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Base of the Pyramid and Business Process Outsourcing Strategies

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Preface

Economic development and alleviation of poverty are essential to maintaining sustainable growth in the age of sustainable development goals (SDGs). This is particularly pressing for emerging and developing countries where social issues are concentrated. Through research studies and field surveys, the authors recognized the need to elucidate the following points. Effective industrial policies for economic development in the age of digital capitalism must differ from those of former industrial capitalism. Information technology (IT), among others, has been at the core of technological architecture since the late twentieth century. In this sense, it means that industrial policies and business models that utilize IT are effective in tackling these issues. These social issues in emerging countries can be solved smoothly under a social business model with locally embedded knowledge and wisdom, as well as IT. This type of social business model needs to be based not only on international value chains but also on local value chains. Technological architecture has evolved further, becoming centered on digital technology, and the paradigm of innovation has changed accordingly. The explosive spread of the Internet has largely enabled some areas of knowledge to be disseminated worldwide, including in developing countries, as well as facilitating the sharing and integration of knowledge from around the world. Strengthening collaboration among private companies, universities, and non-governmental organizations (NGOs) has become an important strategic issue, especially in the area of social businesses.

Based on this recognition, the major objective of this book is to introduce the IT business industry and social business models to address the challenge of social issues in emerging countries. Each chapter clarifies business strategies based on diligent field surveys in developing nations, focusing on Bangladesh and the Philippines, where social issues in the age of the SDGs are concentrated.

Field surveys enable the effective construction of a sophisticated hybrid value chain by connecting a sustainable business ecosystem of local value chains to global value chains. Joint social business entities formed between local NGOs and foreign companies, and multinational corporations with global value chains, among others, appear to be keystones.

The book consists of two parts. The first part, which consists of the following five chapters, mainly discusses social business-related models from the perspective of SDGs. In the second part, consisting of the remaining five papers from the sixth to tenth chapters, new industrial development based on the IT business industry is examined from the perspective of specific industrial sectors and companies, which leads to alleviating poverty issues in informal sectors.

Here, we highlight some key themes from each chapter.

Chapter 1, "Collaboration Between For-Profits and Non-profits: Strategies for Successful Market Entry into Developing Countries" by Hiroshi Hoshino, discusses the results of research conducted to determine how latecomers can successfully reach new markets in emerging countries. Studies in Africa and Asia have found that unique methods are required to enter new markets as latecomers. Among these unique methods, collaboration with non-profit organizations such as NGOs and international organizations such as UN agencies can be a powerful tool for overcoming various entry barriers and penetrating local markets.

Chapter 2, "Social Business Strategies to Alleviate Poverty in Emerging Countries Aiming at New Development Strategic Management Theories: Focusing on the Business Model of Grameen-Euglena in Bangladesh," focuses on the poverty reduction strategy by "Grameen Euglena," which is jointly funded by Grameen Krishi Foundation in Bangladesh, and Euglena, a Japan-based company.

The paper also considers the social business model between sectors by this joint company to solve social issues in rural areas, based on the research field surveys on "Grameen Euglena" in Bangladesh in 2016–2020.

Chapter 3, "Digital Healthcare and a Social Business Model to Ensure Universal Health Coverage (UHC): A Case Study of Bangladesh," elucidates that disruptive technologies and a social business model can deliver healthcare services to non-UHC communities in faster, affordable, and sustainable manner, based on the Portable Health Clinic (PHC) system that Kyushu University and Grameen Communications successfully developed. This chapter describes this experience and identifies major challenges to ensure that UHC approaches can assimilate advanced technologies, mainstream them in national healthcare policy, and train healthcare workers.

Chapter 4, "Sari-Sari Stores as Sustainable Business by Women in the Philippines," by Toyoko Funahashi, discusses the consumption activities of the BOP, which represents the base of the economic pyramid that constitutes the income bracket, as well as the sari-sari stores, a generic term for micro-retailers that play a major role in the Philippines. This paper examines the cases of Nestlé Philippines, San Miguel Brewery, and Yakult Philippines, which are manufacturers of processed beverages and foods, as examples of how manufacturers utilize sari-sari stores in their business. It examines their channels and marketing strategies through sari-sari stores, enabling women to become economically independent.

Chapter 5, "Bottom of Pyramid Strategies by MNEs and NGOs: A Case of UNIQLO," by Kanako Negishi, examines how multinational enterprises (MNEs) in the complex global supply chain of the garment industry maintain sustainability,

centering on the case of UNIQLO. Her study reveals a dual structure in which employment conditions differ among Bangladeshi workers, depending on whether it is a Grameen UNIQLO or a production consignment factory.

Chapter 6, "The Growth of the IT-BPO Industry and Women's Work Choices in the Philippines," by Yoshie Hori, explores the IT-BPO industry's role in forming a middle class in the Philippines. It focuses on enhanced economic opportunities for Filipina women, who now have alternative ways to earn money in their country rather than being "exported" to foreign countries as migrant workers, examining cases of female employees in the industry.

Chapter 7, "IT Business Process Outsourcing (BPO) Strategy as a New Development Strategy in Emerging Countries: Focusing on the Philippine IT-BPO Industry and Lewis Turning Point Theory," by Takabumi Hayashi, examines the fact that the number of poor people in the Philippines has decreased relatively and absolutely since 2012 from the perspective of the IT-BPO industry as the formal sector, while it also still holds the problems of surplus labor in the informal sector mainly in the rural areas. These issues are discussed in line with Lewis's original argument (Lewis1954).

Chapter 8, "New Industrial Development Path Based on IT Service Business in the Case of the Philippines," by Raquiza, argues for bright prospects and conditions for Philippine IT-BPO and the manufacturing industry. The study has two preliminary findings, which could lead to inclusive development, or at least a more equitable regional development, with the industry shifting to work from home. First, the rising IT-BPM investment in the post-pandemic transition coincides with growing interest in manufacturing services, including product design, engineering design, and data analytics. Second, the country seeks to leverage its leading global industry position and large high-skilled pool to expand higher-value employment, linking the provision of IT-BPM enterprises to the development of an indigenous innovation economy.

Chapter 9, "The Burden and Autonomy of Women in the IT-BPO Industry in Metropolitan Manila: Under the COVID-19 Pandemic," by Makiko Ota, discusses how the COVID-19 pandemic affects the lives and household responsibilities of women in the IT-BPO industry in the Philippines. The paper clarifies that the growth of the industry has created possibilities for university—and college-educated women in adversity to upgrade their lives, enhance their autonomy, and achieve upward mobility. Through online interviews with female workers/former workers in IT-BPOs in metropolitan Manila, the author explores their gendered contribution and responsibility in households both before and during the pandemic while paying attention to differences in both according to life stage. This study suggests that young female IT-BPO workers from low-income households tend to be economically responsible for their families and are more vulnerable to the pandemic.

Finally, in Chapter 10, "Joint IT Development Strategies Between Nepal and Japan: Based on Japan-South Korea-Nepal Trilateral Cooperation," Tetsuro Saisho examines the supply of IT human resources in Japan that is continually unable to keep up with the ever-increasing demand. It is becoming increasingly difficult to secure IT human resources year after year, and the shortage is expected to continue in the future. In addition to offshore development, a new system development business model has been developed in which foreign engineers who wish to work for Japanese

IT companies come to Japan to develop information systems through international cooperation between Japan and other countries.

The further evolution of IT and international knowledge creation and sharing will continue to lead to new types of social business models to cope with deepened SDG issues. The book will help us to better understand the various themes to be unraveled.

This book is highly recommended not only to academicians but also to business-people who seek social business models and provide an overview of new sustainable and inclusive businesses in the age of the digital economy.

