3,63,482	3,88,080
5. Construction	9,21,470	9,79,086	9,92,298	10,28,463	11,04,185
6. Trade, hotels, communication transport, and services related to broadcasting	18,74,467	21,07,597	23,03,249	25,21,813	28,21,490
7. Financial, real estate and professional services	20,69,508	23,63,347	26,31,284	28,57,322	31,73,667
8. Public administration, defence, and other services	13,01,935	14,91,536	16,60,120	19,24,339	22,01,573
9. GVA at basic prices	1,03,63,153	11504279	12566646	1,38,41,591	1,51,66,379

General Poverty Situation in India

Despite the country's meteoric GDP growth rate, poverty in India is still pervasive, especially in rural areas where 70% of India's 1.2 billion population live. It is one of the fastest growing economies in the world and yet its wealth is unevenly redistributed across the population. India's government is well aware that poverty is a giant barrier to overcome in becoming a fully developed nation. Below poverty line (BPL) is an economic benchmark used by the government of India to indicate economic disadvantage and to identify individuals and households in need of government assistance and aid. Internationally, an income of less than USD1.90 per day per head of PPP is defined as extreme poverty. The different definitions and different underlying small sample surveys used to determine poverty in India, have resulted in widely different estimates of poverty from 1950s to 2010s.

In 2012, the Indian government stated that 22% of its population is below its official poverty limit. The World Bank, in 2011 based on 2005's PPPs International Comparison Program, estimated 23.6% of Indian population, or about 276 million people lived below USD1.25 per day on PPP.

According to UN's Millennium Development Goals (MDG) program subsequently Sustainable Development Goals (SDG), 270 millions or 21.9% people out of 1.2 billion Indians lived below poverty line with an income of USD1.25 in 2011–2012. The National Sample Survey Office (NSSO) defines rural India as areas with i) population density of less than 400 per sq km, ii) 75% of the male working population are engaged in agriculture, and iii) there are no municipal corporation or board. Other government agencies, such as Insurance Regulatory and Development Agency (IRDA) and National Council for Applied Economic Research (NCAER), define rural as villages with populations of less than 5,000 and 75% of the male population are engaged in agriculture. 259.5 million people live in extreme poverty in India. The percentage of people living in extreme poverty in India decreased by 10.1% in just two years (2009–11). Over 40% of these same villages don't have proper roads connecting them. Data released by the Planning Commission in July 2013, suggested that poverty in India had declined from 37.2% in 2004–05 to 21.9% by 2011–12. Figure 2.2 shows the India's poverty rates in 2012.

The expert committee recommended that the Social Economic Caste Census (SECC) data which measures the multidimensionality of poverty should replace it with the erstwhile Planning Commission's BPL. Moreover, as poverty lines are established according to the mean income of the lower-class population, the most affected and neglected groups (including factors, such as homelessness and informal housing) are also those living in cities where living cost is more expensive and needs and requirements are more diverse than in rural areas. This is the biggest misrepresentation caused by distorted poverty guidelines. To better represent a nation's poverty level, there is dire need of data and documentation, thus a new expert group has redefined the poverty line. The methodology recommended by the expert group, Rangarajan, for estimation of poverty is to be based on certain normative levels of adequate nourishment, clothing, house rent, conveyance, and education, as well as a behaviourally determined level of other nonfood expenses [13]. The largest portion of the poor comprises the women, children, and men who live in rural areas. They tend to live in remote areas that are great distances from the nearest markets and basic social services. They are mothers and fathers, most of who are day labourers, subsistence farmers, herders, and migrant workers. They struggle to meet basic everyday needs, such as feeding their families at least two meals a day, or taking their children to a clinic when they have fallen ill. The rural poor also work in insecure and relatively low-paying jobs, have little education, and may experience discrimination as women and members of ethnic minorities. For all these reasons, the rural poor suffer from hunger, ill health, illiteracy, instability, and low self-esteem as well as marginalization from their own governments who are often unresponsive to their needs and concerns. Empowering the rural poor is a critical step in advancing any poverty alleviation effort. In fact, the most basic financial services reach only 10% of rural communities.

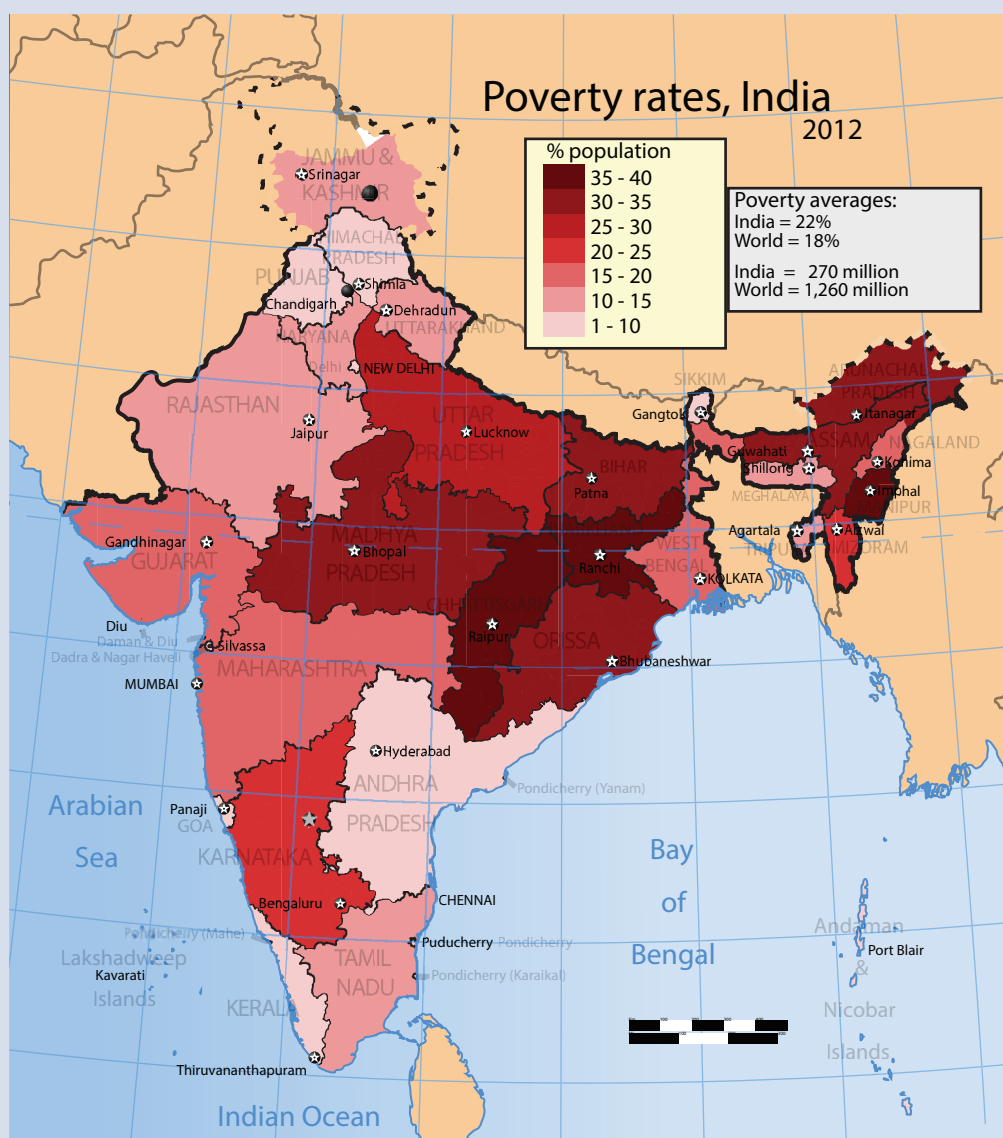
Social Problems/Issues Related to Poverty

A few of the social problems and issues related to poverty in India will be discussed. The Indian society is so diverse that the rapid and unequal growth has brought overwhelming inequalities, which is unexpected in a democratic country. India being the biggest democracy, people have more opportunities to voice their concerns. However reaching a consensus on a long-term goal may prove to be an impossible mission. Poverty in India is a multidimensional phenomenon, with a bundle of economic, social, geographical, human, gender, and other deprivations.

Poverty involves more than the lack of income and productive resources to ensure sustainable livelihoods. Its manifestations include hunger and malnutrition, limited access to education and other basic services, social discrimination and elimination as well as the lack of participation in

FIGURE 2.2

POVERTY RATES IN INDIA (2012)



decision-making. It is also a major cause of social tensions and threatens to divide a nation because of the issue of inequalities, in particular income inequality. This happens when wealth in a country is poorly distributed among its citizens. The Copenhagen Declaration describes absolute poverty as “a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information”. Among numerous issues, hunger and malnutrition are closely associated with poverty in the Indian scenario that have a separate gender dimension and are prevalent among women. The proportion of underweight children in India have declined from 45.1% in 2005–06 to a historic low of 30.7% in 2016, shown in the provisional data from a survey conducted by the government of India and UNICEF. The number needs to be made to zero.

In Mumbai, one of the biggest cities in India, nearly 50% of the population live in informal settlements having little or no access to basic services, e.g., water, sanitation, power, and waste management. In those informal settlements, only 71.2% of urban households have access to clean drinking water in their house and one in five urban households do not have their own toilet, and instead depend on shared facilities. This also explains why India accounts for nearly half of the global population defecating in the open which is now being taken care of by the flagship scheme, “Swachh Bharat Mission” by the present government for both rural and urban India. Some of the most badly affected by these constraints are the young people growing up in these urban slums and villages. Approximately 443 million school days are lost as a result of water and sanitation-related diseases. As a result of this and the already low school enrolment rates, 68% of street children are illiterate. The share of urban population has risen from 18% in 1961 to 31% in 2011. Urban poverty in India is a direct effect of rural migrations fleeing poverty. This creates a massive unemployment and underemployment issue but also a disproportionate housing problem.

Inclusive growth means growth with equal opportunities focusing on creating opportunities and making the opportunities accessible to all. In India the growth is inclusive when it allows all members of the society to participate in and contribute to the growth process on an equal basis regardless of their individual circumstances. Rural BoP populations are not a homogenous group. Living in all kinds of settlements, they have varied income and expenditure levels. BoP customers’ unique demands mean that product or service solutions are neither interchangeable nor readily transferable even within the segment. India has 29 states and seven union territories with a wide variety of culture, language, and climate. In spite of their diverse needs that vary across regions, BoP populations share several commonalities in their financial hardships, domestic constraints, difficult living conditions, lack of basic information for making informed decisions, and informal quality standards, among others, such as income levels and volatility, savings pattern, language and literacy, mobility and travel patterns, customer preferences, location and cultural influence, etc.

Government Initiative on Eradicating Poverty

Poverty is a multidimensional phenomenon, with a bundle of economic, social, geographical, human, gender, and other deprivations in India. These diverse features of poverty have led to different strategies of poverty reduction. Interventions to reduce poverty need to take place at three different levels in an integrated manner. At the macro level there are interventions aimed at income - poverty reduction through capital formation in human and physical resources, and achieving economic growth through fiscal incentives and expenditures; at the community or village level, government interventions aim at directly providing basic social services that are the foundation of human capital formation and local infrastructure development. The third type of interventions target good health, nutrition, and education at the individual level [14]. The government of India has come up with several programs in order to ease the burden of poverty holding India back since the 1950s and eradicate poverty toward becoming a developed country. Some of the schemes in brief will be discussed in subsequent paragraphs and in Table 2.3.

Since 2014 till date the administration has moved from discretionary and favoritism based to system and transparency based. Inflation was brought under control and CPI-based (Consumer Price Index) inflation declined from 6% in July 2016 to 3.4% in December 2016. The Indian government has focused its supports to address key concerns of economy, namely, i) housing for the poor; ii) relief to farmers; iii) credit support to micro, small and medium enterprises (MSMEs); iv) encouragement to digital transactions; v) assistance to pregnant women and senior citizens; and vi) priority to Dalits, tribals, backward classes, and women under the Mudra Yojana.

TABLE 2.3

SOME INITIATIVES OF THE GOVERNMENT OF INDIA ON POVERTY ERADICATION

Scheme and the brief

Pradhan Mantri Jan Dhan Yojana (PMJDY): To provide access to different financial services, e.g., as a basic savings account, insurance, credit as and when needed, pension, and remittances to economically disadvantaged people, can earn interest on the deposited amount, have accidental insurance cover amounting to INR1 lakh (INR100,000) and RuPay debit cards.

Pradhan Mantri Ujjwala Yojana (PMUJ): Free liquefied petroleum gas (LPG) connections to 50,000 women from below poverty line in the next three financial years.

Aadhaar and Jan Dhan Yojana (PMJDY): Address the financial inclusion of unorganized workers such as insurance and pension.

Pradhan Mantri Awas Yojana (PMAY): 2,508 cities in 26 states have been identified to provide affordable housing to the urban poor, enjoy interest subsidy on housing loans.

Make in India: Making India a manufacturing superpower in 25 sectors where India can beat the world, i.e., automobiles, chemicals, IT, pharmaceutical, electronics, design manufacturing, mining, biotechnology, textiles, ports, aviation, leather, tourism and hospitality, wellness, and railways. Also focuses on skill enhancement and job creation also.

Smart Cities Project in India: To build 100 smart cities having 24/7 water supply, electricity, free from garbage heaps, providing quality education and sports facilities, open spaces for recreation and for healthy living with an allocation of INR70.6 billion.

Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and Pradhan Mantri Suraksha Bima Yojana (PMSBY): PMJJBY and PMSBY cover people of lower income groups and economically backward sections between the age group of 18–70 year @ yearly premium of INR12, getting INR100,000 in case of partial disability in an accident and INR2 million for complete disability and death for same reason.

Pradhan Mantri Sansad Adarsh Gram Yojana (PMSAGY): Places the responsibility of rural development on the Member of Parliament to develop the infrastructural facilities - physical and socioeconomic - of three villages each and this has to be done by 2019. By 2024, they have to develop eight villages each. The first village has to be completed by 2016. It is expected that by 2024, 6,433 "Adarsh Gram" (model village) will be created.

Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY): This program is to provide rural areas continuous supply of power with the national administration investing INR756 billion. It has replaced the Rajiv Gandhi GrameenVidyutikaranYojana.

Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDUGKY): To provide jobs in rural India to people between the age group of 18–35.

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA): Started in 2005 to provide 100 days of guaranteed work to people in villages across the country. It has been a successful program as far as increasing the income levels of poor people in the rural areas is concerned. It involves mostly unskilled manual work, it does provide some sort of safety net for the economically impoverished. The income from this program helps them build some assets that make their lives that much better.

Integrated Rural Development Programme (IRDP): This is one of the most ambitious schemes of its kind in the world. The program, launched in 1978–79 with the main objective of creating sustainable assets and provide them to targeted families, so that they can be brought above the poverty line. Self-employment is a major component of the assistance provided as part of the scheme.

Source: www.sarkariyojana.co.in [15]

Some of the distinct themes to foster this broad agenda are commitment to double the income of farmers within the next five years, providing employment and basic infrastructure to the rural population, energizing the youth through education, skills, jobs and strengthening the systems of social security, health care and affordable housing for the poor and the underprivileged. To ensure flow of credit to small farmers, the government is to support NABARD for modernization through computerization and integration of all 63,000 functional Primary Agriculture Credit Societies with the Core Banking System of District Central Cooperative Banks in three years at an estimated cost of INR19 billion. Coverage under Fasal Bima Yojana Scheme (FBYS) will be increased from 30% of cropped area in 2016–17 to 40% in 2017–18 and 50% in 2018–19 for which a budget provision of INR90 billion has been made. A dedicated Micro Irrigation Fund in NABARD is set up to

achieve ‘per drop more crop’ with an initial corpus of INR50 billion. Dairy Processing and Infrastructure Development Fund is to be set up in NABARD with a corpus of INR20 billion and will be increased to INR80 billion in over three years. Over INR3 trillion are spent in rural areas every year when all the programs for the rural poor are added up - from Central Budget, State Budgets, Bank linkage for self-help groups, etc. The government’s mission is to bring 10 million households out of poverty and to make 50,000 Gram Panchayats poverty free by 2019, which is also the 150th birth anniversary of Gandhiji, the father of the Nation. Against the target of 500,000 farm ponds to be created under the MGNREGA by 2017–18, 100,00 farm ponds would be completed by March 2017. Women participation in MGNREGA has increased to 55% from less than 48% in the past, and MGNREGA allocation was to be the highest ever at INR480 billion in 2017–18. Allocation for Pradhan Mantri Awaas Yojana - Gramin increased from INR150 billion in 2016–17 to INR230 billion in 2017–18 with a target to complete 10 million houses by 2019 for the houseless and those living in kutchha (mud) houses. For imparting new skills to people in rural areas, mason training will be provided to 500,000 persons by 2022. A program of “human resource reforms for results” will be launched in 2017–18 for human resources development in Panchayati Raj Institutions. Total allocation for Rural, Agriculture and Allied sectors is INR18.72 trillion.

Poverty Line, BoP Group, and BoP Market

To define the poverty line in India, the government had constituted a 14-member task force under NITI Aayog’s vice chairman to come out with recommendations for a realistic poverty line. After one and half years’ work, this task force had failed to reach a consensus on poverty line. In September 2016, it was suggested to the government that another panel of specialists should be tasked again in defining the poverty line. Informally, this committee supported the poverty line as suggested by the Tendulkar Committee. It should be noted that the NITI Aayog in India replaced the Planning Commission in the year 2014.

Up until 2011, the official poverty lines were based entirely on the recommendations of the Lakdawala Committee of 1993. This poverty line was set such that anyone above them would be able to afford 2,400 and 2,100 calories worth of consumption in rural and urban areas, respectively in addition to clothing and shelter. According to the Lakdawala Committee, a poor person is one who cannot meet these average energy requirements. However, Lakdawala formula was different in comparison to the previous models. In the earlier estimates, both health and education were excluded because they were expected to be provided by the states. This committee defined poverty line on the basis of household per capita consumption expenditure. The committee used CPI-IL (Consumer Price Index for Industrial Laborers) and CPI-AL (Consumer Price Index for Agricultural Laborers) for estimation of the poverty line. The method of calculating poverty included first estimating the per capita household expenditure at which the average energy norm is met, and then, with that expenditure as the poverty line, defining as poor as all persons who live in households with per capita expenditures below the estimated value. The fallout of the Lakdawala formula was that number of people below the poverty line got almost double. The number of people below the poverty line was 16% of the population in 1993–94. Under the Lakdawala calculation, it became 36.3%. In 2005, Suresh Tendulkar committee recommended to shift away from the calorie-based model and made the poverty line somewhat broad based by considering monthly spending on education, health, electricity, and transportation. It strongly recommended target nutritional outcomes, i.e., instead of calories, intake nutrition support should be counted. It suggested that a uniform Poverty Basket Line be used for rural and urban region. It recommended a change in the way prices are adjusted and demanded for an explicit provision in the Poverty Basket Line to account for private expenditure in health and education.

The Tendulkar panel stipulated a benchmark daily per capita expenditure of INR27 and INR33 in rural and urban areas, respectively, and arrived at a cutoff of about 22% of the population below poverty line. However, the stipulated amount was too low that it immediately faced a backlash from all sections of media and society. The methodology recommended by the new Expert Group (Rangarajan) for estimation of poverty in 2014 suggested that the poverty line should be based on certain normative levels of adequate nourishment, clothing, house rent, conveyance and education, and a behaviorally determined level of other nonfood expenses. Rangarajan committee raised these limits to INR32 and INR47, respectively, and thus worked out poverty line close to 30% in 2011–12. The number of poor in India was estimated at 363 million in 2011–12. The new poverty line thus work out to monthly per capita consumption expenditure of INR972 in rural areas and INR1,407 in urban areas in 2011–12. For a family of five, this translates into a monthly consumption expenditure of INR4,860 in rural areas and INR7,035 in urban areas. BPL is a benchmark used by the government of India to identify the people who are at the BoP. The main purpose for identifying BPL people by government is to help them financially, so that they can fulfill their basic need like food, shelter, education, clothes, etc. In its Ninth Five-Year Plan (1995–2002), BPL for rural areas was set at an annual family income of less than INR20,000, less than two hectares land, and no television or refrigerator. The number of rural BPL families was 650,000 during the Ninth Plan. Generally, the government uses some basic parameters to consider people who are BPL, i.e., type of house, status of children, food requirement, clothing, literacy status, landholding, sanitation, etc.

BoP Cases

The three case studies profiled below represent current models, analyze strategies adopted by companies working in India's rural BoP markets, and to provide deeper understanding of the contributions and opportunities under the BoP as a strategy to improve economic activities while underpinning sustainable development and interdependencies between environment and business/economic activities. Table 2.4 gives a summary of Case Studies.

TABLE 2.4

SUMMARY OF PRESENTED CASE STUDIES

Organization	Business Model	Products	Target Customer	Sustainable Development
Case Study 1: d.light India	Commercial for-profit social enterprise; relies on channel partners tagged with NGOs	Solar-powered LED – powered by solar and battery charge	BoP market; others in open market	Replace kerosene lamps in rural households
Case Study 2: Microfinancing and small businesses by individuals and groups in BoP level	Commercial for-profit social enterprise; relies on HG group members; sell direct to customer, trade fair, etc.	Handicraft, grocery, milk production bamboo products, sari design, leather bag manufacturing, training center, etc.	BoP market; others in open market	Use of green chemicals, waste utilization, least packaging materials, etc.
Case Study 3: HLL's Project 'Shakti' – Marketing FMCG in rural India	Commercial for-profit social enterprise; channel partners tagged with NGOs. Rural health and hygiene initiative with Lifebouy swast-hayachetna	Lifebouy soap, Lux, Surf Excel, Fair & Lovely, Wheel, Sunsilk, Clinic shampoo, Lakme, Rin, Brooke Bond, Pepsodent, etc.	BoP market; others in open market	Generated huge small plastic packets against environmental sustainability. No waste management plans.

Case Study 1: d.Light India for Solar-powered LED [16]

d.light Energy is a solar lighting products company that supplies solar-powered LED lighting products that replace kerosene lamps in rural households and also in areas where there is erratic power supply. In mid-2016, the company outlined their plans to set up a manufacturing unit in India with a potential investment of about USD2 million. A social enterprise, d.light provides distributed solar energy solutions for households and small businesses that are transforming the way people all over the world use and pay for energy. d. light India supplies solar lighting systems in a number of countries and the company celebrated the major landmark of reaching out to about 50 million homes in Asia, Africa, and other parts with its network of distributors and associates in Hyderabad. Their immediate task is to cover 100 million homes by 2017. d.light has taken one light as a benchmark that supports five people in a family. The company was entering the southern marketing and has tied up with oil marketing companies like IOCL, BPCL and microfinance companies, such as SKS and cooperative banks. Banks and MFIs support rural folk with funding to buy these products priced starting from INR495, INR645 and INR1,895, the last one also doubling up as a charger for mobile phones. In addition, the company also has a solar home lighting system priced at about INR6 per unit, as per the statement by the CEO of the company. The company has thus far risen over USD10 million and may consider raising more funds to support expansion.

Product/Technology

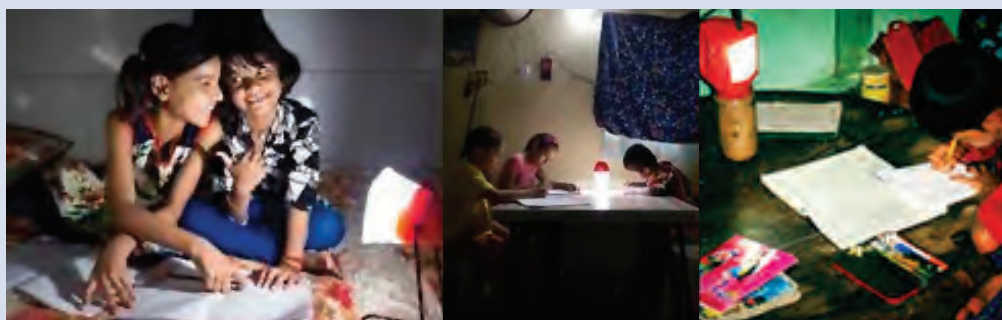
d.light designs and manufactures LED lights powered by solar and battery charge. It offered three solar home light models (d.lights250, d.light S10, and Solata S380) (Figure 2.3). The S250 is priced at INR1,350 and comes with a one-year warranty. S250 has a one-watt solar panel and a solar or AC-chargeable battery that, per d.light's claim, can last up to two years. S250 has a mobile phone charging socket, which can recharge a cell phone battery in one hour. The Solata is a desk lamp, which costs INR700–800, and comes with an AC or solar-charge option. Solata has a 360-degree head revolving option, which is helpful for small businesses like barber shops. S10 is a household lantern with differential power settings; it costs INR500 and is currently one of the lowest priced solar lanterns in the Indian market.

Business Model

d.light is a 'commercial for-profit social enterprise'. d.light India was set up in February 2008 and Enviro fit conducted a pilot in the Aligarh district of Uttar Pradesh, India to get consumer feedback on the Nova (predecessor to the S250) and Solata lanterns. d.light's business model relies on channel partners (dealers and distributors) and the open market for product sales and promotion, as well as subsidies and financing for the end users in certain markets when it is absolutely essential. d.light's production design team includes product designers, mechanical and electrical engineers and a group of quality control professionals to ensure quality in large scale production.

d.light's impact strategy is based on theories of change across four areas of well-being: financial freedom, productivity gains, human health, and environmental health. d.light approaches impact measurement in three ways: modelling social impact metrics, monitoring customers, and evaluating customer data. This approach produces a deeper understanding of how solar energy affects households that previously relied on poor quality, expensive, and unhealthy alternatives, such as kerosene, candles, and diesel. More than 2 billion people around the world live without reliable access to electricity. These solar solutions are making clean energy products universally available and affordable [16].

Beyond Solar, a USA-based NGO that supported 162 lighting projects in the Koraput district of Orissa, India purchased solar lanterns from d.light and distributed them to end users.

FIGURE 2.3**d.LIGHT SOLAR LANTERN IN USE IN THE VILLAGE**

Beyond Solar partnered with local NGOs and provided the lanterns to beneficiary households. The local NGOs worked toward getting the repayment on the solar lanterns from the end users over a set period of time. This distribution model worked as a regular instalment purchase system, in which the local NGO acted as an intermediary that provided the end users with a cushion of paying over a period of time. d.light also runs a subsidiary charitable initiative, known as GiveLight, to provide solar lanterns to extremely poor rural households around the world. Previously d.light collaborated with two NGOs - One World Children's Fund and Rural Education for Development Society (REDS) - to provide donor-funded lights to Dalit households. As of 31 July 2008, the Give Light Impact initiative has provided light to 11 villages, 531 families, 1,497 adults, and 964 children (Figure 2.3). This distribution network of d.light also partners with NGOs to distribute the grant-subsidized products. Apart from the above mentioned model, d.light uses the open market channel to distribute solar lanterns in remote markets. d.light also uses a rural entrepreneur to distribute products in rural areas.

Interdependencies between Environment and Business/Economic Activities

The business model and the products for the BoP groups helped in reducing the carbon footprints and the cost as the products acts as a substitute of the traditional kerosene lantern in the rural India. The end users provided their savings on kerosene every month to the local NGOs, which go into a community fund that can be utilized for village infrastructure projects, which drives resource conservation as well as savings in expenditure.

Case Study 2: Microfinancing and Small Businesses by Individuals and Groups Under BoP

This case study looks into one microfinancing initiative associated with several business activities and two small businesses by the members under the BoP level where there is no intervention from the MNCs.

i. Bachat Gat Bank (BGB) and Associated Business in Rural India in Maharashtra Concept

“Bachat Gat”, may be called “Self-help Group or SHG”, is a small group of (10–20) individuals (generally women) living in close proximity who undertake income generating activities. This is achieved through their own meager savings deposited into a common bank account which then enables them to borrow bank loans on a nominal interest rate. Obtaining loan from traditional bank created lots of problems for these groups of people due to compliance to documentary evidences. Thus the deserving women get frustrated making drastic impact on her family sustenance. To help the common and downtrodden needy women, the unique concept of BGB was introduced and

implemented by Sri Bhalchandra Kuravalkar, Prof. Sadhan Kumar Ghosh, the then Director of Central Board of Workers Education (presently, Dattopant Thengadi National Board for Workers Education) under the Ministry of Labour and Employment to support the bread earners in the family of BoP groups in 2009–10 (Figure 2.4).

FIGURE 2.4

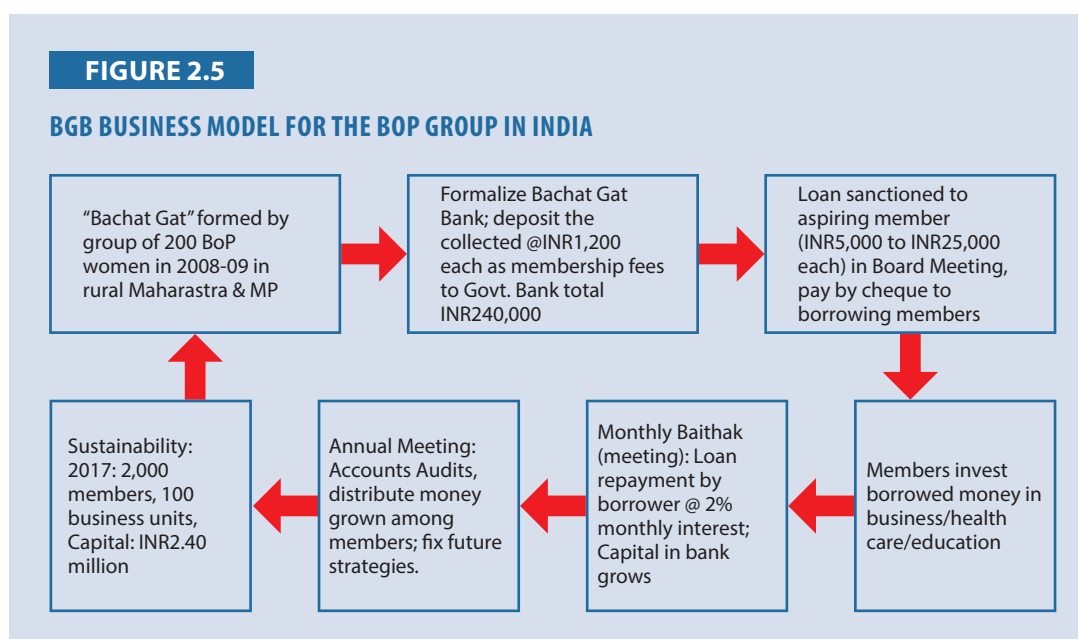
PROF. SADHAN K. GHOSH DELIVERED THE INAUGURAL SPEECH TO ENCOURAGE BGB MEMBERS



Business Model

The BGB is a financial institution that was formed in 2009–10 in several locations by the women in several areas, namely, Kohlapur, Sangali, Satara, Sindhurde, Gadginglax, Bidri, and other locations in Maharashtra, for women and run by the women for the overall development of the

family. Figure 2.5 demonstrates the existing business model of BGB for the BoP group of people in India in 2016–17 developed by the author. The interested women in the nearby locality come together, forms a group, collect some deposits, and name their group in consensus. The money collected from the members are deposited in the local government bank in an account of the ‘Bachat Gat Bank’. Subsequently they apply for the government’s schemes or various processes of the Bank. When any member of the bank requires a loan, the group will apply for amounts anywhere from INR5,000–25,000 through their respective bachat gat by complying with the necessary formalities and the loan is approved quickly at reasonable interest rate of 2% per month. They in turn invest the money into business. The loan stipulates that the amount borrowed are used as investment - minimum 75% in business, maximum 25% for education and health. In this business model, the benefit of each business unit is shared by all the members of one BGB. The business model has received the Times of India “Social Impact Award” in 2015.



Strategies

The BGB tries to achieve the followings by the BoP groups, i) involvement and participation of members in all the activities, ii) change the habit of dependability or relying on others, iii) Develop the PigmaScheme, iv) Development and utilization of own potentials, v) no borrowings from banks or private money lenders, vi) enhance the standards of living, vii) remove the phobia and develop the will power by motivation, viii) develop and enhance the source of stable income, and ix) individual as well as group skill development.

Functions of the BGB

A total of 25 Bachat Gats from "Panchkroshi" assembled together to form the Bank. The BGB rules and regulations have been formulated in line with the scope and preview of Indian Constitution and banking industry in general. Out of 25 SHG groups, 11 women who have been identified with certain skills and social awareness are selected and spread over several villages, and they become part of the Board of Directors of the Bank. The board members are elected once a year by the general members to operate the bank account. Of these 11 women, two women are appointed as chairman and secretary, respectively. This group is responsible for the smooth functioning of the bank, sanctioning and recovery of the bank loans, and take stock of the businesses by individual or group.

The managing director and the other 10 directors jointly open a savings bank account in the nationalized bank or scheduled bank in the name of 'bachat gut bank' for utilization of funds. All the transactions are done through cheques only and no cash transactions. The board of directors consisting of 11 women are authorized to decide i) the rate of interest, ii) capital ratio, iii) enhancement of share capital, iv) yearly bonus, v) sanctioning of loans on application after assessing the necessity and urgency adhering to the norms and practice of the bank, and vi) add new members and remove unruly/noncompliant member. Monthly and annual Baithak (meeting) is held to review the activities and taking decisions and discuss on other beneficial schemes for the members such as Bachat Bazar (Figure 2.6), social security, mobile vocational training center, etc.

FIGURE 2.6

INAUGURATION OF BACHAT BAZAR AND BGB TRAINING CENTRE IN 2010



Products

The business is carried out by the members of the BGB in their village. Members give the preference of traditional businesses, such as milk production, vegetable selling, small grocery shop, cloth stitching and selling, garment fabrication, servicing works (repairing different devices), schoolbag and sack making, candle making, agricultural products, etc. The cost toward packaging is minimum which helps in waste management and cost effectiveness. In many cases where required, the fallen leaves from trees are used as a packaging material instead of plastic carry bag. In a year, nearly 1,000 members get the benefit of borrowing to run their business. The loans are used in purchasing cows and buffalos for milk production, purchase vegetables, grocery items, clothes, etc. from bigger markets for selling in the local markets. Products are sold in the Bachat Bazar (Figure 2.6).

The Role of Microfinance

This business model is the best example of microfinancing which gives an array of financial services, including loans, savings, self-security, and reliance, provided to the poor entrepreneurs and small business owners who have no collateral and wouldn't otherwise qualify for a standard bank loan. The capital growth by the Bachat Gat Bank is huge in last eight years.

Interdependencies between Environment and Business/Economic Activities

The BGB and associated businesses help the people at BoP in earning their livelihood and giving confidence and self-security to make their own earnings. The business model help in reducing material wastages as there is hardly any packaging needed. The end users are able to obtain the required products closer to home which reduces the carbon footprint in transportation. Even health problems are reduced, which means the cost of medical treatment is also brought down.

ii. Handicraft: Leather and Bamboo Bags by a BoP Group

It is a small group of 12 female at the BoP level that formed a SHG in making handicraft bags. They were trained at the workshop at Baruipur, West Bengal by the Dattopant Thengadi National Board for Workers Education and Development, previously the Central Board of Workers Education (CBWE). The organization is under the government of India and registered at the District Industrial Center (DIC) of the government of West Bengal. They started the business with a very small capital of INR20,000 and manufacturing was set up at members' homes. They buy raw material from Barabazar (a famous market in Kolkata), consisting of thread, jute, crystals, and gemstones to make different types of bags.

The consumption of raw materials is kept at the lowest level by ensuring the designs are made correctly and all wastes during the manufacturing process are collected and reused for making special types of bags by stitching/pasting. Though the business is small, they are very much environment friendly with respect to the use of chemicals for coloring, waste generation, and raw materials utilization. They use organic gums for pasting. Though it is a small business, the group is seen to maintain a high level of GP. The average cost of making one bag is about INR70. They sell their products at about INR120 at their own stall throughout the year.

The bags are marketed as a green product (Figure 2.7). The quality of the bag is very good and affordable, in comparison to the existing market pricing. They have both retail and wholesale markets. All class of peoples buy their products. Profits are divided equally after every month among the partner workers, earning between INR10,000–12,000 per month each.

There are some shortcomings to the business. It needs to expand but they do not have sufficient funds. The group is in the process of getting some financial assistance from the government as they

look to expand their range of bags and explore online sales. They could create a social impact by selling the “Green Product” which creates general awareness on environment.

FIGURE 2.7

HANDICRAFT BAG MANUFACTURED BY BOP GROUP OF PEOPLE AND DISPLAYED IN A STALL IN POUH MELA (FAIR) AT SHANTINIKETAN, WEST BENGAL

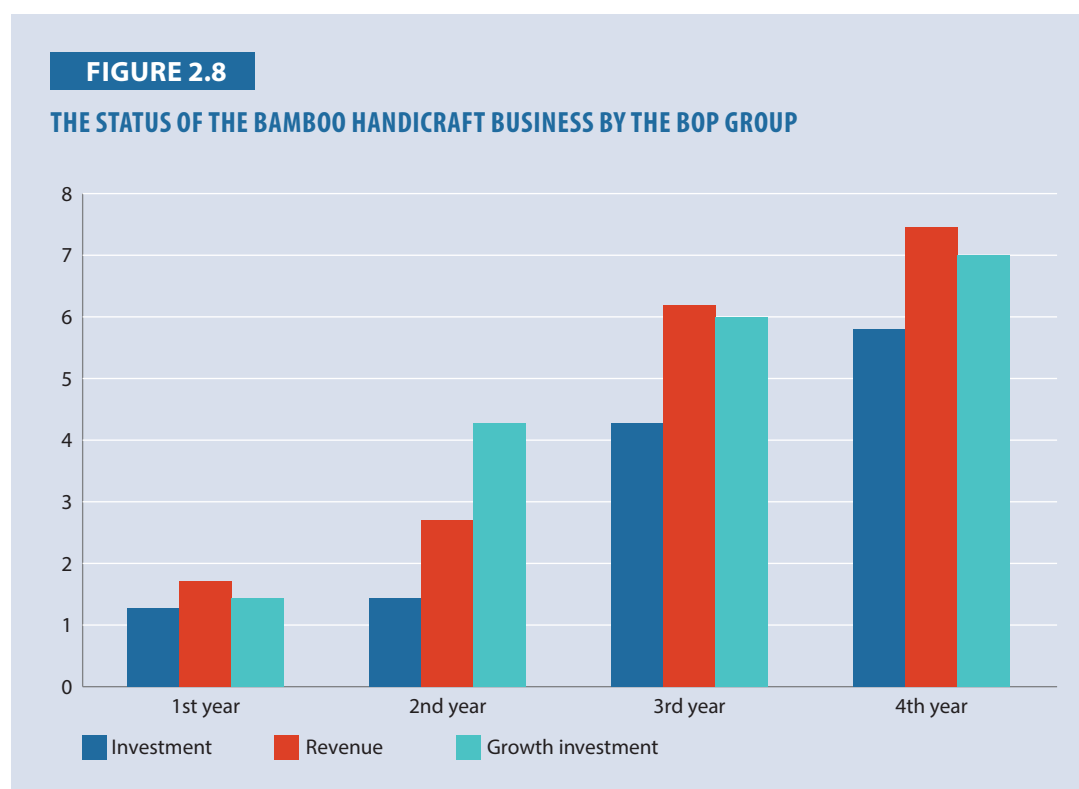


Another BoP business model featured here deals in bamboo products. The study of this business was carried out based on on-site study and interviews with the people involved in the business and the stakeholders. The study is an in-depth analysis of the raw materials procured, business initiation, social impact, environmental impact, customer satisfaction, business growth, and government support. The business is in line with GP. The business is carried out by six artisans. They were initially working separately, earning a profit of about INR10,000. This wasn't sufficient to run their respective families. After meeting at a fair, the artisans decided to work together thereby increasing their production capacity as well as profit. All the artisans have garnered their skills from their forefathers. They pooled in equal amounts of money to start the business. The raw material - bamboo - is mainly brought in from North Bengal and adjoining states like Jharkhand. They buy their raw materials in bulk as to minimize the transportation cost. The raw materials are brought in to their village in Birbhum district of West Bengal. All the other raw materials, such as pins and ropes are purchased locally.

A variety of products are made - baskets, stools, chairs, tables, etc. The cost incurred in making a stool is around INR200 and sold at INR400. The cost price of a chair is around INR400, sold at INR600–700. The baskets are made using leftover items thus reducing waste. In a year the group made a sale of INR400,000 against an investment of INR300,000. Products are sold mainly at

annual fairs. The peak season is from December to March. Now with an increase to their annual income, they lead a better life. They have employed local youths to sell their products in different households thus creating employment opportunities. In order to expand their business they have started saving a part of their annual income so that they can set up a permanent shop to sell their products and even make their products under the roof.

The artisans do face a lot of problems in procuring raw materials which increases their cost of production. The products are made at their respective homes and then assembled, making it a time-consuming process. They are requesting for government aid to expand their business as well as for the government to recognize their craft and advertise it. In the meantime, the group is exploring doing business online. They are now making their supply chain through different SHG members to different markets in rural and urban locations. They would just have to drop their products at the warehouse. Both the problem of permanent shop and advertisement will be solved. The research study results calculated as per the accounts book of the case study organizations, the status of Bamboo Handicraft business by the BoP group is shown in Figure 2.8 for 2011–12 to 2014–15.



iii. Sonarpur Sari Design Business by a BoP Group

The business was started in 2012 by Rita Di after securing a loan of INR125,000 under Mudra Yojna, a scheme under the government of India. The company employs 20–25 women workers except for the sari designers who form the SHG. The women designers have been trained by private institutions and in turn by their peers. All the designers work in their respective home, however printing works has to be done externally. Once completed, the saris are kept in Rita Di's house for further distribution and sales. The raw material such as 'Thaan' (base cloth for sari) is brought from Bara Bazar and Park Circus in Kolkata. All the threads used for designing and sewing purpose are purchased from Kolkata at a discounted price of 30%. Only when there is an emergency will the raw materials be purchased from local markets. Leftover pieces of cloth are made into doormats (Figure 2.9).