Finally, in editing the book, we would like to express our gratitude to the editing staff members of Springer publishing: Ms. Vidyaa Shri Krishna Kumar, Ms. Kokila Durairaj, Mr. Yutaka Hirachi, and Ms. Shinko Mimura for their valuable comments and kind help.

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About the Editors

Takabumi Hayashi (Ph.D. in Economics, Rikkyo University) is Professor Emeritus of Rikkyo University, Tokyo. He successively filled the position of Senior Lecturer at Fukuoka University, Associate Professor and Professor of International Business at Rikkyo University, and Professor at Kokushikan University, Tokyo. His recent research arears are innovation systems and R&D management, focusing on knowledge creation and diversity management. His works have been widely published in books and journals. His book *Multinational Enterprises and Intellectual Property Rights* (in Japanese; Moriyama Shoten, Tokyo, 1989.) is widely cited, and *Characteristics of Markets in Emerging Countries and New BOP Strategies* (in Japanese; Bunshindo, Tokyo, 2016) received the award from Japan Scholarly Association of Asian Management (JSAAM) in 2018. He has been sitting on the editorial board of several academic journals.

Hiroshi Hoshino is Professor of International business at the Faculty of Economics and Managing Director of Yunus and Shiiki Social Business Research Center at Kyushu University, graduated from Faculty of Law, Keio University, and Graduate School of Business, Georgetown University. After working at Nippon Yusen Co., Ltd., serving as Assistant Professor in the Faculty of Business Administration and at the Research Institute of Economic Management, Kobe University, he assumed his present position in 2003. In response to the Great Hanshin Earthquake in January 1995, he has been contributing to various community development activities for over 20 years and engaged in creating and supporting various sorts of social businesses in Kobe. He received the award in 1999 and the Best Paper Award from Japan Society of Logistics and Shipping Economics (JSLSE).

Yoshie Hori (Ph.D. in International Relations, Sophia University) is Professor of International Relations at the Faculty of Social Science at Waseda University, graduated from Department of International and Cultural Studies at Tsuda University, and

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Chapter 1
Collaboration Between For-Profits and Non-profits: Strategies for Successful Market Entry into Developing Countries

Hiroshi Hoshino

1.1 Introduction

1.1.1 FDI of Japanese Companies

The trend of the aging society, decreasing population and labor forces in Japan are all urgent issues which Japanese firms need to tackle. It is predicted by the Statistics Bureau of Japan's Ministry of Internal Affairs and Communications that the present population of Japan—125.5 million in 2022—will become less than 90 million in 2060. Companies depending solely on the domestic market can no longer expect the growth of their businesses in a shrinking market. Small and medium enterprises (SMEs) will be placed in an even more serious situation than larger companies.

Japanese companies have expanded their business in overseas countries through foreign direct investment (FDI), especially since the mid-1980s, when the sharp appreciation of the Japanese currency prompted manufacturers to invest in production and sales functions in overseas countries which were in or closer to the market. While the number of overseas subsidiaries has drastically increased over the last thirty years, most of them are established in developed countries in Europe and North America, northeastern Asian countries such as China, Korea, and Taiwan and the ASEAN countries. On the contrary, subsidiary companies established in developing countries are limited and have not increased much over the last fifty years, as Table 1.1 shows. In case of Japanese subsidiaries in Africa, the number decreased from 307 in 1970s to 211 in 2020.

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Table 1.1 Subsidiaries of Japanese companies

	∼1974	1984	1994	2004	2014	2020
Total	3345	7017	16,043	20,563	28,013	32,938
Asia	4376	2746	6714	11,813	17,617	20,577
China	–	–	1055	4040	6707	6985
Korea	813	322	390	634	904	976
Taiwan	649	479	789	905	1038	1183
HKG/Macau	819	527	1000	1126	1298	1297
ASEAN5	1887	1477	3,239	4521	5910	7361
Middleeast	96	99	82	98	209	259
other Asian C	208	–	159	489	1551	2516
Europe	1144	1149	3417	3384	4084	4862
N. America	3011	1856	4091	3829	3893	4603
Oceania's	494	384	726	562	659	813
C.& S. America	1405	720	952	839	1363	1613
Africa	307	172	143	136	188	211

Data Source Toyo Keizai Inc. Directory of Japanese Companies Abroad, 1975/1985/95/2005/2015/2021

According to the JETRO FY2021 Survey on Business Conditions of Japanese Companies in Africa, the number of Japanese companies[1] was 335 in 23 countries as of September 2021. This number includes any company receiving capital contribution from a parent company, regardless of the ratio of the stock. Of the 258 companies which responded to JETRO's survey, 62 companies were established after 2016.

1.1.2 Expansion Policies in Developing Countries

In the White Paper on International Economy and Trade 2014 by Japan's Ministry of Economy, Trade and Industry, the future policies for Japanese companies toward developing countries by region are described as follows:

In China and the ASEAN countries:

In the field of Japanese-affiliated manufacturing and other industries in which Japan has already established a presence, it will be necessary to further strengthen competitiveness, including the development of infrastructure and supply chains. Targeting the entire consumer market through the entry of a wide range of industries is required.

[1] The definition of a Japanese company in Africa in the survey is a company that receives capital contribution from any Japanese company, regardless of the investment ratio or number of Japanese expats present.

In Southwest Asia, the Middle East, Russia, Central and South America:

In order to make a full-scale entry into promising fields, it is necessary to strengthen Japan's presence by exhibiting at trade fairs and sending missions in priority fields to each country, based on the signed inter-governmental agreement for trade promotion.

In Africa:

To create as many successful cases as possible, the public and private sectors will work together to develop the market by supporting participation in international trade fairs and by promoting investment agreements to improve the investment environment.

By strictly following these policies, Japanese companies have made a strategy toward gaining a foothold in developing countries. And as a result, it has been found that more companies accelerated investment in China and the ASEAN countries, while there is still only limited investment in other developing countries.

The government of Japan has organized the Tokyo International Conference on African Development (TICAD) since 1993 and has encouraged Japanese companies to become involved in business activities in Africa by offering various incentives and subsidies.

The Japan External Trade Organization (JETRO) supported Japanese companies by offering subsidies for Pilot Demonstration Projects in Africa from 2014 to 2018.

Thirty projects[2] in total were accepted under the scheme, and feasibility studies on establishing subsidiary companies, checking legal procedures, and various marketing research in Africa were carried out.

In 2015, the Japan International Cooperation Agency (JICA) proposed three courses of action for Japanese companies aiming to enter markets in developing countries: public–private partnerships, new partnerships and supporting economic growth. JICA offered the following three support schemes to provide funding and expert advice, mainly for small and medium Japanese enterprises (SMEs) to seek entry into developing countries. The reason that the project targeted Japanese SMEs is that JICA believed SMEs would be the major driving force to promote economic growth in developing countries.[3]

1. SME Partnership Promotion Survey

   Aiming at assisting in gathering basic information needed to explore a business model.
2. SDGs Business Model Formulation Survey with the Private Sector

   (1) Exploring business ideas that leverage Japanese companies' technologies, products, and processes to address challenges facing partner countries
   (2) Examining the feasibility of these ideas in ODA projects
   (3) Developing these ideas into business models

[2] JETRO's Pilot Demonstration Projects in Africa: (2014) 4 projects; (2015) 6 Projects; (2016) 7 projects; (2017) 7 projects; (2018) 6 projects.

[3] JICA Annual Report 2019, pp. 50–52 Public–Private Partnerships.

3. SDGs Business Verification Survey with the Private Sector
   Assisting in developing business plans to address challenges facing partner countries through:

   (1) examining business models
   (2) promoting understanding of the proposed business models
   (3) assessing their adoptability for ODA projects

Despite the availability of these projects to support feasibility studies and surveys, the amount of foreign direct investment and the number of successful cases of Japanese companies in Africa are still very limited.

1.1.3 Attitude Toward Developing Countries

Through careful observation, it was found that the reasons for Japanese firms' passive attitude toward emerging markets hinges on several factors. In comparison with developed countries, the political and economic country risks are higher, and in developing countries, government policy toward FDI is unstable and sometimes unfavorable. Consequently, the return on investment is not satisfactorily high in the short term and cannot exceed the investment standards set by each Japanese company. Moreover, most companies lack experience and skills for management in developing countries and human resources assigned to set up the projects there.

As the statistics of UNCTAD World Investment Report indicate, FDI inflow into developing economies is stably increasing. Since developing countries are potentially the next growing market, the investment into developing economies exceeded the amount of inflow into developed economies in 2020. It can be said that many multinational companies are seeking opportunities for investment and market entry into developing countries (Fig. 1.1).

In the JETRO FY2021 survey, 82 out of 258 companies responded to the questionnaire that future market potential is the main reason for maintaining their presence in Africa, with market size coming next.[4] At the same time, more than half of companies currently doing business in Africa consider regulation or legislation and political or social instability as risks for investment in Africa[5] (Table 1.2).

[4] JETRO FY2021 Survey on Business Conditions of Japanese companies in Africa, pp. 23–24,

[5] JETRO FY2021 Survey on Business Conditions of Japanese companies in Africa, pp. 28–31.

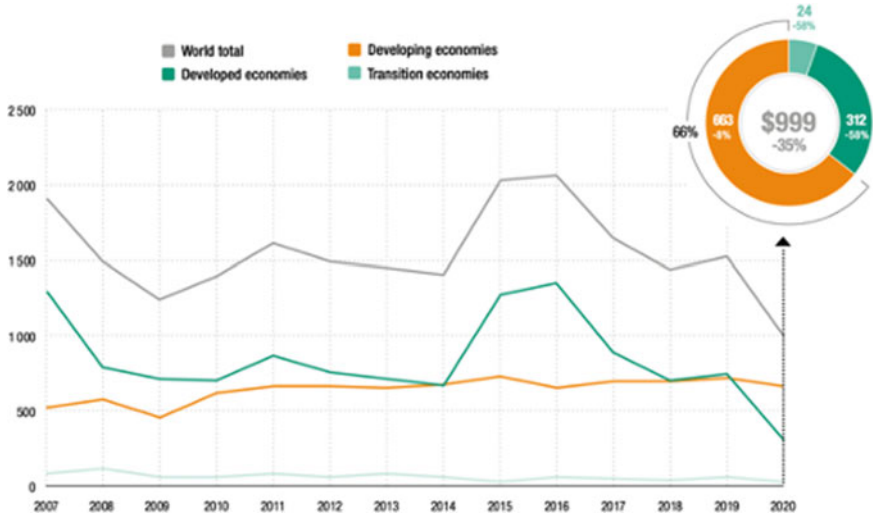
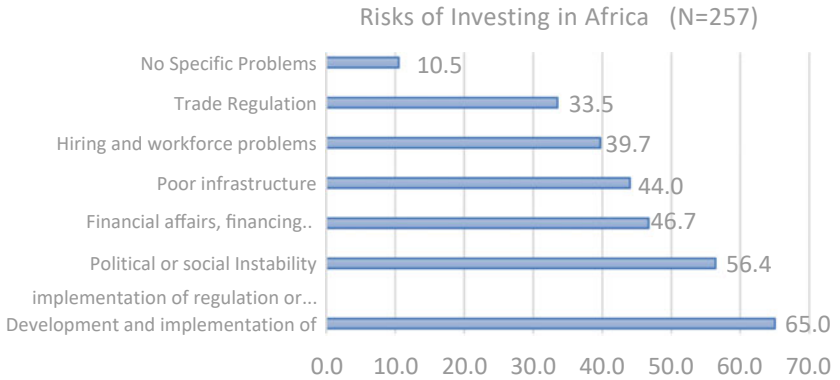


Fig. 1.1 FDI Inflows, global and by group of economies, 2007–2020. *Data source* UNCTAD world investment 2021-investing in sustainable recovery

Table 1.2 Risks of investing in Africa



Data Source JETRO FY2021 Survey on Business Conditions of Japanese companies in Africa

1.2 Market Entry into Developing Countries

According to Prahalad's research in 2002/2004, to approach untapped potential and to stimulate consumption in BOP markets, four factors starting with A—Awareness, Affordability, Access and Availability—are effective factors which multinational companies need to seek out. Considering the low-income level of consumers, simple and affordable products should be introduced and made available in their neighborhoods.

Based on our joint research (as mentioned on page 20), specific tactics have been found to successfully launch businesses in developing countries. The approaches do not necessarily adopt methods similar to those employed in developed markets. As the following cases indicate, a number of multinational companies, including some from Japan, have successfully developed new markets through their own innovative methods.

1.2.1 Contributing to the Solution of Social Issues

As outlined in the UN Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs), people in developing countries are particularly afflicted by innumerable social issues such as poverty, hunger, lack of primary education, child mortality, and diseases such as HIV/AIDS and malaria in their daily lives. As part of a global partnership previously for MDGs and currently for SDGs, the UN expects private companies to contribute to the improvement of the current situation with their superior management skills and expertise.

The Olyset net is a mosquito net composed of a fiber that incorporates a synthetic pyrethroid to repel mosquitoes that cause malaria, a disease which affected around 40 million people and caused 1.1 million deaths in Africa in 2002 alone.[6] *The Olyset net* was originally developed by Sumitomo Chemical Co., Ltd. as factory window screening to repel insects, but it was further developed as mosquito nets that help protect people from malaria. In African and Asian countries, *the Olyset nets* have been provided for people in cooperation with the World Health Organization and NGOs, and also made available for sale locally at a reasonable price by the company itself.

Nisshin Food Co., Ltd. was a relative latecomer in the market of instant ramen noodles in Kenya, after *Indomie*, a product of an Indonesian company that dominates the market, and others sold by some Korean food companies. After some marketing research, Nisshin Food modified their product with ingredients available in Kenya. For example, they developed a masala flavor as well as other local flavors instead of the original chicken flavor. They also added nutrients so that consumers—who were mainly children and women—could get additional nutrition by eating a pack of ramen noodles. Localization of the product was supported by Jomo Kenyatta University of Agriculture and Technology, and their product successfully gained a certain portion of market share. Later, however, Nisshin Food Co., Ltd. withdrew from the joint venture with Jomo Kenyatta University of Agriculture and Technology and from the market, as well.

[6] World Health Organization, World Health Statistics 2004 Report, pp. 122/126.

1.2.2 Access to Local Distribution Channels

To reach local customers, the products must be easily available at a nearby shop. Local shacks such as sari-sari stores in the Philippines or roadside shops are where local residents primarily stop by for daily shopping. Therefore, setting up distribution channels to local stores rather than selling at supermarkets is required to approach local consumers.