The designs are innovative and contemporary. The designers may be inspired from a design they see in the market, which they either quickly sketch or snap a photo for reference. Then the design is modified and printed on a sari. The design is first made on a transparent tracing paper using basic sewing machine. When the design is to be made on a sari the paper is placed on it and dye is sprinkled. The dye seeps through the hole and creates an impression on the sari. Then printing or stitching follows as may be the case. The cost of printing is INR100–125. The cost price of saris depends on the work done on them. They vary from INR250–1500. They keep a profit of 20% if they are selling it to a whole seller and a profit of 30% for end customer. The sales per year generally vary from INR200,000–250,000. They sell their products in markets of Jadavpur and Gariahat. The wholesale customers come from Kalighat.

Annual fairs are another medium of sale. The group commission people to sell their saris to local household. To expand their business they are now venturing into different areas like making bangles and phenyls. They have roped in different people thus creating employment opportunities.

While the Block Development Office in Sonarpur is of immense help to this group, there remain many problems - lack of capital, working space, and market domination by other companies, are some of the problems faced. Demonetization has hit their business hard and sales have suffered. Being able to do their business in permanent shops will give the group a much-needed impetus. Capital will increase and customers will be able to purchase the saris at a cheaper rate.

FIGURE 2.9

TOOLS AND ITEMS USED TO DESIGN SARIS



The stitching machine and the frame used by the workmen for making design on sari.



Threads for making design.



Basic sewing machine for design.

Interdependencies between Environment and Business/Economic Activities

The business model and the products made by the BoP group took care of the environment by way of waste management, use of green chemicals, and use of gas in place of the traditional coal or wood burning. These help to reduce the carbon footprint in the rural India. Simultaneously, the BoP group of people in the villages earned their livelihood while getting other people involved through employment. These initiatives may not remain viable as the business is dependent on one or two individual's leadership, which may not be sustained for time.

Case Study 3. Hindustan Lever's Project 'Shakti' - Marketing FMCG (On-site Study)

This project was carried out by primary research - on-site study by interviewing the involved BoP group of people and the business house representatives in different locations - and through literature survey. Hindustan Unilever Limited (HUL) is one of the largest fast-moving consumer goods company and exporters in the country, touching the lives of two out of three Indians with over 20 distinct categories in home & personal care products and F&B. They endow the company with a scale of combined volumes of about 4 million tonnes and sales of nearly INR320.86 billion. It has been recognized as a Golden Super Star Trading House by the government of India.

Products

HUL's brands - such as Lifebuoy, Lux, Surf Excel, Rin, Wheel, Fair & Lovely, Pond's, Sunsilk, Clinic, Pepsodent, Close-up, Lakme, Brooke Bond, Kissan, Knorr-Annapurna, Kwality Wall's - are household names across the country and span many categories - soaps, detergents, personal products, tea, coffee, branded staples, ice cream, and culinary products. They are manufactured over 37 factories across India. The operations involve over 2,000 suppliers and associates. One of the products aimed at the BoP market is Lifebuoy soap.

The BoP Business of HUL

The business objectives was to extend HLL's reach into untapped markets and to develop its brands through local influencers and the social objectives was to provide sustainable livelihood opportunities for underprivileged rural women. For long-term benefit HUL started PROJECT STREAMLINE in 1997, appointing 6,000 substockists that directly covers about 50,000 villages and 250 million customers with a vision of integration, economy, environmental protection, and social objective with a Business Agenda. Project Shakti - an ambitious venture by HLL to spur growth and penetration of its products in rural India while changing lives and boosting incomes. Project Shakti was launched in 2001, with partnership of SHGs of rural women and encompasses 5,000 villages in 52 districts in different states. Shakti targets small villages with the population of less than 2,000 to provide health and hygiene education through shaktivani program. Shakti was extended to 80,000 villages in 15 states with 45,000 women entrepreneurs and generating INR700-1,000 per month for each woman. Project Shakti plans are looked into bringing in partners in agriculture, health, insurance, and education to catalyze the overall rural development. HLL's New Venture Division identified rural India as a key source of growth and competitive advantage. HLL argued that access to rural markets would be the big differentiator among FMCG companies.

Business Model

Lifebuoy Swasthya Chetna (LBSC) is a rural health and hygiene initiative that was started in 2002. The program was initiated in media-dark villages (in Uttar Pradesh, Madhya Pradesh, Bihar, West Bengal, Maharashtra, Orissa) with the objective of spreading awareness on the importance of washing hands with soap. LBSC is a multiphased activity which worked toward effecting behaviour

change in the rural population it touches. It targets children who are the harbingers of change in society and mothers as the custodians of health.

The first interaction with students is then replicated with mothers and finally, the rest of the community. Being India's leading personal wash health brand, Lifebuoy saw a role for itself in propagating the message of hygiene and health in villages. The company's relentless focus on market research, product development, and innovation led to Unilever setting up a research center in India in 1960. This allowed the company to develop products locally, using local ingredients and processes, helping cut costs, and respond to market challenges quickly. HUL contributed to bringing an end to the government's price control of soaps in the 1970s, and introduced a mass market soap brand - Saral.

HUL has built a strong rural presence without much advertising support. HUL made effective use of prevailing infrastructure in rural areas. It has also used unconventional channels of marketing like hats and shandies which are weekly markets in villages, where it gets a captive audience. It has followed a policy of consciously setting up small stalls close to public distribution shops where the majority of the villagers visit for their daily needs. HUL has given distributorships to the paan beedi outlets (very small kiosks selling beedis - a cheap type of cigarette - and the Indian favorite paan (betel leaf and areca nut preparation) which are found in every nook and corner of rural India). In addition to these outlets, men gather daily and chat at the local vegetable and grocery store and buy products, such as chocolates, soaps, shampoos, and similar products spontaneously. India has 50,000 "melas" (fairs) every year where villagers gather in one place for shopping. HUL has taken full advantage of these "melas". It has used "melas" to reiterate its products, expose them to a far wider audience, and make people aware and familiar with HUL packaging.

Business Strategies

Shakti Entrepreneur: Empowerment of Women - Sponsoring agency gave microcredit to SHG. Shakti Entrepreneur borrowed money from SHG for purchases. HLL partnered with SHGs to extend its reach in rural markets. The sponsoring agencies included NGOs, multilateral agencies, government bodies, and public-sector banks. A member of a SHG in each of the 50 chosen villages was appointed as Shakti entrepreneur. The entrepreneur's job was to sell these products in their villages, outlets, and direct to consumers, and this generated significant income for the individual entrepreneurs.

From soap to mineral water, HUL is shaping the life of 1.3 billion people daily in consumer goods market with 20 consumer categories, such as soap, tea, detergents, shampoo, etc. By penetrating further into the rural markets through its project Shakti AMMA and transition unorganized business to organized one will lead to further expansion of the consumer goods market [17–19].

Women are the target consumers for most of HLL products and rural women constituted the most marginalized group in society. However, it was also acknowledged that women were more likely to access into homes of potential consumers in villages. Focus on women would have greater impact on the entire household - leading to improvements in health, hygiene, and education levels. HLL knew that to be a success, it had to make a significant difference to the lives of the entrepreneurs. Average household monthly income among women who became Shakti entrepreneurs was less than INR1,000. For Shakti to make an impact to the entrepreneurs family it had to yield a monthly income of at least INR500. A socially relevant branded communication program was created to

target the rural community, where village women were recruited as ‘Vani’, trained and positioned as an expert on matters relating to personal and community health and hygiene. A ‘Vani’ covered a cluster of villages. She is able to make her sale in a combination of three ways: door-to-door selling (11% margin on sales), selling from own home (11% margin on sales), and retailers (3% margin). The sales averages between INR10,000–15,000/month with a profit of INR1,000 per month.

Pricing and Packaging

The product content in sachets and mini packs are in small quantities. As rural consumers are price sensitive, prices do not exceed INR5 per sachet. For instance, Lux was sold at INR5; Lifebuoy at INR2; Surf Excel sachet at INR1.50; Pond's Talc at INR5; Pepsodent toothpaste at INR5; Fair & Lovely Skin Cream at INR5; Pond's Cold Cream, Surf Excel at INR5, and Brooke Bond Taaza tea at INR5 (Figure 2.10).

FIGURE 2.10

HUL'S RURAL MARKETING INITIATIVE



(Top) Various HUL's brands. (Bottom) Khushiyon ki Doli - HUL's rural marketing initiative in three states Uttar Pradesh, Andhra Pradesh and Maharashtra in 2010 [17-18]

The Role of Microfinance

Microfinance played a big role in giving a boost to the BoP group of people and emerged as a powerful instrument in providing basic financial facilities to them. It has been significantly impactful to SHGs and various individuals trapped in the BoP - creating businesses and mutual thrift societies of village women. The movement of microfinance spread rapidly, reaching 6 million groups in India and 70% of rural households in Andhra Pradesh. A microfinance revolution has seen 8 million families receiving microcredit, where 76% of microcredit recipients have crossed the poverty line. 95% of microcredit recipients are women and the effectiveness depends on opportunities for microenterprise.

Interdependencies between Environment and Business/Economic Activities

The business model and the products for the BoP groups helped in reducing the wastage of materials as mini packets contain lesser materials. However, due to small packaging, the waste management problems are magnified in the rural and urban areas. The end users could reach better branded quality product at lesser price, which help to bring down their health problems that simultaneously reduces the cost of medical treatment to the villagers.

Lessons Learned, Recommendations, and Conclusion

The magnanimous task of developing the BoP market and an entire BoP community require change that can be seen and felt in the way BoP leads its life. Going by the available research studies on BoP, from the economic perspective, the segment is a potential source of large revenues and profits but low margins. From a social perspective, if products and services can be created to address the unmet needs of the BoP segment, then this will bring about a systemic change in the ecosystem leading to positive social value. Considering the huge untapped potential of BoP consumers, there is a shift happening towards social capitalism, wherein the success lies in creating market solutions (products and services) that address the basic needs of the people at the BoP.

After analysing the case studies, several points have been identified as key to improving the business models. Project Shakti is enabling families to live with dignity and in better health and hygiene, educating the children, and an overall betterment in living standards. It creates a win-win partnership between HUL and the rural consumers for mutual benefit and growth. It has been observed that the BoP business in small scale has been successful when it is carried out in a group, like SHG for a small period of time. However, it may not work as well when it is carried out by an individual alone.

When the BoP group is supported by the MNCs or bigger financial support, such as the government, the business becomes sustainable. This may prove to be the reason that the capital of a group is more significant and the team effort work together in pushing the sale of products. Government support to the BoP group of people in most cases are not known or well documented hence the reach of the schemes are not effectively managed.

In India, the SHG also acts as a critical foundation for a number of large government programs to deliver livelihood development services and other complementary benefits. The participation of MNCs are very poor unless their interest is served. Fund utilization from corporate social responsibilities (CSR) is not visible for the support of the BoP group. The awareness of GP among the BoP market is also very poor in India. But it has been observed that the participation of some NGOs has made substantial and significant improvements in income, assets, financial inclusion, food security, and personal and social empowerment in small pockets.

The SWOT analysis of the cases as a whole is presented in Table 2.5, followed by some recommendation.

TABLE 2.5

S.W.O.T. ANALYSIS

Strengths	Weaknesses
• Recognized as a global company	• Dual leadership
• Strong brand portfolio	• Not connecting with customers
• Strong relationship with retailers	• Inefficient management of brands
• Economies of scale	• Reduced spending for R&D
• Involving BoP people in business	• Inability to maximize acquisitions
	• Decrease in revenues
Opportunities	Thr Threats
• Changing consumer preferences	• Strong competition
• Increasing need for healthy products	• Increasing store brands
	• Tougher business climate

The recommendations comprise:

- Participation of MNCs in BoP markets and encouraging GP
- Training at the basic level on business and environmental protection and health care, and gender-empowerment practices
- Create a larger platform for community-level collective action, e.g., joint advocacy for a new road
- Government assistance to microfinancing initiatives
- Enhance cost effectiveness and scalability of the business
- Training and hand-holding are critical in reinforcing competence and motivation for the participants in developing the business
- Businesses has to treat BoP projects differently from their core business when operating in very low income populations as it presents enormous challenges from high operating costs and poor economies of scale to sceptical consumers. Hence if these projects aren't being driven as rigorously and as laser-focused on meeting the numbers as companies would with "traditional markets", they simply won't have a shot at profitability
- Explore possibilities of business to catch the BoP market as well to involve them in the business, so they can earn for their livelihood and enhance quality of life

Several possible sectors in which the MNCs' intervention in the BoP market may be considered are nutritious foods, FMCG, mobile communication system, education, etc. These are some of the prioritized or focused areas for BoP implementation in India. For sustainability of this business, the NGOs and SHGs should ideally be involved in the business for continued use of products as well as earning their livelihood. The circulation of resources should be one of the recommendations to the Center of Excellence on GP in promoting it further in the region by applying GP in the BoP business model strategy.

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CHAPTER 3

COUNTRY REPORT - INDONESIA

Dr. Semerdanta Pusaka

Executive Summary

The base of pyramid, or the BoP, is the concept where companies serve the most unfortunate customer group - the low-income households or poor people. The BoP customers have the least purchasing power due to economic gaps, but the population size is quite large. Therefore, the BoP as a group becomes a significant potential market. However, a company serving the BoP market needs to implement a specific strategy that fits into its market setting. This is most likely different than those of business operations serving middle and high-income customers.

Businesses with the BoP in Indonesia cannot be separated from the country's poverty and characteristics as the largest archipelago in the world. About 56.80% of the population is concentrated in Java Island where it creates stiff competition and limited access to economy, education, health, and other resources in the island. Cultures, customs, conflicts, and corruption also stimulate poverty in Indonesia. On the other hand, the poverty situation in parallel creates BoP opportunities in the country.

This research discusses the BoP strategies of a large company, an SME, and an NGO from different industry sectors in Indonesia. One is a BoP strategy, which is called "Daya", by a bank that aims to empower business management skills of the mass market or microentrepreneurs as their clients in Indonesia. Another one is a BoP business run by an NGO as part of corporate social responsibility initiative of a mining company in South Kalimantan. The last is where the researcher had an intense interview and direct observation with the owner, is a successful small-scale business targeting BoP customers in Jawa Barat (West Java).

At the end of the study, the researcher concluded that BoP businesses and strategies can be initiated by any type of organization, regardless of size, industry sectors, access to resources, and business scale. Another conclusion is that a BoP strategy should be designed to meet the needs and characteristics of the BoP, including culture and religion. In addition, a BoP product may not be exclusive, where it can be saleable to the middle-income class customer.

The main recommendation of this research is to encourage Center of Excellence on Green Productivity (COE on GP) to have more studies on BoP strategies under two perspectives. One is to see a BoP as a business model, and the second is to see a BoP strategy as a community development initiative. However, the studies should be linked with sustainable development principles and framework, where BoP strategies also address social and environmental issues while generating profits - one thing that usually large companies are able to do.

Introduction

Discussion about poverty in the Republic of Indonesia, or "Indonesia", should be started from understanding the nation's history, demography, and economy. As the largest archipelago in the

world, Indonesia's history is remarked with the Dutch imperialism for about 350 years, and after, the Japan invasion for about three and a half years before Indonesia's achieve independence on 17 August 1945.

As a newly born country, and even to date, Indonesia continues to struggle to unite its diversities from Sabang City at the westernmost part to Merauke City at the easternmost part of the country. Conflicts on ethnicity, race, religion, and political views among society groups in Indonesia color the history of the nation as it strives to grow and develop as one of the largest economies in Asia. The conflicts may directly or indirectly stimulate or preserve poverty in the country.

Indonesia was accounted to have about 1,300 tribes and 2,500 languages based on the national census in 2010. Five most recognized religions according to the census are Islam, Protestant, Catholic, Hindu, and Buddhism, where according to the 2013 national census, about 87% of the citizens were Muslim.

Individual/Family Average Income (GDP) of Indonesia

Indonesia GDP was recorded at IDR11,540.80 trillion in 2015 with current year base price. GDP per capita of the country in that year was IDR45.2 million or USD3,377.10. The economic growth was 4.79% in 2015, lower than that of 2014 at 5.02%. In 2016, the economic growth raised up to 5% again, which has stimulated optimism of the businesses on the future Indonesia economy [1–2].

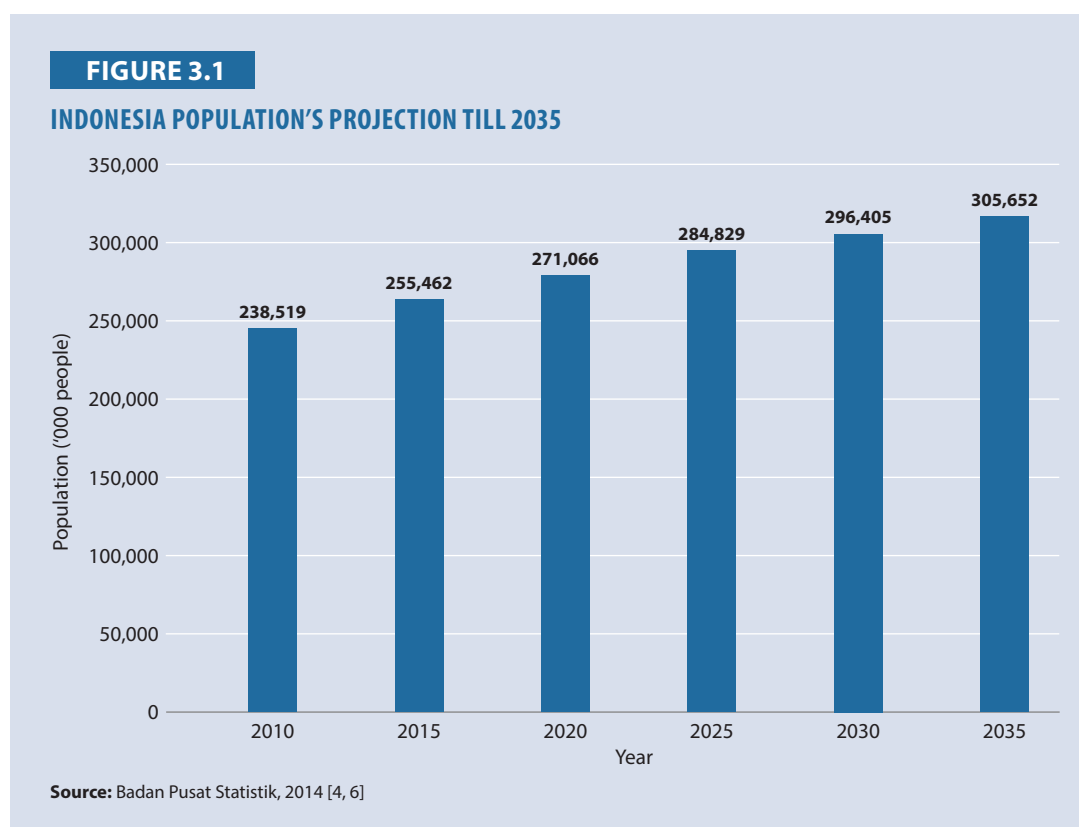
The information and communication sector has driven the economy with 10% and 9% growth in 2015 and 2016, respectively. Other significant industry sectors are petrochemical, automotive, F&B, consumer goods, services, and retail chain stores. Overall, the economy of the country is supported by various industry sectors including;

- Manufacturing-based industry, e.g., steel cement, petrochemical, ceramics, electrical equipment, machineries, textile, and footwear
- Agro-industry, e.g., palm oil, rubber and rubber goods processing, cocoa, coconut, coffee, sugar, tobacco, fruit, furniture, fish, snack food, paper, and milk
- Transportation, e.g., motor vehicle, shipping, aerospace, and railroad
- Industrial electronics and ICT, e.g., computers, electronics, and telecommunication equipment
- Supporting industries for creative industries, e.g., software, multimedia content, fashion, crafts and art goods
- Small and medium industries, e.g., stone and jewelry, silk, pottery, ceramics, essential oils, and snack foods at small scale

General Poverty Situation in Indonesia

In terms of population, Indonesia is projected to have 255.46 million people by end 2015 and the number will keep ascending till 2035 [3–4]. Indonesian people live in 34 provinces which collectively constitute about 17,504 islands [3,5] and located in a region of 1,922,570 km² of land and 3,257,483 km² of water [3].

Figure 3.1 presents the projection of Indonesia population till 2035.



About 56.8% of the Indonesian population lives in Java Island, the fifth biggest island with a land size of about 126,700 km² or 6.59% of total land area of the country [4–7]. When more than half of the country's population live in less than 10% of the nation's land area, Java Island shows a situation that stimulates the most poverty in Indonesia; gaps in access to resources and public services, including education, health, jobs, funds for initiating microbusinesses, and other social and environmental services.

Table 3.1 presents projection of Indonesia population by island in 2015.

TABLE 3.1
INDONESIA POPULATION BY ISLAND IN 2015 (PROJECTION)

Islands	Year 2015	Percentage
Sumatera Island	55,272.90	21.6%
Jawa island	1,45,143.60	56.8%
Bali and Nusa Tenggara Islands	14,108.50	5.5%
Kalimantan Island	15,343.00	6.0%
Sulawesi Island	18,724.00	7.3%
Maluku Islands	2,848.80	1.1%
Papua Island	4,020.90	1.6%
Total	2,55,461.70	100.0%
Average	36,494.53	

Source: Badan Pusat Statistik, 2014 [4,8]

In addition to the gaps to resources, a systematic corruption in the country also contributes to poverty [9]. Public policies set by the late President Soeharto administration provided a limited economic access for a small number of business groups during the New Order era from 1966 to 1998. They usually have close relationship with the President and his family members, or the military.

By end 2015, about 11% or 28.51 million of population was estimated to have income under poverty line. About 17.89 million of poor people lived in rural areas while the rest or 10.62 million were in urban areas [3,7].

Three provinces in Java Island were among the top 10 provinces that are steeped in poverty. They contribute to 48.30% of total poverty in Indonesia. Jawa Timur (East Java) had the highest poverty with a total of 4.78 million people in poverty out of 38.85 million population, followed by Jawa Tengah (Central Java) with 4.50 million people in poverty out of 33.77 million population, and Jawa Barat (West Java) with 4.48 million people in poverty out of 46.71 million population. This indicates that after years of infrastructure development mainly in Java Island may not lead to poverty reduction.

TABLE 3.2

TOP TEN PROVINCES IN POVERTY IN INDONESIA AS OF 2015

Province	Population	Year 2015			Year 2015			Pov. Pct. to Tot. Pov.	Pov. Acc. Pct. to Tot. Pov.
		Term 2 (September)			Term 2 (September)				
		Low-Income Population (Thousand)			Poverty (Percentage)				
		Urban	Rural	Total	Urban	Rural	Total		
Jawa Timur	38,847.60	1,571.15	3,204.82	4,775.97	4.0%	8.2%	12.3%	16.7%	16.7%
Jawa Tengah	33,774.10	1,789.57	2,716.21	4,505.78	5.3%	8.0%	13.3%	15.8%	32.6%
Jawa Barat	46,709.60	2,706.52	1,779.13	4,485.65	5.8%	3.8%	9.6%	15.7%	48.3%
Sumatera Utara	13,937.80	727.76	780.38	1,508.14	5.2%	5.6%	10.8%	5.3%	53.6%
Nusa Tenggara Timur	5,120.10	97.06	1,063.47	1,160.53	1.9%	20.8%	22.7%	4.1%	57.6%
Sumatera Selatan	8,052.30	360.73	751.80	1,112.53	4.5%	9.3%	13.8%	3.9%	61.5%
Lampung	8,117.30	197.94	902.74	1,100.68	2.4%	11.1%	13.6%	3.9%	65.4%
Papua	3,149.40	30.28	867.93	898.21	1.0%	27.6%	28.5%	3.2%	68.6%
Sulawesi Selatan	8,520.30	157.18	707.34	864.52	1.8%	8.3%	10.1%	3.0%	71.6%
Aceh	5,002.00	155.81	703.60	859.41	3.1%	14.1%	17.2%	3.0%	74.6%

Source: Data from Badan Pusat Statistik, 2016 [6–7]

Social Problems/Issues Related to Poverty

Statistical data in the second term of 2014 indicates some significant differences between poor and nonpoor households in Indonesia, especially in terms of education and source of income. First, 40.57% people from poor households did not graduate from elementary school and only 8.56% had the opportunity to experience senior high school. Less than 1% of low-income families had the opportunity to have college education.

In contrast, 22.59% of people from nonpoor households did not graduate from elementary school. About 24.45% of the nonpoor experienced education up to senior high school and 8.59% could obtain college or university degree.

Moreover, 51.67% of poor households had income from agriculture industry sector. On the flipside, only 29.86% of nonpoor households earned money from the agriculture industry sector. Both poor and nonpoor households had a small percentage of nonworking status with percentage in a range of 11.50% to 12.05%. The highest percentage of nonpoor households income was at 48.80%, which came from other sectors including education, handicrafts, fashion, F&B, trading, services, and other small-to-medium scale entrepreneurship.

There are several significant social issues that are closely related to poverty in Indonesia. First, the lack of education may lead people to have less access to income, especially job opportunities. With less education, they cannot compete in a tight and competitive environment where capabilities to generate new ideas, manage innovation and technology, handle pressure, and communicate and work with people from different cultures and backgrounds are highly valued and recognized.

Second, it is presumed that people working in the agriculture industry have less income, especially the nonskilled workers in the fields and plantations or farmers that rent the farmland. One of the causes is the existence of gangs and middlemen that create price gaps, inefficient long trading-chain, and loan-trap for farmers [10–11].

Next, cultures and customs may also lead to poverty. Several community groups in Papua still live in remote areas with less access to education, health, and sanitation, and after some time move from one to another site. The old custom promoting “*banyak anak, banyak rejeki*”, which means “a lot of kids, a lot of income”, encourages people, especially in villages, to have large number of family members leading to lack of funds to send their children to school or to have better nutrition.

Last but not least is the corruption that stimulates and maintains poverty through unjust public policies and unfair state budget allocation and distribution. Indonesia ranked 88th out of 168 countries in the Corruption Perception Index (CPI) with a score of 36 in 2015 [12]. Cases involving high-ranked officials, governors, and members of the house of representatives show that corruption in Indonesia is systematic and massive at various level of governance structure.

Characteristic of Indonesia poor and nonpoor households in 2013 and 2014 is shown in Table 3.3.

Government Initiatives on Eradicating Poverty

Vision and Strategy for Poverty Reduction

The government of the Republic of Indonesia (the Government) led by the President Joko Widodo released a set of visions called the Nawa Cita in 2014. It is comprised of the nine-priority agenda for national development [13]. Under Nawa Cita, poverty reduction is translated into several strategic initiatives, which are as following:

- i. Create economic independency by moving forward the strategic sectors in domestic economy
- ii. Increase productivity and competitiveness in international market
- iii. Develop quality education and training through *Indonesia Pintar* (Indonesia Smart) Program

TABLE 3.3

POOR AND NONPOOR HOUSEHOLD CHARACTERISTIC IN INDONESIA IN 2013–2014

Household Characteristics	Household Characteristics							
	Poor Household				Non-poor Household			
	2013		2014		2013		2014	
	Term 1 (Mar)	Term 2 (Sep)	Term 1 (Mar)	Term 2 (Sep)	Term 1 (Mar)	Term 2 (Sep)	Term 1 (Mar)	Term 2 (Sep)
Average Size of Family (People)	–	4.84	4.84	4.76	–	3.79	3.76	3.73
Percentage of Female Head of the Family (Single Parent)	–	14.41	14.20	14.97	–	15.21	14.90	14.55
Average Age of the Head of Family (Year)	–	48.14	48.67	49.06	–	46.19	46.81	46.93
Average Year of Education of the Head of Family (Year)	–	5.09	5.21	5.23	–	7.81	7.88	7.91
Level of Education of the Head of Family (%)	–	–	–	–	–	–	–	–
a. Do not graduate from Elementary School	–	40.30	40.39	40.57	–	22.30	22.95	22.59
b. Elementary School	–	40.47	38.20	37.89	–	30.08	28.89	29.02
c. Junior High School	–	11.28	12.62	12.33	–	15.89	15.36	15.36
d. Senior High School	–	7.56	8.24	8.56	–	24.20	24.29	24.45
e. University	–	0.39	0.54	0.65	–	7.54	8.51	8.59
Primary Income (%)	–	–	–	–	–	–	–	–
a. Not working	–	11.73	11.73	12.03	–	12.04	12.23	11.53
b. Agriculture	–	52.89	53.58	51.67	–	30.48	30.50	29.86
c. Industry	–	6.21	6.87	6.07	–	9.65	9.49	9.82
d. Others	–	29.18	27.82	30.23	–	47.83	47.78	48.80

Source: Badan Pusat Statistik, 2016

iv. Develop people welfare through *Indonesia Kerja* (Indonesia Work) Program and *Indonesia Sejahtera* (Indonesia Prosperity) Program

v. Encourage land reform and 9 ha land ownership program

vi. Low-price and subsidized apartment program and social network for people in 2019

To reduce poverty, the Government has set an agency called the National Team for the Acceleration of Poverty Reduction (*Tim Nasional Percepatan Penanggulangan Kemiskinan* or TNP2K) that manages various integrated poverty reduction programs based on different approaches. That includes social assistance, community development, and small enterprises empowerment. The

programs are implemented by several government agencies at both central and regional level based on the four fundamental strategies, which are:

- i. Enhance social protection programs
- ii. Improvement of access to basic services by the poor
- iii. Community empowerment
- iv. Inclusive development

Government Program for Poverty Reduction

The Government programs for poverty reduction through TNP2K are divided into four clusters [14]:

- **Cluster I: Integrated family-based social assistance programs**

Programs under this cluster are designed to fulfill the basic rights of the poor, reduce life burdens, and improve quality of life. The programs are i) *Jaminan Kesehatan Nasional* or JKN (National Health Insurance) for health; ii) *Program Keluarga Harapan* (Family Hope Program), a social network program providing direct cash disbursement to low-income families; iii) *Raskin*, provision of subsidized rice for low-income households, and iv) Program Indonesia Pintar or PIP (*Smart Indonesia Program*) for education.

The logos of the government programs to reduce poverty in Cluster I are shown in Figure 3.2 to demonstrate the programs.



Delivery of programs in Cluster I is performed through i) *Kartu Keluarga Sejahtera* (Family Welfare Card); ii) *Kartu Indonesia Pintar* (Smart Indonesia Card); iii) *Kartu Indonesia Sehat* (Healthy Indonesia Card), and iv) *Kartu Simpanan Keluarga Sejahtera* (Family Welfare Deposit Card). The cards are distributed to low-income households where they can get benefits from the Government programs by using the cards.

Kartu Keluarga Sejahtera is an identity card of the beneficiaries, which is given to each poor family. People can use *Kartu Indonesia Sehat* to get health insurance and health services at the nearest clinic while *Kartu Indonesia Pintar* provides basic education for the poor. *Kartu Simpanan Keluarga Sejahtera* is a noncash subsidy for the poor. Each low-income household receives about USD15 or IDR200,000 per month through bank transfer.

FIGURE 3.3

TYPES OF FAMILY CARDS FOR LOW-INCOME HOUSEHOLDS



Source: www.tnp2k.go.id

The Family Cards for low-income households cards are shown in Figure 3.3.

- **Cluster II: Community development poverty alleviation programs**

Programs in Cluster II strengthen the institutional community aspects to become capable in developing themselves. The community development programs are designed in accordance with the community needs and implemented by *Program Nasional Pemberdayaan Masyarakat Mandiri* (National Community Empowerment Program) or PNPM Mandiri.

However, in 2015, the Government terminated PNPM Mandiri, which ran since 2007 [15]. Corruption was one of the main reasons of termination. In 2016, the National Commission of Corruption Eradication found USD751,270 or IDR10 trillion indication of corruption [16]. The Government then initiated the Village Funds under Village Law. Under this initiative, the Government disbursed funds to the villages to develop its respective economy and eradicate poverty.

FIGURE 3.4**PNPM MANDIRI, A GOVERNMENT PROGRAM TO REDUCE POVERTY IN CLUSTER II**Source: www.tnp2k.go.id

- **Cluster III: Micro and small enterprise empowerment to alleviate poverty programs**

Empowerment of micro and small enterprises aims to strengthen the economic environment of micro- and small-scale entrepreneurs in the community. The initiative saw disbursement of loans for businesses through People's Business Loan Program (*Kredit Usaha Rakyat* or KUR), where the credit value is ranged from IDR5 million to IDR500 million (about USD360 to USD36,000) for each entrepreneur [17]. The loans are distributed through state-owned banks, large private national banks, nonbank financial services companies, and people's credit bank that operate at local levels in provinces.

Figure 3.5 presents the logo of the Government program to reduce poverty in Cluster III.

FIGURE 3.5**KUR IS A GOVERNMENT PROGRAM TO REDUCE POVERTY IN CLUSTER III**Source: www.tnp2k.go.id

From 2007 to 2014, about IDR178.85 trillion (USD13.43 million) was disbursed to small- and medium-sized entrepreneurs (SMEs) with 3.3% total nonperforming loan (NPL). That also brings positive impact in terms of employment for about 20.34 million people working for SMEs. In 2015, the Government distributed IDR22.75 trillion or USD1.7 million via the KUR program to SMEs. Potential raise of NPL is the critical issue of this program due to lack of capabilities of microbusinesses in managing funds.

- **Cluster IV: Affordable housing and transportation programs**

In Cluster IV, the Government initiated One Million Houses Program for low-income households in nine provinces; Jakarta, South Sumatra, North Sumatra, Banten, West Java, Central Java, East Java, Central Kalimantan, and South Sulawesi [18]. The program kicked off in the second quarter of 2015 with a state budget allocation of about IDR12 trillion (USD898.28 million) in 2015 and IDR20 trillion (USD1,497.13) in 2016. The Ministry of Public Works and People's Housing manages the program. The Ministry aims to build 700,000 units including houses and apartments for the low-income households.

For transportation, the Government still provides subsidy for gasoline (Premium) and speed diesel oil (Solar); which are most used by the people for public and goods transportation. In addition to that, the Government also carries out public service obligation (PSO) on energy for low-income families, especially on 3 kg-sized LPG (liquefied petroleum gas) and 450VA electricity from the grid.

[Economic Development and Private Sector Contribution for Poverty Reduction](#)

The Government encourages the private sector in Indonesia to get involved in poverty reduction through economic development based on three perspectives. First is the economic activities are driven by private sectors. This is based on the assumption that the corporations and medium-sized enterprises generate the trickle-down effect in the industry to the BoP.

The second is the economic activities of the state-owned companies, which also represent the Government policies on national development. The most recent is the community-owned businesses in the villages or village-owned enterprises (*Badan Usaha Milik Desa* or BUMD) that represent the community's economic interests. The Government has distributed IDR20.80 trillion or USD1.56 million of village funds to the villages around the country in 2015. With the funds, the villages are encouraged to stimulate economic growth through infrastructure development or establishment of village-owned enterprises [19].

The Government also manages the development of micro-, small- and medium-sized industry through the Ministry of Industry and the Ministry of SMEs and Cooperatives. The Creative Economy Agency was established to stimulate the development of creative economy (e.g., culinary, handicraft, clothing, etc.) where a lot of BoP group are found working in such sectors.

In order to maximize local potentials, Law No.13/2003 on Manpower and the Ministry of Manpower and Transmigration's Regulation No.12/2013 regulate the use of local manpower, where a percentage of local employment is defined by industry and by region. The hiring of foreign experts should lead to shifting of skills of knowledge from foreign experts to local employees.

The Government also encourages the use of local products and local services through local procurement policies and minimum local content requirements in production of goods and services. Therefore, companies are encouraged to use local goods and services, and hire local labors and local experts. One example is the manufacturing of 4G LTE devices has a requirement of 20–40% local content in Indonesia.

Further, companies' contribution to poverty reduction is also initiated through CSR Programs or community economic empowerment. It is mandatory under Law No.40/2007 on the Limited

Liability Company and the Government Regulation No.47/2012 on Corporate Social and Environmental Responsibility. State-owned companies also play a role to alleviate poverty under the Ministry of State-owned Enterprises' Regulation Per.09/MBU/07/2015 on *Program Kemitraan dan Bina Lingkungan* (Partnership and Community Development Programs).

Partnership Programs are provided revolving funds by state-owned companies for micro and small businesses. Community Programs are charity-alike programs targeting a number of areas; disaster victims, education and/or training, health, social facilities and infrastructures, places of worship including facilities, environment, and poverty alleviation.

Poverty Line for Identifying BoP Group/BoP Market

Indonesia segmentizes poverty line in two settings - poverty line for urban areas and rural areas. The poverty line increases every year, which may lead to new poverty descriptions and indicators in Indonesia. Some families with income per capita per day above poverty line in current year may be deemed poor the next year if they cannot improve their livelihoods.

As of second term 2015, the poverty line for urban areas was USD0.90 per income capita per day. It increased about USD0.03 or 3.40% from USD0.87 in the urban setting during the first term that year. For the rural area, the poverty line was at USD0.80 in the first term in 2015, and increased USD0.04 or 5%, at USD0.84 in the second term. Table 3.4 presents the poverty line in Indonesia from 2013–15.

TABLE 3.4

INDONESIA POVERTY LINE FOR URBAN AND RURAL AREA IN 2013–15

Poverty Line in IDR/ Capita/Month	2013		2014		2015	
	Term 1 (Mar)	Term 2 (Sep)	Term 1 (Mar)	Term 2 (Sep)	Term 1 (Mar)	Term 2 (Sep)
Urban	–	275,779	318,514	326,853	342,541	356,378
Rural	–	275,779	286,097	296,681	317,881	333,034

Poverty Line in USD/Capita/Day	2013		2014		2015	
	Term 1 (Mar)	Term 2 (Sep)	Term 1 (Mar)	Term 2 (Sep)	Term 1 (Mar)	Term 2 (Sep)
Urban	–	0.70	0.80	0.83	0.87	0.90
Rural	–	0.70	0.72	0.75	0.80	0.84

Source: Badan Pusat Statistik, 2016

Moreover, the poverty line in Indonesia is also set according to their provincial characteristics - mainly economy, e.g., costs of living, minimum provincial salary rate, economic growth, and inflation. The different rates to define poverty in provinces indicate Indonesia diversity in terms of social, economy, and BoP profiles.

In the urban setting, Jakarta as the capital city of the country had USD1.27 per income capita per day, which made it the highest poverty line in the country. The highest poverty line in the rural area was USD1.37 per income capita per day in Kepulauan Bangka Belitung (Bangka Belitung Islands) Province. The lowest poverty lines for both urban and rural areas were in Sulawesi Selatan (South Sulawesi) province with USD0.69 and USD0.64, respectively.

TABLE 3.5

INDONESIA HIGHEST AND LOWEST POVERTY LINE FOR URBAN AND RURAL AREA IN 2015

		Province	(Rp/Capita/Month)	USD/Capita/Day
Urban	Highest	DKI Jakarta	503,038	1.27
	Lowest	Sulawesi Selatan	274,140	0.69
Rural	Highest	Kep. Bangka Belitung	542,732	1.37
	Lowest	Sulawesi Selatan	254,524	0.64
National	Urban		3,56,378	0.90
	Rural		3,33,034	0.84

Source: Badan Pusat Statistik, 2016

BoP Cases

This report presents three BoP business models or strategies in Indonesia. The BoP cases are derived from three types of business organizations and industry sectors as a basis for analysis and comparison. They are a large company operating in the banking sector, a youth organization selling low-cost toilets and septic tanks, and a small business from the F&B sector.

The three cases also address different issues and practice different approaches. The first case study is a bank that highlighted the economic issues of BoP customers and utilizes the empowerment approach as issues, such as religion, culture, and custom are taken into consideration. The second case study looks into a youth organization that addresses water and sanitation issues of low-income households under a community development program of a large mining company in Kalimantan. Finally, the third case study is a small business that produces very cheap products that serve both BoP and non-BoP customers.

These three cases have different scope of businesses. While the bank operation is at national level, the small food business has a very small-scale operation in a village in Java Island. Last but not least, the youth organization represents a case of BoP strategy from Kalimantan, a non-Java Island.

Case Study 1: Bank BTPN Syariah Community-based Banking Business

Founded in 1958, Bank Tabungan Pensiunan Nasional (BTPN) launched a Sharia community-based banking business in 2011. After just two years, the Sharia banking business has reached about 931,500 BoP customers under 69,500 community groups in Indonesia. In 2014, BTPN separated the management of the Sharia banking business into a subsidiary, namely Bank BTPN Syariah [20].

The Sharia banking business is designed to support the BoP market, especially the microscale businesswoman in rural areas. It is managed following the Islamic law (Sharia). One of the applications is profit and loss sharing (Mudarabah) because Sharia prohibits Riba, which is defined as the interest paid on all loans of money.

Bank BTPN Syariah provided an integrated loan and savings program, namely the Package of the Future or *Paket Masa Depan*. The program provides one-year loan amounting from IDR1 million

to 50 million (about USD70 to USD3,600). Repayments are made every two weeks during the patron's visits. The customers must open a savings account that enable them to manage income and expenses. In addition to loan benefit, the package also covers the customers with insurance benefits [21].