Yakult is a nutritious dairy beverage sold in small bottles. It has been produced for more than 90 years by Yakult Honsha Company, Ltd., and is currently sold in a total of 40 countries and regions, including Asia, Europe, the Americas and Oceania. The company first adopted its unique direct sales model, the so-called "Yakult Lady System", in 1963. Salespeople, mainly women, engage in face-to-face sales, delivering their products directly to the customers by visiting homes and offices. After this domestic model was well-received in 1964, the company went on to enter Korea, Thailand, and Brazil in the same way. As the same sales system has been widely introduced in overseas operations, the total number of Yakult Ladies overseas has exceeded the number of Yakult Ladies engaged in sales in Japan.[7]

Grameen Danone Foods, Ltd. is a social enterprise and a joint venture between Grameen Group, Bangladesh and Groupe Danone, France, producing *Shokti Doi* yoghurt in Bangladesh. This yogurt contains protein, vitamins, iron, calcium, zinc and other multi-nutrients. Aiming to provide the considerable nutrition contained in a cup of *Shokti Doi* yogurt to children and villagers in rural areas, the company learned the appropriate direct sales model from *Yakult* and employed women living in rural areas as Grameen Ladies. As these salespeople were local people from neighboring villages, customers accepted the effectiveness of the product and purchased it with confidence. Now, in the city centers, customers purchase their yoghurt at slightly higher prices at supermarkets, while in rural areas, it is sold at a lower price through Grameen Ladies.

1.2.3 Selling Through a Unique System

In the past, multinational companies rarely targeted people situated at the Base of the Pyramid in developing countries because companies considered BOP consumers' purchasing power is not as high as general customers. To stimulate these potential customers, some companies started to sell their products in smaller portions at an affordable price instead of normal-size packages containing larger quantities, such as in a carton or bottle. Customers who become accustomed to using a certain product in small portions might become regular consumers in the future if their income increases.

[7] Yakult products were delivered by 48,300 Yakult Ladies and handled in 846,500 stores outside Japan as of December 2020, pp. 10, Yakult Company Profile 2021–2022.

Following this logic, Ajinomoto Co. started selling monosodium glutamate in small sachets for cooking in Southeast Asian countries in the 1960s. Similarly, Hindustan Unilever sold shampoo and detergent in sachets for one-time use in India by studying the purchasing power in the local market.

Unicharm Corporation, a manufacturer of diapers for babies and feminine sanitary products, entered foreign markets full-scale in the 1990s as a latecomer in those markets. They established joint ventures in the Netherlands and some other countries such as South Korea, China, Indonesia and a wholly owned subsidiary company in Malaysia. By visiting individual local families in Indonesia and Thailand, they conducted careful marketing research to identify consumers' needs. The company then introduced baby diapers and feminine care products and sold them individually. Consumers would purchase a single portion of a product at the beginning, and then later purchase them in larger packages when they could afford them. The company's efforts led to the successful expansion of business in Asia and in other countries since. Their products are widely sold in approximately 80 countries at present, with the volume of overseas sales reaching 59.8% of their total sales as of December, 2020.[8]

1.2.4 Collaboration

In these cases, successful factors for entering developing countries are unique and original methods, and sometimes partnerships through which the new entrant can acquire the experience and expertise which are essential for doing local business.

1.3 Benefits of Collaboration Between For-Profits and Non-profits

To enter a new market, a company can expect various benefits through a JV or collaboration with one of more partners who possesses the complementary resources, local knowledge–including culture and customers' tastes and preferences—human resources, and access to local distribution channels and the government.

Inkpen and Beamish (1997) point out that the local partner's knowledge of local economic, political, and cultural environments is a key contribution to the JV when the JV is international and the foreign partner seeks to expand its geographic scope of operations.

Yachi (1999) categorizes the purpose of establishing a foreign subsidiary company as a market-oriented direct investment and export-oriented direct investment. By

[8] Unicharm Corporation, Unicharm Group Integrated Report 2021, pp. 31.

forming a market-oriented joint venture with a local company, marketing knowledge on local demand and access to the local distribution systems, consumer preferences, competitor behavior, trading practices, and information on vendors would be efficiently gained from a partner.

In a study on collecting data in three stages on 66 joint ventures in 27 Least Developed Countries (LDCs), Beamish and Banks (1987) examine the importance to the multinational enterprises of the assets owned by the local partner. The assets are grouped into five categories: (1) items readily capitalized, (2) human resource needs, (3) market-access needs, (4) government political needs, and (5) knowledge needs.

Building on preliminary research undertaken by Hammond (2010) finds that hybrid organization or partnership with NGOs in the areas of sourcing, distribution or marketing, product co-development, franchising and financing are success factors. Knowledge creation through these forms of business is necessary in order to enter an unfamiliar market.

"Social business" is defined in various ways. However, the common basic concept is that social business aims to overcome social issues such as poverty, hunger, malnutrition, health and sanitation, education, technology access, and environment through business activities.

Porter and Kramar (2011) propose the idea that creating shared value (CSV) is a way to enhance the competitive advantage and profitability of the company while simultaneously advancing social and economic conditions.

Hayashi (2016) suggests the potentiality and limitation of both the hybrid value chain created by NGOs and the 'trickle-down growth and development model' in developing countries. Solutions might be found in some combination of existing models. When businesses can offer solutions for social issues, companies may have more opportunities to enter into new markets in collaboration with non-profit organizations.

As these studies show, it turns out that newcomers to markets in developing countries can expect a number of benefits through collaboration or joint venture with other organizations. However, the benefits vary depending on what kind of organization a company partners with. A few cases of actual partnership in developing countries are presented in the following section.

1.4 Cases of Collaboration

1.4.1 NGO: Grameen Foundation

Dr. Muhammad Yunus, Nobel Peace Prize laureate and founder of Grameen Bank and Grameen Foundation in Bangladesh, has initiated various joint ventures with multinational enterprises such as: Danone to supply highly nutritious yogurt, Veolia to supply clean water, and INTEL to provide information technology to poor people

and residents in rural areas of Bangladesh where access to adequate infrastructure is not available.

Dr. Yunus' basic idea of social business, proposed in Seven Principles of Social Business,[9] is that companies aiming to be social businesses should be financially self-sustainable and that profits from the business activities should be reinvested in the business. His third principle, "No profit, no dividend beyond the amount of investment rule" may appear to promote charitable activity by foreign companies supporting the poor. However, foreign multinational companies may gain valuable organizational learning by doing business in developing countries that can be transferred to other markets.

While various studies show that collaboration and joint ventures in host countries have turned out to be quite effective, research also shows that collaboration with non-profits such as NGOs and international organizations can also result in intangible benefits, such as access to local communities, reliability, and sometimes a good relationship with governments as well, as demonstrated in the following case.

1.4.2 Case: Farming in Bangladesh by Euglena GG, Ltd. and Grameen Krishi

The case of Euglena GG, Ltd. shows a good model of feasible business and an effective partnership between profit and non-profit sectors. Euglena GG, Ltd. is a joint venture between Grameen Krishi Foundation, an agricultural organization of Bangladesh, and Euglena, Ltd. of Japan, biotech-venture firm which succeeded the initial contract between Grameen Krishi and Yukiguni Maitake Co., Ltd., Japan, signed in 2010. The initial members who started the project at the former company also joined Euglena, Ltd. The company provides financial support, agricultural technology, logistics infrastructure and on-site training for planting mung beans in a few places in Bangladesh.