The operations of the Sharia banking business are different to those of other banking business models. Customers are formed in small community groups, consisting about 10 to 15 microscale businesswomen per community group in villages. A bank staff called *Pembina Sentra* is assigned as a patron for several community groups. Once every two weeks, the patrons visit the community groups where banking transactions, such as loan disbursements and repayments of profit sharing are carried out during the visits. Figure 3.6 shows a patron visiting a microscale businesswomen group.

FIGURE 3.6

A PATRON VISITING A MICROSCALE BUSINESSWOMEN GROUP



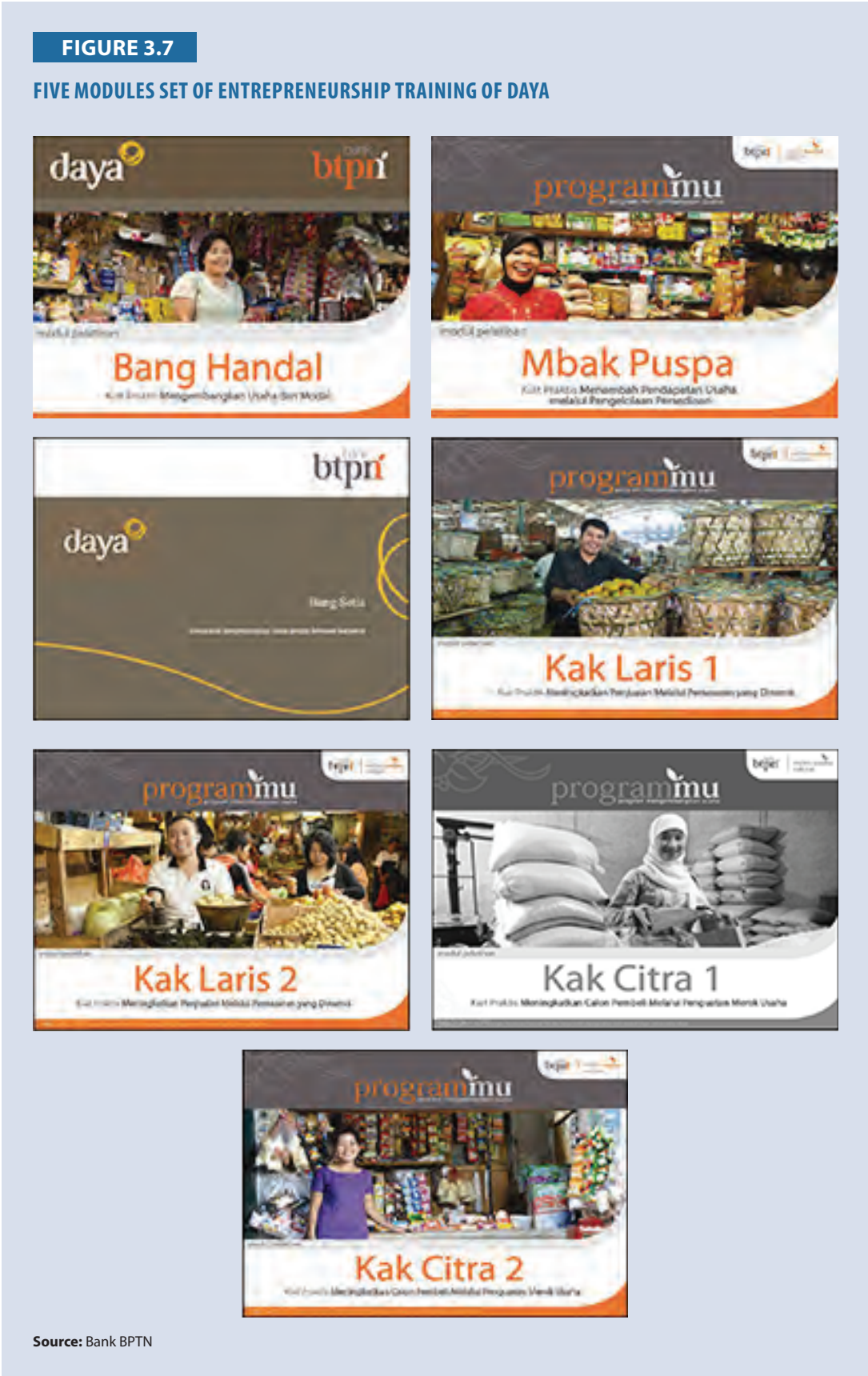
Source: <https://www.btpnsyariah.com/produk/pembiayaan/paket-masa-depan.html> [22]

BTPN also has a unique value proposition called “Daya”, which is implemented through all business portfolios including the Sharia banking business. Daya is an interpretation of BTPN corporate value, which is “do good, do well”.

Daya consists of three pillars. First is *Daya Tumbuh Usaha* (DTU), which supports business development of the mass market or microscale businesses. Second is *Daya Sehat Sejahtera* (DTS), where the programs support the health of the clients, especially the retirees. Third is *Daya Tumbuh Komunitas* (DTK) that supports business community groups to grow.

Under *Daya Tumbuh Usaha* (DTU), BTPN and Bank BTPN Syariah manage a program namely *Pelatihan Kewirausahaan* or Entrepreneurship Training targeting the SMEs and Sharia customers. Initially, the program delivered five modules set; which were *Bang Handal* (financial management), *Mbak Puspa* (inventory management), *Kak Citra* (marketing and promotion management), *Kak Laris* (sales management), and *Bang Setia* (employee management). Beginning 2012, the five modules were developed into 24 modules.

Figure 3.7 presents the five modules set for entrepreneurship training.



Regularly, the patrons deliver training materials to the BoP customers during their visits to the community groups. Nevertheless, due to limited time, the patrons focus on delivering financial management module; thus the BoP customers are able to manage and maintain their income and expenses, as well as to develop budgeting. Patrons also play the role as a partner and monitor the BoP customers under the basis of partnership rather than a bank-client relationship. Any challenges and difficulties in business can be discussed with the patrons.

As more than 80% of the population including the low-income households are Muslim, the Sharia banking business has the opportunity to grow. In addition, it is also appropriate to approach businesswomen in rural areas because the husbands in BoP segment usually have nonskilled jobs and the mothers have spare time at home.

Table 3.6 presents the analysis of Bank BTPN Syariah community-based banking business.

TABLE 3.6

ANALYSIS OF BTPN SYARIAH COMMUNITY-BASED BANKING BUSINESS

Items for Discussion	
Business model	<ul style="list-style-type: none"> Under the Islamic law, especially on profit and loss sharing Community-based with patrons taking a role as a partner Empowerment through Daya, especially in financial management
Success factor	<ul style="list-style-type: none"> Sharia banking model in Indonesia with over 85% of the population are Muslim Patron visits once every two weeks, enable to monitor BoP customers' business progress Community-based approach, enable learning among the members Commitment of the bank, to empower BoP customers
Failure factor	<ul style="list-style-type: none"> Lack of initiative for upscaling the BoP customers Turnover of patrons is high, only people with empowerment mindset and values are able to carry out the work Some people say "profit and loss sharing" has no significant difference to that of interest-based loan, BoP customers pay more when they have more profits
Social impact created	<ul style="list-style-type: none"> Microbusinesses run by businesswomen, providing additional income for BoP households Good case for socioeconomic empowerment
Lessons learned and critical aspects	<ul style="list-style-type: none"> Banking business model under Islamic law, combined with empowerment initiative BoP strategy with an appropriate approach, considering religion, cultures, and customs It needs commitment of the top management to integrate socioeconomic empowerment in business

Case Study 2: Low-cost Sanitation Package "Dewa Ruci"

PT Adaro Indonesia or Adaro is a subsidiary of a listed mining company PT Adaro Energy Tbk. Located in the Tabalong Regency, South Kalimantan, Adaro maintains a good relationship with the local community including the young people through the corporate social responsibility programs run by its foundation Yayasan Adaro Bangun Negeri (YABN). The Community Led Total Sanitation Program (CLTS) is one of YABN's highly successful programs in economy, health, and sanitation aiming at the BoP market [23].

As of September 2016, the Central Body of Statistics showed that the average poverty rate in South Kalimantan was about 4.52% in average - poverty rate in urban and rural area was 3.43% and 5.37%, respectively [8]. The statistics also highlighted that there were about 184,160 people living in poverty in South Kalimantan, out of which 60,900 of them live in the cities and 123,260 were in the villages. About 58% of the people in Tabalong work in the agriculture sector or plantation [24–25].

Having 67,687 households living in the regency in 2012, sanitation became a significant issue in the community. Data from the Government in 2013 revealed that only about 75% of total households had proper toilets and septic tanks for sanitation in their homes [26]. Most of them use a very simple washroom built on the riverside where human waste goes directly into the river.

Through the CLTS Program, YABN has tried to improve the economy, health, and socioculture of the community. The program was started in 2012 when YABN sent 50 representatives from various youth organizations to join a Workshop on Sanitation Entrepreneurs, which was organized by the Indonesia Association for Sanitation Contractors (*Asosiasi Pengelola dan Pemberdayaan Sanitasi* or APPSANI), in East Java. The workshop delivered learning and exercise program on low-cost toilet and septic tank construction [27].

A follow-up workshop and on-the-job training program were organized to increase individuals' capacity. The workshop covered technical construction for toilet and septic tank, small-scale business management, and financial aspects. In 2013, the Youth Organization Dewa Ruci (*Karang Taruna Dewa Ruci* or KTDR) began to operate, promoting low-cost toilets and septic tanks to low-income households in the Tabalong Regency.

FIGURE 3.8

CONSTRUCTION OF A LOW-COST SEPTIC TANK CONSTRUCTION IN A VILLAGER'S HOUSE



Source: KTDR (http://ktdrtanta.blogspot.co.id/2015_06_01_archive.html)

KTDR also started a business constructing low-cost toilet and septic tank with a low capital of only IDR5 million or USD360. The fund was borrowed from the Microfinance Banua Bauntung, one of Adaro's social responsibility projects in microfinancing. Within one month, about 32 sanitation packages including the low-cost toilets and septic tanks had been sold and built with total sales of IDR52 million or USD3,800.

The average price of a sanitation package was about USD125 per toilet and septic tank, which led to KTDR collaborating with hardware stores. The organization bought materials using an installment scheme, which allowed for low-cost sanitation packages to be sold in installment with a monthly payment of less than USD8 for up to two years to low-income households.

Figure 3.9 presents a YABN officer and sanitarian from Tanta Village, members of Youth Organization "Dewa Ruci" participating in low-cost toilet and septic tank workshop.

FIGURE 3.9

A YABN OFFICER AND SANITARIAN FROM TANTA VILLAGE AND MEMBERS OF THE YOUTH ORGANIZATION "DEWA RUCI" AT A LOW-COST TOILET AND SEPTIC TANK WORKSHOP



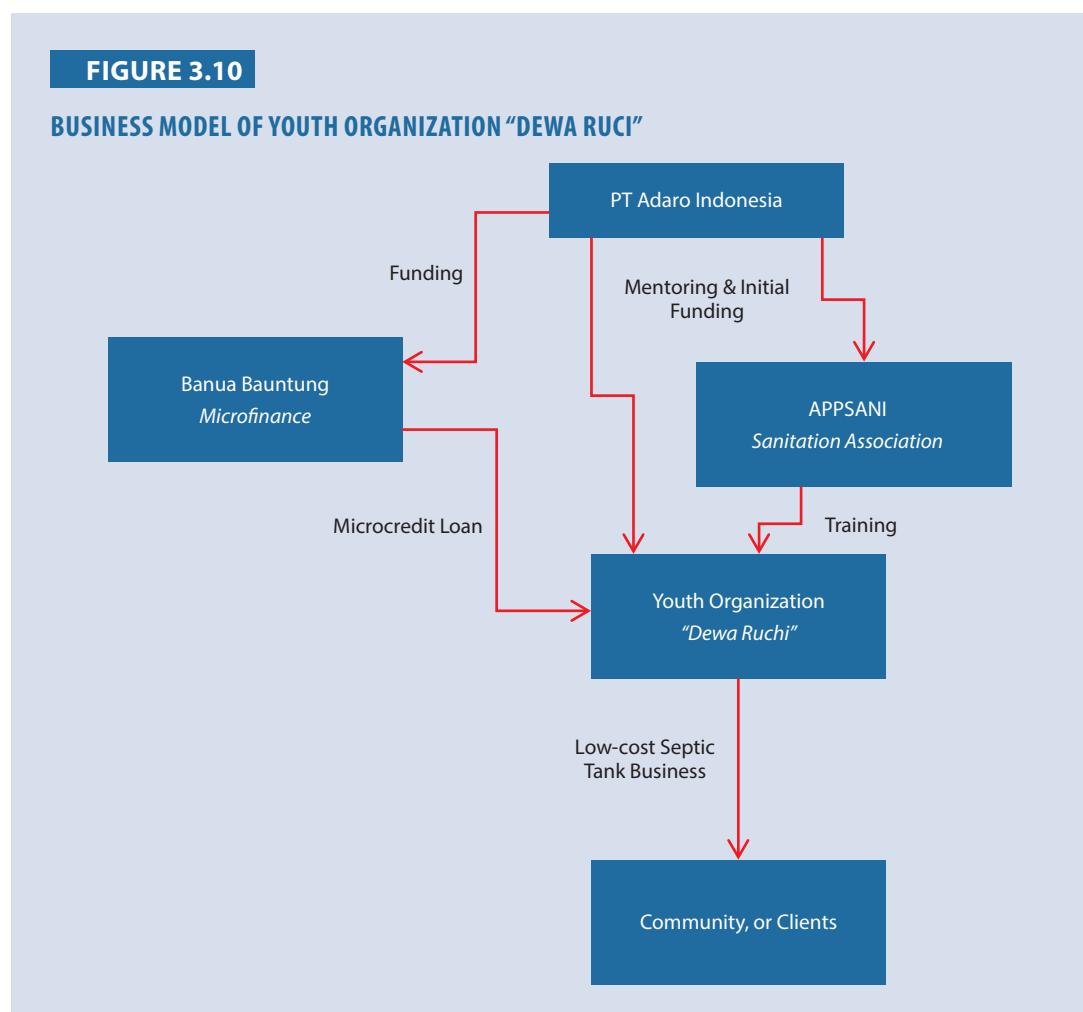
Source: KTDR (http://ktdrtanta.blogspot.co.id/2015_06_01_archive.html)

After three years, the organization has installed 323 low-cost toilets and septic tanks with about USD43,000 total revenue and USD17,150 net profit. The organization also set a target of 500 low-cost toilets and septic tanks to be installed in 2017. The goal raised a number of challenges. First, KDRT needed more capital because of the installment plan for low-income households. Second, more molds were required as the organization worked with only four sets. The last challenge was the need to have operational vehicles to reach more BoP markets in the larger area of Tabalong Regency.

Successfully supporting the CLTS Program, PT Adaro Energy Tbk was awarded the Best Community Programme at the 8th Annual Global CSR Summit and Award 2016 in Singapore. The award was an acknowledgement to Adaro's commitment in supporting socioeconomy development in parallel with improvement in health and sanitation. The program had also changed the social behavior of the community, especially in using toilets and maintaining sanitation in homes. From the BoP perspective, the CLTS program has successfully empowered the young people in doing BoP business, aiming at BoP customers in the Tabalong Regency.

It is very interesting that KTDR low-cost septic tank business for BoP customers was developed on a community development platform. At the initial phase, Adaro stimulated KTDR business with mentoring, training, and initial funding in collaboration with two organizations - APPSANI (sanitation association) and Banua Bauntung (microfinance). Banua Bauntung itself is Adaro's initiative to stimulate development of micro- and small-sized entrepreneurs (the nonbankable) by providing microcredit for them.

The low-cost septic tank business impacted positively on both economy and social aspects. The business provided jobs and generated income for the local youth in Tabalong. The business also encouraged better household sanitation and healthier environment in homes and community. The business design of the low-cost septic tank business run by Youth Organization "Dewa Ruci" is illustrated in Figure 3.10.



It can be said that the low-cost septic tank business is already a GP in practice. The construction uses fiberglass mold, thus there are no construction waste. The business also changes people's behavior from polluting river with human waste to using septic tank.

The critical learning from the case is the method of stimulating social changes by simultaneously initiating economic activity. However, the scalability of the initiative cannot be guaranteed in the long run. The customers are limited to those who do not have septic tanks at home. Once the regency is developed and people have adequate sanitation facilities at home, then the business must look for BoP customers in other areas.

Table 3.7 presents an analysis of the low-cost sanitation business.

TABLE 3.7

ANALYSIS OF THE LOW-COST SANITATION BUSINESS

Items for Discussion	Analysis
Business model	<ul style="list-style-type: none"> • Socioentrepreneur business model • Integrating business, social, and environment dimension • Community development platform
Success factor	<ul style="list-style-type: none"> • Address the needs for sanitation and health issues • Easy construction process, use simple technology • Low price and ease of payment, installment of up to two years • Local initiative serving local beneficiaries • Funding and knowledge support
Failure factor	<ul style="list-style-type: none"> • Less scalability, the clients are limited to local people who do not have septic tanks, and adequate water and sanitation infrastructure
Social impact created	<ul style="list-style-type: none"> • Employment and income generation for local people • Better sanitation, healthier environment, reduce medical expenses • Positive attitude and behavior in sanitation and health • Good reputation of the company
Lessons learned and critical aspects	<ul style="list-style-type: none"> • Economic motivation combined with social or environmental dimension • Link different community development programs on one platform to generate higher impact • The business itself already implement GP

Case Study 3: The Sumedang Tofu (On-site Study)

The researcher, also the writer, organised an on-site study on Sumedang Tofu business in order to have a different perspective of a BoP business compared to those of previous cases. Haj Nono is an entrepreneur who manages several small businesses, including a chicken husbandry. He runs the Sumedang Tofu business and became the main resource person in his locality. The interview was conducted by phone but the researcher was able to observe the factory and store even though the resource person was not present.

Haj Nono bought a house with a small-scale tofu factory in Kemang Village, Bogor, West Java in 2011. The previous owner initially operated the factory to produce and sell raw tofu in bulk to the markets. Haj Nono modified the factory and business model into producing and selling ready-to-eat Sumedang Tofu. It is a deep fried small-sized tofu which sells at IDR500 or USD0.04 per piece - affordable for the low-income households in Indonesia (Figure 3.11).

FIGURE 3.11**SUMEDANG TOFU SOLD IN A STORE**

Source: Researcher documentation

The tofu is sold directly at the store called “Bilqis” in front of the house on the roadside of the main village road. The factory processes fresh raw materials every day and does not keep unfinished goods overnight. The tofu production also avoids using preservatives or flavoring, except salt.

In 2016, the factory processed an average of 250 kg soybean each day - the raw material for the making of tofu. About 8,000 pieces of tofu can be produced with every 100 kg soybean, which means the small factory produces and sells about 20,000 pieces of tofu per day, or 600,000 pieces in one month. Sales are usually higher during the weekend.

The cost for raw material is IDR8,000 or USD0.60 per kg or IDR2 million or USD145 per day. Daily sales are estimated to be about IDR10 million or USD730 per day. Sales reached USD22,170 or IDR300 million per month. In a year, Haj Nono can earn about IDR3.6 billion or USD266,000.

The business owner does not want to disclose his profit margin. Assuming that the minimum net margin is 10%, then the profits is about USD2,217 per month. It is considered to be a large profit for a small-scale factory that serves the BoP markets using only a simple distribution and marketing channel.

FIGURE 3.12**CUSTOMERS PURCHASING SUMEDANG TOFU AT THE BILQIS STORE**

Source: Researcher documentation

At present, Haj Nono employs 12 people from the Majalengka Regency, which is his hometown. He does not employ local people because he wants to hire the best and trusted people to run the business. In fact, he needs a group of people who can run the tofu business while he is away at Majalengka for a stretch of two to three weeks a time to manage his other business - the chicken husbandry.

FIGURE 3.13**HAJ NONO'S SUMEDANG TOFU FACTORY - THE PRODUCTION AREA**

Source: Researcher documentation

Located on the main road of the village, the store opens from 7am to 10pm every day, except during national holidays. Direct observation indicated that the buyers were not only the BoP customers but also the middle-income group. Some customers are also resellers who usually buy semi-finished or ready-to-fry tofu in the morning and then sell hot and fresh Sumedang Tofu on the streets (as the street vendors) or other market places.

Tofu production includes a process of soaking soya bean in water for three to four hours. Then, the beans are grinded into soya porridge and is cooked with water. It takes about 1 hour to boil and stir the beans. Then, the essence of soya porridge is filtered to separate the dregs. Afterwards, vinegar is added and the soya porridge is stirred to form a coagulation. Then, it is left to stand for 15 minutes before filtering the porridge into containers of 40 cm x 70 cm in size. The tofu is then left to cool in normal room temperature. Once ready, the tofu is cut into a box-shape and fried with cooking oil.

Wastewater is a critical issue in tofu production. Just like other tofu businesses, the wastewater from Haj Nono's tofu factory is flown into a small river near the factory. The effluent contains carbohydrate, protein, fat, salt, mineral, and chemical, which disturbs the biological balance and may cause the death of fish. The wastewater issue has not been resolved as of yet.

Haj Nono's Sumedang Tofu business has proven that SMEs can also perform BoP businesses. Its business model is very simple; input, process, and output, just like those of other small businesses. It has a simple marketing strategy. As the store is located at the main road of village, the targeted BoP customers easily reach it. However, its scalability is limited and the production has an environmental issue.

Table 3.8 presents the analysis of the Sumedang Tofu business.

TABLE 3.8

ANALYSIS OF SUMEDANG TOFU BUSINESS

Items for Discussion	Analysis
Business model	<ul style="list-style-type: none"> Food manufacturing: input, process and output Simple marketing strategy - store is located on the main road of the village Some BoP customers are resellers, selling low-price tofu on the street (as street vendors)
Success factor	<ul style="list-style-type: none"> Location Low price, affordable for BoP consumers Tasty, not really special but non-BoP consumers like it
Failure factor	<ul style="list-style-type: none"> Less scalability, the consumers are the people living in the area Wastewater management does not exist, water pollution
Social impact created	<ul style="list-style-type: none"> Employment for street vendors Food for poor, support sustainability of the poor
Lessons learned and critical aspects	<ul style="list-style-type: none"> Small businesses can do BoP business, even when the business has limited resources and access to market, and small economic scale Implementation of GP is needed, especially wastewater management

Lessons Learned and Recommendations

Lessons Learned

The three case studies demonstrate a variety of BoP business model. A BoP business can be run by a big corporation, or an SME, or under a community development scheme. It is also interesting to note that a BoP business model as presented in the case of Sumedang Tofu has no distribution and promotion channel, and yet it can be successful and generate good profits. However, the scalability of the business is still a question mark.

The case studies indicate that some of the BoP theories are not applicable in specific settings. The Sumedang Tofu business doesn't really fit the theories of Hart and Prahalad, and Simanis where a BoP business model should have a distribution system, communication links, and a penetration rate of 30% [3, 28–30]. Consumer education in the BoP business as proposed by Hart and Prahalad fits into the Sharia community-based banking business and the low-cost sanitation package business run by KTDR.

Nevertheless, this study agrees with Simanis that price does matter. KTDR provides low price and easy payment for buying the sanitation package [6, 28, 30]. An installment plan is offered up to two years with low interest rate and affordable monthly payment. This is reasonable because KTDR does not have the capability to increase the buying power of low-income households in its area, which is in accordance with Hart and Prahalad's BoP business theory of [6, 30].

Overall, the BoP businesses presented in this study have direct access to the market, regardless of their size, type of business, and target market. Local young people in Tabalong Regency established KTDR that sell low-cost toilets and septic tanks; thus they can reach, communicate, and educate local BoP customers about health and sanitation in the area.

The Bilqis store that sells Sumedang Tofu is located on the roadside of the main village road. BoP customers and non-BoP people pass through the area when going to and coming from the surrounding cities. Bank BTPN Syariah assigns a number of patrons to create direct access and maintain the BoP consumers, which are the microscale businesswomen in villages.

It should be noted that, for the exception of the Sharia community-based banking business, the other two BoP businesses in this report offers BoP products that are not exclusive for BoP markets. KTDR's clientele is not only the low-income households but also the lower-end middle class families in the Tabalong Regency because not having a toilet is a common practice in the area. Customer segments of Sumedang Tofu business are both the low-income and middle-income market. Observations on the store showed that many people with motorbikes and cars also stopped in front of the store to buy tofu.

Recommendations

Based on the previously discussed BoP business model, this study proposes a number of recommendations, especially for those who engage in BoP businesses.

- BoP products that are not exclusively sold to BoP customers will have better positioning and larger potential market. In addition, this type of BoP products may create better branding that makes the BoP customers feel more part of the larger community and not “marginalized”.
- Community engagement in BoP business model under community development and

empowerment scheme is significant. It can effect change of mindset and behavior. In relation to that, this type of BoP business is encouraged to utilize efficient and effective approach to the community.

- Perception of quality is important in a BoP business model. Thus further research on perceived quality that is also acceptable to the lower-end middle class is important. This is probably one of the significant strategies that is applied any successful BoP business model in the world.
- It is necessary to design BoP strategies that consider various aspects of BoP customers, such as religion, culture, and custom.

Specific recommendation is for the Asian Productivity Organization (APO) to develop further studies that will enhance GP integration into potential BoP business model strategies, which highlight the following:

- Future BoP studies look into the integration of GP into BoP business model in the F&B industry. The Sumedang Tofu case study shows that food business targeting BoP market has environmental issues. As production cost is very low, it has no wastewater management and burdens the environment.
- COE on GP is recommended to conduct further study on GP integration into BoP business model under two perspectives. First, BoP business run by companies or SMEs that aim to generate profits with no specific engagement in social or environmental issues. The second, BoP business model that is based on community development and empowerment scheme address specific social or environmental issues while generating profits. Both should be lined with sustainable development principles and GP framework.

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CHAPTER 4

COUNTRY REPORT - MALAYSIA

Dr. Shaik Roslinah Bux

Executive Summary

In the last five years, the quality of life of Malaysians has improved as reflected by the increase in the per capita income and the average household income. This was made possible by numerous reforms undertaken by the government, such as the Government Transformation Programme as underpinned by the Tenth Malaysia Plan (2011–15). In retrospect, Malaysia has risen from the ranks of a low-income economy in the 1970s to a high middle-income economy in 1992. Malaysia's national per capita income expanded more than 25-fold from USD402 (1970) to USD10,796 (2014), and is well on track to surpass USD15,000 threshold of a high-income economy by 2020 [1]. Between 1970 and 2014, the incidence of poverty in general was reduced from 49.3% to 0.6% while hard-core poverty has been eradicated. The mean household income increased more than 20-fold from MYR264 in 1970 to MYR6,141 in 2014. Income inequality has also narrowed as reflected by the Gini coefficient from 0.513 in 1970 to 0.401 in 2014 [2–3]. In enhancing inclusiveness toward an equitable society where all Malaysians are able to participate in and benefit from national economic growth, the government will elevate the well-being of the B40 (bottom 40% of the population) households toward a middle-class society. Enhancing well being is given due importance as it enhances productivity and mobility while at the same time, strengthens social cohesion and national unity. According to the 11th Malaysia Plan (2016–20), there are 2.7 million B40 households with a mean monthly household income of MYR2,537 [4]. Through the uplifting of B40 households toward a middle-class society, it is anticipated that this class of society will grow to 45% by 2020 doubling the mean income to MYR5,270, thereby facilitating sustainable development in Malaysia. Some of the planned uplifting and wealth-creation initiatives include enhancing accessibility to higher education and skills training, fostering community and social-based enterprises among the B40, and building capacity to participate in high productivity, innovative, and creative economic activities.

Introduction

Malaysia has established the Government Transformation Programme (GTP) in 2010 to facilitate the nation's journey toward a developed status by 2020 [5]. The GTP that is complemented with the Economic Transformation Programme (ETP), are both strategic efforts under the nation's National Transformation Programme (NTP). At that point, Malaysia has already made significant mileage in eradicating hard-core poverty, developed a diversified economic base, addressed the interethnic disparity in economic participation and wealth distribution, increased the quality of life of the average citizen as well as created a progressive civil service that embraces change. The GTP that is bold and details unprecedented program that transforms the government, is guided by the principles of “1Malaysia, People First, Performance Now” to ensure every Malaysian enjoy the fruits of the nation's development. Both the GTP and ETP that form the NTP is inclusive for the diversified society in Malaysia [5].

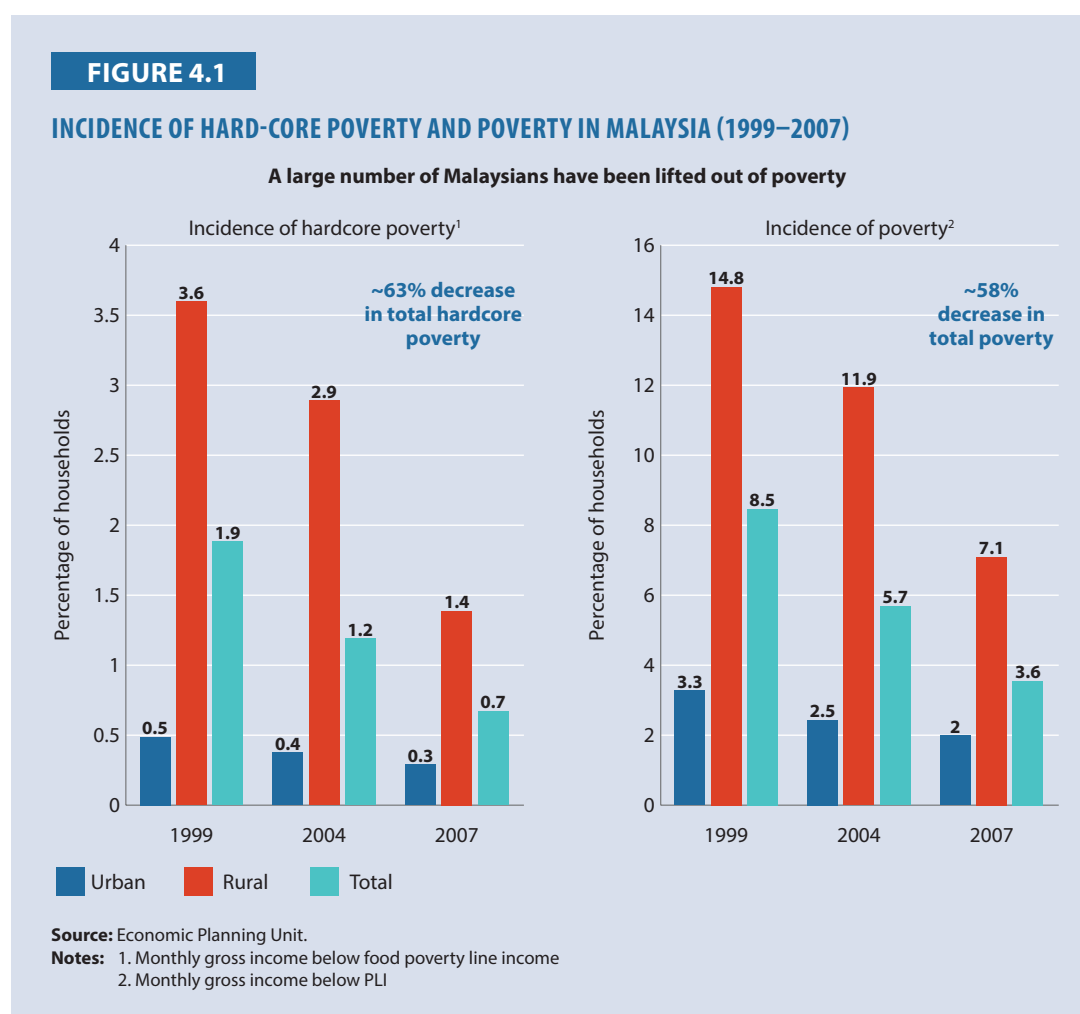
Household Average Income in Malaysia

In Malaysia, the household average income is classified into three groups: top 20%, middle 40%, and bottom 40%. According to the Department of Statistics Malaysia, the household average

income for 2014 was MYR14,305, MYR5,662, and MYR2,537, respectively. As Malaysia was at crossroads toward the end of the 1990s, it needed new implementable ideas to put the nation on a trajectory out of the middle-income trap and expedite its economic growth. During 1991–2008, Malaysia charted an average economic growth rate of 6.2% per annum, enabling the country to reduce its poverty and hard-core poverty rates. Additionally, Malaysians enjoyed better quality of life, received better education opportunities, and experienced rising access to the mobile, internet, and broadband communications. These improvements are captured in various domestic and international indices, such as the United Nations Development Programme's (UNDP) Human Development Index (HDI) and the local Economic Planning Unit's Quality of Life Index [6].

General Poverty Situation in Malaysia

Generally, Malaysia has successfully reduced the incidence of poverty from 49.3% in 1970 to 1.7% in 2012, and the latest available figure is 0.6% in 2014. As the nation progressed, Malaysia registered reduced poverty and hard-core poverty rates at 58% and 63%, respectively, during the period 1999–2007 (Figure 4.1). Subsequently, Malaysia was successful in eradicating hard-core poverty in the country, an achievement that was recognized by the UNDP in 2013. A priority under the 11th Malaysia Plan (2016–20) is to help households that fall under the bottom 40% to reach the middle-income group. Nevertheless, Malaysia experiences challenges to fulfill the nation's 2020 aspirations. Despite recording an average 6.2% economic growth over the past 20 years, this performance has slowed down since the 1997 economic crisis and exhibited signs of being stuck in the middle-income trap [2, 7].



Social Problems/Issues Related to Poverty

The main issue relating to poverty in Malaysia was the segmentation of economic development of the diverse ethnic groups in Malaysia. This issue was reflected in the interethnic disparity in economic participation and wealth distribution that also affected the quality of life of those in the Bottom 40%. Other areas of concern were the education and skills competency gaps among urban and rural Malaysians. Hence, the nation embarked on the National Transformation Programme (NTP) to arrest the slacken growth rate and to ensure the nation could achieve the social goals encapsulated in Vision 2020. As the global environment becomes increasingly challenging, elements of Malaysia's economy has to be structurally upgraded to increase her economic growth rate. The NTP is initiated in tandem with the nation's New Economic Plan (NEP) and the Tenth Malaysia Plan (2011–15) that was released in June 2010.

Government Initiatives on Eradicating Poverty

The Government Transformation Programme (GTP)

The GTP was formulated to accelerate Malaysia's performance to achieve Vision 2020. GTP is based on the principles of '1Malaysia, People First, Performance Now'. '1Malaysia' emphasizes the importance of fairness to all, where no group will be marginalized while support and opportunities are provided based on need and merit [8]. The 'People First' principle indicates the focus on areas that Malaysians most want and need, and where the government will direct the country's finite resources to those areas with care and balance for short-, medium-, and long-term investments. The 'Performance Now' principle focuses on tangible outcomes that can be seen and felt by Malaysians, and delivered in real time. The benefits of '1Malaysia, People First, Performance Now' will be significant for all stakeholders, especially those in rural areas and lower household incomes. It will improve their overall quality of life and instilling a greater sense of unity [7, 9].

Raising the Living Standards of Low-income Households

As Malaysia intensifies its efforts to develop economically and become a fully developed nation by 2020, initiatives are put in place to ensure inclusiveness where no Malaysian is left behind. Malaysia has managed the polarity between the economically well-off and the disadvantaged by providing direct aid to the needy and making economic opportunities available to them so that they become self-sustaining (Figure 4.2) [2]. The significant strides of Malaysia in reducing the incidence of poverty received global recognitions, such as the 1996 UN's classification of Malaysia as a success story in managing poverty. Five noted measures that contributed to this success were:

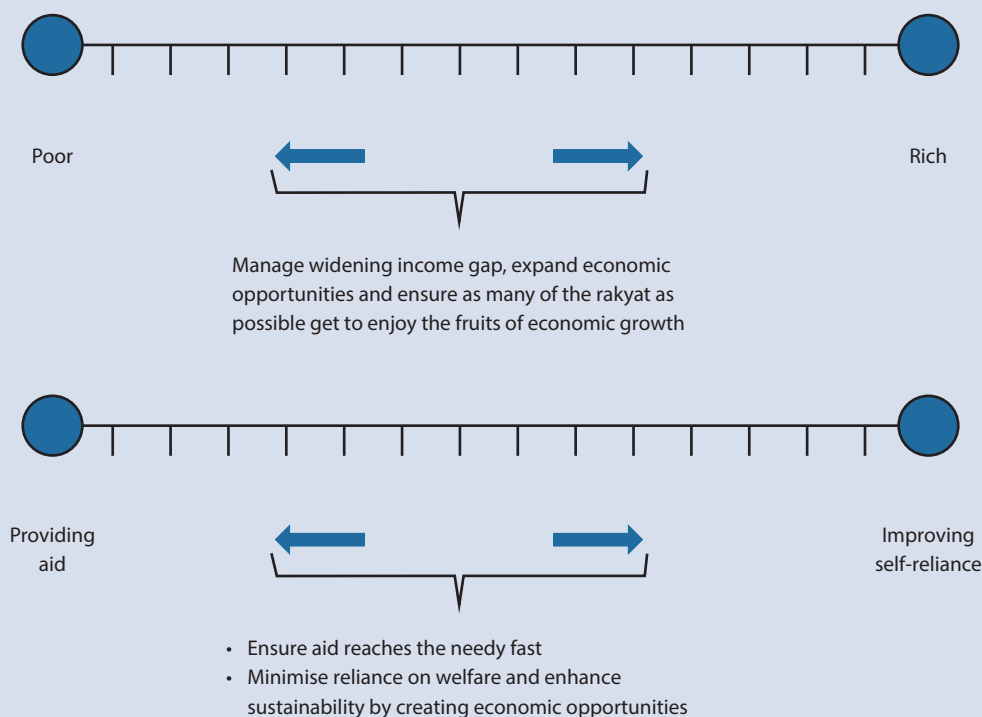
- Opportunities for the rural poor to participate in collective farming schemes conducted by the Federal Land Development Authority
- Allocation of training, funds, and premises to support *Bumiputra* entrepreneurship through Majlis Amanah Rakyat and the Urban Development Authority
- Monthly welfare payments to the poor and the vulnerable, such as the disabled
- Microfinancing through Amanah Ikhtiar Malaysia
- Financial assistance for schoolchildren from poor families intended for textbooks, bags, uniforms, and pocket money

Hence the imperative for addressing low-income households is both economic and social.

FIGURE 4.2

METHODS OF RAISING LIVING STANDARDS OF LOW-INCOME HOUSEHOLDS

How raising living standards of low-income household contributes to 1Malaysia



Implementation of Fast, High-impact Initiatives

Numerous intensive, prioritized, and coordinated initiatives were undertaken during the 10th Malaysia Plan (2011–15) to expedite the effort to raise the living standards of low-income households. As the cost of living is creeping into all Malaysian households, the Malaysian government expanded its financial mitigation and focus to include the lower-middle-income group that is known as the Below 40% group or B40. This is carried out by delivering initiatives that centered on driving productivity in the areas of education and training, health, and microcredit, while continuing to deliver aid to those who need it. In addition, the Malaysian government has also managed the polarity between aid and self-reliance by ensuring that aid is gradually linked to participation in employment or participation in entrepreneurship programs. This meant that the government would only provide aid to those who are actively seeking work or setting up businesses. This aid will be phased out when they have a steady stream of income. As for the disabled, the government would continue to provide aid while helping them transition into mainstream economic activities. Initiatives of 2010–12 to uplift low-income households were carried out in three stages; namely, deliver priorities in 2010, generate further wins in 2011, and change the game in 2012.

In relation to the Base of Pyramid (BoP) or B40 for sustainable development, the Malaysian government has implemented fast, high-impact initiatives as well as laid out the groundwork for longer-term actions. Two such initiatives that have helped to reduce poverty and eradicate hard-core poverty in Malaysia are:

- Provide support to increase home ownership by offering low-cost houses for sale or rental through city halls, such as Dewan Bandaraya Kuala Lumpur (DBKL) and the National Housing Department
- Deliver 1AZAM programs to create jobs, based on job-matching, training, and providing funds. This is achieved through a mixture of employment and entrepreneurship that is supporting the setup of goods, services, and agricultural businesses

Apart from the above, other initiatives that have been implemented between 2011–12 were [10]:

- Provide training to eligible low-income households to improve their economic value
- Create employment opportunities through the setting up of *Jimat1Malaysia* provision stores
- Develop a mechanism to provide microcredit to eligible low-income households
- Increase the number of urban, rural, and mobile medical clinics to cater to rural low-income households
- Offering assistance for down payments, legal fees, and low-interest rate loans to eligible low-income households who are not recipients or purchasers of low-cost homes provided by the government
- Offering 1Malaysia insurance scheme covering areas, such as education, death, and critical illness to extreme poor households

Recently, the Malaysian government has set up a minimum wage system to enable Malaysians to earn at least an income that parallels with the Poverty Line Income (PLI). Reviews on how other countries protect low-income households indicated the use of minimum wage system to safeguard low-income workers. Malaysia has started with feasibility studies on minimum wage system before implementing it gradually so as not to adversely affect employers.