Japanese instructors and Bangla field supervisors, assigned in farming regions, recruited farmers by providing guidance on activities, teaching farmers "line sourcing" instead of traditional "broadcasting" and provided proper instructions for more efficient harvesting of high-quality mung beans. At the same time, Grameen Krishi provided microcredit, seeds, human resources and distribution channels within Bangladesh. Small mung beans less than 3.5 mm in diameter are sold locally in Bangladesh for nutritious soup and lentil curry, while medium and large mung beans are exported to Japan to grow sprouts for the Japanese market. In 2020, mung beans

[9] (1) Business objective will be to overcome poverty, or one or more problems (such as education, health, technology access, and environment) which threaten people and society; not profit maximization. (2) Financial and economic sustainability. (3) Investors get back their investment amount only. No dividend is given Beyond investment money. (4) When investment amount is paid back, company profit stays with the company for expansion and improvement. (5) Gender sensitive and environmentally conscious. (6) Workforce gets market wage with better working conditions. (7) Do it with joy.

were grown in 5,000 ha in three regions and more than 10,000 farmers and women employed to pick and sort the mung beans benefited from the project as of 2019. After the change of partnership in 2014 from Yukiguni Maitake to Euglena, the harvest of mung beans and the number of farmers and other workers involved have steadily increased and will soon exceed the former scheme.

This project has created mutual benefits for both organizations and countries. For the Bangladesh side, job opportunities not only for farmers but for poor women living in rural areas, advanced techniques for farming, the opportunity to export products from Bangladesh, logistics infrastructure, nutritious food at a lower price and higher income were the outcomes. Their learning and experience could be replicated in other types of farming and geographical areas, for example, the production of rice. For Japan and Euglena, Ltd., the import of mung beans from Bangladesh acted as an alternative supply source, solving increasing shortage problems in the growing of sprouts in Japan. Until the supply from Bangladesh became available, China was the major source of supply and almost 90% of mung beans were imported. The new supply ensured a safe and stable supply that could be closely monitored through vertical integration of the supply chain at rather reasonable cost (Fig. 1.2).

Based on the business model of Euglena GG, Ltd., approximately 60% of mung beans are exported to Japan and 40% are sold in the local market in Bangladesh. The joint venture itself invests the profit into new projects in Bangladesh and will not receive any return from the project beyond their investment. However, both organizations receive both tangible and intangible benefits, including financial profit outside Bangladesh. The mung bean project has further expanded to sesame growing in Bangladesh, has added more collaborators, and has supported the Rohingya refugees living close to the border of Myanmar jointly with the World Food Programme since 2019.

While Grameen Krishi Foundation and Euglena, Ltd. own almost equal shares, other organizations are partnering in the project by providing various kind of support. Kyushu University of Japan offered technical support and research development at

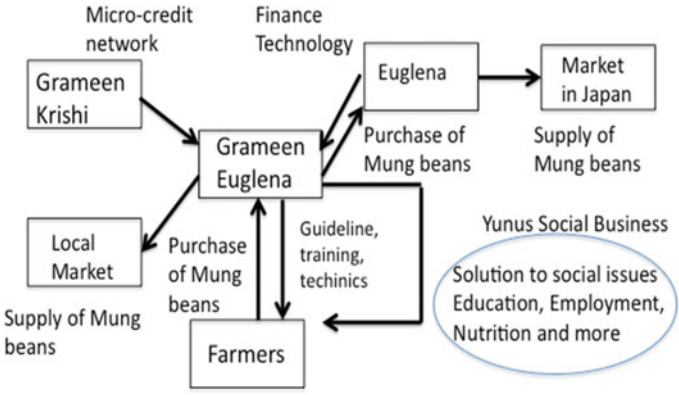


Fig. 1.2 Business model of Grameen Euglena, Ltd.

the initial stage and Bangladesh Agricultural University provided technical skills for farmers. JETRO and JICA selected this mung bean project as a BOP Business Pilot Project with financial support, with expectations that the project would become a good practice model for other Japanese companies. The Embassy of Japan in Bangladesh provided support for a smooth export process to Japan.

As seen in this case, collaboration with the non-profit sector is quite an effective scheme for a company which has no experience in developing countries. Above all, learning and experiencing business in Bangladesh has given Euglena a great opportunity to transfer the knowledge to ventures in other developing countries. NGOs and international cooperation agencies have networks and are grounded in local communities. Therefore, they are knowledgeable of the local needs. If the service or products could become a solution to social issues, collaboration between the profit and non-profit sectors should be made possible.

1.4.3 International Organization: UN-Habitat

UN-Habitat, or the United Nations Human Settlements Programme, is one UN agency that aims to promote a better quality of life and to build inclusive, safe, resilient and sustainable cities and communities (UN Department of Economic and Social Affairs, n.d.). Its Regional Office for Asia and the Pacific (ROAP) is located in Fukuoka City, Japan, and has worked in providing technical assistance to developing countries through its networks. One of their continuing projects is partnering Japanese technology and experience with cities in Asia and the Pacific. It aims to connect mainly Japanese SMEs, which have unique environment technology and know-how but have not yet been able to expand globally, to cities and communities in Asia and the Pacific region where there is a strong demand for technical support through practical and affordable solutions.

In pursuit of its objective to improve cities and communities, UN-Habitat ROAP has organized a so-called Environmental Technology Expert Group Meeting every year since 2009 to invite Japanese SMEs, NGOs and local governments on one side of the table and mayors and government representatives from Asia and the Pacific on the other to discuss issues and solutions. Since the first meeting in 2009, they have discussed key environmental areas such as water, wastewater, solid waste, sanitation, disaster risk reduction, energy and others.

Through the discussions, participants seek opportunities for collaboration and partnerships, by matching the needs with available technologies. For private companies and NGOs, it is not easy to enter into developing countries by themselves or to identify a good partner with common interests.

This is a good case of matching of organizations in different sectors for mutual benefit. Since the initial project was commenced in 2009, more than 70 technologies from both public and private sectors have been introduced and several projects have been implemented in Asian and African countries.

1.4.4 Case: Water Treatment Project by Aqua Service Co., Ltd. and UN-Habitat

The UN-Habitat ROAP has also implemented another program entitled "Water for Life Project". Its objective is to provide clean water for people living in poor sanitary conditions through technical transfer and provision of various unique technologies and products from Japanese SMEs in countries such as Nepal, Laos, Mongolia, Vietnam and Myanmar. One such SME is Aqua Service Co., Ltd., located in Fukuoka, Japan.

Aqua Service Co., Ltd. is the developer of *Aqualift*, a bio-product which is a blend of natural aerobic and anaerobic active bacteria for the biological treatment of water systems and water bodies. This product was originally developed to treat septic tanks and for use in wastewater treatment plants; however, for this particular project it was selected in Nepal as a low-cost, simple and practical solution to improve the increasingly degraded water quality in rivers, streams, ponds upon which local residents largely depend for their daily life. Larger-scale and sophisticated solutions such as constructing treatment or filtering facilities were not realistic considering financial sustainability and the lack of power in the country (Fig. 1.3).

Aqualift was implemented in various public water facilities in Nag-pokhari, Tukucha downstream, Bagmati Gokarna Dam and Guheshwori river in Kathmandu Valley, and has shown positive results. It is expected to play a major role in cleaning the water bodies, thus helping the communities in many aspects.