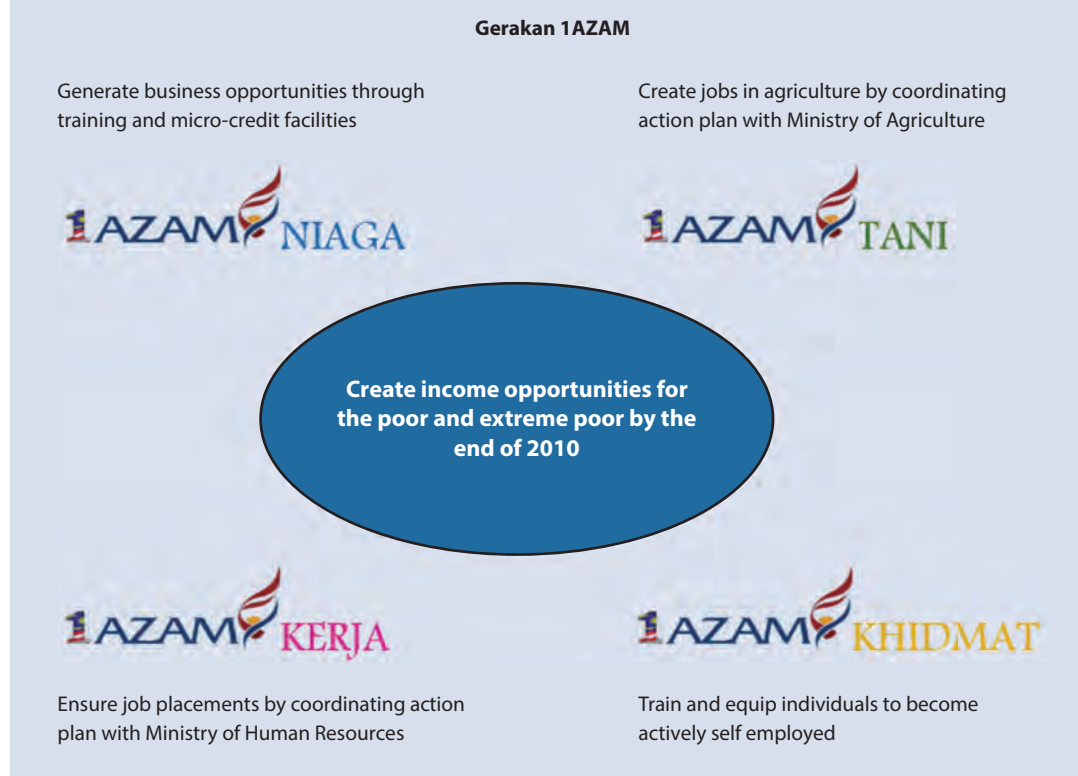
Increasing Productivity

For delivering priorities in 2010, the government has intensified its programs to build the capabilities of the poor and extreme poor as well as create jobs to equip them with the means to increase their incomes. One such program is Gerakan 1AZAM (1AZAM Movement) [2, 10], a program to create jobs through a mixture of employment and entrepreneurship (Figure 4.3). The Gerakan 1AZAM program incorporated various schemes announced in the 2010 Malaysian Budget, such as the establishment of 300 *Kedai Desa* (Rural Shops) and *Skim Pembangunan Kesejahteraan Rakyat* (Citizen's Well-being Development Scheme). As of December 2014, there were 33,368 new 1AZAM participants.

Gerakan 1AZAM Movement

1AZAM is a comprehensive program based on the concept of driving productivity and managing aid to lift the living standards of the poor and extreme poor. This program consists of five main steps:

- i. Assess productiveness (ability to work). For those who are either physically incapacitated or mentally ill, necessary aid and rehabilitation will be provided so they can become productive

FIGURE 4.3**TYPES OF GERAKAN 1AZAM**

- ii. Match productive individuals with available job vacancies and other suitable economic activities, such as farming and small businesses
- iii. Provide training for those who do not have the needed skills
- iv. Monitor and provide continuous short-term support, such as coaching when a person gets a job or starts a business
- v. Remove from support list when income of the participating individuals is established

These narrations are depicted as 1AZAM process and shown in Figure 4.4 [2].

Enablers to Ensure Sustainable Delivery of Initiatives [2, 10]

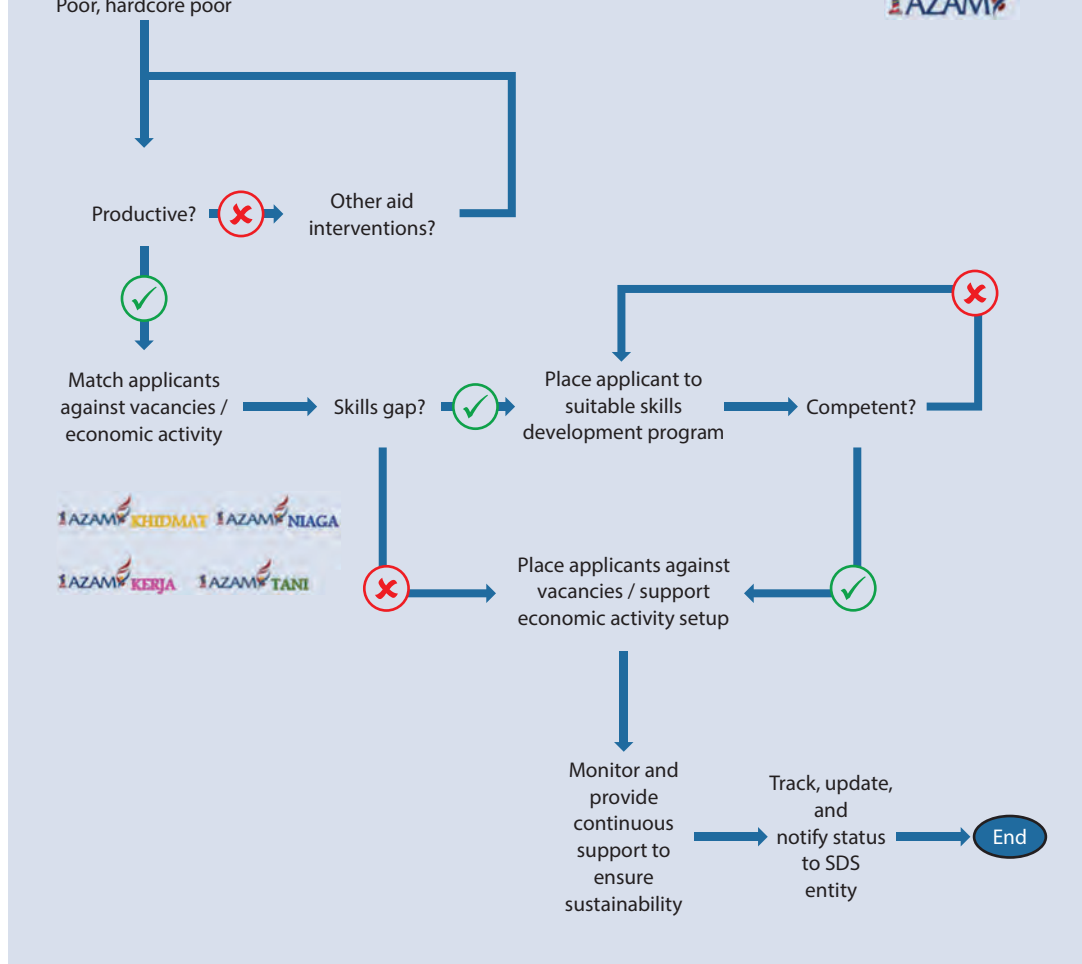
Structural changes and safety measures have been put in place to enable the 1AZAM initiatives be delivered effectively, efficiently, and sustainably.

- **Unified Social Development Services (SDS) entity**

Agencies involved in planning, delivering, and monitoring social welfare services were integrated into a single entity. The objectives were to improve coordination of welfare services efficiency as well as provide convenience to the public who would then only need to interact with a single agency and visit a single service center for all social welfare services.

FIGURE 4.4

1AZAM PROCESS



- **Independent Social Development Inspectorate**

The inspectorate investigates and prosecutes welfare fraud and handle complaints by low-income households against the SDS entity.

- **Integrated databases**

The government consolidated all databases containing data of low-income households into a sole database called *e-Kasih*, managed by the Implementation Coordination Unit (ICU) of the Prime Minister's Department. Hence, it became the government's priority to work with the public and nongovernmental organizations to ensure that all low-income households are registered in *e-Kasih* as only households that appear in *e-Kasih* are eligible for government support. Members of the public can help to accelerate and increase the reach of the government aid programs by identifying any households they think are eligible to receive assistance, and helping them to register in *e-Kasih* through www.ekasih.gov.my.

- **Reduced processing time for disbursement of aid**

The streamlining of processes and strengthened coordination between agencies reduced the processing time for first-time applications from two months to seven days.

Poverty Line for Identifying BoP Group/BoP Market

Common Definition of Low-income Group

Malaysia has traditionally determined the incidence of poverty by reference to a threshold Poverty Line Income (PLI). The PLI is based on what is considered to be the minimum consumption requirements of a household for food (constituting the Food PLI) and nonfood items, such as clothing, rent, and power (the NonFood PLI). The proportion of households living below the PLI is the proportion living in poverty, while those living below the Food PLI are classified as living in extreme poverty. Before 2010, Malaysia recorded more than 200,000 poor households that had monthly gross household income that has below poverty line income, and more than 40,000 hard-core poor households; that is households with monthly gross household income below food poverty line income. Malaysia has since been successful in eradicating hard-core poverty by end of 2010 and reduced the incidence of poverty from 3.6% to 2.8 % in 2010, to 1.7% in 2012 and 0.6% in 2014. Measures are also implemented to enhance the productivity of low-income household (LIH) that do not fall under the categories of poor and extreme poor. This effort resulted in an improvement in the overall income inequality as reflected in the improved Gini coefficient - from 0.401 in 2014 to 0.385 in 2015, as reported in the 11th Malaysia Plan [4]. LIH is defined as households with a total income of less than or equal to MYR2,000 per month. This amount has since been revised to MYR4,000 per month in accordance with the 2015 scheme of 1Malaysia People Aid, also known as BR1M. This scheme has assisted low-income households to combat the rising cost of living since 2012.

Farm Market for B40

As announced by the Prime Minister of Malaysia in the revised National 2016 Budget, the Federal Agricultural Marketing Authority (FAMA) has initiated the MyFarm program. This program is a government initiative to help people especially the B40 cope with the rising cost of living with food items sold for between 5–20% lower than market prices. The new program, right from the beginning, attracted many consumers due to the reasonable prices of food items and fresh produce, such as chicken, marine fish, vegetables, fruits, meat as well as agriculture caravan and food truck. A noted outcome is that within three months of operation (March-May 2016), the MyFarm outlet in Precinct 17, Putrajaya recorded MYR4.2 million in sales! There is also *pasar tani* (open-aired market) outlets that sells food items and products from small to medium enterprises. In 2015, the 618 *pasar tani* outlets in Malaysia with 26,836 traders brought in MYR795 million in sales [11].

BoP Cases

Case Study 1: Raising Living Standards of Low-Income Households NKRA (National Key Result Areas) (LIH-NKRA) Through Gerakan 1AZAM

In the early independence days, Malaysia depended largely on the agricultural produce of its rural communities. Almost half of Malaysians were deemed to be living in poverty in 1970. However, with numerous interventions of government development programs, incidence of poverty in Malaysia reduced to 3.8% in 2009 (prior to the start of the Government Transformation Programme). This figure was further reduced to 1.8% by 2012. The LIH-NKRA is committed to the betterment of the lives and livelihood of low-income Malaysians in line with the country's development and

philosophy of inclusivity. The government recognizes that winning the fight against poverty cannot be an individual effort and has enlisted the help of partners including nongovernmental organizations (NGOs) and the private sector to fund and support programs.

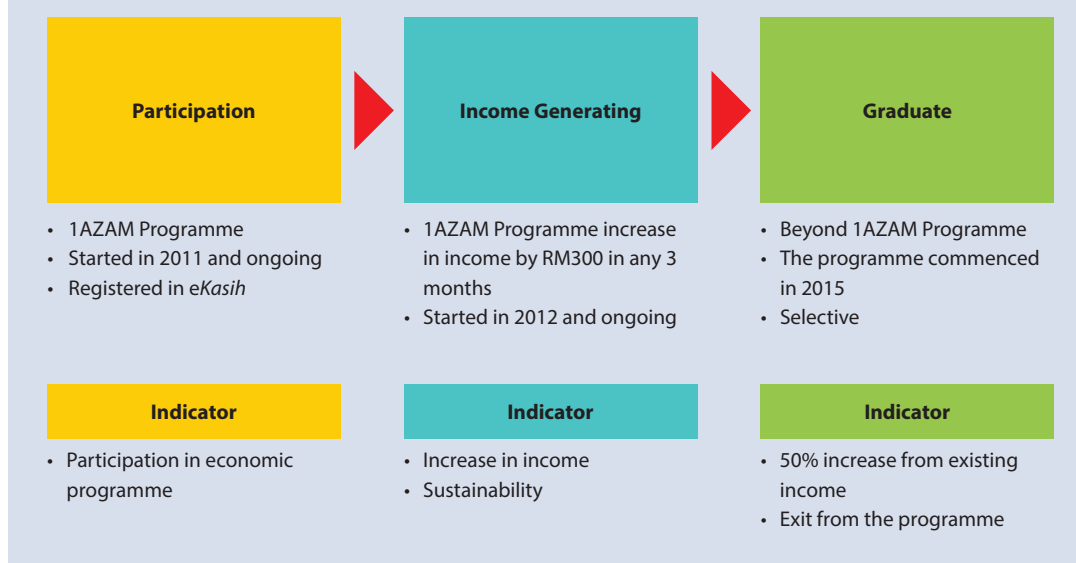
Since independence, Malaysia has charted significant changes in economic and financial developments, including the composition of low-income groups. With sustainability as the current focus, the government places priority on skills and vocational training, and financial empowerment. The LIH-NKRA is addressed through Malaysia's flagship 1AZAM (*Akhiri Zaman Miskin/Ending the era of poverty*) program that offers support and training in five key work streams to both rural and urban poor. The five key work streams are 1AZAM Kerja, 1AZAM Niaga, 1AZAM Khidmat, 1AZAM Tani, and 1AZAM Bandar. A subsequent program called Beyond 1AZAM started in September 2014 with the aim to help successful 1AZAM participants to further develop their capacities and income opportunities. The Beyond 1AZAM program aspires to arm participants with advance entrepreneurial and business skills, such as online marketing, market diversification, and distribution to help them further enhance their earning potential [10].

In 2014, NGOs and corporates in the private sector collaborated in implementing 46 programs. This was an increase of almost 28% from the targeted 36 programs. The LIH-NKRA prioritized the delivery of economic enablers to vulnerable groups in need of aid, such as the Penan community in East Malaysia and orang Asli groups in Peninsular Malaysia in 2012–13. From improving health and nutrition to providing home help services, the enablers changed the lives of the vulnerable groups and helped them to become economically self-sustaining individuals. As explained, Gerakan 1AZAM is a program to create jobs through a mixture of employment and entrepreneurship. 1AZAM emphasizes the development of financial skills and capacity building of those in need. In 2014, 64,689 Malaysians had participated in the financial literacy programs. The 1AZAM program is divided into three phases (Figure 4.5) [2].

In the first phase, the 1AZAM program focused on increasing participation by encouraging low-income individuals to register themselves with the *e-Kasih* database. In the second phase, 1AZAM focused on delivering income-enhancing initiatives to participants based on the KPI of a MYR300 increase for any three months within a year. The aim is to help participants increase their incomes, and perhaps more importantly, to sustain that increase. The third phase began in 2015 and LIH-NKRA implements the Beyond 1AZAM program that is designed to boost the income levels of successful 1AZAM participants further. Beyond 1AZAM is selective and will only enrol participants who have successfully raised their income levels and show promising further developments. Beyond 1AZAM's benchmark of success is for participants to mark their incomes by a further 50%. The focus now is still on Phase 2; that is to raise income levels and monitor participants to ensure they sustained the income increment and be self-subsistent. The requirement that participants sustain income growth over a period is important to facilitate the creation of sustainable long-term change rather than one-off benefits. The following section narrates on each 1AZAM work stream [10].

1AZAM Kerja

1AZAM Kerja is about boosting employment prospects of low-income workers in jobs that will help them increase their income through more steady and meaningful work in the service sector. The program also helps provide training and instruction to help individuals with little to no qualifications to meet the job requirements. Through this initiative, the poor and extreme poor were matched to available jobs and encouraged to take advantage of employment opportunities in

FIGURE 4.5**THE JOURNEY OF 1AZAM PROGRAM**

sectors where Malaysians are not prevalent. The government facilitated job placement for low-skilled positions, such as domestic maids, petrol pump attendants, security guards, waiters, and construction workers. In ensuring the smooth running of 1AZAM Kerja, the government had undertaken the following steps:

- Freezing the hiring of foreign workers in selected industries for a limited time period
- Encouraging employees to prioritize Malaysians when filling the low-skilled positions
- Setting up Jobs Malaysia Centre to match job seekers with available jobs
- Offering skills development programs to the poor and extreme poor through community colleges and various skill institutes

Under its job placement initiative, 1AZAM Kerja pairs qualified employees with participating employers, such as La'Joise beauty salon that hired two 1AZAM Kerja participants. La' Joise has been a participant of the 1AZAM Kerja program since 2013, and has trained 26 participants. Through this program, participants are provided a place to stay and train in their chosen profession to give them the skills necessary to seek gainful employment and become financially independent. As noted in the GTP 2014 report, Nurul Hasra Roslang was a 1AZAM Kerja participant working at the La' Joise outlet in Klang, Selangor. A fresh secondary school graduate, she said getting a job right out of school was a "dream come true". She received proper skills training during her time at La' Joise that she hopes will enable her to set up her own beauty salon one day. Another success story of 1AZAM Kerja is Clarisa Balicao, a resident of Kota Marudu, Sabah. As a 1AZAM Kerja program participant, she received training in areas related to her business activities - facials, hairstyling, and beauty therapy. Balicao has since acquired her former work place, Magical Salon through instalment payments. She now earns a monthly income of between MYR6,000 and MYR8,999.

1AZAM Niaga

1AZAM Niaga is a program targeted at budding entrepreneurs who have the necessary skills to start small or sundry businesses on their own. This program provides support in the form of training and microcredit financing to help fund the initial start-up costs of budding entrepreneurs. 1AZAM Niaga participants are expected to have some experience running small-scale businesses to qualify for the program. This initiative encourages entrepreneurship and the setting up of small goods businesses, such as food business (home-cooked food) and online businesses, similar to successful programs run by other agencies, such as Amanah Ikhtiar Malaysia (AIM). A cited example was a middle-aged lady from the state of Terengganu who sells noodle soup and drinks. She received a MYR200 start-up capital from AIM. Another noted success story was on Saidah Samadi of Ipoh, Perak. She has always had an entrepreneurial nature. With the encouragement from her daughter, she learned how to cook and make Malay delicacies. When friends started asking her for her recipes or to teach them, she decided to hold classes and started selling her culinary products through agents and online through Facebook. Through the 1AZAM Niaga program, her cooking classes and culinary offerings were further developed. Her life transformed tremendously since then: “The biggest change is that I always have money in my pocket now. I no longer have to worry about money at the end of the month - we have the courage to change the things we want and expand the business. I started with a small turnover and now I have a full-time worker and two assistants. I never thought I would have these things.” Saidah’s dream now is to get her Sijil Kemahiran Malaysia (Malaysian Skills Certificate/SKM) Grade 2 qualification so that she can teach at the local community college. She also has plans to open a store to expand her market outreach further.

1AZAM Khidmat

As with 1AZAM Niaga, this initiative facilitates the setting up of small service businesses including innovative service-based businesses, such as homestays, training programs, mobile canteen, mobile car wash, day-care centers for the elderly or children, post-natal care services as well as low-skill home-based assembly businesses. This initiative assists with the required training and start-up funds. A cited example was a young lady from the state of Kedah who ventured into tailoring business with a MYR600 equipment grant from the government. Another was on Sharifah Junaidi Sayed Idrus who now owns and operates her own salon and spa in Perak. Since participating in the 1AZAM Khidmat program, she has been generating a steady income from her enterprise that could total to more than MYR400 a day on some days.

1AZAM Tani

1AZAM Tani supports the income growth of participants by focusing on agro-related businesses, such as poultry farming, cash crops, and aquaculture farming. Participants are assigned projects based on their ability, expertise, and needs. 1AZAM Tani supports participant development through financial aid, capacity training, technical expertise, and other agro-related facilities. This initiative supports the poor and extreme poor to become involved in small short payback agricultural businesses, such as poultry farming and aquaculture. Similar with other initiatives, the government provides training and funds to support the setup. Though many, there are three documented encouraging stories for this program.

The first is on Hassan Mohammed Hussin, a full-time papaya grower, who is now one of the biggest papaya producers in Alor Setar, Kedah. After a year of participation in the 1AZAM Tani programs, demand for his papaya grew and he was able to market his fruit better. Hassan received about MYR8,850 worth of equipment from 1AZAM Tani in 2011 through the Muda Agricultural Development Authority. He now sells about a tonne of papayas each day to five buyers. His income

has grown more than five times - from between MYR800 and MYR1,000 per month to between MYR5,000 and MYR6,000.

The other documented successful life-changing story on 1AZAM Tani program is on Asbullah Ali of Nibong Tebal, Penang. Working as a factory worker only enabled him to earn a minimum wage of MYR900 a month. He desired to establish a quail eggs business in Seberang Prai, Penang. In 2013, through the 1AZAM Tani program, Asbullah was provided with MYR9,000 cash grant by the Federal Agriculture Marketing Authority (FAMA) to start his business. The assistance from FAMA gave him the capital to purchase the necessary equipment and 4,000 baby quails for breeding. Two years later, rearing between 15,000 and 20,000 birds, he became the main supplier of quail eggs and meat in Seberang Prai as well as in another two states - Kedah and Perak - earning a minimum gross profit of MYR6,000 monthly.

The third life-transforming story is on Chik Azmily of Kelantan (NTP, 2015). He was a day laborer who earned MYR500 a month, an amount that is hardly enough to support his family. Through the 1AZAM Tani program by the Malaysian Agricultural Research and Development Initiative (MARDI), Chik Azmily was able to increase his monthly income ten times to MYR5,000, taking his family out of hard-core poverty.

1AZAM Bandar

Through collaboration with the local NGOs, the 1AZAM Bandar work stream helps transform the earning potential of the urban poor to make them positive contributors to the economy. In Kelantan, the Malaysian Business Women's Association (WIBA) has been actively running vocational training courses since 2013. WIBA also conducts practical skills workshop, such as sewing and retail workshops, as well as help participants to set up online marketing distribution points and kiosks at farmer's markets. As with other program implementations, the biggest challenge faced by WIBA is in changing the mind-sets and attitudes of participants to continuously putting the skills acquired to work. Postprogram follow-up sessions are critical because the program only lasts eight days followed by a two-day motivational workshop that are not enough to change mind-sets and attitudes.

Challenges Faced

There were numerous challenges when implementing 1AZAM programs. Problems were encountered in 2013 when participants were not being directed to the right 1AZAM channels. Through more thorough needs analysis when screening potential participants and stringent selection of participants interested in joining, the 1AZAM programs have yielded improvements in 2014. Monitoring the progress and development of program participants remains a challenge due to several reasons; i) the large number of program participants; ii) the decentralized location of participants; and iii) the amount of effort required to provide regular and timely monitoring of their progress. Some 1AZAM recipients tend to be resistant to long-term change, setting back efforts to help develop long-term change in their financial habits. This relates to the mind-set and attitude issues raised by WIBA in 1AZAM Bandar. Mitigation efforts, such as motivational workshop are constantly held to help change mind-sets, and the monitoring and evaluating framework is regularly refined to reflect the reality on the ground better. The LIH-NKRA team continuously collaborate and leverage the relationship with program delivery partners and NGOs to ensure the success of 1AZAM programs.

Developing Economic Enablers for Low-income Groups

The focus of the LIH-NKRA was expanded to include delivering economic enablers as it became clear that building skills and providing opportunities alone are insufficient in helping low-income

individuals if their capacity to work is affected by obstacles due to their circumstances in life [10]. The LIH-NKRA team sought the assistance and expertise of external partners including NGOs and corporate partners to help execute and support the delivery of enablers. The following enablers were selected from the result of needs analysis and the impact they would have on the targeted community:

- **Providing food baskets for urban poor**

Two key administrators for the program are the Ministry of Urban Wellbeing, Housing and Local Government and the NGO MyKasih Foundation. Under the program, each eligible household receives MYR80 per month that is directly credited to the recipients' MyKads (Malaysia's identification card). The funds are only eligible for purchase of essential items, such as rice, flour, cooking oil, sugar, salt, condensed milk, and eggs at selected outlets - Mydin, Giant, and Eonsave. In 2013, 3,200 households from across Malaysia participated in the program.

- **Delivering home help to seniors and homes with disabled children**

The Community Welfare Department and NGOs assisted in delivering the home help programs. In 2014, the program was running in 222 Parliamentary locations with the assistance of 124 District Community Welfare officers.

- **Improving connectivity for Orang Asli (Aboriginal tribes in Malaysia)**

Reliable roads and other forms of public transport is a key economic enabler allowing remote Orang Asli residents to access the market or areas where there are jobs. The Temenggor-Gerik Ferry service has enabled the Orang Asli communities in Temenggor, Perak to reduce their journey to the nearest major city, Gerik from four to five hours by road to about 40 minutes. Although a round trip fare of MYR30 is cheaper than commercial fare, the Orang Asli Affairs Department for Perak is looking into the possibility of lowering the cost of operating the ferry so that the fare could be made more affordable for the Orang Asli. Greater connectivity provides Orang Asli living far upstream greater access to education, health, and economic opportunities to improve their quality of life. However, maintenance of roads, prioritization of communities, and the quality of roads supplied are issues that need to be resolved to ensure better infrastructure delivery.

- **Delivering clean water**

Clean water is a key enabler of health and economic development, and a priority in remote areas. Hence, in 2014, the LIH-NKRA widened its scope to delivering clean water and sanitation to the Iban people in Ulu Mujok, Sibul. This project benefited approximately 254 households consisting 1,692 people. The provision of clean water will enable the residence to have better quality of health and life.

Further explanations on the economic enablers are as appended in the following section.

Case 2: Rural Development - National Key Results Area (RD-NKRA)

According to the 11th Malaysia Plan (2016–20), 26.3% of Malaysians live in rural areas with varying levels of accessibility to peri-urban areas, infrastructure, social amenities, and economic

opportunities [4]. Due emphasis has been given to the rural development in elevating the economic level of rural folks and enhance their capability to contribute to national wealth as well as the attainment of Vision 2020 goals. Since 2010, the GTP has unequivocally been addressing rural development to enable rural Malaysians achieve a basic standard of living through proper road connectivity, clean water and electricity supply, better quality of education as well as avenues for increase in income and rural development. As of December 2014, the GTP delivered uninterrupted electricity to 14,296 rural households under the Rural Electricity Supply Project. Further, an additional 336,266 households obtained access to clean and treated water while another 129,595 households gained 24-hour electricity access that translated to greater productivity for rural folks.

The Malaysian government has also initiated the 21st Century Village Programme in 2013 to focus on the sustainability of the developments in rural areas. Through this program, the government revived agricultural farms that could now have greater potential to create lasting jobs and become important component of Malaysia's production supply chain. An example is the Kelabit tribe in Bario, Sarawak. Any visitor to Bario would find this place calm and could feel its serenity. Bario, once a secluded village on the easternmost border of Sarawak, is experiencing developmental revivals. The RD-NKRA has accelerated the delivery of basic amenities, such as treated water, electricity, and Internet access to the village; thereby improving the livelihoods of the Bario people. Before this transformation, people from the outskirts of Bario had to walk for an hour to get into town. Now, with the infrastructure in place, local enterprises blossomed, creating opportunities for residents in the area for cottage industries and tourism. Connectivity that facilitates the transport of people and goods has been a key enabler for better quality of life and economic empowerment in Bario. With ecotourism being a big thing at Bario, many residents want to be tour guides. There are now three flights coming in to Bario daily. With more tourists coming to Bario, there has been an increase in homestay businesses. As ecotourism is a niche market, sustainability becomes a big focus at Bario to preserve the ecosystem for the future generations of the Kelabit tribe. The Desa Lestari (Sustainable Village) cooperatives (co-op) program supports this [10].

Building of Roads

Building roads in rural areas of Malaysia plays an important part in integrating rural communities with the rest of the nation [2, 10]. This is because building roads enhances rural connectivity, a key enabler transporting people and goods toward a better quality of life and economic empowerment. Greater connectivity directly encourages other commercial activities, such as tourism as well as facilitates greater access to markets for rural producers. Before the RD-NKRA started, only 45% of the roads in Sabah were sealed roads. By 2014, the percentage has gone up to 55%. This increment may seem small; it is actually quite a massive change as the state of Sabah has about 10,000 km of road. The 60 km road connecting Sook to Kampung Sinua in Keningau Sabah has changed the lives of over 10,000 residents. Schoolchildren from two secondary schools and 16 primary schools previously had to make their way to and from their schools through a bumpy gravel road. The completed sealed road toward the end of 2014 made their journeys safer and more reliable. The road also serves the surrounding community - the Murut and Dusun tribes - by connecting them to Sook, which is experiencing an economic boom. The surrounding residents could now transport their goods, such as fresh fruits and vegetables to the market, which raises their income and quality of life. Nonetheless, implementing the RD-NKRA at remote areas has its challenges. Material shortages and the lack of skilled consultants and contractors in Sabah have proven to be challenging obstacles. Nevertheless, the government has managed to find work-arounds to bring development to rural areas.

Provision of Clean Water

Another effort expanded under the RD-NKRA is the provision of clean water to rural folks as accessible clean water is a basic human need. The lack of reliable access to clean water has been hazardous to health and disruptive to the daily routine of residents in rural areas. The regularity of ill health means that community residents are often forced to miss work to recuperate or care for sick family members. The lack of access to clean water also jeopardizes small-scale manufacturing businesses that need access to clean water for their outputs [2, 10]. Delivery efforts and access to rural communities have been challenging, as sometimes it is almost impossible to connect remote communities to the main water pipeline. Due to the relative inaccessibility of the Sabah terrain coupled with a lack of manpower, construction has not always been the easiest of tasks. There were also problems with inexperienced consultants, working with stakeholders to obtain land approval, electrifying the infrastructure in remote areas as well as material shortages. The acceleration of water pipelines had benefited over 100,000 rural Sabahans. The projects had definitely improved the wellbeing of rural folks as they are now spending lesser time in foraging for water. The overall commitment of the RD-NKRA is to ensure 95% of rural areas in Peninsular Malaysia and 90% of rural areas in East Malaysia will have reliable access to clean water by the end of the NTP [10].

Brightening Households

Brightening households is another effort under the RD-NKRA. Electricity is a key requirement for economic activity and decent standard of living, such as enabling Internet access and helping a child to study at night. As with roads and water supply delivery, rural electrification has also faced challenges and at times requires innovative localized solutions. The RD-NKRA has adjusted its delivery of infrastructure from the provision of diesel generators to the construction of mini hydro dams - based on specific and localized circumstances. By the end of 2014, Peninsular Malaysia has electricity coverage of 97.6% while it was 94.1% and 91.1% in Sabah and Sarawak, respectively. The ultimate goal is to hit 99% coverage in all areas in Malaysia before 2020. Delivery of electricity has not always been a straightforward process. 97% of the projects were about connecting communities and villages to the main grid, while the remaining 3% require alternate solutions due to access and terrain issues [10]. According to the Ministry of Rural and Regional Development's project manager of the RD-NKRA electricity initiatives, the biggest challenge is accessibility because the majority of the rural communities are located more than 50km away from the nearest town. The transportation and accessibility issues make the job time consuming and labor intensive. An example of alternate solution is the development of micro hydro systems that places the small-scale hydro generation infrastructure near water sources to generate power for nearby communities.

Building Quality Homes

The fourth key initiative of RD-NKRA is building quality homes for the rural poor because the challenges in obtaining homes can be highly expensive especially in the more remote regions. The lack of access to homes means that the rural poor will have very few opportunities to improve their life to sustain their families. In ensuring only truly deserving citizen were eligible for homes, potential beneficiaries of the housing program were identified through information from district and state level agencies, civil servants, and the *e-Kasih* portal. Shelter and houses play a key role as economic enablers in that they provide permanent shelter for families; hence freeing up the breadwinner to find work without the worry of having to relocate every now and then. The state ministry of rural development does not merely give free houses; the project team also follows up with recipients to ensure they settled in well and that they are doing something useful to better the quality of their lives. The project team of the ministry also provides them with opportunities to pursue economic activity. Since the start of GTP in 2010, about 9,250 houses have been delivered under the program in Sabah alone. With 50,000 poor households registered in Sabah, housing delivery has to be continuously improved.

21st Century Village (21CV) Program

Besides the delivery of basic infrastructure, the RD-NKRA team also introduced the 21st century village (21CV) program in 2012 to boost rural economies and make them more attractive to the youth in the community. The program also aimed to catalyze economic development and transform rural areas into thriving and sustainable centers of commerce [9–10]. 21CV comprises four distinct pillars of transformation; namely, i) investing in youth through the Rural Business Challenge (RBC), ii) investing in the agricultural potential of rural areas by leveraging on premium fruits and vegetables of Entry Point Project (EPP), iii) investing in villages through the *Desa Lestari* (Sustainable Village) program, and iv) creating integrated villages through the *Rimbunan Kaseh* program. The RD-NKRA manages the first three pillars while the Implementation Coordination Unit (ICU) of the Prime Minister's office coordinates the fourth pillar on *Rimbunan Kaseh*.

As with any noble intention, there will always be challenges too. One noted challenge of 21CV is identifying suitable land for agricultural activity that is a requirement of EPP 7. Although potential solutions have been identified, such as expanding the search for land in East Malaysia, insufficient and inappropriate land for agricultural activity have caused setbacks to the delivery of this initiative.

i. Rural Business Challenge (RBC)

RBC, under the first pillar of village transformation, is to drive youth entrepreneurship in rural areas without having to leave for the cities to look for jobs. The winners are given support in terms of funding and advice to start or expand their businesses with an expected show of positive returns, such as increased income over the next 12 months. An example of RBC is Rusila Yusof, a mushroom entrepreneur [2]. Since starting her mushroom cultivation enterprise in 2007, she experienced numerous difficulties due to the vagaries of small businesses. With limited funding and unstable partnerships, Rusila went through two near closure occasions. However, winning the 2012 RBC changed that. The MYR500,000 grant from RBC gave her the capital she needed to revive her own enterprise which is today an integrated mushroom business comprising a mushroom farm, a factory manufacturing mushroom-based products, such as her award-winning mushroom sauce, and a mushroom-themed eatery called Fatisha Mushroom Kopitiam.

The financial grant has also enabled her to purchase machineries and relevant materials. Winning the RBC has helped raised her company profile and received attention from relevant parties where she had the opportunity to attend both local and foreign expositions, such as the Malaysian Agricultural, Horticultural and Agro-tourism showcase. Subsequently, her income increased from MYR20,000 a month in previous enterprise to MYR70,000 in 2014. As a gesture of reciprocity, Rusila practised social responsibility by giving back to the Terengganu community in which her business is based. She hired 22 workers to help work in her various businesses. She acknowledges that being located in a rural setting has caused some challenges for product promotions and access to markets, but it is compensated in providing work opportunity to the people in the area as well as cheap costs of production. Further, RBC has helped Rusila's business to be better established and organized.

Rusila has written a book on succeeding in the mushroom business. She also teaches at the local college and polytechnic on mushroom cultivation. Rusila recommended the RBC to other rural entrepreneurs she meets at expos as RBC is a great way to help small rural businesses to get started. In fact, three of those entrepreneurs have participated in RBC and received grants as well. The RBC became a reality TV show for the 2014 edition, where competitors share and update a panel of judges on their business development plans on a weekly basis.

ii. Employment in agriculture

The second transformation pillar under the RD-NKRA is with the goal to create sustainability through employment in agriculture. Through the EPP7 on Fresh Fruits and Vegetables program, a company provides villagers with training and employment. The Ministry of Rural and Regional Development (KKLW) in collaboration with state agencies, such as KEJORA (South East Johor Development Authority), provide agriculture land. Kampung Sedili Kecil in the state of Johor have undergone substantial change ever since KKLW and KEJORA chose the village as the site for the Tuan She Pineapple Plantation Project. In a village where jobs were previously scarce and hard to come by, the construction of the pineapple plantation has come as a welcome boon to almost all residents. In addition to a stable income, project employees have also benefited from valuable trainings on mass production of pineapples that are sold in hypermarkets, such as Giant and Tesco.

iii. Sustainable village (Desa Lestari)

Through Desa Lestari, the third pillar of the 21CV program, the RD-NKRA aims to bolster the capacity of existing rural cooperative programs by increasing their income and streamlining their operations. As rural economies tend to be isolated from the main market, they need to align their activities within each economy to create value for one another, thus creating a self-subsisting entity. Desa Lestari is funded and monitored by the Economic Empowerment Division (EED), which also collaborates with other implementing agencies to identify suitable candidate villages. EED has worked with the Rubber Industry Smallholders Development Authority (RISDA) and KEJORA to implement the programs. A beneficiary of Desa Lestari is Kampung Lonek, a village located about seven kilometers away from Bahau, Negeri Sembilan [10]. Desa Lestari's goal is to place Malaysia's villages on a more sustainable footing. The preserved traditional feel and look of Kampung Lonek has made it a natural tourist destination that in turn spurred the development of homestay program in 2004. The homestay industry in Kampung Lonek made a quantum leap in 2013 when it was selected as a Desa Lestari participant to accelerate the development of rural economic activities. The homestay program was subsequently placed under a village cooperative, Koperasi Homestay Lonek Jempol Bhd that coordinates and manages the program as a whole. The co-op has constructed a broadband center to help develop the villagers' computing skills as well as develop other commercial activities, such as crafts from rubber trees, bee keeping, and equipment rental for tourists. Additionally, the co-op also trained and exposed the village youth on business management skills. Hence, Kampung Lonek transformed into a sustainable economic center that in the process, elevated the villagers' standard of living through income creation and increment. The co-op also encourages villagers to improve their communication skills, particularly in the English Language as the majority of their visitors are from overseas. Another frontrunner of 21CV is the Kampung Bukit Bulat villagers with the stingless bee farming project. 28 villages ventured into this project, achieving a yearly income of between MYR10,000 and MYR19,000. The villagers also generate additional income by packaging tourist activities (nature tourism) with honey hunting expeditions as well as promote organic honey products [10].

iv. Rimbunan Kaseh

Building modern farms for economic empowerment is a collaboration between the private and public sectors. Rimbunan Kaseh is one such program where farms are designed to be completely interacted to maximize efficiency and minimize wastage in all its operations. These farms subsequently hire villagers and provide housing for them to create a community center on the farm. Rimbunan Kaseh farms, a collaboration with IRIS Corp Bhd, represent model communities emphasizing environmental sustainability to provide food and income to rural folks. An example of an environmental sustainability program is the fish farm that are reared using aquaponics system.

Wastewater from that project is used to irrigate plants to grow fresh produce. Worms that are cultivated in the plant compost are then fed to free-range chickens to complete the cycle. Funded by the federal government, the *Rimbunan Kaseh* program is directed primarily at the rural poor who lack employment and homes.

Case Study 3: Axiata - Serving Asia with Its Sustainability Pillars

Axiata Group Berhad (Axiata) is one of the largest Asian telecommunication groups in Asia with over 275 million customers. The company's vision is to be the best throughout the region in connectivity, technology, and talent, uniting them toward a single goal: Advancing Asia. With business interests in mobile operations in Malaysia, Indonesia, Sri Lanka, Bangladesh, and Cambodia, and significant strategic stakes in India and Singapore, the Group provides employment to over 25,000 people across Asia. In line with its triple bottom line management (Economic, Environment, and Social/EES) and its two core values of uncompromising integrity and exceptional performance, Axiata remains committed to people's lives and help transform the countries in which it operates [12].

Guided by its vision of Advancing Asia by bringing together people, connectivity, and technology, Axiata has published its Sustainability Report in accordance with the Global Reporting Initiative (GRI-G4) guidelines since 2013 to disclose the Group's management of EES risks and opportunities for each financial year ending 31 December. As the company expanded its network coverage, it continuously strived to make connectivity more affordable to the diverse social segments of its 275 million customers. In facilitating its journey of advancing Asia, Axiata has established its sustainability framework that comprises four sustainability pillars (4P's) as indicated below [13]:

Pillar 1: Beyond Short-term Profits

Axiata focuses on long-term value creation in all its different markets to increase connectivity, enhance reliability, and facilitate access across its network. Through this principle, Axiata has contributed to the socioeconomic development of each market it operates especially rural and under-served communities. In 2013, Axiata became the first operator to introduce LTE (Long Term Evolution) to Cambodia and the first 3G enabled operator in Bangladesh covering both urban and rural areas. By 2014, as part of its inclusive digital ecosystem and providing services beyond commercial motivation, almost 49% constituting more than 19,500 sites in the rural areas of its OpCo (operating companies) countries, covering almost 450 million people.

In 2015, the Group leveraged its synergies and brought its award-winning eZ Cash M-Money product pioneered in Sri Lanka to Bangladesh and Cambodia. Axiata's M-money and M-insurance programs in Bangladesh, Sri Lanka, and Indonesia provide banking and insurance services to many who did not have access to conventional banking and insurance services. Accordingly, through the new digital inclusion projects, 8.3 million people in Bangladesh and Indonesia get insured, 2.9 million people gained access to banking and supported 2,000 developers in Sri Lanka. Axiata's 4As inclusion model of affordability, accessibility, availability, and applicability, as depicted in Figure 4.6 (inclusion by products) and Figure 4.7 (inclusion by coverage), guided these achievements. Another mileage of Axiata in assisting people at the BoP is M-Fish that has redefined commercial fishing in Indonesia. A cited case is Jamil, a fisherman from Pondok Perasi Village, Lombok, Indonesia. Using the M-Fish has helped Jamil to access important information related to fishing activities, such as weather forecasts, tidal information, seabed maps, the market values of catches, and real-time updates from the National Oceanic and Atmospheric administration providing information on fish and plankton locations. Apart from introducing sustainable fishing practices, M-Fish has helped fishermen to improve their productivity.