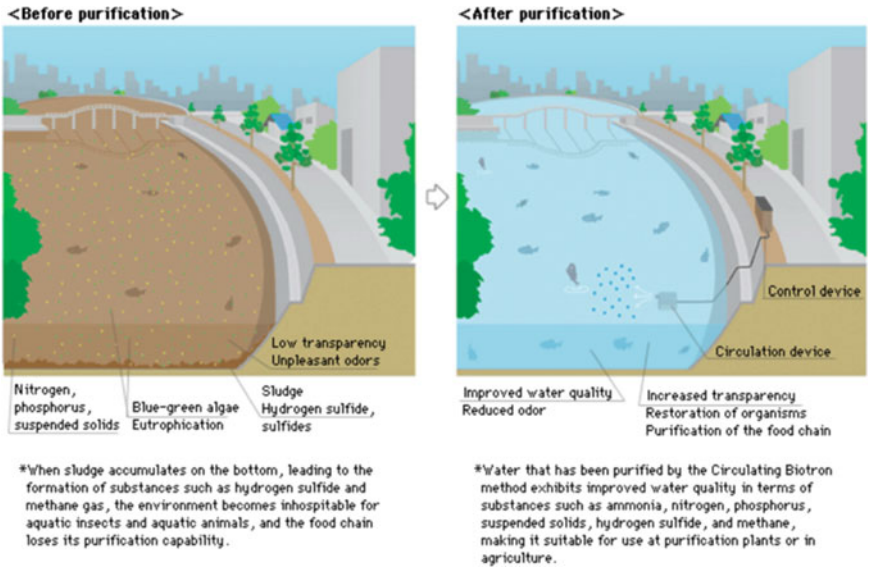


Fig. 1.3 Pond purification (*Data Source* Aqua Service Co., Ltd. Pond Purification)

Aqualift was also implemented in Myanmar at the request of the Yangon City Development Committee, which was facing deteriorating water quality in Kandawgyi Lake. This lake, located in the center of Yangon City, is called the Royal Lake of Yangon, and is approximately 8 km in circumference and 1.2 m in depth. A combination of '*Aqualift*' and '*Eco Bio Blocks*' were implemented in the lake. '*Eco Bio Blocks*' is a bacillus bacteria blended cement block bio product created by Koyo, Inc., another SME in Fukuoka, Japan.

Kandawgyi Lake has traditionally been an important part of the Water Festival held April every year. Furthermore, local residents depend on the lake's water for their daily lives. However, the water quality has increasingly degraded due to several factors, particularly the rapid urbanization and population increase in the area, as well as untreated wastewater from the lakeside restaurants and lakeside households running into the lake. As a result of the poor water quality, people have reported skin rashes, diarrhea and complaints over bad odor of the lake.

Implementation of the *Aqualift* treatment was made in March 2014 jointly by the Yangon City Development Committee and the UN-Habitat Myanmar Office. After two months, the water quality showed significant improvement in basic parameters such as chemical oxygen demand (COD), and biochemical oxygen demand (BOD), which were reduced by 25% and 30% respectively, with a 61% reduction in suspended solids. As noted above, *Aqualift* has proven to be very effective and low-cost, and is being used in lakes and water bodies in Nepal, Myanmar and other countries.

1.4.5 Case: Insulation Paint Project by MIRACOOL and UN-Habitat

MIRACOOL is a highly reflective coating paint, initially introduced at the Expert Group Meeting organized by UN-Habitat in 2010. Such coating paint can reduce the surface temperature of buildings/roofs and absorb solar radiation heat up to 40%[10] in the hot season. It has been applied to the roofs of many shopping malls, factories, warehouses, buses/vehicles and other buildings throughout Japan. The company, MIRACOOL Co., Ltd., is a manufacturer based in Tokyo which focuses on heat insulating paint.

In response to a strong request from the mayor of Sorsogon City in the Philippines, who was one of the speakers at the meeting, the first pilot project was implemented in his city. An elementary school building, community hall, and three core shelter buildings for elders (low-cost public housing) were selected for the project. Results of performance monitoring showed that surfaces coated with *MIRACOOL* recorded significantly lower surface temperatures and proved to be very effective as a sustainable and carbon-free solution for the health and well-being of people in tropical and

[10] MIRACOOL Reduction of surface temperature, retrieved March 25, 2022, from https://miracool.jp/english/.

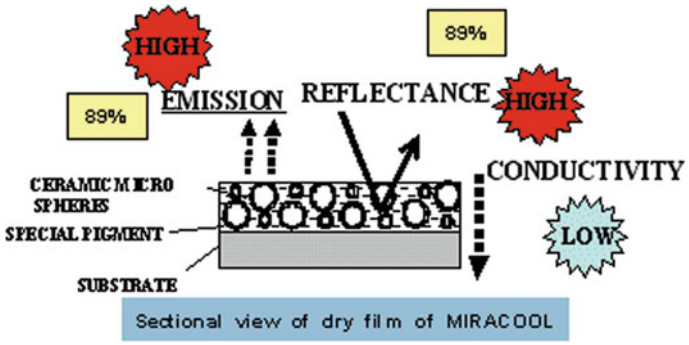


Fig. 1.4 Solar radiation effect on the surface temperature of the roof (*Data Source* MIRACOOL Reduction of Surface Temperature)

semi-tropical climates, without relying on air-conditioning or even simple electric fans.

For MIRACOOL Co., Ltd., this was the first experience to apply the product in the context of low-income communities and public facilities in developing countries. (The only exceptions were implementation to roofs of factories of Japanese manufacturers in a few Asian countries, where the decision to do so was made by their headquarters in Japan.)

The results of the pilot project led to business discussions between major paint manufacturers in the Philippines and MIRACOOL Co., Ltd. While the discussions did not conclude in a form of agreement at the time, the experience has led to further project implementations in refugee camp shelters in Kakuma, Kenya. Furthermore, preparations are being made to implement this measure in low-income communities in several developing countries in the Asian region as one way to promote green and sustainable building technologies from Japan (Fig. 1.4).

1.4.6 Case: Water Tank Tametotto Project by Daiken Co., Ltd. and Kopernik in Indonesia

Tametotto is an underground water tank storage system which utilizes rainwater captured on the roof of a building through rain gutters. The rainwater is collected and stored underground. A construction company, Daiken Co., Ltd., invented and first installed the system in a residential complex in Fukuoka, Japan, where the rainwater is utilized daily to flush toilets and for outdoor use, such as for car washing, watering greens and other purposes. The system is also meant for emergency use for its residents in case of severe drought, which Fukuoka City has experienced in the past.

The system was first introduced at the annual Expert Group Meeting organized by the UN-Habitat ROAP. After successful pilot projects undertaken in Laos,

Vietnam and in Kenya from 2016 to 2020 in cooperation with UN-Habitat, *Tametotto* was selected by Kopernik for implementation in several communities in Indonesia affected by the 2018 earthquake and tsunami.

Kopernik is a non-profit organization headquartered in Indonesia and run by Japanese experts aiming to find what works to reduce poverty "in the last mile", or closer to the affected residents. They believe that ideas and potential solutions should first be tested and that their impact should be demonstrated before large-scale implementation and investments are made. They currently have twenty ongoing projects in Indonesia, Malaysia and other developing countries in the Asian region which are categorized in three stages: Experimentation, Last Mile Consulting, and Technology Distribution.

Access to domestic water in some areas in Indonesia is a major issue, especially for communities and villages situated in hilly areas. The Water Tank *Tametotto* Project aims to support the recovery of tsunami-affected areas and improve their livelihoods by installing underground rainwater harvesting tanks in Sigi Biromaru in the Sigi Regency of Sulawesi in Indonesia, and to provide sustainable and safe water sources. With Grant Aid for Japanese NGO's Projects in fiscal year 2021, Kopernik requested that Daiken construct four *Tametotto* tanks, each 100 m^3, to supply drinking water in four villages, each with a population of 400. In addition to securing safe and clean water, it has released the people from the hard labor of carrying water from various and oftentimes distant water sources every day (Fig. 1.5).

In addition to being able to store a massive amount of clean rainwater, the *Tametotto* tank has many benefits, including low construction cost, short implementation period, no high skills required, being able to mobilize local labor (including village and community people), and using locally available materials (crucial when working in rural areas with limited road access). Sustainability is another important strength, as the tank is easy for the community's people to maintain, without any additional cost involved.