FIGURE 4.6

AXIATA'S 4AS INCLUSION MODEL BY PRODUCTS

Inclusion by Products	AFFORDABILITY		ACCESSIBILITY	
	Smart:	provides cheapest call and data rates in Cambodia	All OpCos:	online access to the Customer centre via chat, email forums
	Dialog and Robi:	affordable smart phones for less than USD100	Celcom:	some of customer centres are accessible to disabled persons
	AVAILABILITY		APPLICABILITY	
	Smart:	makes 4G available in Cambodia as first operator, followed by iPhone6 launch	Robi and Celcom:	provides social media access to featured phones
	XL and Robi:	provides a local number for roaming customer where incoming calls become free	Dialog:	has value added services such as 'Say it in English'

FIGURE 4.7

AXIATA'S 4AS INCLUSION MODEL BY COVERAGE

Inclusion by Coverage	Country	Malaysia	Indonesia	Sri Lanka	Bangladesh	Cambodia
	OpCo					
	Population Coverage	95%	90%	96%	99%	97%
	BTS Sites	6,880	21,500	2,850	7,100	1,700
	BTS Sites in Rural Areas	3,500	8,700	1,750	4,600	910

Source: Axiata's Sustainability & National Contribution Report 2014.

Note: BTS = Base Transceiver Station

Pillar 2: Nurturing People

Axiata practices a culture of integrity and inclusivity to nurture future leaders. This pillar aims to build a sustainable supply of excellent talent for the Group. Through its core culture of UI-EP (uncompromising integrity-exceptional performance) values, employees are guided on meeting the

Group's high expectations while ensuring them a safe workplace conducive to productivity. As at December 2015, Axiata Group Berhad had a team of 11,713 employees. The company is committed to nurture future leaders to drive the future of the Group as well as the industry. Axiata has strengthened its internal leadership programs that enabled the Group to fill 64% of its top-level management positions with internal candidates. Besides the accelerated development program for employees, the company also has the Axiata Young Talent Programme (AYTP) to source and develop new talent. Similar program known as the XL Future Leaders Programme has benefited more than 400 young Indonesians. As part of the initiative to contribute toward addressing the B40 group of Malaysians, Axiata has supported the Malaysian government's effort to raise the standard of employability among the country's graduate. Axiata through its local OpCo, Celcom launched its *Skim Latihan 1Malaysia* (1Malaysia Training Scheme/SL1M) program in 2011 to develop and train fresh Malaysian graduates to hone their soft skills and functional development, as well as acquire on-the-job skills to raise their employability. Priority is given to underprivileged graduates from poor family backgrounds, rural areas, and the urban poor. In 2015, Axiata recorded 528 SL1M trainees.

Axiata also practices equal opportunity where workplace practices are constantly streamlined to ensure that women and men, people with disabilities, and other groups, have equal access to workplace environments, equal access to growth opportunities, and equal access to self-development within the Group. Fostering equal opportunities for men and women is fundamental to the company's approach to sustainability. Toward the end of 2015, 35% of Axiata's employees were female who filled 24% of senior leadership positions across the Group. As a multinational company in diverse socioeconomic settings, Axiata has more than 50 different nationalities working across its Group in its strive to promote and attract a diverse talent base. Through the principle of inclusivity in its recruitment policy, Axiata hires people based exclusively on talent and qualification.

Pillar 3: Process Excellence and Governance

Axiata upholds strong governance and the best practices of supply chain management as part of its sustainable governance processes that are integral to sustainable operations. Common standards are established to ensure that sustainability practices are adopted throughout its supply chain. Business processes are also regularly streamlined to ensure transparent and efficient outputs. In 2014, the Axiata Supplier Code of Conduct was established to stipulate the expectations the Group has on all suppliers in terms of behaviour and practices. This is implemented with the recognition that the sustainability impact of the organization apart from its internal operations also includes the way Axiata interact with its suppliers and business partners.

As a support for domestic entrepreneurs, more than 50% of its Malaysia capital expenditure is spent on procurement from local vendors. In its commitment to digitization, Axiata revamped all its key processes, especially those in servicing and sales across all its operating companies. Even the employee communication platform "Prism" is put on digital to enable group-wide communication and networking as Axiata believes that sustainability requires the business to empower and enhance the experiences of all stakeholders. Axiata also recognizes the importance of regulatory requirements in maintaining the sustainability of the industries as a whole. The Group has established the Axiata Regulatory Compliance Framework that stipulates baseline principles and expectations in relation to regulatory compliance. Additionally, the OpCos of Axiata conduct respective vendor development program to enhance business collaborations with suppliers and strengthen their businesses while meeting the OpCos' placement needs. In Malaysia, the Celcom Local Vendor Development Programme (LVDP) is targeted to improve the processes of its value chain, the distribution network as well as expand its retail operations to foster stronger relationships with Axiata's retail base.

Celcom has also established the Partner Capacity Building Centre (PCBC) as the central hub of LVDP to help Malaysian vendors become more sustainable.

Pillar 4: Responsibility to Planet and Society

This pillar focuses on Axiata's effort to mitigate the environment's impact of its operations and to create value in the communities of the countries where the Group operates. As a telco, Axiata and its OpCos have charted significant reach into the communities as mobile phones are ubiquitous devices to the world's society at large. Through digital ecosystems and the advancing Asia vision, Axiata continuously sought to reduce its environment footprint and grow its social footprint. Axiata launched its infrastructure company, 'edotco' in 2013 to conduct environment management and create greener digital networking. A key goal of edotco is to reduce the Group's carbon emissions by 40% from the 2013 levels by 2018.

In 2015, Axiata has successfully reduced its greenhouse gas (GHG) emission by an average of 19% per site against the 2014 levels. The edotco focuses on four key aspects of energy conservation; implementing environmentally friendly designs for all infrastructures, reducing energy consumption and increasing efficiency in base stations, exploring the use of renewable energy sources, and reducing energy consumption by sharing towers. The company continues to invest in renewable sources of energy, recycling wastes, and growing environmental awareness among employees. The edotco Echo Centre was established in Malaysia to conduct remote monitoring and manage rural sites that includes regulating power consumption, managing cabin temperatures, and measuring fuel and battery capacity. Axiata also believes that its sustainability as a Group is closely linked to the progress and welfare of the societies in which the company operates. As part of its green mandate, more than 200 towers of its network are currently run by renewable energy sources.

Through its commitment to society, more than 50,000 Sri Lankan students benefited from having free access to the educational channel "Nenesa" while rural schools in Bangladesh were able to access English learning programs through the "English in School" program. Nenesa was also made available to the rural communities across Sri Lanka through Dialog TV. Axiata engaged the key stakeholder groups from its OpCos to identify areas where Axiata could assume a greater role in assisting communities affected by natural and man-made disasters through its corporate responsibility activity called Disaster Management and Response. In October 2015, the UCEP (Underprivileged Children's Educational Programmes) technical school was launched in Chittagong, Bangladesh to impart technical skills to youth in the areas of ready-made garments, mobile phone servicing, and electronics. The program also places participants in jobs following the completion of the training program. A cited story for this program was Monjur Ahmad who found himself unable to secure a full-time job despite holding a diploma qualification. His situation changed when he enrolled in the UCEP. Upon completion of the program, he secured a job as a technician with a starting salary of BDT15,000. His salary was revised to BDT18,000 after working 15 days in the assigned company. Monjur was one of the 500 underprivileged youth selected to participate in the 15-month long "*Gori Nijer Bhobishshot*" (Let's Build Our Own Future) project organized by Robi Axiata, one of Axiata's OpCos in Bangladesh, in partnership with UCEP Bangladesh, a nonprofit NGO aimed at raising the socioeconomic conditions of the underprivileged communities [13]. In Malaysia, following the 2015 Sabah Earthquake at Ranau, Celcom Axiata provided zero-rated calls to and within Sabah to help its subscribers reach their loved ones.

Axiata has introduced the "4i" aspects for each of the stated sustainability pillars in 2014. The four "i" are: 'improvement' in its processes; 'innovation' through continuous review of new projects

and initiatives; ‘investment’ in significant projects; and ‘impact’ in terms of socioeconomic for its projects and initiatives.

Axiata’s approach to sustainability is beyond expanding into new markets. It includes providing affordable products using quality technology to meet the diverse needs of its socially diverse groups of customers, linking to their productivity and output. Besides, Axiata has also launched its Digital Innovation Fund in 2014 to assist Malaysian companies to discover their full digital potential. This fund would provide opportunities for Malaysian digital entrepreneurs to reach Axiata’s 13 million customers in Malaysia and 275 million customers across eight countries, be it to grow their networks or forge new partnerships. Hence in line with its strengthened sustainability disclosure, Axiata Group was accorded with the ACCA’s Malaysian Sustainability Reporting Award (MasRA) in 2015.

Lessons Learned and Recommendations

Since its launch in 2010, the National Transformation (NTP) has set a series of ambitious targets to move Malaysia to a stronger socioeconomic footing. In the seventh year of implementation, Malaysia has achieved positive outcomes in poverty eradication and sustainable development. It is the fundamental commitment of Malaysia’s government to build resilience and deliver sustainable results with accountability to ensure that Malaysians have quality of life.

The NTP has eliminated extreme poverty through the *Akhiri Zaman Miskin* (1AZAM) program by raising the living standards of low-income households (LIH). This multipronged 1AZAM program needs to be delivered in tandem with NGOs as they know the ground better. There is also the *Program Desa Lestari* (Village Sustainability) that aims to transform villages and enhance the income capability of villagers. Through the listed 42 villages for this program, 15 villages have achieved the desired status of Sustainable Village. As the nation strives toward Vision 2020, further enhancements to reduce the economic, environment, and social gaps between rural and urban Malaysia continue. The collaboration among the government, NGOs, and private sector to uplift the B40 group requires various approaches as there are different requirements to do this sustainably and there is no one-size-fits-all mode. Between 2010–13, the two mentioned programs had enabled 168,483 Malaysians to register under the *e-Kasih* database to move out of poverty. Besides, there is also the Rising Cost of Living (COL) NKRA where in 2014, seven million households and individuals benefited from the *Bantuan Rakyat 1Malaysia* (BRIM) distribution while ensuring that basic goods and services are always affordable for everyone. There are now 161 *Kedai Rakyat 1Malaysia* (1Malaysia Sundry Shops) providing necessities at low prices. Uplifting the quality of life of B40 households will be a game changer for Malaysia. Upskilling and providing job opportunities, access to healthcare services and education, and a reliable social safety net to the 2.7 million B40 households will increase the nation’s skilled workforce and reduce inequality.

In addition to income (Poverty Line income/PLI), the government has also introduced the Multidimensional Poverty Index (MPI) to ensure that vulnerability and quality of life is measured. The MPI is a relative poverty measurement approach practised in developed nations. The MPI measures access to basic infrastructure and services that facilitate social mobility and enables intensity-based analysis, thereby providing clear identification of the needs of the lower income households. As with all initiatives, be it at a macro or micro level, the government requires the collaboration of the private sector as well as the creativity and spirit of volunteerism of all Malaysians to transform Malaysia. Under the 11th Malaysia Plan (2016–20), strengthening collaborations with regional economic corridor authorities will enable more conducive business

environment and attract higher value-adding private investments to rural areas. Further, enhancing the role of the Rural Transformation Centres (RTC) as one-stop business facilitation center will provide information on potential areas for investment and increase the ease of doing business.

Additionally, leveraging on Malaysia's diverse linguistic capabilities, cultural connections, and religious affiliations with markets in ASEAN would facilitate the building of a resilient nation with sustainable economic growth. With this connection, Malaysia could consider capitalizing on the prospects of the BoP by engaging the ASEAN diaspora to create a win-win situation of mutual investments and marketing of ASEAN's BoP products or services among member countries. In similarity with Axiata's goal of advancing Asia, this potential new economy requires the energetic and proactive role of the private sector in leading through entrepreneurship so that new sources of growth can be created. Today, with inclusive developments that have been carried out, over 5.567 million more Malaysians living in rural areas enjoy the same access to basic utilities, such as water, electricity, and road connections as the city folks (NTP, 2015). It is hoped that the prospects of BoP for sustainable development in Malaysia complements the transformation journey of the nation and the achievement of 1Malaysia goals to make Malaysia more vibrant, productive, and competitive.

In summary, the NTP has enabled rural communities to experience, share, and complement the nation's socioeconomic growth. The NTP efforts are incorporated into the 11th Malaysia Plan to take the nation on her final lap toward Vision 2020. However, impactful transformation requires time and commitment from various ministries, agencies, NGOS, private sector as well as the citizens themselves. Still, the most important requirement needed to break free from the clutches of poverty and achieving sustainable development is the right attitude and mind-set; a prerequisite to sustain and fulfil the transformation plan put in place by the government. The Malaysian government will definitely continue on the road less travelled to ensure rural communities and the B40 are not left behind as the nation strives to advance to a developed state by 2020.

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CHAPTER 5

COUNTRY REPORT - PHILIPPINES

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Executive Summary

This case study focuses on the green productivity (GP) for the base of the pyramid (BoP) for sustainable development in the Philippines. It aims to determine the BoP business strategies and approaches to achieve sustainable development, examine the contributions of the BoP business model to environmental protection, and prepare proposals that will enhance GP integration into the BoP business model. The research methods used include interviews, key informant interviews, and review of secondary data. Three cases were reviewed in this case study, particularly, the Don Bosco Foundation, Rags2Riches, and the Bayani Brew, for the on-site study.

The Rags2Riches (R2R) are composed of women weavers from Payatas dumpsite. There were three levels of weavers, namely, i) rug makers, ii) rug and bag makers, and iii) rugs, bags, and higher-end bag makers and product development. Bag weavers earn 20–50% of the retail price, depending on the skills needed to create the bag. The team reflected on the company's core pillars, such as community empowerment, fashion, and environment. R2R also focuses on environmental advocacy - its beginnings could be traced to upcycling scrap cloth. Only discarded scraps from factories were used in the products or organic materials that do not use harmful dyes or chemicals. Chemical adhesives were also prohibited in the production process. R2R is currently active in 12 communities in Metro Manila, with 167 artisans in its program.

The second enterprise, the Don Bosco's social enterprise, subscribes to the triple bottom line - people, profits, and Mother Earth. It has 2,629 farming families as partners and beneficiaries from more than 80 extension impact communities covering 2,527.2 ha of land and with 11,633 active project installations.

The on-site case study was conducted in Bayani Brew in Encanto, Angat, Bulacan. This social enterprise produces a locally prepared iced tea: Kickass Lemongrass and Camotea Commotion. Bayani Brew uses local ingredients that consist of low maintenance crops, easy for the farmers to grow, and are climate-resilient. Bayani Brew's business model aims to address the challenges confronted by the farmers, such as limited direct access to the market, susceptibility to sell crops for a pittance to menacing middlemen or to the traditionally known marketplace, lack of market information - planting the same old and low-value crops that other farmers are already planting, and lack of access to reasonable credit resulting in constant debts with loan sharks that charge exorbitant interest rates.

Introduction

Individual/Family Average Income (GDP) in the Philippines

The Philippine Statistics Authority (PSA) revealed that the monthly poverty threshold for a Filipino family of five in 2015 is at PHP9,140, around 1.04% than the reported monthly poverty threshold of PHP8,778 in 2014 [1]. Poverty threshold refers to the minimum income a family or individual

must earn in order to be considered not poor and to cover a single family's basic food and nonfood needs. However, the average nominal wage is PHP8,280 as of June 2016 which means that the average nominal wage of the Philippines is less than the poverty threshold. Thus we can say that majority of the families in the country are considered poor.

The PSA also released other poverty-related statistics in the report, such as the income gap [1]. The income gap which measures the average income required by a family of five in order to get out of poverty relative to the poverty threshold is PHP2,649 during the first semester of 2015.

General Poverty Situation in the Philippines

Poverty has always been a critical social problem in the Philippines which remains unaddressed for several decades now. The latest poverty head count of the PSA in the first semester of 2015 showed that the poverty incidence or the percentage of the total population of the country living below the poverty line is at 26.3% [1].

Social Problems/Issues Related to Poverty

Equal Access to Education

The latest Functional Literacy, Education and Mass Media Survey (FLEMMS) conducted in 2013 revealed that one in every 10 or about 4 million Filipino children and youth were out of school. The same survey showed that the second most cited reason (19.2%) for not attending school is insufficient family income, with the entering into union or marriage as the top reason (22.9%). In terms of gender, the proportion of out-of-school children was higher among females than males in all regions, generally because of the notion that women are for productive and reproductive activities at home [2].

Child Labor

Despite the implementation of laws against child labor, the practise still continues to rise due to rising poverty in the country. Tubeza reported that Filipino children as young as five years old are already engaged in child labor. The 2011 Survey on Children conducted by the National Statistics Office (NSO) showed that out of the 29.02 million Filipino children aged 5-17 years old, about 18.9% or 5.59 million were already working [3].

Homelessness

With poverty being its root cause, homelessness is another issue that remains unaddressed in the Philippines. In 2014, the International Business Times (IBT) reported that Manila has the highest rate of homelessness in the world. It was estimated that more than 1.2 million children live on the streets throughout the Philippines, 70,000 of whom are in Manila [4]. Likewise, slums are widespread in Metro Manila and in smaller cities and towns. Most slums are located in public lands and abandoned private properties that are close to the poor's sources of livelihood, such as dumps for scavenging, roadsides for itinerant vending, and residential areas for domestic services. In Metro Manila, slums proliferate along public domains like riverbanks, clogged streams, railroad properties, roadsides, and parks [5].

Hunger and Malnutrition

Another indicator of the prevalence of poverty in the Philippines is the high rate of hunger and malnutrition. Gavilan reported that the country has faced a serious level of hunger in 2015 according to the Global Hunger Index (GHI) [6]. With a score of 20.1 which denotes serious level of hunger,

the Philippines ranked 51st among the 117 countries measured. The GHI is a tool made to "comprehensively measure and track hunger." As a country scores higher in the index, the level of the hunger problem also increases. Out of the total population, 13.5% is undernourished.

Due to hunger and undernourishment, stunting among Filipino children is another side effect of poverty. Stunted growth is caused by protein deficiency, one of the leading malnutrition problems in the country. In 2015, 30.3% of the total population of children under five years old experience stunting. Moreover, there is 3% mortality rate due to hunger among children under the age of five [6].

Crime and Theft

Due to poverty, there are Filipinos who are forced to commit crime and theft. As of 2015, the crime rate increased by 46% compared to 2014 according to the Philippine National Police (PNP). People have to make ends meet at the end of the day and because of the income inequality, and the skyrocketing number of unemployed in the work force, they commit crimes to survive.

As a result of high unemployment rate due to poverty, the country's economy suffers. Less laborers simply means less work is done. There will be less tax but there will be no change to those who are unemployed and the government still need to provide them some assistance [7]. Poverty in a country may be one of the causes for decline in its economy.

Government Initiatives on Eradicating Poverty

With the continuous aggravation of poverty in the Philippines, the government is fast-tracking its efforts to alleviate poverty in the country to at least 18% by 2016. One of the efforts to address the issue of poverty is the spearheading of the conditional cash transfer program called the *Pantawid Pamilyang Pilipino Program* (4Ps) by the Department of Social Welfare and Development (DSWD) in 2007. Patterned after programs in other developing countries like Brazil and Mexico, it aims to eradicate extreme poverty in the Philippines by investing in health and education, particularly among children of ages 0–18. 4Ps focuses on two objectives, namely, social assistance or the provision of cash assistance to address the short-term financial need, and social development wherein through the investment in capability building, the beneficiaries will be able to break intergenerational poverty cycle. As of 26 August 2015, there are 4,353,597 active household-beneficiaries [8].

The 4Ps has two types of cash grants that are given out to household-beneficiaries. One is the health grant amounting to PHP500 per household every month or a total of PHP6,000 every year. The other is the education grant involving PHP300 per child every month for 10 months with a total of PHP3,000 every year. A household may register a maximum of three children for the program [8].

Another program by DSWD to combat poverty is the Community-Driven Development (CDD) strategy employed by the Kapit-Bisig Laban sa Kahirapan-Comprehensive and Integrated Delivery of Social Services (Kalahi-CIDSS). CDD is an approach that engages citizens in local development so that they will determine and implement specific interventions that will help their communities respond to issues affecting their poverty situation. These interventions include the construction of community projects, such as farm-to-market roads, footbridges, day care centers, solar dryers, school buildings, health centers, water systems, and small irrigation systems, among others [8].

A part of the government's efforts toward sustainable poverty alleviation is investment in businesses that provide jobs, income, goods, and services. With the primary goal of creating employment

opportunities especially for the poor, one of the most recent government-driven initiatives toward poverty reduction is called the Accelerated and Sustainable Anti-Poverty Program (ASAPP). Geronimo stated that the project will be piloted in cities and municipalities with the potential to grow economically, specifically, Cebu, Pangasinan, Camarines Sur, Negros Occidental, Leyte, Davao del Sur, Sulu, Quezon Province, Iloilo, and Zamboanga del Sur [9]. Fundamentally, these areas are classified as Category 1 in the Updated Philippine Development Plan for 2011–16. The National Economic and Development Authority [7] further explained that the highest number of poor families in the country is present in these provinces. As pilot areas, the 10 provinces also have the potential to supply raw materials, such as bamboo, poultry, livestock, seafood, spices, and vegetables.

As part of the project's kickoff, NEDA convened Salubungan, a public-private partnership (PPP) model under ASAPP, in Cebu on 30 April 2015. With the general objective of tapping the skills and resources of the poor in enabling private enterprises to expand their production capacities and markets, Salubungan will link the poverty-stricken communities with the enterprises through intervention including skills enhancement to increase the poor's employability in businesses with growth potentials, trade facilitation, and market linkages. Furthermore, Salubungan will allow the poor to supply the needed raw materials and provide inputs and services needed by bigger businesses, making the project mutually beneficial to the community and businesses [9].

Apart from Salubungan, ASAPP has another model which involves employing the poor in government programs and projects, such as in public works, shelter and facilities improvement, education, health and nutrition, and ecological management programs [9]. The Philippines has also been particularly vulnerable to extreme weather since time immemorial, but in recent years, the country has suffered from even more violent storms, such as typhoons Ondoy and Yolanda. Scientists believed that tropical storms have struck the nation more often and more severely over the past decade due to climate change. In fact, the Global Climate Risk Index 2015 listed the Philippines as the number one most affected country by climate change. Located in the western Pacific Ocean wherein it is surrounded by naturally warm waters that are likely to get even warmer as average sea-surface temperature continues to rise, the Philippines continues to suffer from climate change mainly because of its geography [10].

To address the problem of climate change and other issues concerning the environment, several initiatives have been spearheaded by the public and private sectors in the Philippines, one of which is Green Productivity (GP). GP, as defined by the Asian Productivity Organization (APO), is a strategy that combines the application of appropriate technology and environmental management tools and techniques which reduce the detrimental impact of an organization's activities, products, and services to the environment while enhancing profitability and competitive advantage [11]. In a nutshell, it enhances productivity and environmental performance for overall socioeconomic development.

In the welcoming speech by Gonzalez during the second World Conference on Green Productivity, it was stated that the Development Academy of the Philippines (DAP) spearheaded the GP promotion among local businesses and persuaded them to adopt cleaner technologies and environmental management systems with the aim of producing high quality, environmental-friendly goods and services [12]. Additionally, the Department of Labor and Employment-National Wages and Productivity Commission (DOLE-NWPC) did their part in forwarding GP by launching the Green My Enterprise (Green ME) Program in 2013. The main objective of the program is to enhance productivity and environmental performance of micro, small, and medium enterprises

through sound manufacturing and services practices. Aside from the common initiatives on waste prevention and pollution control, the Green ME Program also involve in converting wastes into profitable by-products. For instance, the AMS Employees Fresh Fruits Producers Cooperative (AMSEFFPCO) in Davao Del Norte turns banana rejects into banana flour and banana peels and stalks into bioorganic fertilizer [13].

In 2011, the Climate Change Commission (CCC) launched the first eco-town framework in the Visayas area with the goal of building an economically stable and ecologically sustainable town. An eco-town is defined as a planning unit composed of municipalities or a group of municipalities located within and in the boundaries of critical key biodiversity areas, highly vulnerable to climate change risks due to its geography, geographic location, and poverty situation. Caspe added that the setting up of eco-towns is a local implementation mechanism in the National Climate Change Action Plan (NCCAP) that provides direction for sustainable economic growth for 2011 to 2028 by building climate change-resilient communities and local economy via poverty reduction and ecosystem protection [14]. Some of the efforts under this project are the modernization of farming practices to include weather stations and small-scale irrigation facilities, introduction of more climate-resilient crops, establishment of sea walls and dikes, setting up of an early warning system, involvement of the private sector in coastal planning and management, conducting of training on disaster risk reduction and management, and provision of a clean and adequate water supply system [15].

In order to communicate the knowledge and skills on GP and sustainable development to a greater number of people, stakeholders, and communities, the APO, in cooperation with DAP, has implemented a self-learning e-course in 2015. Accessible on the APO website, the e-course aims to trigger economic development initiatives by raising awareness of waste minimization and transformation of agricultural waste into useful products [16].

BoP Cases

Case Study 1: Rags2Riches

BoP Practices

Rags2Riches was an initiative that came up from with an endeavor to alleviate poverty for the women in Payatas, a poor community in Manila. It began with weaving rugs and later evolved to making stylish rugs and bags. The name Rags2Riches (R2R) was adopted as the corporate name and remained the brand name for the foot rugs. For the production, the company followed a system of commitment. Production targets were based on the number of hours committed by the mothers at the beginning of each month. At the end of the day, the women reported their outputs to the members of the management committee.

There are three levels of weavers and they are based on the women's skills. The first level of women-weaver are solely into rug making while the second level produces rugs and bags. The third and the most expert level are those who can produce rugs, bags, and high-end bags. These three categories are based on the women's available time to weave, enumerated as follows:

- First category - those who can devote two hours of making rugs and bags a day
- Second category - those who can devote four hours of making rugs and bags a day
- Third category - those who can devote six hours of making rugs and bags a day

The women could transfer any time to another category depending on their preference. The labor cost of rug weavers ranged from 30–50% of the retail price, while bag weavers earn between 20–50% of the retail price, depending on the skill needed to create the bag. The Positive Influence Meter was a platform that its partners could use to show their social and environmental impact. For those who order, R2R will give an estimate on the volume of scrap materials recycled, how many women were empowered, and how many communities were supported. All this information became part of the product tag.

In November 2009, the Rags2Riches Producers Cooperative was established by the Payatas women. The members managed the production aspects of the business while R2R remained in charge of product development, marketing, and sales. In February 2011, the women started managing their own labor costs. The company had transferred the daily management of the cooperative to members. R2R would buy the products from the cooperative. It would pay for the women's labor but not the materials. The company had placed a profit for the cooperative. The members would take the profit, save it, and pay the weavers the cost of her their labour. Not all members of R2R joined the cooperative. Weavers who were not members of the cooperative had the choice of remaining as R2R community suppliers.

To be a weaver, interested participants need to attend trainings and seminars on basic sewing, pattern making, basic design, quality control, values and religious formation, leadership, handling finances, and running a cooperative venture. This approach had its foundation in the company's values which is the four Ps - people, planet, profit, and positive influence to other people, their community, and the world. R2R also provided training and education to the community. This extracurricular learning program was called Rags2Riches Activation for Community Enterprises (RACE). It gave the members an edge in their lives and careers, either by deciding to stay in R2R or move on to other endeavors [17].

Business Model

R2R works with local foundations, nongovernmental organizations (NGOs), church-based institutions, and partner communities to identify and engage the communities that supply R2R's products. They are R2R's partner-institutions and their members are R2R's artisans. They complement the support provided by R2R by helping the community get a site for training and cover costs of bringing weaver-mentors to the site. Communities are treated like suppliers or production units, where at least 40 member-artisans commit to at least 10 hours a week of production time each. Incoming artisans should be able to buy a kit worth USD4 and attend an orientation from R2R. Initially, they have trainee status.

It is R2R's vision that communities transform themselves into self-sustaining and legally-recognized entities that can supply their products to other companies. R2R has three basic building blocks to scale as well as sustainability:

- i. **Integrating design.** R2R transforms scrap, organic, and indigenous raw materials into stylish home and fashion accessories by partnering with a team of well-known local and international designers. The infusion of creativity and innovation into the materials and techniques creates value for the products and the brand.
- ii. **Skills training.** R2R equips community artisans with the necessary skills and tools to create the products launched in the market. R2R envisions that as the capacity to create increases, the

capacity to earn also increase. R2R created the Artisan Academy, a progressive modular training platform that gives the artisans an opportunity to learn new skills (e.g., crochet, embellishments).

- iii. **Access to market.** R2R creates access to the artisans' products in the formal economy by penetrating both retail and corporate markets with a brand positioned as stylish, sustainable, and handmade.

R2R empowers the communities and its artisans by engaging them in dialogues and consultations on matters regarding production, training, pricing, and other services. Artisans have the potential to earn between USD4.50 and USD15 per day, depending on the number of hours worked.

R2R also assisted in opening opportunities for the artisans to access financial products, such as savings and microinsurance. Through savings, artisans are better able to cope with anticipated and unanticipated needs for money. Microinsurance, on the other hand, can lower the artisans' vulnerability to financial shocks in case of death or illness in the family. R2R has partnered with the Center for Agriculture and Rural Development (CARD), the leading microfinance institution in the Philippines, to provide savings and microinsurance for the artisans [17].

Product/Service/Solutions

The team reflected on the company's core pillars of community empowerment and fashion. They project their environmental advocacy more prominently as R2R beginnings could be traced to upcycling scrap cloth. In the process, the company had contributed to converting tons of waste into high-end fashion bags and accessories. The convergence of these three pillars, community empowerment, fashion, and environment, the R2R team also ensured that its products were 100% consistent with their values. All the materials were upcycled and eco-friendly. Only discarded scraps from factories were used in the products or organic materials that did not use harmful dyes or chemicals. In fact, chemical adhesives were also prohibited from use during production. The products were eco-ethical, which meant they were made ethically. However, due to limited supply, R2R came up with innovative materials as replacement that have the potential to be developed in an eco-ethical way. To expand their sources of eco-friendly materials, R2R partnered with ethically run community-based enterprises for the supply of materials. To put their new marketing advocacy into a higher level, R2R launched another eco-friendly bag which is the Rajo Laurel Tree Bag. The project empowered four communities; i) the women of Abra, with the help of another Cebu-based social enterprise, Anthill Fabric Gallery, which produced the linen fabric of the bag from scrap thread from different materials, ii) the wood carvers of Cebu who made the wood components in the bag from scrap wood, iii) the seamstresses in Cebu who sewed the bags, and iv) the women of Payatas who made the braid handles from the scrap cloths. After the bags are assembled, R2R looks into quality control, labeling, inventory costing, and packaging.

In line with the company's win-win philosophy, for every bag sold, a tree was planted in a watershed as a means to fight deforestation. San Carlos Development Board Inc., partnered with R2R on the project and planted the trees [17].

Success/Failure Factors

The secret of the R2R's success has always been working with the community and the mothers. The centerpiece of R2R continues in empowering the community. R2R have institutional partners, event partners, and individuals. Since 2011, R2R have more than 500 local and international individuals and institutional partners. The nature of the partnership varied depending on the

FIGURE 5.1**SAMPLE PRODUCTS OF R2R**

Source: National University of Singapore [17]

expertise of the institution or individual. One of the partners provided the production site, a place for sewing machines, equipment, and training materials, and a larger working area for R2R's communities or weavers.

The PBSP, a nonprofit consortium of corporations led the advocacy and the practice of corporate social responsibility (CSR) and corporate citizenship giving trainings and grants to businesses and social enterprises depending on the immediate need of the organization [17].

FIGURE 5.2**CHECKING THE QUALITY OF THE PRODUCTS**

Source: National University of Singapore [17]

Social Impact

From the early stages of the social enterprise, the volunteers were clear on what they wanted to do which is to help create a social enterprise that would let the mothers of Payatas earn a better living by selling their products more profitably. R2R is currently in 12 communities in Metro Manila, with 167 artisans in its program. A management team of 13 full-time staff handles the daily operations, which includes community activation, training, materials sourcing, and partnership building [17].

FIGURE 5.3

IMPACT OF PATRONIZING R2R



Source: National University of Singapore [17]

Lessons Learned

Capacity building among married women in the dumpsite coupled with assistance from institutions engaged in a social enterprise can help these women to be economically productive despite their low level of education. Although these married women were deprived of education due to poverty, it does not mean that they were incapable of earning a living and will only depend on their husband's meager income. This implies that social enterprise play a vital role in empowering married women in the dumpsite, in achieving food security at the household level, and in having a good quality of life.

Case Study 2: Don Bosco Foundation on Biodynamic Agriculture

BoP Practices

Don Bosco commenced as a religious foundation before it became a social enterprise. After its first year of operation in 1995, the institution adopted the biodynamic agriculture (BA) with a holistic approach taking into consideration the interrelatedness of plants, animals, climate, soil, and other biotic and abiotic factors in an ecosystem. The result was increase in yield, better crop quality, and

improved soil fertility. Since then, more farming communities shifted to BA, producing rice, vegetables, fruits, and root crops which led to the establishment of the Don Bosco Health Foods Center in 1998.

Don Bosco also developed the Integrated Sustainable Agriculture Research and Development (ISARD) program, doing R&D in a 21-ha farm on sustainable agriculture and off-farm technologies. The farm was partly self-financed by the profits collected from harvested crops, livestock, and dairy products. Meanwhile, their Plant Genetic Resources Conservation and Development (PGRCD) program focused on the collection, retrieval, study, characterization, breeding, and improvement of traditional rice varieties, and training the farmer-breeders. Further, the institution also developed a rice gene bank station.

Another enterprise developed by the Don Bosco is an operations training center known as the Youth Camp of which different institutions make use of its facilities for their workshops, seminars, and retreats. With new funding partners, KFB Austria, Don Bosco started the GREEN Women project that produces health supplements and healthy snacks.

The Sustainable Biodynamic Farmers Association of Sagkungan, Inc. (SUBFASI) produced tea and capsules from turmeric, lemongrass, and sambong leaves, which are supplied to the Don Bosco Biodynamics Health Foods Center allowed the women to earn additional income. In partnership with Broederlijk Delen, a European funding agency, Don Bosco had launched another program on “The Community Seeds Conservation and Development” (COMSEEDCODE) to empower biodynamic farmers on seeds research.

In January 2005, the Sustainable Agriculture Productivity Development (SAPD) component responded to the need for area expansion of BA in other provinces converting 3,000 hectares of land with more than 3,000 farmer adopters. The Institutional Development Support (IDS) spearheaded in organizing 40 people’s organizations [17].

FIGURE 5.4
BIODYNAMIC GARDEN OF DON BOSCO



Source: National University of Singapore [17]

Products/Service/Solutions

Although Don Bosco's main product is organic rice which already enjoys a market share of 53% of the organic rice market in Mindanao, they diversified their product line further, translating to more work, employment, and income. There was a tremendous improvement in the production and marketing of semi processed agricultural products through the organization of the rural folk, mostly women, into microenterprises of biodynamic health supplements. This resulted to the development of the Alternative Marketing Services (AMS) to facilitate fair trade for the produce of farmer-partners. The Alternative Credit and Savings Services (ACSS) program was also created as a solution for farmers to have a start-up capital from shifting to biodynamic and diversified farming systems. Further, since the farmers are into organic rice farming, Don Bosco established a grain center with a fully operated rice mill, a drying and storage building, and hauler trucks [17].

FIGURE 5.5

DIFFERENT PRODUCTS OF DON BOSCO



Source: National University of Singapore [17]

Business Model

The business model of Don Bosco is from seeds to shelves consisting of three main programs - extension, credit, and R&D that aid farming families who are adopters or partners of the sustainable agricultural program. The extension program consists of four different services. They are surplus production, institutional development services, GREEN Women assistance, and agrarian redemption program. Surplus production is the main program which provides training, technology extension, and technical assistance to producers. Institutional development services, on the other hand, help in facilitating the organizational development of the farming families into People's Organization. The GREEN Women assistance supports women of farming families to develop processing skills to add value to their farm produce. Lastly, agrarian redemption program converts rice lands to organic biodynamic system which are organically certified and given back to the farmer without financial obligation and encumbrances after five years.

Credit program only consists of alternative saving and credit services that respond to the farmers financial production needs either through seeds, planting materials, and other production costs. One of the goals of the R&D program is to provide technology support to farmers through scientific R&D studies in the laboratory, such as Bios Dynamis Research Farm 1 and 2, and Bios Dynamis Dairy Farm, and farms with farmers participation. This service is provided by integrated sustainable agricultural research, development, and extension services. Community seed conservation and development on the other hand, conducts special research, retrieval, collection, breeding, and development (COMSEEDCODE) that responds to the need for quality and organically certified seeds to progress into organically certified seed industry.

The farmers' products undergo alternative marketing services which facilitate centralized procurement, processing, and distribution consisting of mainly rice, vegetables, livestock, and products by women to the target market through fair trading, promotion, and expansion. For quality assurance and product integrity, organic certification program prepares for smallholder group organic certification by establishing Internal Control System among members of clusters in production areas and communities. This certification program is conducted by third-party organic certification body that is directed to both producers and consumers.

Success/Failure Factors

Over the years, Don Bosco experiences different challenges. One particular example was when Dole Philippines, Inc. (Stanfilco Division) expressed their desire to expand its banana plantation adjacent to Don Bosco's physical base. Dole's practice of pesticide use and aerial spraying posed a serious environmental threat, especially in Biodynamic Agriculture where ecological pest management and organic compost are being applied. Upon learning this, the DKA of Austria urged Don Bosco to buy the estate to ensure that the Don Bosco Center and the community will not be engulfed in toxic pesticide drift. With this, Don Bosco got a PHP1.5 million (USD40,000) character loan from a bank. Operating without any outside funding support and with only PHP1.7 million capital, two buying stations, one central product outlet, and 10 personnel, the organization was able to go a little beyond breakeven after a year.

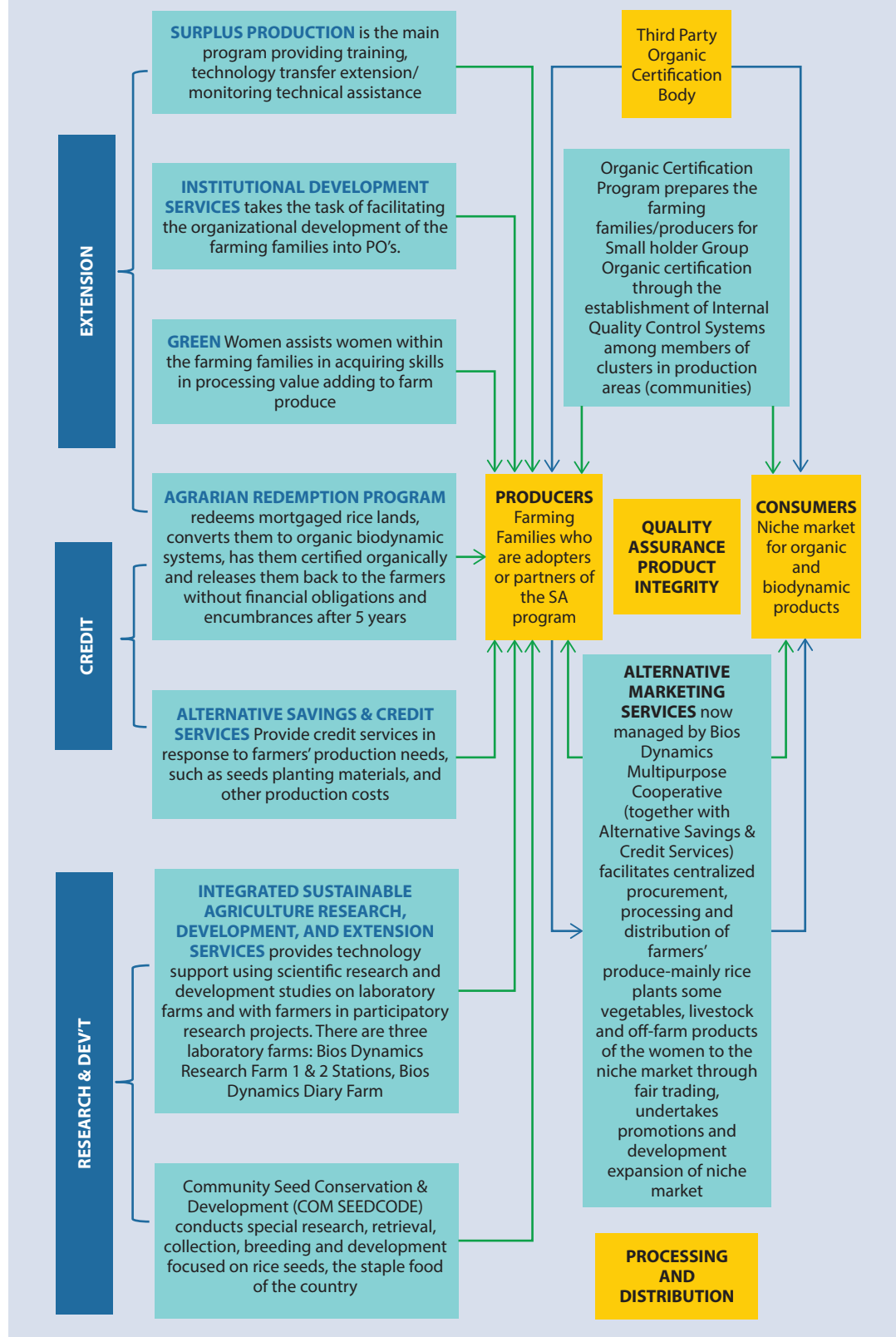
The 2003–04 funding crisis paved the way for initial achievements in financial sustainability. The Don Bosco Biodynamics Health Foods Center was then transferred to Kidapawan City. Although unplanned, a new income-generating venture started. The partnership with the EU granted financial support to Agrarian Reform in Central Mindanao (STAR-CM) which earned revenue for Don Bosco as it was tapped to provide trainings in biodynamic agriculture. Don Bosco was then able to pay their debts, and from then on had a good cash flow from their revolving capital and profits. The cooperative had its own office-cum-store with a processing center at the back. They have a herbal garden and were no longer dependent on the wild for supply. The institution has a processing center following the guidelines of the Bureau of Food and Drugs (BFAD). Both the Department of Trade and Industry (DTI) and the municipal government provided assistance. Most importantly, Don Bosco was able to sustain employment to not only local farmers, but full-time and part-time jobs to other people in the community [17].

Social Impacts

Biodynamic agriculture is not labor intensive. It is more economical as it uses less agricultural inputs and it is not time consuming compared with other traditional farming practices. With this, excess time can be channelled for other productive endeavors in the farm. The yield is almost the same to conventional farming but higher profits in biodynamic agriculture. Thus the farmers and

FIGURE 5.6

DON BOSCO'S BUSINESS MODEL



workers were able to provide college or vocational education for their children and no longer resort to loan sharks for chemical inputs. The farmers and their families have good health since they were no longer exposed to chemicals and the food consumption are chemical and pesticide free. This has led to a healthier state of mind and body which is important in becoming productive at work.

Don Bosco has 2,629 farming families as partners and beneficiaries from more than 80 extension impact communities covering 2,527.2 ha and with 11,633 active project installations. The farming families now have regular jobs with the businesses of their cooperatives hence achieving food security. They also have electricity and home appliances installed in their homes.

Lessons Learned

Biodynamic agriculture established by the Don Bosco as a social enterprise has achieved ecological success and provided income to the rural poor. This can be attributed to the technology developed which does not only focus on profit but the environment as well.

Although the technology is proven viable, employing good extension work and education in any enterprise is necessary to establish networks/linkages, distribution, and marketing channels. Further, product diversification to cater to the various needs of people are served as a catalyst for the social enterprise to grow further. Moreover, the holistic approach employed by the Don Bosco is the most important lesson learned that should be emulated by other social enterprise.

Case Study 3. Bayani Brew (On-site Study)

BoP Practices

Bayani Brew was registered in October 2012 as a social enterprise affiliated with Gawad Kalinga (GK) Enchanted Farm. Its alternative beverage product is promoted in the market is a native iced tea using indigenous ingredients, such as lemongrass, pandan, and sweet potato leaves. The enterprise sells locally prepared iced teas with two variants namely Kickass Lemongrass and Camotea Commotion at a retail price of PHP48 per bottle in restaurants, coffee shops, and social enterprise stores. The target markets are young adults and parents concerned with the health of their children.

The raw materials are organically grown in Gawad Kalinga Enchanted Farm to help improve the standard of living of the farmers. These farmers do not use pesticides and chemicals to ensure the health of the consumers. Bayani Brew likewise do not use any preservatives hence, it can only last in the refrigerator for a short while.

The tea is packaged using BPA-free recycled bottles which can be returned for recycling purposes. The label of the bottle is made of rock paper which means it is water-resistant and does not harm the forests. Further, the gift packs are made of recycled materials.

Data also proves that the product is safe for human consumption and the packaging used is environment-friendly. This implies that this social enterprise emphasizes on people's wellbeing and the environment.

Products/Service/Solutions

Bayani Brew uses local ingredients - low maintenance crops - that are easy for the farmers to grow, particularly those that are climate-resilient. The lemongrass, pandan, and sweet potato leaves are not popularly used in the country in making value-added products. Thus this serves as a breakthrough for producing beverage drink from less popular low maintenance crops. The company purchases crops directly from the farmers which means the profit goes directly to them and not to the middlemen.

FIGURE 5.7

LEAVES OF SWEET POTATO AND LEMONGRASS



FIGURE 5.8

DIFFERENT BEVERAGES SOLD IN THE SUPERMARKET



Source: bayanibrew.com

Bayani Brew aims to transform farmers into agripreneurs, by encouraging them to engage into farming as a business. This is done through training farmers on quality standards and supply chain, and partners with organizations that can teach farmers different skills. Capacity building therefore is deemed necessary in enhancing the knowledge and skills of the farmers. Further, Bayani Brew also awards deserving student with Agribusiness scholarships as part of its programs and advocacy.

Business Model

Bayani Brew's business model addresses the challenges confronting farmers, such as limited direct access to the market, susceptibility to sell crops for a pittance to menacing middlemen or to the traditionally known marketplace, lack of market information (planting the same old and low-value crops that other farmers already plant, e.g., eggplant, ampalaya, etc.), and lack of access to reasonable credit resulting in constant debt from the exorbitant interest rates of loan sharks.

Figure 5.9 shows the “Win-Win” business model diagram of Bayani Brew serving both the interest of the farmers as suppliers and the consumers. Bayani Brew's primary responsibility to farmers-suppliers is to educate the farmers on sustainable farming practices and purchase the brew raw materials higher-than-market price. In addition, Bayani Brew provides farmers interest free loans through microfinancing for farm implements. In return, the farmers ensure the supply of brew raw materials.

Bayani Brew opened doors for livelihood opportunities for the residents of the GK Enchanted Farm community. The company trains farmers and other suppliers, and ensure that all production inputs are locally sourced. The company sources its raw materials from the farm and nearby communities.

In relation to consumers, Bayani Brew increases consumer awareness on making more responsible purchase choices and understand the benefits and social impacts of sourcing products locally. Further, Bayani Brew maintains a stable revenue from customers paying for the product. To save cost, Bayani Brew promotes its products through social media. The attention of the media featuring Bayani Brew in various TV shows resulted in a tremendous increase in demand, from a previous average of three boxes a day to six to eight boxes a day. Data shows the importance of product promotion to increase sales. It is significant to note that Bayani Brew did not pay the high cost of TV exposure. The Bayani Brew's reputation as a good quality product had travelled through word-of-mouth and had fortunately reached the media.

Bayani Brew also explored different distribution channels particularly coffee shops, restaurants, convenience stores, S&R membership shopping, and other social enterprises, such as Human Nature, Souvenir Shop, and Dairy Hut. Bayani Brew built a culture that values the people involved in the company. This is attested by the employees, who appreciated the importance the company gives to work-life balance. Since the farm is located near the community, this allows farmers to go home to their families when necessary. Mothers who live in the community can also easily monitor their children even while working.

Value Chain Analysis

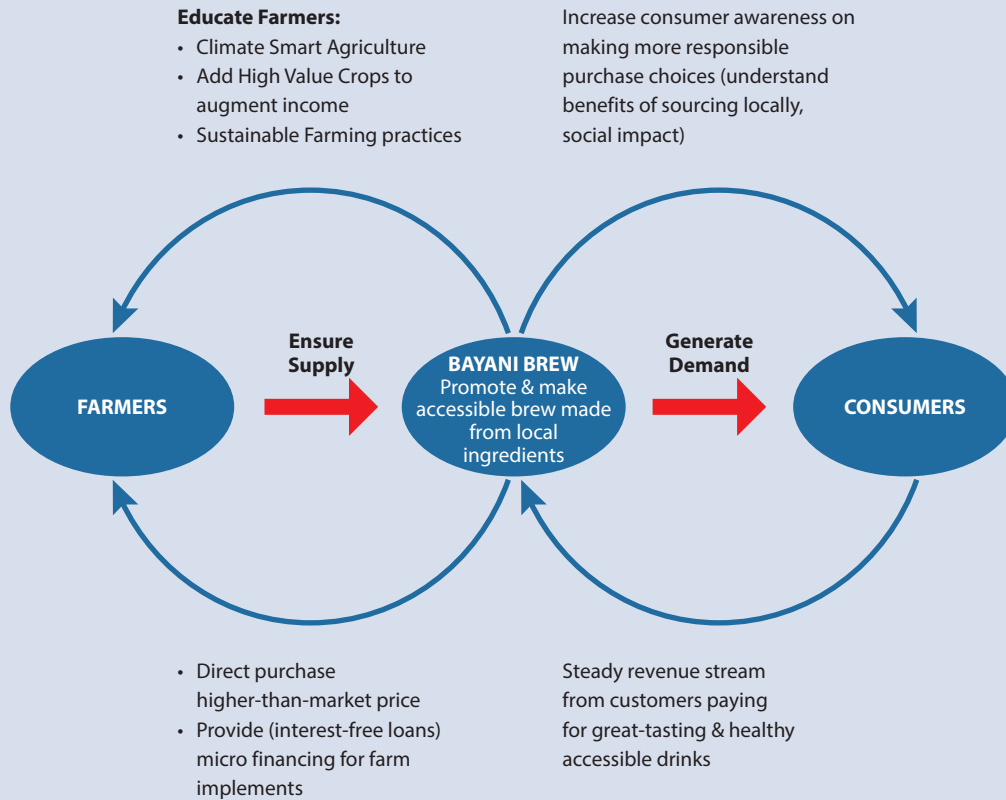
Figure 5.10 presents an illustration of the Bayani Brew's value chain which was developed based on obtained data. The illustration is an analysis identifying all the activities performed internally as inputs are transformed to finished products that defines its competitive advantage in the market.

FIGURE 5.9

BAYANI BREW BUSINESS MODEL

WIN-WIN Business Model:

Farmers learn more sustainable (smart) agriculture leading to better livelihood for farming communities, and giving conscious consumers a healthy accessible drink.

*Primary Activities**Inbound Logistics*

Bayani Brew builds strategic partnership with farmers as suppliers of brew raw materials. Farmers are educated and trained to produce quality standards of brew raw materials grown from farms near Bayani Brews' processing facility. Brewed raw materials are delivered just in time to meet the required brewing time within 24 hours of harvest. The raw materials are therefore considered fresh since the farms are situated near the processing facility.

Operations

Bayani Brew product undergoes tight quality control to ensure that brewed raw materials and packaging materials meet the required quality standards. Likewise, continuous research is in place particularly on other indigenous crops that can be used as product ingredients.

Bayani Brew also had an effective supply-chain management with the integration of activities from material procurement, conversion to finished product, and delivery to customers. Supply-chain management is essential in improving competitiveness and in avoiding product shortage.

Outbound Logistics

Bayani Brew had partnered with retailers, coffee shops, and restaurants across Greater Manila Area without any intermediaries having its own transport delivery and contract transport for contingency. It also implements just-in-time delivery for efficient product distribution.

Marketing and Sales

Bayani Brew's marketing efforts is limited to digital media only (e.g., social media and website). No cost is incurred from advertising and celebrity endorsers who support the product and its mission. The founders, partner retailers/stores, brand ambassadors, and customers use word-of-mouth and their testimonials in social media regarding the product serve as part of marketing strategy. The network of Gawad Kalinga had helped Bayani Brew gain exposure in the social sector that brings in potential customers. Many online articles in English are written about Bayani Brew's work among them are blogs, short features, and social causes-oriented websites.

The company is having difficulty making their product available in convenience store and groceries since these business establishments prefer to be provided with chillers, which Bayani Brew cannot afford. It is significant to note that there are restaurants and coffee shops that agreed to carry their product. However, some of them after a few months, terminate the operation.

Support Activities

Procurement

Bayani Brew purchase brew raw materials directly from farmers-suppliers. The suppliers are categorized into five farming communities, namely:

- i. Farming Community 1 of Gawad Kalinga Enchanted Farm situated in Encanto, Angat, Bulacan
- ii. Farming Community 2 which is the Lifebank Foundation agripreneurs - the agrarian reform beneficiaries from nearby municipalities of Angat, San Miguel
- iii. Farming Community 3 are likewise agrarian reform beneficiaries in Camchile, Dona Remedios Trinidad, Bulacan
- iv. Farming Community 4 is a parish-led organization which is the *Kaisa sa Kapatid na Kayumanggi* from Sampaloc, Dona Remedios Trinidad, Bulacan
- v. Farming Community 5 is the Good Food Community located in Capas, Tarlac

After starting in Gawad Kalinga Enchanted Farm, this social enterprise expanded with a number of farming communities supplying directly to them.

Receiving Supplies

In the case of raw materials, such as lemongrass, pandan, and sweet potato leaves for the brew, the just-in-time method is applied. Supplies are stored at room temperature in the storage room. The storage facility is only good for the week's production run. The company does not overstore supplies due to cash flow constraints. The fresh leaves as raw materials are delivered to the facility are first weighed, then brewed within 24 hours. However for the packaging materials, they are stored for one week production.

Technology Development

To achieve long-term socioeconomic growth of the company, Bayani Brew conduct research studies that focuses on naturally extending the shelf-life of their bottled drink as part of product development. This is due to Bayani Brew offering preservative-free healthy drink to their consumers.

Human Resource Management

After five months' probation period, the hired personnel will become regular staff. The company also hires casuals when in urgent need, which is seasonal or during rare cases. The administrative staff is required to work when there are personnel on maternity leave to avoid overlapping with finance work (petty cash disbursement, check preparation, bank deposits, collection, and petty cash review), administrative documentation (keeper of forms, documents, permits, lease contracts), human resource (encoding of SSS, Pag-ibig, Philhealth files, processing of leave, timekeeping for payroll), and other clerical duties.

Bayani Brew places a lot of importance to employees' skills enhancement. For instance, the warehouse crew were provided with basic computer literacy. They also conduct basic English communication training for their merchandising and delivery crew while the merchandising and customers relations trainings are in collaboration with Human Nature. Other relevant life skills trainings include financial literacy, political awareness, and emergency situation. It is good to note that Bayani Brew provides tuition assistance capped at PHP5,000 per child every enrolment. Bayani Brew also shoulders medical expenses that arise from work and extend medical assistance to personnel that do not have Health Medical Insurance. Further, the company also provides reasonable cash benefits and allowances.

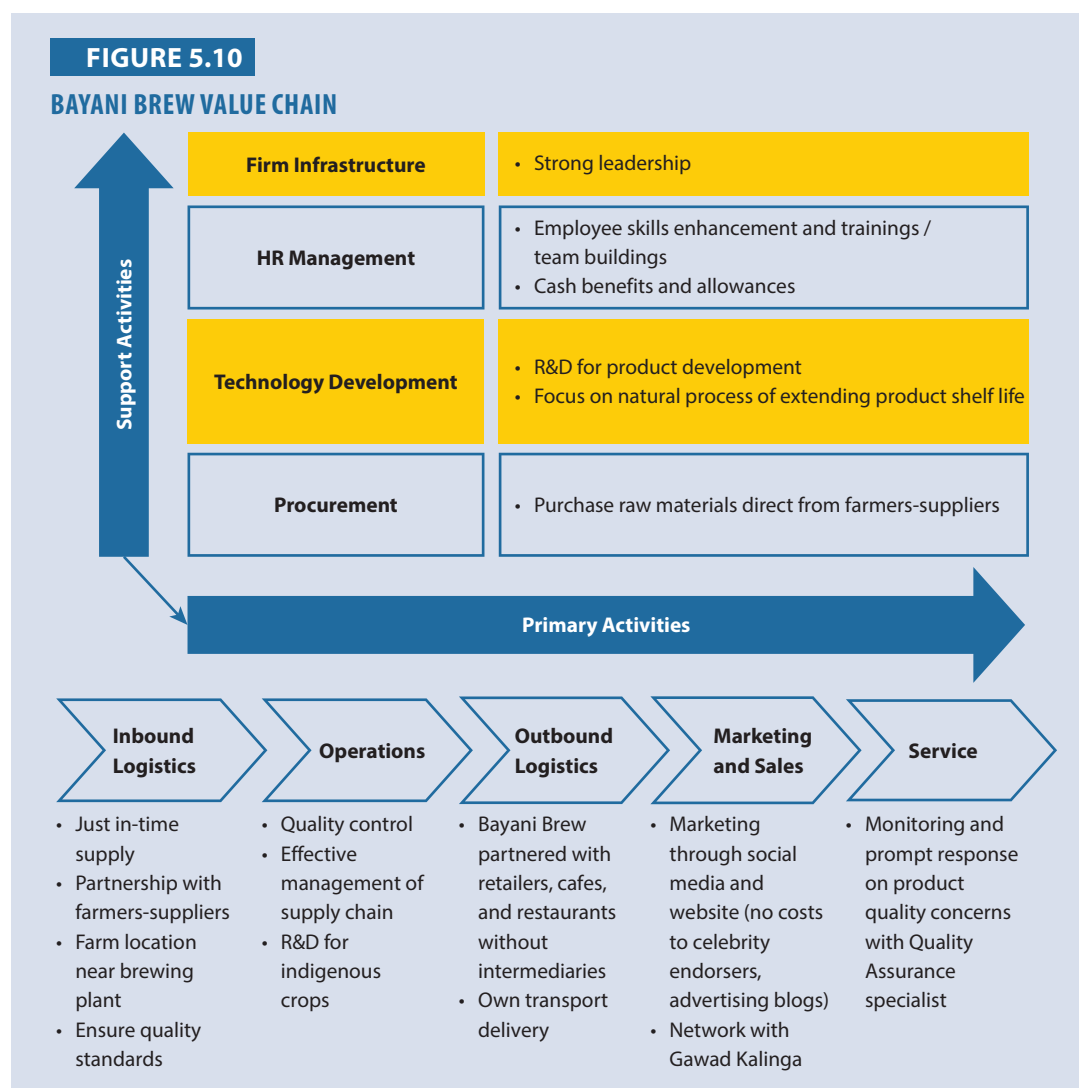
In terms of general management, the founders of Bayani Brew multitask in their operation. They work on accounting, sales, marketing, community development, and human resource development. The company had only started hiring Sales Analyst and operation staff later. The founders admitted that they still lack business development and marketing managers. Professionalism poses a problem among the personnel of Bayani Brew. The personnel in the labor force who work for a longer period of time tend to be more belligerent in obeying superiors. Hence, the company hired a managerial staff.

Firm Infrastructure

Bayani Brew had a strong leadership founded by Ron Dizon, a former IT executive, Shanon Khadka, a former practicing lawyer, and Xilca Alvarez-Protacio, a Gawad Kalinga worker who manages farm-based businesses. The multidisciplinary team of Bayani Brew is a facilitating factor in achieving success in their social enterprise.

Bayani Brew had capitalized on local demands for an all-natural native ingredients drink. It is a healthy beverage that caters to health-conscious consumers and serves as sustainable source of income among their partner farming communities. Bayani Brew is small in size compared to its main competitors which are giant beverage conglomerates. Thus the company would like to focus on establishing awareness on its brand, product, and advocacy. Due to limited resources, Bayani Brew has decided to focus on below the-line marketing. The company implement marketing ideas limited to digital media only (social media and website), bearing in mind that Bayani Brew does not have a marketing executive to execute all the ideas.

Value Chain Analysis



Analysis of the Activities in the Value Chain

Support activities and primary activities interact with each other to produce an effective value chain. A strong leadership is necessary to manage and support the primary activities particularly the operations where effective management of supply chain is a crucial factor. Human Resource Management, on the other hand, hones skills and provides benefits to employees for better work ethics and performance which links to the different stages of primary activities. It is significant to note that Bayani Brew provide medical and educational assistance to their BoP workers.

Human Resource Management also helps produce good team relationship that leads to better production of supplies that leads to a quality product distributed to the market. Quality products are easier to market and sell. Technology development helps improve operations, outbound logistics, marketing and sales, and services. It helps improve quality control through consistent production and enhance products by extending its shelf life which also helps extend market availability of products. The use of technology is also a crucial factor in advertising products since cost-free endorsements are used to sell the products. Product development helps in improving product quality which later leads to a better product quality assurance.

The primary activities are linked with one another where the five activities flow consecutively from inbound logistics through operations, outbound logistics, marketing sales up to service. Each of the services' outcome is crucial for the baseline and others' end result. The procurement is based on good BoP practices considering that the ingredients used in the production of healthy beverages are from the poor farmers, whereby their produce is purchased at a higher cost as opposed to the low price set by middlemen, traders, and direct buyers. Bayani Brew obtains its resources from the produce of farmers who are the main suppliers of their main product components. They partner with restaurants without intermediaries or people in between and establishes independent and direct contact for reselling and supplying. Bayani Brew is based on good BoP practices to keep its product and the social enterprise moving. Each of its main services and needs are provided by the people belonging to the base of the pyramid.

Managing the Supply Chain

Figure 5.11 illustrates the supply-chain of Bayani Brew that shows the relationship between suppliers, Bayani Brew, and its clients. Bayani Brew utilizes local farmers from several nearby farms-communities as suppliers of the beverage main ingredients. Farmers are educated and trained for sustainable farming practices in collaboration with other organizations. In turn, farmers gain different types of skills, financial literacy, maintain savings programs, and prepare the next generation of farmers. Bayani Brew purchases crops directly from the farmers at higher-than-market price to augment their income, thus profit go directly to the farmers and not to the middlemen.

Bayani Brew turns the crops into higher value products in the form of its signature drinks under strict quality control by ensuring that the leaves pass quality standards (e.g., weight, color, length, maturity, cleanliness, etc.). The manufacturing process includes the preparation of leaves, brewing with laboratory tests, bottling, labelling, and packaging. Bayani Brew also strategically manages its own warehouse and distribution to serve all its clients.

Bayani Brew had partnered with retailers, cafes, and restaurants to carry its drink across Greater Manila Area that are within range of its own logistics. For regional clients, such as Visayas and Mindanao, Bayani Brew sends their products through distributors. Bayani Brew has no store of its own but the network of Gawad Kalinga had helped Bayani Brew gain exposure in the social sector and brings in potential customers.

Success/Failure Factors

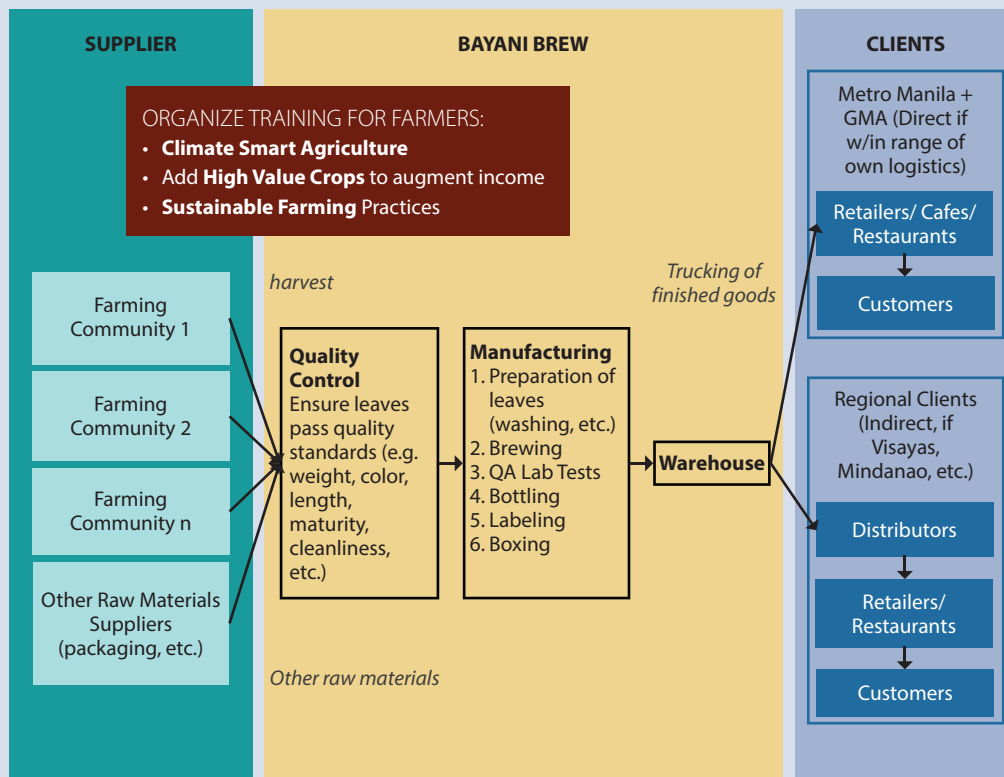
The success of Bayani Brew can be attributed to the selection of low maintenance crops that is resistant to climate change. Application of inorganic fertilizer and pesticides are not necessary in lemongrass, pandan, and sweet potato. Since the beverage drink made use of these low maintenance crops thus it is affordable to the consumers. Likewise, people who are conscious of their health prefer the alternative beverage drink formulated by Bayani Brew. Further, the tremendous increase in the sales of the beverage drink can be ascribed to the effective promotion of Bayani Brew in social media and most importantly, its exposure on TV shows.

Lessons Learned and Recommendations

This case study stresses that social enterprise development should take into consideration environmental concerns. In the case of R2R, solid wastes were converted into different kinds of products by being innovative and creative. This will not only reduce the volume of wastes generated

FIGURE 5.11

BAYANI BREW SUPPLY CHAIN MANAGEMENT



but more importantly, provide employment to those who have low educational attainment as this serves as a new source of income for them. In the case of Don Bosco, they introduced biodynamic agriculture and organic farming which do not use fertilizers and pesticides.

From the Bayani Brew case study, it was found that other less popularly known crops can be explored in developing value-added products. The beverage product was found to be economically and socially viable since it provided livelihood opportunities to the farmers. From the three cases, the featured institutions engaged in social enterprise are not merely businesspeople who are only interested in earning huge profits but they have a strong conscience in uplifting the socioeconomic conditions of the people in the BoP. For a social science researcher, this serves as an eye opener to conduct community development studies incorporating the concept of GP among low-income communities in the Philippines. This kind of action research will have an impact in the lives of the impoverished Filipinos, particularly in rural areas.

GP and BoP are not new concepts. However, there is paucity of researches implemented along these lines. In this regard, it is highly recommended that researchers in the Philippines explore this area of study by conducting empirical research incorporating GP toward the development of an ideal business model strategy. This is beneficial to the growing social enterprises and to the poorest of the poor in the country. Further, other variables that were not present in these case studies can be integrated by future researchers.

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CHAPTER 6

COUNTRY REPORT - THAILAND

Dr. Prasert Tapaneeyangkul

Executive Summary

The aim of this report is to investigate the Base of Pyramid (BoP) in Thailand. Drawing from two successful case studies of two corporations, the Petroleum Authority of Thailand and Siam Cement Group, the report outlines the best practices and lessons learned in the endeavor to alleviate poverty in communities. Findings from an on-site survey of the Electricity Generation Authority of Thailand's project in "Biological Way of Life" is also included. The area surveyed is known to be formerly susceptible to insurgency activities. An additional study on attitudes toward sustainability and implementation by the community was also conducted. The results reveal that the key to success stems from the full cooperation among the villagers in local communities working in tandem with support from the corporations via their corporate social responsibility programs. This report highlights the prospect and potential for a community's ability to achieve sustainable development is determined by the leadership skills of local community leaders and organizers, highly active public engagement and participation, and the support of relevant organizations. The report outlines the following key recommendations for the Asian Productivity Organization (APO):

- Consider the creation of a BoP clearinghouse
- Collaborate and network closely with relevant organizations from both the public and private sectors to promote sustainability programs with regards to BoP activities
- Enhance capacity building and education programs for relevant organizations in member countries
- Provide technical assistance to relevant organizations in member countries

Introduction

The poorest socioeconomic group, or those at the BoP are often the largest proportion of the population. Poverty Facts and Stats - Global Issues indicate that 3 billion people live on less than USD2.50 per day. At least 80% of humanity lives on less than USD10 a day. The poorest 40% of the world's population accounts for 5% of global income. The richest 20% accounts for 75% of the world income [1].

In 1998 Professors C.K. Prahalad and Stuart L. Hart defined the phrase "bottom of the pyramid (Base of the Pyramid)" referring to the billions of people who live at the subsistence level and in extreme poverty.

Prahalad proposes that businesses, governments, and donor agencies stop thinking of the poor as victims and instead start seeing them as resilient and creative entrepreneurs as well as value-demanding consumers. He proposes that there are tremendous benefits to multinational companies who choose to

serve these markets in ways that are responsive to their needs. After all, the poor of today are the middle class of tomorrow. There are also poverty reducing benefits if multinationals work with civil society organizations and local governments to create new local business models [2–3].

Income Profile, Poverty, and Statistics

The Office of National Economics and Social Development Board (NESDB) reports Thailand economic conditions in 2015:

TABLE 6.1

THAILAND ECONOMIC CONDITIONS IN 2015 [4]

GDP growth (%)	2.8
Income (THB/ca/y)/(USD/ca/y)	201,342.80/5,878.62
Export value (USD million)	212,109
Export growth rate (%)	–0.9
Trade balance (USD million)	34,593
Current balance per GDP (new series)	8.9
Inflation rate (%)	–0.9
Policy interest rate (%)	1.5
Exchange rate (THB/USD)	34.25
SET index	1,288.0
Public debt (USD million)	6,005.1
Remaining public debt per GDP (new series)	44.4

In April 2015 NESDB published a report on poverty and inequality in Thailand 2013. The report highlighted the latest poverty line and inequality situation including the grassroots' problems connecting the economic and social structure, and the government policy and measures to alleviate both issues. The poverty line uses this criterion: any person with an average total expenditure per capita per month that is lower than the poverty line is considered poor. The poverty line is calculated from the minimum acceptable level of standard of living comprising a set of basic human necessities including nutritional requirements as well as other basic necessities for each individual in terms of THB/capita/month.

In 2013 poverty levels in Thailand decreased. Nevertheless, lifting the population out of poverty is still a main concern for the country. Overall poverty decreased from 12.6% of the total population in 2012 to 10.9% in 2013 (7.3 million inhabitants). However, the combination of the poor and the near-poor adds up to 14 million people or 21.0% of the total population. The near poor people are defined as those with a total expenditure that is no more than 20% above the poverty line. They are vulnerable to fall back below the poverty line easily in the event they face any external uncertainties beyond their control, such as natural disasters, economic crises, or poor health that render them incapable of working. The decrease of poverty in 2015 is the result of better education access for poor children. All cost of living reduction and income boosting policies and measures by the government have successfully led to more jobs and better quality of life for many people. For example, the Royal Scholarship is offered to poor students in remote rural areas, education loan funds, cost of living reduction schemes, such as free bus and train rides, welfare in terms of money for the elderly and disabled, minimum wage rise to THB300 per day enhancing the purchasing power to cope with living necessities.

NESDB compiled and analyzed all necessary data and information related to poverty from the National Statistics Office and concluded that the poverty line of Thailand in 2013 is at THB2,572/capita/month or USD75.09/capita/month.

Thailand's Income Inequality Situation in 2013

The inequality of income or the distribution of income of Thailand in 2013 has improved slightly when compared to 2011. The income distribution problem is moderate reflecting the GINI coefficient of income in 2013 of 0.465 and in 2011 of 0.484. The inequality not only restricted to income but also inequality in financial asset, land ownership, education and health care accesses, and gender.

Root Cause and Basic Factor to Poverty and Inequality

The Thai economic structure benefits the capitalist more than the worker. The revenue of investors (excluding public sector) constitutes 55% of national income whereas only 36.5% benefits go to workers. As a result, the income differentials are widening.

Public administration is centralized in the capital and public facilities are concentrated mainly in the Bangkok Metropolitan and its vicinity. This is also the case in other Thai's big cities in various provincial area that affect's rural area population access to public facilities. Land ownership by the poor is inadequate to make a living causing public land trespass and dispute between the state and the poor as well as forest encroachment and inefficient use of public land. Illiteracy and ignorance of the law, liberty, and rights enable the poor to be taken advantage of. The poor cannot afford justice in court due to the complicated and costly nature of the judicial process. Public administration still lacks efficiency and governance including the existence of corruption among some public authorities.

11th National Economic and Social Development Plan (2012–16)

The 11th plan comprises of strategies and development plan including the current government's policy. It gives precedence to development implementation plan with targets to enhance people's income and quality of life, poverty eradication, social justice, and opportunity to the basic public service accessibility.

Some of the factors that reduce the poor's cost of living is 15 years free and good quality education, free transportation on specific public bus, and third class train rides. The raising of daily minimum wage of THB300 per day has provided better income security as well as increasing opportunities to natural resources. Now, the minimum salary of public servants with Bachelor's degree is no less than THB15,000 per month. An increment of THB2,000 per month is given to public servants with Bachelor's degree whose salary is lower than THB13,285 per month along with compensation of THB1,000 per rai (0.16 ha) but not more than THB15,000 per family growing rubber.

Public land management aims to allocate land for the impoverished. Financial funds are set up under the Village and Urban Revolving Fund and Women Empowerment Fund. Free scholarships for impoverished students and the Student Loan Fund are provided for the underprivileged. Health care scheme provides National Health Security for all with "30 Baht Cures All" program for low-income citizens while better health care welfare is available for public servants as well as a social security program for workers. There is also social welfare and low-income housing estate provided to the elderly and disabled living allowances, and Security Housing Program for slum areas and impoverished villages, including low-income housing. The setting up of Justice Clinic Program is about getting access to a fair trial in court while the Justice Fund for the Poor include free consultation service with the Lawyers Council of Thailand and law schools [5].

Public Initiatives Addressing Problems Relating to GP, Environmental Protection, Climate Change, and Sustainable Development

The government administration complies with the sustainable environmental conservation and management with respect to the United Nations Millennium Development Goals (MDGs) and UN Sustainable Development Goals (SDGs). All national agenda are set with targets and timeframe. Policies are put together and development implementation plan are launched to achieve the following:

- Ensure environmental sustainability and reduce biodiversity degradation by 2010
- Commercialize renewable energy to 8% by 2011
- Recycle municipal garbage up to 30% by 2006
- Reduce the inaccessibility to clean water and good sanitation to half by 2015

The government takes the initiative to ensure environmental sustainability by prioritizing the national agenda, namely conservation, rehabilitation, and securitization of natural resources and environment. The ecologically fragile forest is conserved with strict laws and control of illegal forest landholders especially in the upstream forest. The government encourages the civic society to protect the forest and promote community forest including tree bank, reforestation, and afforestation. The program includes:

- Developing complete geographic information system (GIS), mapping, and database on forest areas
- Improving land management and allocating necessary land to the poor
- Improving and rehabilitating land quality for agriculture for higher productivity
- Setting up marine and coastal management system for tourism, fishery, and marine lives
- Setting up holistic water management in order to secure food and energy needs and to mitigate the drought and flood sustainably by increasing the reservoir capacity to meet future need
- Promoting and campaigning efficient water consumption, resulting in water reuse and recycle to become normal practice in all sectors.

The industry applies the water footprint concept to reduce water consumption per unit production. Government agencies promotes conservation and wise use of biodiversity-based resources with fair profit sharing among stakeholders. The government emphasizes on a low carbon economy and the notion of an environmentally friendly society by encouraging the power plants, cement plants, steel industry, electronic industry, automobile industry including SMEs to adopt cleaner technology and environmentally sound technology by giving low-interest rate loan and tax privileges to retrofit machinery and processes to achieve ecoefficiency.

The Board of Investment also provides a tax incentive package to low carbon industries. The government tries to accelerate the mechanism and greenhouses gasses (GHG) reduction mitigation

by issuing various economic instruments namely environmental tax, carbon tax, carbon footprint using Life Cycle Assessment process, and Eco Design. Promotions of eco industrial town/park among industries and communities in order to achieve synergy in resources and energy, harmonize the agriculture to an ecosystem with a new concept of sustainable agriculture namely organic farming, and community forest are carried out as well. These are looked as solutions to reduce chemical use by substitution of organic fertilizer and biological product, promote ecotourism, and pave the way for sustainable consumption and production.

Due to the fact that Green Labeling is highly promoted, both the government and the private sector look more aggressively into producing green products. The Ministry of Energy plays a major role in increasing energy efficiency for all manner of transportation by promoting cleaner fuel namely, biodiesel (B5, B10), ethanol (E10, E20, E85), and natural gas (CNG). Hybrids and even electric plug-in cars are available and have become more popular.

The Town Planning Authority made environmentally friendly urban zoning into law whereby compact urban designs are accompanied with a high ratio of green area. The government also promotes Green Building design in accordance with LEED (Leadership in Energy and Environmental Design) and achieve 2.0 Gold certification. Hence the buildings consume much less energy and become environmentally friendly.

In the matters of pollution control and mitigation measures, there are several significant environmental aspects. Air pollution namely, particulates PM₅, PM₁₀ is commonly detected in urban area due to vehicles. Government investments were put into public transportation such as buses (BRT), trains, elevated trains (BTS), and underground mass rapid transit (MRT) to reduce the number of cars on the road. For the industries, cleaner technology and fuel are used in the plants. The municipal waste and wastewater management is improved by strengthening the local administration and privatizing the facilities. Relevant government agencies promote recycling habits to all walks of life. One method is getting the cooperation of all supermarkets and department stores to stop using plastic bag every Wednesday. The stores give out extra credit points when customers refuse plastic bags on other days.

In dealing with hazardous waste, WEEEs (waste from electric and electronic equipment), and infectious waste management, there are currently more than 300 waste processing plants. The authorities keep up with strict monitoring and control of waste handling, transportation, and processing.

To raise community income from natural resources and biodiversity resources, there are inspiring success stories in rural community development in commercializing a local product champion called “One Tambon One Product (OTOP)”. These product champions show the identities of each local administration (Tambon). The products range from organic rice, tea, coffee, food, dessert, herbal drink, medicine, cosmetics, and other natural or organic products. The creative economy applies well in the product design. Geographical indications (GI) fit well in proving the authenticity and originality of products of different villages. GI protects the intellectual property of these villagers. Hence the poor have a better opportunity to increase their earning. Another effective tool on environmental management is Payment for Ecosystem/Environment Services (PES) where incentives are offered to farmers in exchange for managing their land for ecological services. Clean Development Mechanism (CDM) looks into matters of dealing with climate change [5].

BoP Model as a Business Strategy

There are a number of corporations, most of them listed in the Stock Exchange of Thailand that focuses on the BoP group. The corporations employ business strategies that balances high performance, corporate governance, and corporate social responsibility. The outcomes of their tireless efforts have resulted in good progress in achieving environmental sustainability and improving the quality of life of local communities. All corporate sustainability reports are processed in accordance with the Global Reporting Initiatives (G4-Core) Guidelines.

Case Study 1. Fruitful Sustainability Endeavors By PTT Public Company Limited (PTT)

PTT does two very important things. The first is to initiate demand to turn agricultural products - palm oil, sugar cane, and cassava into bioenergy, gasohol (ethanol), and bioplastic. These not only help lessen the use of fossil fuel, which is the major cause of pollution, but also enhances alternative renewable energy that is cleaner and greener. The project is a win-win story with the farmers getting better and more secured income. It is an outstanding sustainable BoP Project, successful both in environment conservation and using modern technology, which provided an effective solution to manage high energy demand.

Second is PTT's initiative of growing forests in Bangkok and the reforestation efforts throughout Thailand as to reduce GHG emission and simultaneously improve the environment.

PTT is the national energy company listed in the Stock Exchange of Thailand. It is a state-owned enterprise under the supervision of the Ministry of Energy with the Ministry of Finance as a major shareholder. Engaging in fully integrated energy and petrochemical businesses with the mission to balance stakeholders' interests, PTT invests in energy supply chain that range from upstream to downstream businesses. PTT set up a Sustainability Management Business Unit and published its eighth annual corporate sustainability report in 2015 as part of its commitment to stakeholders in disclosing the organization's important economic, social, and environmental performance annually. The report has not only been prepared in accordance with GRI Guidelines but also the Oil and Gas Sector Disclosure (OGSD). The report further details PTT's progress in implementing the Ten Principles of the UN Global Compact (UNGC), and is externally verified by an independent third party.

PTT's performance is in accordance with UN Sustainable Development Goals (SDG). The company conducts assessments comprehensively, looking into aspects of i) stakeholder engagement, ii) organization governance including corporate governance, fair operating practices, risk and crisis management, and human rights, iii) value chain including supply chain management and product stewardship, iv) operational excellence including climate change, ecoefficiency, safety, capital project management, and biodiversity, v) people including human capital development, talent attraction and retention, and knowledge organization, and vi) corporate citizenship.

PTT's sustainability policy is to operate an environmentally friendly business under the Green Roadmap, i.e., increasing energy efficiency and reducing GHG emissions. Green Products and alternative energy are also its main focus. PTT raised public awareness over environmental conservation to create energy security. PTT's achievements can be elaborated in terms of targets (T) and performance (P).

- Generate 2%(T) of PTT's revenue from green products by 2020 with THB44 trillion, accounting for 1.5%(P) in 2015

- Reduce GHG by 5%(T) by 2020 compared to 2012 baseline with result of 84.74 kgCO₂eq/BOE(P)
- Increase the quality of forest to achieve the target of 2.1 million tons of CO₂ absorption with result of 1.89 million tons of CO₂ absorption per year and on track to achieve the target at 2.14 million tons per year in 2018

PTT's mission is to be a good corporate citizen, manage environmental impacts, and engage in the improvement of livelihoods for communities. PTT engages with communities and civic societies through collaborations with various institutions, such as PTT Reforestation Institute, Green Globe Institute, and the Sustainable Energy Foundation. With the PTT Reforestation Institute, the company officially launched "PTT Green in the City" (a large plot of land in a Bangkok suburb that is turned into a forest of Bangkok). As the country's R&D is still lagging behind the developed countries, PTT established PTT Research and Technology Institute as a national research center that is dedicated to integrated R&D in the petroleum and petrochemical fields. By 2020, PTT aims to generate at least 20% of PTT's revenue from technology. Currently its R&D Performance Index is 327.