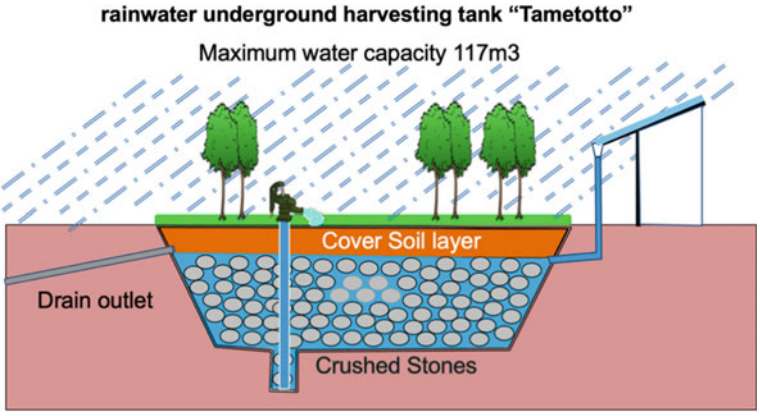


Fig. 1.5 Tametotto by Daiken Co., Ltd. (*Data Source* Daiken Co., Ltd, Presentation Material Tametotto)

1.5 Conclusion

With the exception of Euglena, Ltd., most of the companies introduced in these four cases are small and medium size companies employing between ten and forty-two people, and none of them had experience entering foreign markets. However, their unique technologies enabled them to form joint projects with NGOs and international organizations and to start pilot projects in developing countries. Based on the success of those projects, the experience gained, and the reputation established by working with reliable organizations, these companies were able to expand their business opportunities in other developing countries. Being smaller enterprises, they have also been flexible when it comes to modifying and sometimes simplifying their technology and products on order to adapt to the local context, availability and affordability. It could be regarded as their advantage in comparison to larger companies, where systems and products are fixed and are therefore inflexible to meet the demands of individual situations.

In the research referred to in 1.3, it turned out that collaboration and joint ventures are effective pathways to entering unknown markets. From a local partner company, managerial resources and knowledge about the local market can be gained. Working with international organizations such as UN agencies and international NGOs can bring several advantages to the project and technology: credibility, access to central and municipal governments, and knowledge/capacity development of field staff working in the country. There are also competitive advantages of partnering with NGOs, including the opportunity to share knowledge with active members rooted in the community and enabling support from the community and local residents (Fig. 1.6).

As these cases indicate, how private companies and non-profits can be matched and led to undertake joint ventures is the most challenging and critical issue. While government agencies have often organized business forums and seminars in both

Fig. 1.6 Potential partners

Japan and in target countries to facilitate collaboration, it is essential to identify and connect issues and potential targets with the most suitable unique technologies which could be potential solutions. It requires information, knowledge and understanding of the local context and issues–both apparent and underlying–of the target country and markets. Universities and research institutes could be good intermediaries to link organizations in the for-profit and non-profit sectors because various data and information are gathered via industry-academia collaboration activities.

Our findings show that especially small and medium companies without sufficient management resources and expertise to get into unknown markets will be required to have unique ideas such as contributing to the solution of social issues, access to local distribution channels, selling through a unique system and collaboration. While non-profits working in developing countries often aim to improve tough situations faced by local people by working closely with their communities, both the for- and non-profit sectors can share directions and recognize the benefits of working together on the same project. On the other hand, since the mission and the objectives of players in each sector are not exactly the same, sharing a common philosophy over a long period of time might be another challenge.

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Chapter 2
Social Business Strategies to Alleviate Poverty in Emerging Countries Aiming at New Development Strategic Management Theories: Focusing on the Business Model of Grameen-Euglena in Bangladesh

Takabumi Hayashi, Hiroshi Hoshino, Chie Iguchi, and Masashi Arai

2.1 Introduction

Many researchers, international organizations, and members of the general public have recognized that poverty at the 'base of the pyramid' (BOP) in emerging and developing countries is one of the most serious economic and social problems in the modern world.

In strategies at the local side aiming at fostering financial independence among people at the BOP, one effective route has been to develop microbusinesses run by poor women in informal sectors through microfinance provided by local NGOs. However, for a micro-business to become a corporation in the formal sector, it needs to secure knowledge and technologies regarding the economic efficiency, safety, quality, and functionality of its products and marketing. To reduce poverty at the national level and shift the income structure from the pyramid-type to the diamond-type by increasing the number of people in the middle-income class, bottom-up BOP

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strategies adopted by local NGOs must be connected with the trickle-down BOP strategies adopted by multinational corporations (MNCs) or foreign companies. In other words, an effective route would be the construction of a sophisticated hybrid value chain by complementarily connecting a sustainable business ecosystem based on local value chains, in which local NGOs act as keystones, with the trickle-down business ecosystem based on MNCs' global value chains.

The objective of this paper is not to elucidate the effectiveness and limitations of poverty-reduction programs in the form of conventional international development assistance, but rather to explore the effectiveness and limitations of BOP strategies adopted by MNCs and NGOs as poverty-reduction strategies and in the form of social innovation. The paper also examines effective poverty-reduction strategies for developing countries, focusing on a joint-venture company between Grameen Bank, a local NGO in Bangladesh, and Euglena, the Japan-based company from the perspective of social-business strategies, while also considering the effectiveness and limitations of the BOP strategies proposed by Prahalad (2002), London and Hart (2004, 2011), Teegen et al. (2004), Porter and Kramer (2006), or Jain and Vachani (2006).

This paper examines the effectiveness of a model for an economic development system in the reduction of poverty, based on suggestions by Hayami (1995) and the three-sectors theory proposed by Kotler and Lee (2009), Mintzberg (2015) and others, all of which have played important roles in the theory of economic and social development in developing countries, discussed in development economics.

After examining the theoretical models, the paper tries to elucidate missing key points in these models. The research methodology adopted for this purpose is field surveys and interview surveys conducted over ten years in South-East Asian countries. In this paper, we focus on Grameen Euglena, the earlier-mentioned social business joint venture in Bangladesh.

Field surveys reveal that on their own neither the trickle-down global value chains of MNCs nor the bottom-up local value chains of local companies or NGOs are sufficient for people at the BOP in developing countries to gain financial independence and escape from poverty, i.e. it is necessary to recognize the advantages and limitations of conventional BOP strategies adopted by MNCs and local NGOs.

The is the qualitative paper based on the field surveys and interviews, which were conducted in Dhaka and Ishwardi, Bangladesh, and in Tokyo, Japan. The main survey items are social business model of Grameen Euglena centering on agricultural sector in rural areas, processes of production (cultivation) and sales of mung-bean and sesame, the number of contracted farmers and income, problems faced and facing issues to be solved, and so on (Table 2.1).