A total of 53 new products and services were developed. PTT installed an additional six charging stations to fulfill the need of plug-in electric cars. PTT conducts carbon footprints on their products; five products have been certified. PTT is committed to developing Thailand as a center for production and trade of biofuels and bioplastics within 20 years; this will eventually lead to Thailand being a Bio-Hub.

Thailand is the world's number two biggest cane sugar exporter. There are about 1 million cane growers in the country and sugar is a commodity that is susceptible to price fluctuations. A number of sugar cane farmers suffer when the price falls under their production cost. Cassava and oil palm farmers are no exception. PTT Bio-Hub can fit into the BoP Model well and alleviate the plight of these farmers. To date, PTT has invested in two large bioplastic plants. PTT further developed the Green for Life Eco-label to communicate the organization's commitment to and encourage awareness among its stakeholders. In 2015, two of PTT's service stations and one product group were recognized.

PTT also focuses on conducting LCA (Life Cycle Assessment) for products under the Petroleum Exploration and Production Business Unit, Natural Gas, Petrochemical and Refinery Business Unit, and fuels to achieve water and carbon footprint assessments. On environmental sustainability, PTT has made some serious achievements:

- THB256.51 million cost savings made from environmental investments
- 69.78 million gigajoules of energy saved
- 587,433 tons of CO₂eq reduced
- 5.49 million cubic meter of water consumption reduced
- 396.11 tons of hazardous water reduced
- 0.101 case in land transport accident per million kilometers.

Taking climate change and energy management following UNFCCC/COP 21 into consideration, PTT has set the target to reduce GHG intensity by 5% in 2020 compared to 2012, and has integrated GHG management into its strategies for deployment to all operational levels in accordance with the Green Roadmap. Relating to energy efficiency, PTT reduced energy intensity to 0.775% per year compared to business-as-usual operations which accounted for 500,000 gigajoules per year, equivalent to the cost savings of THB194 million per year.

Committed to be a good corporate citizen, PTT's activities focus on community and social development and natural resources conservation. PTT contributed a total of THB1,407.88 million divided into 1.67% in commercial initiatives, 64.22% in community investments, and 34.11% in charitable donations. The outstanding achievements are 193,136 ha of tree reforestation which absorbs almost 2 million tons of CO₂.

Others useful projects are community biogas system from pig farming (130 households) where LPG consumption were reduced by 7,936 kg per year which is equivalent to 23.69 tons CO₂q per year reduction, 10,800 liters of diesel less consumption per year, 6,491 units of electricity less consumption per year equivalent to 3.89 tons CO₂eq per year, GHG reduction of 56.88 tons CO₂eq per year, resulting in total cost saving of THB518,980 per year. Simultaneously, agricultural revenue increased by THB423,780 per year including from increasing yields of sugar cane plantation by using sludge from biogas production instead of chemical fertilizer. Community energy training course and the Royal Princess Herbal Garden have been created throughout Thailand.

Vidyasirimedhi Institutes of Science and Technology (VISTEC) and Kamneotvidya Science Academy (KVIS) established by PTT mark not only the culmination of PTT's dedication to the "Learning Triad for Sustainability" but also support PTT in moving from a resource-based to knowledge-based organization. These two institutions provide students with learning opportunities that can significantly enhance science and technology [6].

FIGURE 6.1
PTT GREEN IN THE CITY



Case Study 2. Creating Better Quality of Life With Water Sustainability by SCG Public Company Limited (SCG)

SCG spearheaded two important pilot projects. The first is reviving community forests by improving deteriorated soil conditions and secure water in checked dams as to ensure sufficient water supply during the dry season and preventing floodings in the wet season. These two factors rekindled the fertility of the land and bring back a healthy ecosystem. The forest serves as a resource for the villagers' livelihood such as collecting wild mushroom and honey. Their income increased 2–3 times to the minimum wage. In turn, to secure their livelihood, the villagers look after the forest. They watch out for forest fires and learn to use organic fertilizer which is more sustainable and eco-friendly.

The second project sees SCG donating off-spec PE pipes to build artificial coral in the Rayong province, located 250 km east of Bangkok. The impact - number of fish have increased and the fishermen can make their living sustainably with better income.

For more than 100 years, SCG has operated its business in line with corporate governance and sustainable development framework since its inception by Royal Decree of HM King Rama VI in 1913. SCG expanded its business across ASEAN with 200 subsidiaries and 52,000 employees. SCG's core business consists of cement, building materials, chemical, and pulp and paper. SCG operates their business within the sustainability framework and is a member of the World Business Council for Sustainable Development since 2000. SCG is also a member of UN Global Compact. In disclosing sustainability information to stakeholders, SCG adopts the Global Reporting Initiative (GRI-G4).

CSR activities at SCG are divided into two components. The CSR Committee for Sustainable Development supervises the first component addressing a broad social impact so that SCG can optimize the use of resources and capacity, and identify and select critical issues that impact people's life. The second component involves communities around SCG's manufacturing areas.

There are many projects SCG has embarked on that showcases good practices for sustainability. For instance, the SCG Conserving Water for Tomorrow Project that was established in 2003, where a community learning center was built in Lampang (northern Thailand). The center captured the local real life-knowledge and experience, resulting in success stories that led to a partnership between SCG and the community in building check dams to resolve a variety of problems gripping the community. The partnership focused on reviving the community forest that serves multiple needs including livelihoods and natural defense against forest fire. The forest brought back a healthy ecosystem and became a source of food and income for villagers who earn THB700–800 per day (comparing the minimum wage of THB300 per day) collecting wild mushroom. Some have reported a spike in income to THB60,000 in six months during the peak harvest season. In addition, community members can harvest THB5,000 worth of wild honey without any investment. The check dams guarantee water supply for agriculture all year round and prevent flooding. The value of building check dams provided opportunities for members to participate proactively in the community. People can visit the Community Learning Center to learn how the community and SCG collaborate to achieve the sustainable development.

The Innovative Technology for Land Remediation Project has been launched in the same manner to establish the Community Learning Center in Nakhon Ratchasima Province in northeastern Thailand. The project presented good practice on how the community, in partnership with SCG

and various partners, had successfully applied a range of innovative solutions to desalinate soil through a unique combination of traditional knowledge and science. Among key results, rice output in the area of Ban Toey community increased from previously 300–350 kg per rai (1,600 square meters) to 600–1,000 kilograms per rai. The local villagers have also earned more income since the desalinated soil enables them to carry out integrated farming and production of organic fertilizers sold at the rate of 2 tons per day with daily proceeds of THB3,200. The community now generates a revolving fund of THB300,000 per year.

“Fish Habitat & Beautiful Beach Project” was inspired and driven by SCG’s sustainable resource management policy. Engaging all stakeholders on board including SCG Chemical staff, coastal resource conservationists, and local fishing folks in Rayong Province in eastern Thailand, the project uses disposed PE (but contains no toxic chemical substance) to assemble fish home, or artificial coral. Blending well as part of marine environment, these man-made fish homes reduce problems associated with operations of large fishing trawlers. The new fish habitat helps local fishermen to generate more income while raising awareness on the importance of marine resource conservation [7].

FIGURE 6.2

SCG HEADQUARTERS IN BANGKOK



Case Study 3. EGAT’s Sustainable Development Approach for the High Voltage Transmission Line’s Right of Way (On-site Study)

Awarded the National Best CSR and Environmental Award in 2014, the Electricity Generation Authority of Thailand (EGAT) initiated the utilization of unused land under high voltage transmission line at Kok Saya villages in Narathiwat, which is 1,178 km south of Bangkok. Originally the land belonged to the villagers, but once the transmission line passed through (with the high voltage pole),

the land was rented to EGAT. Thus the villagers could no longer use the land. However, the approach was changed and now the original landowners are encouraged to use the land for agricultural purposes. They now grow fruit trees, practice horticulture, keep giant catfish in small ponds, and raise poultry and livestock. EGAT also introduced them to the concept of adding value in their agricultural product. Together with the relevant government department, EGAT and its counterpart extended training, trading, and modern marketing courses to help the villagers position their product in appropriate markets. The project used the framework of HM the late King Bhumibhol Adulyadej's philosophy of "sufficiency economy" and it is now the living proof that "sufficiency economy" does work even in the region with serious ethnic and religious separatist insurgency.

The study was conducted in collaboration with EGAT; the largest national electricity enterprise from 9–10 September 2016. The study included comprehensive field visits and intensive interviews.

Background

EGAT implemented the sustainable development project on rented and EGAT's land as part of the organization's Corporate Social Responsibility (CSR) Initiative, using HM King Bhumibhol Adulyadej's sufficiency economy philosophy as the guiding framework. The main obstacle for this project was the security issue, given that the target area is located within the region of southern Thailand active insurgency. It originated in 1948 as an ethnic and religious separatist insurgency in the historical Malay Patani region, made up of the three southernmost provinces of Thailand, but has become more complex and increasingly violent since 2001 with frequent ambushes against the authority of the government. Nevertheless, EGAT allowed locals in the region to gain the right of way in the surrounding high voltage posts, enabling them to utilize the land for agricultural purposes. The total area of the project is about 48 ha, covering eight villages. The project was a success and was given due recognition 2014. It also serves as an example for agencies within the government to undertake similar project approach to remedy affected communities in the same region.

In 1997, EGAT constructed a high voltage transmission line and a high voltage station in the Narathiwat province, which passed through the Kok Saya villages. At the time, Kok Saya had mainly rubber plantation, a remote area where insurgents were particularly active. Despite life-threatening risks, EGAT staff made the trip and remained in the area. Eventually, EGAT launched a basic sanitation training program and 'biological way of life' for sustainable development for volunteers. This increased EGAT's exposure to local communities and villages in Kok Saya area surrounding the high voltage posts. This allowed for knowledge transfer to the locals and village leaders, enabling them to take care of their community as well as acceptance of EGAT's presence. Following this initial success, EGAT meets the locals and enquire about their needs in the area, leading the project to a basic sanitation center. This was a collaborative effort between EGAT and local villages, who contributed their own money and labor. The success of this project led to many others and the close collaboration between EGAT and the villages continues.

Geographical Overview

Generally, Kok Saya villages consists of flat terrain making it fertile ground for agriculture, such as rubber and fruit. About 75% of the population are Muslims and the rest are Buddhist. The biggest problem faced by the locals is insufficient income, forcing them to go out to work in other areas including crossing over to Malaysia. They also face challenges in accessing basic health care.

The average family size is six people and in most cases, after completing their compulsory education, children must go and find employment. The first pilot project for the 'biological way of

life' started in Village 5 and later expanded to cover eight villages, with a total population of 8,194 (1,788 households) of which over 70% are farmers.

Objectives of EGAT's 'Biological Way of Life'

The 'biological way of life' for sustainable development is one of EGAT's many projects, starting in 1998, embracing the philosophy of the King's Project. This project uses effective microorganism (EM) in agriculture and household management, conserving the natural resources and environment, etc. The idea was also shared with other communities, particularly in nearby areas where the high voltage posts run through. This is a good example of practicing sufficiency economy using sustainable development.

Objectives

- Establish a prototype community on sufficiency economy using 'biological way of life' for sustainable development
- Raise the quality of life of the communities around EGAT, making it a "learning center" of sufficiency economy for communities

Targets

Set up at least four prototype communities per year on sufficiency economy around EGAT's property by 2015.

Target Groups

Communities in the nearby vicinity of power plants, weirs/dams, and along the high voltage transmission lines.

Period of Implementation

The project was completed successfully in three years (2012–15). Currently, the program is extended to other areas.

Strategies and Procedures

- Select a feasible and suitable community to be the prototype community from the area close to the power plants and distribution systems
- Collaborate with relevant government agencies and private sectors to seek assistance in the development of prototype community, for example, agricultural and technology colleges and vocational colleges

Background

Establish a prototype community with the philosophy of sufficiency economy by using the 'biological way of life' for sustainable development. For example, the way of planting agricultural product, raising animals and fishery, and conserving the environment. The support given to the community is solid. It is developed to be the learning center and it would enable to extend and expand its ability in the conservation of energy and environment.

Prototype Criteria

- The community must be in the area of power plants, weirs/dams, and the along the high voltage transmission lines, and having EGAT as the promoter

- The community must be committed to carry out the ‘biological way of life’ for sustainable development which can be proven to be successful with clear results. Thus be a good example for other communities
- The community must be ready to become the “learning center”, both in human resources and knowledge sharing with others who come to visit
- The community must be willing to participate and work with EGAT in the project

EGAT's CSR Policy

EGAT's CSR policy is as per ISO 26000:2010, including Good Governance, Human Rights and Labor Procedure, Environment Caring, Fair Treatment, Consumer Issue, Community Participation and Development, Support on Social Responsibility Innovation, and carrying out surveys on the community acceptance of EGAT's way of management.

EGAT's ultimate goal is to create a learning ground and to raise the way to living on self-reliance that would lead to sustainable development. This is defined in EGAT's CSR framework on social responsibility. A multitude of activities were designed to elevate and improve an area according to the area's particular context. It concentrates especially in the area where EGAT's activities take place.

EGAT's staff members is the key factor to the program and they become the facilitators in the community/area. They are also the leaders who encourage joint coordination and joint effort to resolve challenges including initiating the development in an area. This creates a happy ambiance in the community, encouraging community participation and dialogue. Kok Saya is one of the many successful communities, and this project is the pride of EGAT.

Niya Vadeng and staffs of the Narathiwat Station in cooperation with seven Maintenance and Distribution Systems workers were the main force that introduced EGAT's corporate culture and work procedure into the community. They were also responsible for transforming the policy into practice, using the tools and philosophy of “sufficiency economy and biological way of life”. The success came when the community was capable of developing their potential by coordinating within the community network. The community's realization on the importance of being self-reliant and the creation of their own economy from grassroots level as well as embracing the idea of coexisting with the environment changed the outlook of conserving the environment and EGAT's property. The latter is the government's property and they are to be used safely and for maximum benefit.

Driving the Project

Phase 1 strategy: The Project started with the idea of “make it happen”. Networks must be established as to build a strong teamwork in the target area. The acceptance was from ‘word of mouth’, rather than verbal appreciation. The EGAT officers employed three strategies where they adapted and implemented from both theoretical and practical approaches initiated by Khun Sakuntala Na Nongkai, the head of the ‘biological way of sustainable development’ project:

- Do it for them to see - proving the strategy by setting up a pioneer biological farm as a demonstration farm in a small area in EGAT's property
- Teach them so they can do it too - disseminating the approach and create the network to prove that it can be done. Then focus was directed to training and knowledge sharing. Once the proof

is accepted, the project opened for 10 families and interested persons to apply to join the project and be the pioneer in developing the ‘biological way of living along the high voltage posts’

- iii. Support and assist, follow-up, evaluate the result, show appreciation, and give encouragement including financial assistance

TABLE 6.2

STEPS OF IMPLEMENTATION

Phase 1 Strategy	Description	Success Indicator
Strategy 1: Do it for them to see	Use the station’s property to carry out pioneering farm and development	EGAT’s personnel has more knowledge and confidence in carrying out the project
Strategy 2: Teach them so they can do too	Allocate area under the high voltage posts in Village 5, Kok Saya to 10 families as pioneer farmers	10 families participate as the pioneer families and realize the project
Strategy 3: Self Support	Expand the project and allocate more land for the benefit of the public and enable them to be self-supporting	Expand the area and number of public that can benefit and earn from the land along the high voltage posts to 500 families

Evaluation of Phase 1 Strategy

The initial evaluation was not designed to measure the result on quantity, but more on observation and indirect measurement on quality. From the brainstorming sessions, the team found out that the leader of the network came together naturally and individuals who have the same mind-set tend to become partners and cooperate as stakeholders. Later, by using EGAT’s skill capital available in the area, proactive approach was introduced to strengthen relationship and be part of a trusted network as the way a ‘true friend’ would.

The initial measurement placed importance on the satisfaction of the pioneer families between the high voltage posts, an area of around 20 rais (3.2 ha). The yield during this period was not measured as income and sustainability. The mission of cooperation and participation among the stakeholders can be divided into three levels:

- EGAT officers took action beyond their duty by being the leader of the volunteers in the area in order to take care of the community’s health with the government sectors
- Extending training and guidance during the development period of adapting to the ‘biological way of life’. This is done during and outside office hours
- Allocation of the land (under the high voltage posts) in Village 5 of Kok Saya to the 10 pioneering families. The commitment is to jointly take care of the equipment and the national resources with EGAT. EGAT gives the right to use the land in the said area without collecting any fee or compensation

The outstanding success in the first period is the “feeling” of mutual ownership; the start-up of a network that looks after the equipment which includes the government’s property and the benefit from the land goes directly to the user 100%. During the first phase from 2001–13 (a total of 12

years) was the pioneer project (village 5, Paluroo subdistrict, Su-ngai-Padee district), the project later extended to become a sustainable project in the next phase.

Evaluation of Phase 2 Strategy

From the small success in Phase 1, putting theory into practice that was carried out by the EGAT members and the pioneer families, the proof was acknowledged. It finally created a network of government agencies including Agriculture, Fishery, Livestock, Community Development, Administration, Military, Heads of the Villages, and the Subdistrict. These forces came together to develop and raise the standard of living of the people, supporting careers, creating work, and income. HM the King's initial philosophy on "sufficiency economy" is the driver of the project. Ban Kok Saya is the successful extension of sufficiency economy. Good governance was the driver of Phase 2 which reflect the success of each aspect of the sufficiency economy model. They are listed as the following:

1. In legal terms

1.1 Treating the public and stakeholders with equality and same standard of practice by selecting and appointing the committee members and defining work terms with fairness and equality. These are carried out during meetings between the communities and the working team of the local district of Su-ngai-Padee, having the Headman of Paluroo as consultant. A center is set up for information dissemination and collection of requests. Niya Vadeng, EGAT's personnel is responsible for this project. At the same time, a committee for Sufficiency Economy Model of "Ban Kok Saya", emphasizes on equality and rights to vote and to propose viewpoints. The Community Model was approved by Su-ngai-Padee District Officer, who also chaired the Working Committee. Mada Daoh was made President of the Community Model; Yongyut Boonsermsookckharoen, EGAT's Chief of High Voltage Transmission Lines Section was consultant, and Niya Wadent, EGAT's Chief of PR Section was acting as the Committee's Secretary.

1.2 Defining work plan, breaking clearly into steps, timeline, and venues, including following up on result, improvement, and development of continued work. The work plans covered the period from January 2013 to December 2015. A manual on 'biological way of living for sustainability development' was prepared, so the community was aware of the work being carried out. Conclusion of the year's result is reported in the year's last quarter's meeting, held in the Community Meeting Hall.

2. In ethical terms

2.1 Making channels available for requests and recommendations from stakeholders by opening up channels for request and opinion/viewpoints, such as Point 1, a feedback box is placed at the Su-ngai Go Lok High Voltage Station. The contact person's telephone number is clearly stated. Point 2, set up a Line Group Application as electronic communication to facilitate stakeholders in submitting evidence for further improvement and also to make short- and long-term planning procedure. This "Community Model" Line Group is also a channel to disseminate information to members and recruit new members continuously.

2.2 Indication of determination to fully compensate/respond to stakeholders. Time and venue for "seminars" were made available to collate the community's requests and needs

in order to make plans and define result indexing, including involving the committee and related laymen. Meetings were held between the laymen in Had Yai, Narathiwat, and Sungai Go Lok to follow-up on the work planned as well as submitting reports to the Social Affairs Section. The Social Affairs Section must acknowledge the continuity of the support from EGAT's supervisors and management and must acknowledge also the barriers/challenges.

3. Transparency issue

3.1 Emphasis on the transparency of giving and using the data and its background, accuracy, and liability. Every step of the budgeting and expenses can be audited, using resolution and approval from Meetings. They have to be in accordance with the work plan and the committee must consider, then acknowledge receipt of the request for expenses, prior to releasing of the fund. Two representatives from the public and one from EGAT were the authorized personnel to make deposits and withdrawals from the committee's account.

3.2 Every step of work is open to audit. The committee must communicate the expenses with the community after the consideration, and it could also be done by "Community Model" Line Group. The transparency can be audited through public hearing.

4. Participation term

4.1 Support the skill of stakeholders in efficient participation. The participation of the Working Committee between the public and EGAT stipulated the transfer of knowledge in 'biological way of living' leading to sufficiency economy and the actual practice. This is in reflection of the strength of the participation during the project. Eight professional groups were set up. They are i) tapioca farming, ii) fish farming, iii) organic fertilizer, iv) goat farming, v) chicken and duck farming, vi) processed agricultural products, vii) chemical-free seasonal vegetable farming, and viii) cleaning products. i, ii, and iii were set up in 2013; iv, v, and vi were set up in 2014; and vii and viii were set up in 2015. In 2016, a group of housewives making bags and clothes was set up.

5. Responsibility issue

5.1 The project has clear objectives and results, and also has follow-up and evaluation systems. The project committee has defined its targets to evaluate the success and results of the project. The targets are divided into two - quantitative and qualitative targets. Also in place are the procedures to follow-up and to give it a further boost so that the target is achieved. This includes training and knowledge dissemination to the public. The support is offered in various ways which include identifying knowledgeable lecturers to give both theoretical and practical knowledge; providing necessary material and equipment, and have available budget to extend the professional groups' capacity. It also builds the community's market mechanism and dividing duties and responsibilities as to create the sense of ownership in the project. The concrete plan, trends, and success were reported to the EGAT management. The quantitative targets are i) number of members to be increased by 30%, ii) groups' productivity to be increased by 50%, and iii) visitors to view/visit the project to be increased by 50%.

- 5.2 **Put in place efficient risk management plan.** The objective is to create the sense of co-responsibility in the EGAT's high voltage transmission lines areas by providing advice and safety guidelines on ways to work beneath the high voltage posts correctly.

6. Cost Efficiency Measure

- 6.1 **Use of technology to improve production and services procedures.** HM the late King Bhumibhol's philosophy of sufficiency economy is the main driver of the project. The project made use of suitable natural resources appropriately according to local knowledge and know-how which led to self-reliability and sustainability for the community. For example, production of organic fertilizer, plant hormones from local plants, insect-repellant from local herbs; garbage treatment and making fertilizer from household waste, including the use of water from the fish pond to water the plant. These reduce costs and the need to use expensive technology, e.g., costly modern machine.
- 6.2 **Frugal spending, capital deduction, and decreased loss in operation.** The decrease of expenses and the increase of income in the project operation of four professional groups led to success and cost efficiency; i) fish farming carried out along the high voltage posts group, ii) chemical-free seasonal vegetable group, iii) cleanser production group, and iv) processed agricultural product by the housewife group. Income increased by 30% increases in the professional groups and there is a decrease in the expenses of operations.

Benefits and Efficiency of the Project

In the evaluation of the success, it is found that the production from the 'biological way of living', driven by the sufficiency economy philosophy, under the EGAT management that adheres to good governance has both direct and indirect effect on the sustainable development in Kok Saya community of Paluroo subdistrict in Su-ngai Padee district of Narathiwat province.

TABLE 6.3

DIRECT AND INDIRECT EFFECTS

Direct Effect	Indirect Effect
1. Raise the quality of living of the people in the community	1. Decrease the problem of trespassing and the high voltage transmission lines robbery in the area
2. Create work and income and different professions to the people	2. Decrease the cost of cutting the weeds off the area along the high voltage posts
3. Help decrease expense and increase income at household level	3. Serve as a prevention against sabotage of the high voltage transmission lines
4. Enhance the social engagement between EGAT and the public	4. Create a sense of true friendship between the public and EGAT

The success is not only reflected in the sustainability of the project, it can also be seen in the expansion of mind-sets and mechanism, which can be shared to other communities in a practical way. The "Kok Saya Model" has attracted other nearby communities to participate in the project, becoming communities that are self-reliant. Surplus production is also sold to other communities.

TABLE 6.4**PRODUCTS OF THE VILLAGES**

In Practice: Expansion to Other Communities in Paluroo subdistrict	Product/Result	Current Status
Village 1 - Ban Kok Ta	Location of two shops selling products from the communities	Continue operation
Village 2 - Ban Ton Mai Soon	Cleaning products group/expanded to bag-making group	Continue operation
Village 3 - Ban Paluroo	Goat- chicken-duck farming/extended to lime growing (cement tank) group	Continue operation
Village 4 - Ban Lubobatu	Fish farming/lime growing under the high voltage transmission lines	Continue operation
Village 5 - Ban Kok Saya	Tapioca farming; seasonal vegetable farming; organic fertilizer production; fish farming and extending to lime farming	Continue operation
Village 6 - Ban Ta Se Tai	Fish farming; processed agricultural product/Kao-yum (rice salad with herbs), Ger-poh (fish stick fry)	Continue operation
Village 7 - Ban Po-noh	Tapioca farming and seasonal vegetable farming	Continue operation
Village 8 - Ban Laharn	Sewing group and herbal Kao-yum, Ger-poh group	Continue operation

In carrying out the project to help communities to be self-reliant by using the “Ban Kok Saya Model” as the initial reference point and extend the model of success, it has been found that there is an increase in the number of individuals from the public who want to use the area along the high voltage transmission lines. Participation included the planning, the thinking, and the doing. Initially only 20 rais of the area along the high voltage transmission lines were used. At present the total area has increased to 330 rais with production and professions covering eight villages. The project began with stakeholders of only 10 families. Now, there are 500. In conclusion three key factors contributed to the success of the project; i) the participation of the people in the community - Ban Kok Saya and Paluroo subdistrict (50%), ii) support from the government sectors network in the area, provincial levels, and communities heads (30%), and iii) support from EGAT in policy, budget, and personnel in the area (20%).

FIGURE 6.3**HIGH VOLTAGE TRANSMISSION LINE**

FIGURE 6.4
PINEAPPLE PLANTATION

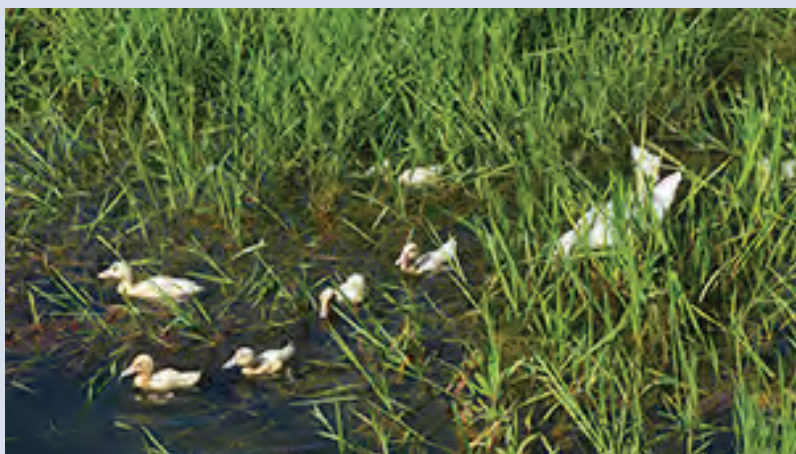


FIGURE 6.5
GIANT CATFISH POND



FIGURE 6.6
GIANT CATFISH WEIGHING 30 KG



FIGURE 6.7**FREE RANGE DUCK FARM****FIGURE 6.8****GOAT FARM**

Lessons Learned on Public/Private Initiatives Promoting the BoP

The recent government administrations, including the current government have set forth governing policies that are in accordance with HM the late King's speech (on the auspicious occasion granting degrees to the graduates at Kasetsart University on 19 July 1974) on **"Philosophy of Sufficiency Economy"**: Economic development must be done step by step. It should begin with the strengthening of our economic foundation, by assuring that the majority of our population has enough to live on...Once reasonable progress has been achieved, we should then embark on the next steps, by pursuing more advanced levels of economic development." This philosophy has become the "best code of practice" and "code of conduct" for all walks of life.

In conclusion, the government, the private sector, and civil society has followed suit and initiated various programs and projects to serve communities especially the low income and the poor. In order to incorporate GP in BoP projects successfully, multidisciplinary expertise and practical experience are indispensable.

Recommendation on Undertaking Research Based on Results

- Provide successful (as well as failure, if any) examples (lessons learned), initiatives, and implementation plans with respect to local conditions and local contents which may not be in line with multinational companies but workable and effective to the APO in order to create a BoP clearinghouse
- Assist the APO to network with relevant government agencies, private sector (especially SMEs), civil societies, and NGOs to coordinate and eventually promote BoP activities
- Assist the APO to enhance capacity building for relevant organizations in member countries
- Assist the APO to provide technical assistance for relevant organizations in member countries
- Launch demonstration activities with local communities and voluntary enterprises report poverty and inequality

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CHAPTER 7

COUNTRY REPORT - VIETNAM

Nguyen Thi Thu Huyen

Executive Summary

This country report falls under the framework of the Asian Productivity Organization's (APO) research in its member countries on green productivity measures that also provides business opportunities for the base of the pyramid (BoP). The report introduces the status quo of per capita income in Vietnam and identifying BoP groups in Vietnam. This report will also highlight the initiatives made by the communities and local authorities in several Vietnam provinces in finding suitable business models and ways to escape poverty.

Several efforts are introduced - the ecotourism model in Lai Chau province, growing fresh vegetables in Phu Yen, and medicinal planting in Lao Cai. Each model will feature specific analysis after the introduction of its business model, the implementing partners, and the role of relevant parties in the project. The report also evaluates both the successes and failures of the project implementation and analyzes the causes of failures. The segment on lessons learned and recommendations from stakeholders are featured as a measure achieve better success in the future.

Introduction

GDP Per Capita of Vietnam

Vietnam has been among the countries with the highest and most stable GDP per capita growth, thus transformed from one of the world's poorest to a lower middle-income country. GDP per capita growth increased nearly six times over the period of 1980–2014, from USD921 to USD5,353. The average annual GDP growth per capita was 4.0%, one of the highest in Asia [1]. It is deemed as a miraculous achievement in the economic development of Vietnam as the economy experienced various challenges, such as natural disasters, epidemics, and regional and global crisis.

However, Vietnam is still backward in per capita income compared with other countries in the region. In 2014, GDP per capita equaled 3/5 of Indonesia, 1/3 of Thailand; 1/5 of Malaysia; 1/14 Korean and 1/7 Singapore (PPP 2005).

General Poverty Situation in Vietnam

Vietnam's growth has been equitable with a dramatic reduction in poverty. Using the 2011 Purchasing Power Parity (PPP) line of USD1.90, the headcount ratio of people living in extreme poverty has dropped from about 39% in 2002 to 3% in 2014 [1].

However, vulnerability to poverty is high. Table 7.2 shows the large gap between the proportion of the population living on less than USD3.10 per day and USD1.90 per day, whereby the near-poor accounted for a substantial proportion of the population. Data from the national survey of MOLISA (2011) shows that near-poor household accounted for 7.4%. Under a small idiosyncratic shock (job loss, accidents, death, or illness of a household member) or related economy-wide shocks (the effects of climate change, human and animal influenza pandemics, and impacts of financial crisis) many people may be pushed into poverty. Poverty reduction is likely unsustainable without new effort.

TABLE 7.1

COMPARISON OF GDP PER CAPITA OF VIETNAM AND SELECTED COUNTRIES IN ASIA (1980–2014)

	GDP Per Capita (USD)			Average Annual GDP Growth Per Capita (%)				
	1980	2014	2014/ 1980	1980– 1990	1990– 2000	2000– 2010	2010– 2014	1980– 2014
PR China	1,599	12,473	7.8	4.1	5.6	8.7	5.7	4.7
India	1,143	5,224	4.6	1.3	4.5	7.7	4.3	3.4
Republic of Korea	4,879	35,104	7.2	9.5	6.5	3.7	1.7	4.5
Indonesia	2,262	9,707	4.3	3.5	2.0	6.7	5.4	3.3
Thailand	3,227	13,967	4.3	4.5	3.9	6.0	1.3	3.3
Vietnam	921	5,353	5.8	3.3	5.2	7.3	4.8	4.0
Brunei	160,512	68,499	0.4	-10.3	-0.4	2.3	1.0	-1.9
Cambodia	840	2,995	3.6	2.4	2.1	6.4	4.2	2.9
Philippines	3125	6659	2.1	1.1	2.1	2.4	4.0	1.7
Lao PDR	930	5544	6.0	3.7	3.4	7.3	7.9	4.1
Malaysia	7031	23158	3.3	1.6	5.0	4.0	3.2	2.7
Myanmar	892	5344	6.0	-0.7	3.6	11.6	8.8	4.1
Singapore	12429	72583	5.8	5.1	7.0	5.6	1.0	4.0

Source: Penn-World Tables 9.0

Note: The per capita GDP levels and growth rates are based on the international (purchasing power parity adjusted) prices of 2005, which are based on the Penn-World Tables 9.0.

TABLE 7.2

POVERTY INDICATORS OF VIETNAM (%)

	2002	2004	2006	2008	2010	2012	2014
Poverty headcount ratio at USD1.90 a day (2011 PPP) (% of population)	38.78	27.12	22.01	16.17	4.78	3.23	3.06
Poverty headcount ratio at USD3.10 a day (2011 PPP) (% of population)	69.32	58.46	51.15	45.61	18.05	13.86	12.02
Poverty headcount ratio at national poverty lines (% of population)	28.9	19.5	15.9	14.5	20.7	17.2	13.5
Poverty gap at USD1.90 a day (2011 PPP)	10.37	7.02	5.52	4.06	0.99	0.58	0.62
Poverty gap at USD3.10 a day (2011 PPP)	28.18	21.43	17.77	14.68	4.91	3.47	3.09
Poverty gap at national poverty lines	7	4.7	3.8	3.5	5.9	4.5	–
Poverty severity at national poverty lines	2.4	1.7	1.4	1.2	2.4	–	–

Source: World Development Indicators

The depth of poverty (poverty gap) throughout the nation has also improved, signifying sufficient improvements in living standards of the very poor. This is largely the result of strong economic growth, phased and managed trade liberalization as well as poverty reduction policies targeted directly toward the disadvantaged groups.

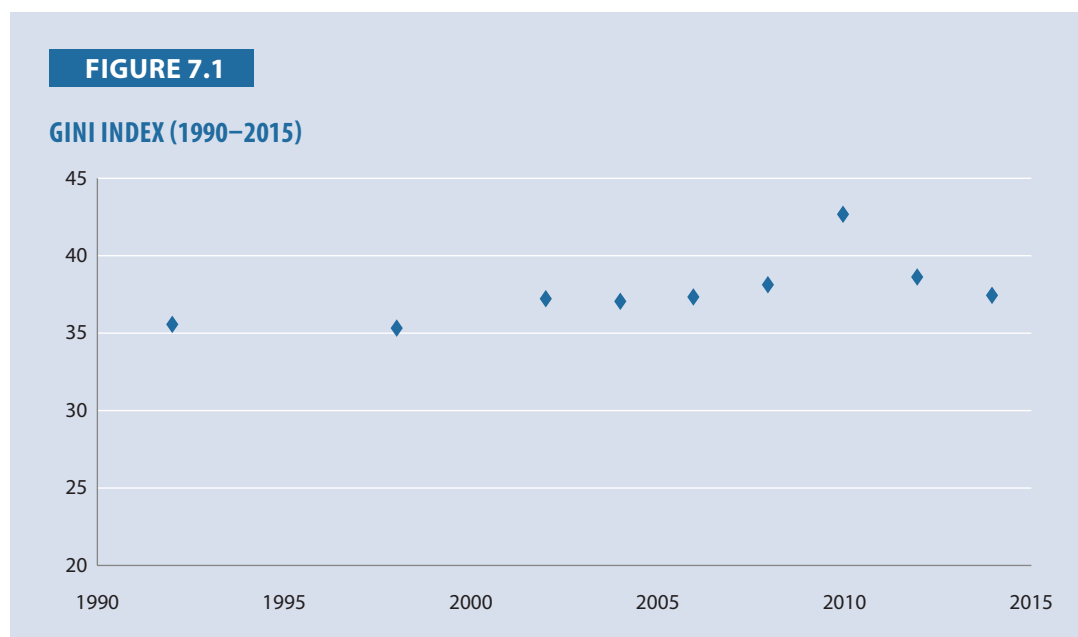
With rapid poverty reduction, the living standards of ordinary Vietnamese had gradually rose. Positive changes have brought a new outlook to rural and mountainous areas. Quality healthcare at health facilities and preventive medical care, and epidemic disease control have noticeably improved. Persistent and unwavering efforts in renovating and reforming the education system at basic and advanced levels have helped enhance the quality of teaching and learning. Public infrastructure has witnessed spectacular growth, and this transformation has been a pivotal driver of economic growth and social development [2].

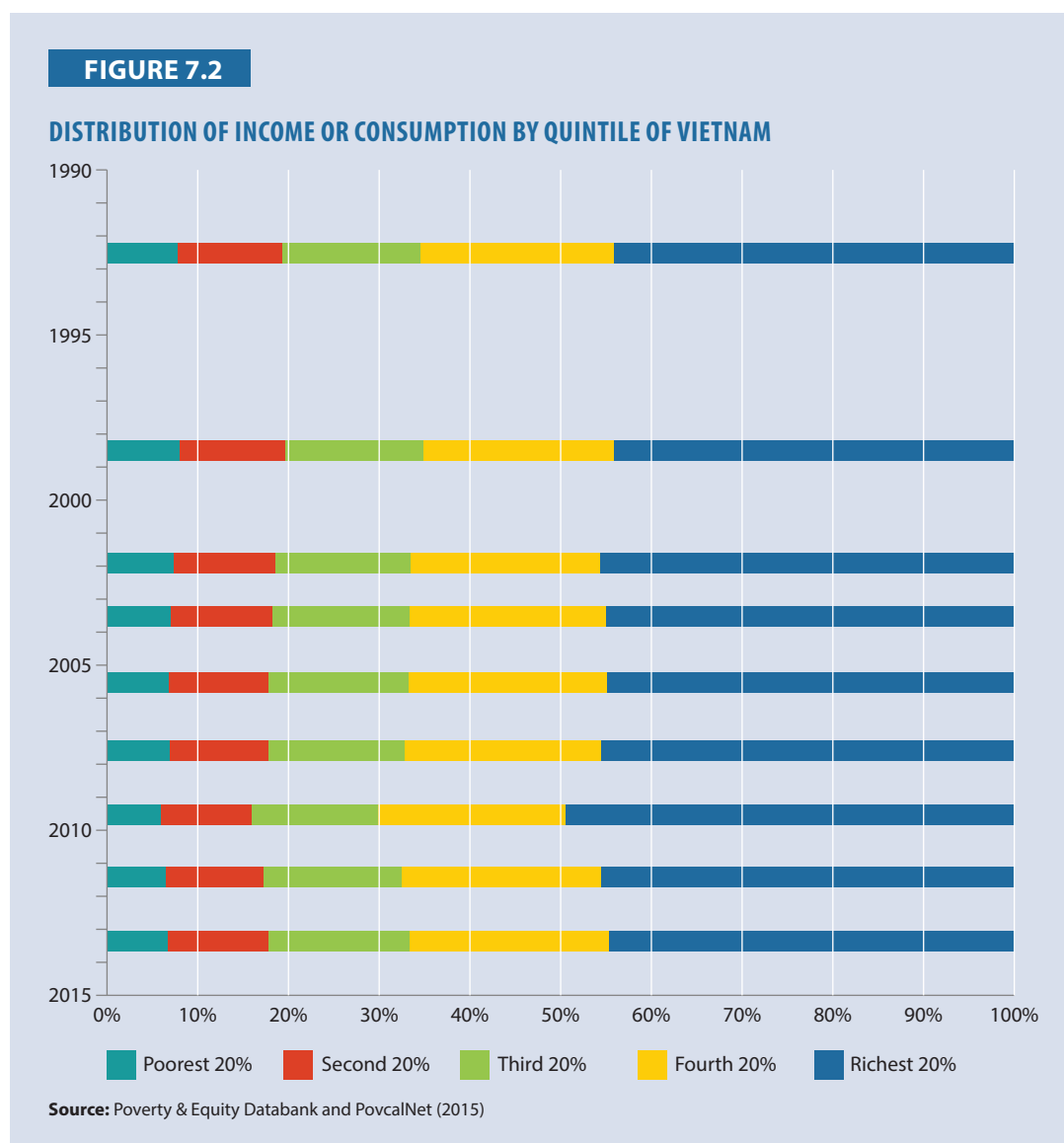
Social Issues Related to Poverty

Vietnam has been hailed for its economic growth and poverty reduction, but it is still coping with many major challenges related to inequality, vulnerability to poverty, and long-lasting poverty among vulnerable groups.

The first challenge of inequality, which is measured by the GINI coefficient index - with 0 representing perfect equality and 100 signifying absolute inequality, has been a growing concern in Vietnam. The value for GINI index (World Bank estimate) in Vietnam was 37.6 as of 2014. As shown in Figure 1, over the past 20 years this indicator reached a maximum value of 42.7 in 2010 and a minimum value of 35.4 in 1998. A wide income disparity exists between the rich and poor, when the top 20% accounting for around a half of the nation's income and the bottom 20% receiving fewer than 8% over the past two decades [3].

The second challenge of high vulnerability to poverty is clearly seen in the large difference between the proportion of the population living on less than USD3.10 per day and USD1.90 per day [1]. Data from MOLISA's 2011 national survey shows that near-poor households account for 7.4%. New and sustainable efforts have to be made to alleviate poverty in the country.





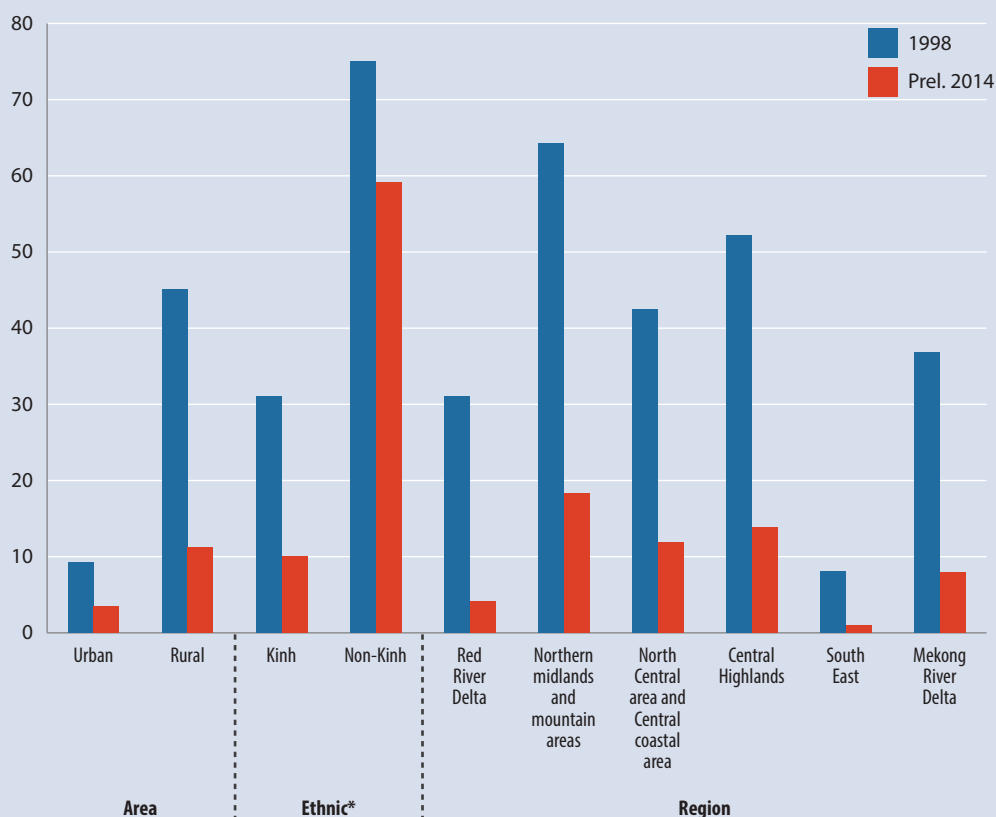
The third challenge looks at long-lasting poverty at vulnerable groups. Although both rural and urban areas have observed rapid poverty reduction, the poverty rate in rural areas had been considerably higher than that in urban areas. In 2014, the poverty rate in rural areas was 10.8% while the urban area was at 3.0% [4].

Further, there is a big difference in the progress made in poverty reduction between the ethnicity. For instance, the Kinh group experienced a rapid decline of poverty from 31.1% in 1998 to only 9.9% in 2012. However, the rate was less dramatic for non-Kinh group from 75.2% in 1998 to 59.2% in 2012. It shows that ethnic minority groups and communities in remote areas are left behind in the development process of the country.

Geographical disparities also existed, with the southeast, the Red River Delta, and the Mekong River Delta outperforming all other regions in poverty reduction with single-digit poverty rates of 1%, 4%, and 7.9%, respectively in 2014, down from as high as 7.6%, 30.7%, and 36.0%, respectively in 1998. The northern midlands and mountain areas, having the highest population share of ethnic minorities and isolation from the national market, remained the area with the highest poverty rates

FIGURE 7.3

POVERTY RATES BY AREAS, ETHNICS, AND REGIONS



Source: General Statistics Office of Vietnam (2013)

(18.4% in 2014, down from 64.5% in 1998). The north central and central coastal areas, and the central highlands shared a similar performance with a drop of poverty rates to 11.8% and 13.8% in 2014, respectively.

There remain segments of the population that have not yet left the poverty trap for good. Hunger and poverty are persistent in rural, mountainous, and remote areas, and wherever there are ethnic minority groups. People in these regions do not have the resources to conduct agricultural activities, which is the main source of income for the majority of the rural people. The poorest rural people live in remote areas with small plots of low quality land that is unsuitable for farming. Similarly, people living along the coastal line are faced with harsh climate conditions that restrict their opportunity for farming. This implies that a much more sophisticated and nuanced policies are required in order to push the country to become middle-income status.

Government Initiatives on Eradicating Poverty

Robust economic growth has been the key driver of poverty reduction in Vietnam, but government policies and targeted programs have played a major role in making the growth pro-poor. From 1998 to date, hunger eradication and poverty reduction became a national target programs, included in every five-year Social-Economic Development Strategy (SEDP) -1998–2000, 2001–05, 2006–10, 2011–15, 2016–20.

The SEDP aimed to integrate the poverty reduction strategy into growth and development objectives, considering poverty reduction as both a tool to achieve sustainability and the driver of the country's overall development. The SEDP prioritizes investments for socioeconomic development, particularly in regions with high poverty incidence to help narrow the gap between social groups. Other measures under the SEDP include the implementation of a social welfare strategy, pay closer attention to the ethnic minorities and those in mountainous provinces, and better natural disaster management and climate change response. Accordingly, there has been a vast majority of national targeted programs for poverty reduction aiming at supporting health policies for the poor, education policies (building schools and exemption of educational fees), social welfare for the vulnerable, housing, land, and production, and credit support. In addition, the government of Vietnam collaborated with many international organizations, such as the UN that has initiated different programs on eradicating hunger in Vietnam. In the National Zero Hunger Challenge (ZHC), the government of Vietnam committed to achieve Zero Hunger by 2025 by formulating a National Action Plan and implemented among the national ZHC. The National Action Plan will contribute to the country's SEDP 2016–2020 through further addressing poverty reduction, food security, and nutrition in rural areas, especially in remote and isolated areas that are home to ethnic minorities and vulnerable groups in the northwest and central Highlands.

While different types of policy interventions are required for poverty reduction, they still have been far from sufficient. Initiatives on eradicating poverty in Vietnam have mainly focused on poverty targeted programs, but may not be very effective in dealing with near-poor issues. The contributing factors may include of a list of poor people being updated only annually while movements in and out of poverty may occur much more frequently. In addition, due to resource constraints, this list may be subject to a quota on the poverty incidence imposed by higher authorities. To effectively help the poor to escape poverty in a sustainable manner while protecting the nonpoor from being pushed into it because of small idiosyncratic shock or related economy-wide shocks, Vietnam requires a broad-based poverty reduction approach. For example, the government of Vietnam could look into enlarging income earning opportunities, reducing risks, and building up human capital.

Identifying BoP Group/BoP Market

The terms 'poor' and 'base of the pyramid' are generally used without careful definition and often interchangeably (Caroline and Shamash 2015)[5]. While donors tend to use the term 'low-income people' and 'poor people', businesses and investors refer to 'markets in which they serve people of the BoP' or in 'underserved markets'.

However, they are significantly different. According to Allen et al. (2007)[6], the BoP group is the socioeconomic segment having annual per capita income of less than USD3,000 in PPP. This USD3,000 figure is based on 2002 PPP, so it is equivalent to USD3,260 in 2005 PPP or USD8.90 per person per day (2005 PPP). Thus BoP refers to income levels that are four to six times higher than development definitions of 'poverty'. At this income level, more than half the global population belongs to the BoP group, while the BoP market in Asia (including the Middle East) represents 83% of the region's population (Allen et al. 2007)[6].

Using this approach, about a third or half of the Vietnamese people live at the BoP. With its population of 90 million, the market is large because the BoP group accounts for 39 million people¹.

1. <http://vietnamnews.vn/economy/267152/companies-told-to-target-bop-market.html#kocrSMswdh8UKsDu.97>

BoP Cases

Case Study 1: Ecotourism in Hon Village, Tam Duong District, Lai Chau Province



The Project

Tam Road is an area that covers 828 km² with a population of 46,000 people. It has a huge potential for tourism development with beautiful landscapes and scenic villages, unaffected by development. On the other hand, Tam Duong, which is close to the Sapa tourist center, is far too developed and has inspired tour operators to look for new destinations. Though close, the potential of Tam Road has not been effectively exploited because of its limited access, underdeveloped goods, and lowly educated populace. A variety of problems, economic challenges, lack of infrastructure, and the area's mountainous landscape are factors that have directly impacted tourism development. Thus the need to implement a community tourism development project that is linked to sustainable poverty reduction. It is a solution that supports local people to have access to the market economy while developing tourism services that can contribute to their livelihood. A program was developed to look into sustainable poverty reduction in mountainous and remote areas that are inhabited by ethnic minorities [7].

Project Objectives

The objective is to improve ethnic minority development in challenged areas with tourism initiatives as a way to reduce poverty with effective use of resources. Good human and environmental values are to be preserved while sustainable communities are built.

A good array of tourism products and services were to be developed by featuring by incorporating the local cultural values and the natural offerings of the land. The outcome was to increase income and improve access to social services, thus contributing to poverty reduction for the people in the area [8].

Specific Objectives

The aims of the project is refined further with specific objectives. They encompass:

- Capacity building for sustainable tourism development, sustainable use, and efficient local resources for economic development and tourism

- Create more jobs and income for vulnerable groups, such as the poor and women of ethnic minorities, which will contribute to poverty alleviation and improve lives
- Increase people's accessibility to social services and deliver good infrastructure. Also, increase economic exchanges, promote the area's unique culture and agricultural consumption, and encourage tourist visits
- Raise the awareness of the community in preserving their traditional values, landscape, and environment protection
- Capacity building of local authorities

Business Model

Each one played a role. There must be strong cooperation between local authorities and travel units that creates income opportunities, especially for those in remote areas.

The local authorities take the role of providing infrastructure, training labors, and obtaining financial support. The community takes initiatives in coordinating with the NGOs for funding, local community for macro environment, and set up suitable business model.

The function of the Center for Information and Tourism Promotion in Lai Chau province is to promote the tourist destinations in the area, connect with the local travel agencies, establish new tourist routes, provide information, and facilitate the activities of tourists in the province.

Cooperatives are set up for ecotourism in Tam Duong district, complete with boards of director, inspectors, and chief accountant. This business model was seemed suitable for start-up businesses in the small community of the remote area.

The local authorities also played an important role in creating a good base for business. They:

- Supported the development of infrastructure projects, material, and technical base for tourism in small-scale projects
- Supported service-skills tourism, provide funding and support for people to develop tourism services income
- Provided Capacity Building Training for residents and local officials in the management and implementation of tourism activities
- Supported market access and carry out tourism promotion

Detailed Activities for Green Tourism Value Chain

i. **Market review**

Market assessment was done with consulting bodies and donor agencies.

A comprehensive market assessment was carried out in various destinations that also looked into private ecotourism. They included the following:

- Set up a survey to obtain samples, profiles, and interests of tourists in the region
- Local business advantages were to be acknowledged and recognized by the country's tourism board
- Increased interest in ecotourism products were taken into consideration the extent, nature, and the existence of the industry
- The assessment of various tour operators and affiliated companies in the country on ecotourism products

ii. **Develop high quality ecotourism products**

The availability of high quality ecotourism product partly played a role in ensuring the success of implementing the business plan.

The first step was to test the market with select groups. The quality of the ecotourism products were maintained with the local people's growing business experiences and continuous tourists arrival. As such, the market segmentation needed to be identified. Another component that was not too complicated but important to the ecotourism market was that tour coordinators had to be genuinely interested in seeking practical experience in the natural environment. It should remain pristine and unexploited.

The beauty of the natural environment and landscape should be seen as unique, attractive, and part of the national heritage. If that were maintained, the project had a bigger hope of being more successful. Simultaneously, the locality were also looking into the quality of their living conditions and environment.

- Combination of natural and cultural factors will attract more tourists to the area
- Good conditions of accommodation must be maintained at all times. Cleanliness is the first most important criteria as well as comfortable bathrooms and working toilets. The design and environment must be in harmony. Other factors, such as temporary housing and NGI camping arrangements must be improved
- Local people trained as tour guides and interpreters
- Local products and handicrafts - the quality of products that reflect the traditions of the region can be made and sold, but the exploitation of valuable cultural artefacts and other resources must be avoided
- Initiatives should be introduced to preserve the local culture and traditions
- Participation - Travelers have the opportunity to rate the activities they participate in in the area. There should also be a protection program that are linked with the components of ecotourism and community-based criteria

The quality improvement methods were as follows:

- Skills training
- Working with the operators of private units and models that involve the private business operators
- Link projects to other locations as to provide different elements to tourists. Local communities can also seek to work together with other organizations, such as park management authorities.

iii. **Coordinate with tour operators on tourist management**

The first concern was the selection of tour operators. Travel companies were reminded that their mission was to support conservation and trade exchange with the community. The companies can look into designing a number of conservation programs and tours are to be limited to a small number. It was stressed upon them on a few specific issues, such as avoiding the sale of artefacts that has sacred significance and the use of unsuitable fuel. Tour operators can also look into applying for environmental impact assessment as well as social and cultural systems in order to develop proposals.

Planning was made for both inside and outside of the protected areas. This included identifying the location and extent of planning permission. In some villages and communities, they have identified specific areas of ecotourism that required solutions to wildlife conservation. Generally, it was agreed that the hostel for tourists was to be located away from the village community area.

iv. **Promotion strategy**

Part of the promotion strategy was to identify and feature the unique qualities of ecotourism in the area. Leaflets were created and made available for tourists. Visitors were also requested to leave their details at the center.

Future marketing plans will be prepared for the project but it must involve market research for the design of effective marketing programs.

The essential part of the project was to create good and trusted relationship with the tour operators. Tourists and visitors were advised to contact the tour operators directly on the various packages that are offered or look into packages that are customized to their needs.

Socioeconomic Impact

The Hon village is a friendly destination that is easily accessible to tourists. Investments were made to improve the infrastructure, such as roads, public housing, sewerage, water supply, electricity and telecommunications. A good service system was also established.

To date, the Hon village can accommodate about 10,000 tourists a year. The tourism services included homestays, village tour (village walk), treks along streams (the Stream of Love Trail), traditional cooking classes (local Lu cuisine/cooking class), traditional cultural performances, traditional textile weaving, and voluntourism (volunteer tourism).

Ecotourism in the Hon village increased the earnings of the local population by at least 20%. In addition, other good benefits came out of the program, such as the conservation of natural resources, the village environment, and cultural values .

The model of community-based tourism development in the province contributed to sustainable poverty reduction, enabling and empowering people, especially the ethnic minorities to overcome rising poverty by themselves. This model will be replicated for other community in the country [9].

TABLE 7.3

CURRENT SITUATION OF THE PROJECT

Project Groups	Number of Beneficiaries	Project Capital (USD 'million)			Total Area (ha)			Payment
		Plans	Registered	Disbursement	Plan	Operation	+/-	
3	135	1,377	1,377	1,373	23.7	8.2	-15	Done

Source: Data from author.

Success Factors

The project accomplished its goal of creating employment for specific communities based on local availability.

The success of the program was contributed by the local people's willingness and desire to escape poverty, combined with the support of local authorities.

The local government played its role effectively by constructing good infrastructure and providing investment capital.

The local people also actively sought collaborative partnerships and customers. They proposed a number of options for the local government to support their project development.

Failure Factors

The coordination of the parties involved in the project implementation was limited. The value chain of the tourism products that were deployed to tourists and visitors faced many obstacles, resulting in long delays.

Tourism products also lacked good promotional design that would have attracted more visitors.

The support of local government should be more flexible, ready to meet the needs of businesses to open corridors for businesses. It is necessary to have tourism promotion programs to train human resources and improve tourism skills for the local people to meet the future demands of the market.

The deployment of tourism links also encountered many difficulties as most of the visitors were scattered customers, not groups. Relevant project partners were unable to secure group visits nor attract high income-bracket customers.

Lessons Learned

It is very important to educate people to take the initiatives to identify and develop various options to get out poverty.

The local people actively sought partners to coordinate the implementation of their programs. This produced good results where relevant stakeholders, such as the government and the market expansion parties were ready to assist after witnessing the positive efforts put in by the people.

Products and solutions should be based on existing local advantages, creating a competitive advantage of the locality.

Only with the willingness of the people in wanting to rise above poverty will ensure the success of the project.

Case Study 2: Growing Safe and Clean Vegetables with Vingroup



The Project

In 2011, Phu Yen Province People's Committee announced the planning and objectives of safe vegetable production at concentrated areas by 2020. The area for cultivation was in a land size of 880 ha that will produce output of more than 84,000 tonnes to meet 68% of consumer demands for safe and clean vegetables. The total area of 1.3 ha will be used as the center of agriculture, forestry, and fishery [10].

Business Model

The main aim of the program is to provide safe food for consumers; the second, to support farmers with technical approach, application of innovative technologies, and optimizing agricultural production, and these were to be followed by the objective to gradually build an international brand name for Vietnam agricultural products.

The business model is to deploy a new type of cooperative that links "four houses" - farmers, scientists, businesses, and the state government. Initial results show that this business model has helped to raise farmers' income and ensure safety standards of food hygiene.

The process of Vietnam Good Agricultural Practices (VietGAP) vegetable production in Phu Yen province is the first local link chain deployment. The state will control the production processes, input, and output to create clean products and develop strong brand names for each product.

Phu Yen Province People's Committee cooperated with the Department of Science and Technology and Vingroup chain of supermarkets 'Vinmart' in the region to set up an area for VietGAP technology in bringing the products directly to consumers. Vingroup created a special segment or space to promote Vietgap products in their series. The idea was to allow the consumer to watch the process of planting fresh produce with their own eyes. This engagement is very important in creating credibility with customers.

Specifically, the Company for Investment and Development of Agricultural Production (VINECO) gave direct training and guidance to farmers on clean production processes as well as providing technology support, engineering, and cultivation. The training also incorporated methods of quality control in the manufacturing process.

VINECO gave the commitment to buy the produce and place them in the market. Part of the strategy was to place a portion of the output in the retail system under the VINECO brand name.

Setting Up A Green and Sustainable Value Chain

Training Farmers to Participate in the Model

Farmers who participate in the VietGAP production model are carefully trained to quickly grasp the production process that has an annual output of around 110 tonnes. The farmer must keep a diary, detailing the time they carry out various activities, such as fertilizing and spraying. The products used on the growing of the vegetables are natural, which make the cost of VietGAP vegetables higher than ordinary vegetables in the market [10].

Make Changes on Habits of Vegetable Growing

With the motto of "hands-on", the offered vocational courses attracted many participants. The local people can live, learn, and practice on the beds of vegetables – from soaking seeds to planting, fertilizing to pest identification. There are certain restrictions in using plant protection products. The result, the vegetable quality is assured, and even better, the program increased farmers' productivity.

Horticulture classes have helped many people to do things correctly. In turn, there are savings in production costs, limits pests, and increases productivity.

The VietGAP vegetable production is also tested and monitored regularly.

Strengthening Consumer Confidence in Finding Solutions to the Paradox of Supply and Demand

Acknowledging that supply and demand may prove to be an issue, the vegetables produced in Vietnam should be standardized and the development of regional brand for vegetables promoted. In building and strengthening consumer confidence, the growers must first comply with the set processes and vegetable cultivation techniques as well be committed to product quality. Then, the vegetable quality is approved by specific safety codes and clear labels are attached to help consumers to trace the source easily.

The Vingroup has created links with cooperatives and farmers in the province with the slogan "Together we support and promote agricultural production in Vietnam". The programs and

business links that the Vingroup created with cooperatives and farmers ensure clean and safe source of food. Simultaneously, they also contribute to modern production mindset that are both effective and income-churning for farmers.

Ensure Quality After Harvesting

After harvesting, VINECO purchases the produce and proceeds with support brand development. The program allows for autonomous distribution from field-to-supermarket that cuts out intermediate parties and improve the quality of agricultural products.

To ensure the quality and safety of agricultural products in the program, VINECO expects to spend VND50 billion in total budget to build a quality control system, including the cost of equipment, control tools, and a quality control team of 300 people. Inspection and supervision of the cooperatives were carried out in several layers: locally managed with daily inspection to periodical inspection by VINECO's supervisory team [10].

Technological Application

VINECO has invested in equipment and technological applications, such as using the QR code to ensure transparency of information related to the produce - place of production, time of harvest, etc. Consumers can easily search for such information using their smartphones.

Socioeconomic Impact

The planting of vegetables in accordance to VietGAP standard has provided a lot of jobs to the people in the area. The province has created jobs for 13 communes that come from the most challenging social economic conditions. To date, 112 VietGAP certification have been awarded to individuals and organizations with a total area 68,2003 ha that is expected to produce a yield of 8,396 tonnes/year. A total of 4,993 farmers have been granted training certificates on safe vegetable and fruit production and processing. The training provides a good foundation for farmers to enter the market on their own, should the Vingroup cancel the initial support/program. Other good results have emerged from this program, such as business training, advocacy and guidance, and modeling transfer production techniques.

Business models on production associated with the consumption of vegetables is effective, especially for vegetable production that undergo VietGAP processes. Based on its success, the vegetable farming model has been expanded to neighboring areas.

The full value chain in vegetable growing was set up and the promotion is done effectively. Important parts, such as inspection and control regulations on the production and trading of vegetables were also strengthened, which contribute to food safety and quality assurance on vegetables [11].

In addition to the Vingroup support, collaborations and partnerships with the National Agro-Aqua-Forestry Quality Assurance Department, Lam Dong Company as well as Thu Duc, Hoc Mon, Binh Dien wholesale markets help the farmers to increase their income as well.

Limitations

Finding the market for clean and safe vegetables has been difficult due to price volatility. The competition is also tougher as these vegetables are more expensive compared to the vegetables that are available in the market.

A number of cooperative groups turn out to be ineffective as the staff and management are unqualified. There is also a lack of specific plan that will maintain the benefits for the farmer in the long term.

Recommendations for the Future

- Continue to focus on training, model building, and technology transfer to grow safe and clean vegetable in new rural communes
- Focus on the evaluation and certification of eligible producers, primary processing, and certification of safe and clean vegetables under VietGAP; provide loan support; consolidate the cooperative groups
- Step up on trade promotion and branding for safe and clean produce that are manufactured in accordance with the VietGAP process
- Intensify the checks on use of pesticides; look into the implementation of the state government on the manufacturing and trading of safe and clean vegetables; coordinate with the provinces on growing and consuming safe and clean vegetables
- Collaborate with the other departments under the Ministry of Agriculture and Rural Development that focuses on the advocacy and mobilization of agriculture, especially those involved in cooperatives; establish an agricultural cooperative group; support farmers in growing and consuming safe and clean vegetables

Failure of the VietGAP project

One of the important criteria in meeting the VietGAP regulations is to record all logs from production, harvesting, and marketing works. However, farmers do not have the habit of doing this. Though lacking such important data, many VietGAP certification bodies (accredited third parties) have awarded the VietGap certification. Thus the violation of the VietGAP regulation must be looked into seriously as the bad practice jeopardizes the program.

This business model faces many challenges due to the high cost of certification, complexity of production that farmers may not be able to follow, and technical errors as VietGAP is based on GlobalGAP standard. The VietGAP standard may be technically difficult and costly to implement. It has been implemented gradually by farmers over the years to meet the stringent requirements of the European market.

Another challenge is the misconception of farmers on the economic benefits of VietGAP produce. Farmers are under the impression that they will be able to sell at higher prices once their produce are certified [2].

Lessons Learned

Vietnam needs to go back to the basic standards of food hygiene and safety. The government should stop trying to put everything into practice with VietGAP's current agricultural practices. Linking generic GAP with food safety may hinder the growth of agriculture. This may work for a small number of farmers as they are able to sell quality at the highest price for export markets. However, the majority of Vietnamese farmers are imposed to comply with the VietGAP standards that serves the domestic market.

Based on the experience in many countries, the application of GAP standards to production and processes can easily lead to failure due to noncompliance with the system's application standards. Therefore, in addition to the VietGAP standards, other generic standards for food hygiene and safety can be practiced to ensure compliance of household and community standards.

It is necessary to educate farmers about the benefits of growing clean vegetables and deliver real value to consumers. It is not clear that growing safe and clean vegetables will earn more money, however it is a real possibility with the increase of consumers' demand, and this may happen in the future.

Case Study 3. Production of Medical Plants in Ethnic Community in Lao Cai Province



The Project

The mountainous regions of northern Vietnam is home to many ethnic minorities with low incomes. Traphaco is a pharmaceutical company that has the pioneering role as the Leading Pharmaceutical Brand in Sustainable Development. As the mountainous area has suitable climate conditions and favorable soil for the production of high quality medicinal plants under GACP-WHO (Good agricultural and practices-World Health Organization) standards, Traphaco approached the farmers in these areas to jointly develop medicinal plantations.

In 2015, Traphaco was certified by the Department of Traditional Medicine Management under the Ministry of Health to plant and collect GACP-WHO herbal medicinal herbs, and increase the total amount of GACP-WHO herbal medicines in Vietnam. Traphaco is one of the few companies that bravely invested in R&D, which created breakthroughs, and quickly became the leading brand in Vietnam's pharmaceutical industry. One of Traphaco's most significant achievements is the development and production of raw materials. In the past two years, the proportion of Vietnamese medicinal ingredients used in production increased to over 90%. The company has established

large pharmaceutical fields that are GACP-WHO standard compliant as well as possesses its own processing plant [12].

Business Objectives

The company's slogan is "Looking into community benefit when starting all activities". Traphaco is committed to creating a stable and sustainable company for the benefit and life improvement of their workers, their family members, and the community.

As there is a high demand for domestic herbal medicine extracted from plants and a lot of raw materials were imported from China for their business, Traphaco decided to pioneer the effort of Green Plan. Today, the company supplies one third of raw material to its domestic market [13].

Business Model

The project was implemented with the participation of many partners under the organization and management of Traphaco.

Business Partners

- Vietnam Enterprise Challenge Fund collaborated with UK's Department for International Development (DFID). The pledge was to invest more than GBP100,000 to support private enterprises in Vietnam to build innovative business model with low-income people for two years
- Scientists from the Sapa Institute of Medicine and the Sapa Centre for Research and Development guide farmers on planting
- Traphaco has low-income farmers to operate its core business as a producer. They are provided seeds, fertilizers, technical assistance, and cash advances for growing medicinal plants. In return, the farmer will sell their harvest back to the company at an agreed price, which raises their income [12]

Planting Medicinal Plants in Lao Cai Province

The main objective is to link cultivation with the consumption market. The project is deployed in six project communes - Luat, Lung Sui, Can Cau, San Chai, Nanch San, Thao Chu Phin - with a total area of 125.5 ha and participation of 251 households (125 poor, 75 near poor, and 51 really poor). The total support capital is VND4.159 billion (including foreign donors: VND2.188 billion, reciprocal capital: VND27.5 million, capital from Traphaco: VND563.5 million and VND1.3805 billion) [12].

Linking the program to meet its business objectives, Traphaco cooperated with the provincial committee to organize two competitions - "Ideas for Livelihood Creation" and "Traphaco and Friends". Throughout the two competitions, 17 ideas for livelihood creation were selected. The total capital support from the Department for International Development at VND2.177 billion was used wisely, supporting 17 groups with an involvement of 104 households [13].

As an organization, Traphaco stands out as it bids for products at reasonable prices and not exploit farmers despite rising prices. In addition, the local authority plays an intermediary role by monitoring market movements and apply flexible measures to cope with price fluctuations. Enterprises and the local authority monitor the implementation of the project by relevant parties in ensuring conformance to the program.

Statistics from the Department of Planning and Investment in Lao Cai show that the growing of three kinds of plants - *Ligusticum wallichii*, *Scophularia ningpoensis*, and *Atractylodes macrocephala* - is sufficient in supporting all the requirements of the project. Two additional plants, *Amomum aromaticum* and *Eucommia ulmoides*, were added, but no clear results have been observed.

The project has generated several creative ideas to further support the farmers that include drying the medicinal plants and grow new plants, such as *Geranium* in Sapa.

TABLE 7.4

IMPLEMENTATION CAPITAL FOR PLANTING MEDICINAL PLANTS IN LAO CAI PROVINCE

#	Ideas	Place (commune)	Number of Groups	Number of Households	Capital			Total area (ha)		
					Plans	Checks	Disbursement Capital	Plans	Disbursement Capital	+/-
I	Market Collaboration		99	1,348	11,468	11,468	8,801		1,456	-26.5
1	<i>Ligusticum wallichii</i>	Bát Xát	13	155	1,500	1,500	1,142	21.5	17	-4.5
2	<i>Scophularia ningpoensis</i>	Văn Bàn	18	431	3,158	3,158	2,659	140	118	-22
3	<i>Atractylodes macrocephala</i>	Sa Pa	12	208	1,775	1,775	1,775	216	216	0
4	<i>Amomum aromaticum</i>	Si Ma Cai	29	303	2,847	2,847	1,578	20		
5	<i>Eucommia ulmoides</i>	Si Ma Cai	27	251	2,188	2,188	1,647	125,5		
II	Creative Ideas									
1	Planting <i>Geranium</i>	Sa Pa	1	10	87	87	89	3	3	0
2	Building drying oven	Mường Khương	1	10	95	95	95	10	10	0

Source: Data from author

Socioeconomic Impact

Trade: This project brings benefits to businesses and ensures the parent company possesses raw materials that conform to GACP-WHO standards.

Social: Jobs were created and incomes raised for hundreds of low-income households, of which 70% are from the ethnic minorities. Income from growing medicinal plants are often two to three times higher than rice or maize. Traphaco also actively carry out meaningful philanthropic programs with the clear aim to uplift the lives of the low income group [12].

Environment: Planting medicinal trees in accordance to GACP-WHO standards is environmentally sustainable due to proper use of fertilizers and pesticides. This also ensures conformance to the strict requirements of protecting the environment and invested toward sustainable development. Traphaco became the first pharmaceutical company in north Vietnam to receive the GACP-WHO certificate in the pharmaceutical segment, perfecting the "green" value chain that the company upholds; the use of green materials and green technology to create products that contribute to the development of a green economy.

Project Success Factors

The efforts of Traphaco were recorded on a collective farming land size of 827 ha and the planting and collection of medicinal herbs in Lao Cai province.

The linkages of medicinal plants have been rated as successful, effective, and produce reliable outputs, which significantly contribute to income growth for the local people. Linking medicinal plants helped increase income from VND800,000 to VND1,500,000 per month [12].

The project personnel gradually approached the farmers to familiarize themselves with the method of mass production, large-scale production, satisfy the demand of the market instead of small, scattered, and spontaneous planting method that was used before.

The Ability to Grow and Develop Local Medicinal Plants Has Grown to a New Level

Historically, most of the households in the communes have been involved in the cultivation of medicinal plants, and the plants are also relatively abundant, including species such as *Ligusticum wallichii*, *Scophularia ningpoensis*, *Atractylodes macrocephala*, *Amomum aromaticum*, *Eucommia ulmoides*, and *Geranium nepalense*. However, due to unstable market prices, the value of the plants constantly depreciated, the output was difficult to consume, and the breed degraded. Thus the percentage of households growing these species also decreased with currently only about 71% of the families plant medicinal plants.

Traphaco's entry has given new life to planting medicinal plants in the area. The number of households growing medicinal plants has risen to 94.4%. Traphaco supports the families in part by making advance payment for the harvest and the company is also responsible for purchasing the medicinal plants from the households. In addition, the company has also deployed five new species of Vietnam trees which have never been planted in Sa Pa. Seeds and fertilizer were provided to those who were involved in planting. However, the project planting these medicinal plants is only on a trial phase involving only a few households, about 2–3 households per village [13].

The composition of medicinal plants grown by households today is very simple. Lao Chai and Ta Van communes plant mainly cardamom. The project began in early 2004 in a small scale (each family has a total area of nearly 1 ha). The other communes also focus on planting mainly cardamom. However, there are still a few households that plant some other medicinal plants, such as Japanese tea, elder mandarin, cucumber, and barley. Observations show that these models look very promising - the plants grow well and some of the species have been harvested with high yield.

At present, the participating communes are planting about 16–20 species of medicinal plants. The number of cardamom growers was the highest at 69.5%, followed by the cross-border (14.3%), the regulars (9.5%), and the followers (6.7%) [13].

Prior to the project, the household facilities for the production of medicinal plants was very simple. The tools used were just household items, such as knives, hoes, shovels, and firewood. The DFID-supported project also organized training courses on the use of new farming tools for farm households, resulting in significant yield changes. This reduced cost and increased the bioavailability of active pharmaceutical ingredients due to good preservation.

Enhanced Quality of Medicine due to Improved Methods of Harvesting and Preprocessing Medicinal Plants

The best time to harvest cardamom is from September to November. Cardamom trees possess medicinal properties and are grown by many households. Due to economic challenges, some households harvest early and much of the cardamom is lost during the drying process. For instance, 10 kg of early harvested and dried cardamoms yields only 3 kg. But cardamoms that are harvested at just the right time will yield 4 kg. Then the dried cardamoms are processed and sold.

A small number of households (11.3%) sells fresh and unprocessed cardamoms. These produce are mainly sold at home (47.9%) or at the market (39.4%) [12]. With the Traphaco's program, contracts are made with farmers, whereby households must fulfil the company's criteria for fruit quality by maintaining a daily log. Their harvest, once preprocessed, are sold to the company.

Many households have ovens to dry the cardamoms (the drying time is about 2–3 hours). For households with cardamom harvesting facilities that are away from home and have a large output, they use kilns for drying and then go to the forest for the drying process. Households that have cardamom trees grown near home but have low yields, the harvest is brought home. After drying, the product is sold when the price is right. To date, about 73.4% of households use this method.

Building Stronger Relationships between Farming Families and Relevant Organizations in the Area

Previously, the relationship between families planting medicinal plants with other organizations was very simple. The majority of households only dealt with traders (69.8%) when selling their products. Traders would go to farmers and negotiate. Trading would only take place after both parties agree on the price. This form of trading takes place all year round. A small number of households (3.8%) have even traded with drug traffickers [12].

Project Failure Factors

Difficulty in Mobilizing People to Participate

Although there is strong potential to the program, it does face difficulties, especially in getting farmers to participate and mobilize them in the project. The business strategy of the cooperative is to take people as a core member of the cooperative. The people will then plant and grow the medicinal plants in their own gardens and then supply the raw materials to the cooperative. As initial support to the farmers, the cooperative deferred payment for seeds and fertilizers. However, some households that are part of the project are found to be not actively involved. The reason could be partly due to previous failures in growing medicinal plants.

There are still a number of issues that need to be addressed at the preparation stage: i) the draft proposal that should be submitted to the project manager may be delayed, ii) the proposal has not been seriously developed, therefore errors still persist, and iii) the registration of households is not done properly.

Group Activities in the Project Have Not Met the Requirements

Group activities are not satisfactory and informal, the number of meetings is small and the meeting content is poor. The information on the program mechanism is not well explained due to the lack of participation of project staff in the meetings. Members of the group have not fully grasped their rights and obligations when joining the cooperative which lead to misinformation and misunderstanding. The company's staff who manage the program are not experienced enough to get its members to comply to the rules and regulations.

Weakness in Monitoring and Evaluation

The tasks of related parties is not timely. The monitoring and evaluation of related cycles of growing the medicinal plants is weak. This leads to many households not adhering to the program implementation.

Causes of Shortcomings

Objective Causes

Inclement weather, droughts, natural disasters leading to diseases, crop failure, low productivity in different business links create challenges to the organization and farmers.

Subjective Causes

There are several causes that contribute to the failure of the program. Several are highlighted as the following:

- The management capacity and support roles provided the provincial, district, and commune staff are weak, especially in monitoring and evaluation. Anticipation and management of risks are not carried out well, thus there is a lack of preventive measures, timely response, and mitigation of the problem.
- Activities have been implemented with the poor, ethnic minorities in remote and mountainous areas, areas with special difficulties, poor awareness, and poor farming practices. Farmers may not be aware or have the sense to avoid specific areas that may not be suitable for planting.
- Some joint ventures have inadequate capacity to build successful partnerships.
- Due to lack of research and thorough consideration, some cultivars in the partnership do not match the natural conditions and long-standing cultivation practices of the people, resulting in low productivity.
- Farmers are not committed to the program which makes it easy for them to not adhere to the rules of the program as they are not subject to legal liability or economic compensation.

At present, there is a lack of agricultural land to develop medicinal plants. If the existing land resources of households can be converted to medicinal plants, they can take advantage of about 209,952 m² of land. This type of converted land comes from upland fields that are currently being planted with maize, cash crops, or part of the gardens in abandoned households.

Apart from experience and land for cultivation, local labor is also important for the development of medicinal plants. The surveyed households have a large population but small proportion of working labor from 14.5% in Sa Pa town to 29% in Ta Phin commune. The percentage of female laborers in working age is also small with only 6.5% in town and 14.1% in the communes [2].

Investment is also an important element in the development or conversion of medicinal plants. Currently, most of the households in the study area lack investment capital.

Lessons Learned

- i. When selecting cultivars and livestock for production, it is necessary to consider and thoroughly understand the factors of the biological characteristics of the species and their natural

characteristics (climate, soil, source, water, etc.) according to locality, weather forecasts of meteorological experts, as well as practices of production and cultivation of people.

- ii. Partner selection for collaborative ideas is extremely important. Projects must strive to find good affiliate partners through thorough evaluation. When choosing a business, it would be best if the firms have similar or greater capacity. It is usually best to select a local partner in order to encourage closer and more favorable relationship between the parties. As to manage risks involved with partners, the government should put into effect measures to protect the interests of the people.
- iii. Involvement of local authorities is an important factor for establishing sustainable linkages, especially for common agricultural commodities. One good case study is Muong Khuong. While most of the links in the three districts - Sa Pa, Van Ban, and Bat Xat - are difficult due to lack of legal representative and lack of people to regulate the implementation process, Muong Khuong has a close relationship with the local government. Thus the interests of both people and enterprises in the linkage are assured, maintained, and developed. Muong Khuong is a good example in getting active participation of the local government and authority.
- iv. Communication should be further promoted to the project participants so that they understand the long-term benefits that can be enjoyed when full commitment is given in meeting the obligations in the economic contract with the partner. The lesson is not to run after short-term profit as it will lose the sustainable elements of the business.
- v. Science and technology should be further applied in production to improve productivity, quality of plants and animals, and gradually shift from extensive to intensive farming, from raw processing to processing.

Creating More Good Business Links

Carrying out good farming practices makes it necessary to form concentrated production areas and apply advanced farming methods.

There are many suggestions in promoting long-term production links to ensure stability. Thus the local People's Committees should come up with good support plan to create favorable conditions for enterprises to link with people. This way, they can avoid the situation of mass development and difficulties to identifying the cause of damage to people.

Assigning specific responsibilities among ministries, branches, and localities in the agriculture sector help to achieve efficiency and effective measures.

Recommendations

To develop effective and sustainable medicinal plants in Sa Pa, focus should be channeled to the following:

- Planning for a specific area for each locality, the economic scale should be large enough and concentrated to help the project get better results
- Identify medicinal plants that are of interest to people and suitable for ecological conditions of the area. This will ensure for a stable market in the future

- Most of the households are of ethnic minority people who live in poor economic conditions with limited education. People have to give up their day or make a small contribution to fulfill their responsibilities. Therefore, they should be assisted in various aspects, such as technical training, seedling, and fertilizer support
- As there is remaining cultivated area in the households that can be converted to grow medicinal plants, there is not much to choose from higher income crop species than the currently planted species. The community should relocate their labor to exploit the space
- There is a need to broaden the relationship between the medicinal plant growers and the related organizations to form a continuous, tight chain. First and foremost is the relationship between the medicinal plant growers and their investment partners - district extension and product consortium partners, thus facilitating the stable development of medicinal plants in Sa Pa.

Group Solutions on Mechanisms and Policies for Development of Pharmaceutical Materials

- To formulate mechanisms and policies on land, tax, and capital sources as to create conditions for localities, enterprises, and people to participate in the preservation and development. Strictly conform to standard medicinal plant growing areas in accordance with the GACP-WHO Guideline for Good Crop and Medicinal Herbs for Medicinal Plant Materials. Supporting policies to the consumption of products to protect the rights of growers.
- To focus on reviewing, amending, supplementing, and promulgating legal documents, standards, and national technical regulations; perfecting the system step-by-step with documentation on management of pharmaceutical materials.

Solutions for Human Resources Development and Training

- Training of human resources in service of pharmaceutical work with policies to attract and develop an experienced and knowledgeable human resource, especially in the cultivation, exploitation, processing, and use of medical material.
- Training and rational use of pharmaceutical human resource and conducting training in accordance to the specific needs of the proposed project to overcome the balance of pharmaceutical human resources across regions ensure the implementation of the project. Strengthening human resources training and development for investigation, research, and management of natural resources

Solutions on Science and Technology

- It is necessary to invest more in the system of research centers on genetic resources and medicinal herbs to conserve and exploit gene sources, breed development, and farming techniques
- To better exploit the experience of planting medicinal plants of ethnic groups in the community

Request to the Project Manager

In order to promote strengths and overcome shortcomings in the implementation of market linkage activities under project in the coming period, ethnic communities in Lao Cai PMB requested the sponsor, the Coordination Committee of the Project for the following:

- Organize workshops and seminars to invite businessmen to invest, cooperate with planting groups, and form partnerships within the framework of the project
- Consult and introduce to enterprises with mind and capacity to carry out business linkages based on potentials and strengths of each locality in Lao Cai
- Stronger voice of local authorities to protect people, linkages, and integrate project activities into local programs and plans

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SUSTAINABLE PRODUCTIVITY

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