Table 2.1 Visited date and companies

Visited Date	Visited companies (agencies) and interviewees
January 23,2016	• Grameen Euglena (Headquaters,Tokyo): Yukoh Satake (Co-CEO)
March 20–26, 2016	• Grameen Euglena (Dhaka): Aminur. Rahman (Senior accounts officer), Nazmus Shaydu (Administrative officer), Azgar Hossain (Factory manager), Mohammad Akharuzzaman (Head of Bangladesh office) • Grameen UNIQLO (Dhaka): Shuhei Onishi (UNIQLO SOCIAL BUSINESS BANGLADESH, Dahka Office), Najmul Hug (UNIQLO SOCIAL BUSINESS BANGLADESH, Managing director) • Yunus Center (Dhaka): Muhammad Yunus (Chairman, Co-CEO of GE), Lamiya Morshed (Executive Director) • Japan International Cooperation Agency (JICA) (Dhaka): Seiko Yamabe (Representative), Tomoyuki Ota (Program Advisor)
February 13–20, 2020	• Grameen Euglena (Dhaka): Asaduzzaman Noor (Assistant Manager), Nazmus, S. Naheed (Deputy Manager), Mostak A. Emon (Junior Executive, GENKI Program) • Grameen Euglena (Ishwardi):Shinji Morosawa (Board of Director) • Grameen Danone Foods Limited (Bogra): Sanjoy, K. Barus (Director Operations), Kanyaiya Moharkar (Danone, India, Manager: Research and Innovation) • Yunus Center (Dhaka): Lamiya Morshed (Executive Director), Zeenat T. Islam (Relations Manager), Shihab Quader (International Projects Manager) • TM Textiles & Garments Limited (Dhaka): Kazuhiro Kataoka (Director), Jamal Uddin (Manager)
January 28, Mar.18, 2020	• Grameen Euglena (Headquarters, Tokyo): Yukoh Satake (Co-CEO)

2.2 Theoretical Background

2.2.1 Three Factors Model by Y. Hayami

Hayami (1995) provided a thought-provoking research perspectives on poverty issues in developing economies. An important issue in the socio-economic structure inherent in developing countries, which he points out, is the mechanism of the virtuous circle among the three factors of "market, government, and community." That is, (1) the basic characteristics of the market structure have a state capitalist character and a crony capitalism character of major family control. As a result, functions based on economic rationality as a market do not work soundly, mainly due to the cozy relationship among high-ranking government officials with licensing authority, big businesses, and dominant families. (2) Since the government and bureaucratic organizations cannot fully fulfill their original public functions due to their corruptive nature, redistribution of wealth through the tax system and development of social capital such as education, medical care, and other living infrastructure do not progress. Therefore, the police and military organizations as security organizations

will be strengthened in order to respond to growing social unrest. However, due to the corruption of central and local government organizations including police and courts, fairness and security cannot be effectively guaranteed, which lead to a lack of social trust in government-related public institutions. As a result, (3) since troubles between the government and companies, between governments and citizens, between companies and workers, between landowners and peasants, between wealthy people and economically vulnerable people, etc. are not effectively solved, huge social costs are generated. Finally, each stakeholder is divided and the community function is reduced. In this way, the pre-modern remains, and the modernization of the socio-economic structure hardly proceed. This is the main reason of his argument that the disarticulation between the informal sector and the formal sector, as well as between agriculture and industry, continues to exist.

As shown in Fig. 2.1, these negative (vicious) circle among the three factors of the "market, government, and community" fix economic stagnation and poverty in developing countries, bringing about expansion of informal sectors and informal economies.

At the same time, his logic also suggests the importance of the shift to a system in which the three factors that define such a socio-economic structure function as a virtuous circle in order to solve these developing country-type social issues, as is shown in Fig. 2.2.

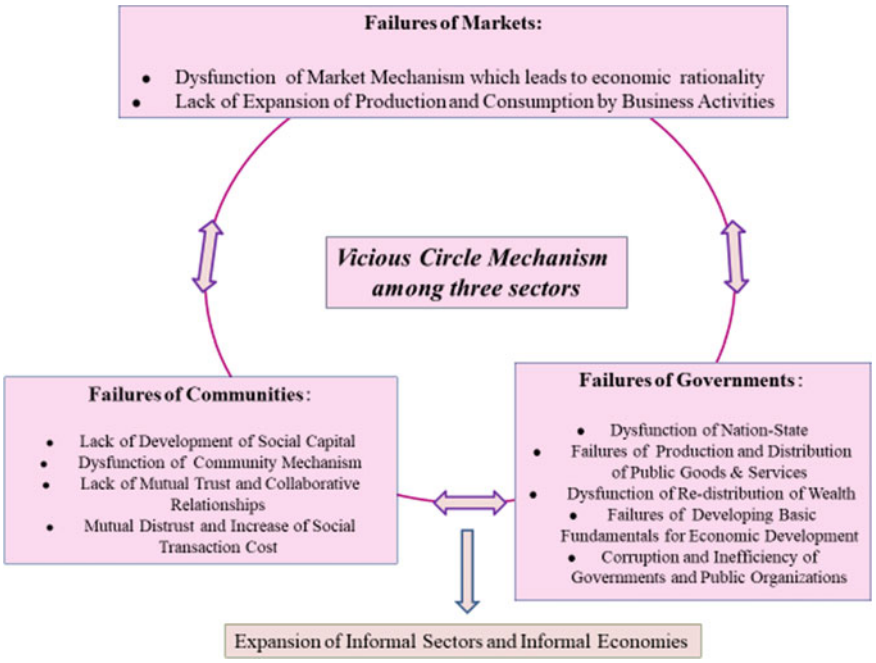

Fig. 2.1 Vicious circle mechanism of social economic formation of developing economies. *Source* Created by the author based on Hayami (1995)

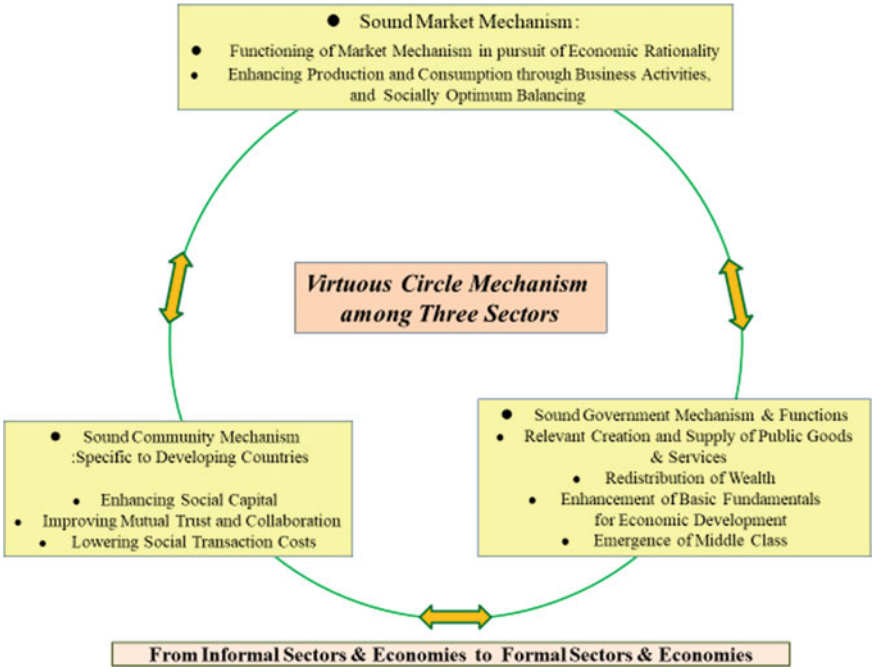

Fig. 2.2 Virtuous circle of social economic formation of developing economies. *Source* Created by the author based on Hayami (1995)

When corruption is absent in central and local government authorities, including police and courts, then even when problems arise between corporations, citizens, and companies and their employees, they can be resolved, thanks to the establishment of social confidence in the relevant authorities and persons concerned. As a result, social costs can be kept low. As governments and bureaucracies function appropriately, income and asset differentials are corrected due to the redistribution of wealth and land, and public goods and services are created and supplied through the redevelopment of basic fundamentals, including the education necessary for economic development.

As a result, economic Darwinism and market fundamentalism can be restrained, which would otherwise cause the generation and immobilization of economically weak people, due to excessive pursuit of economic rationality. As middle class emerges, crony capitalism gradually loses momentum, while market mechanisms function. As a result, the production and consumption of local products are enhanced and an optimal social balance can be attained. A virtuous circle between government, community, and market enables developing countries to continue their sustainable economic development.

2.2.2 *Emergence of Three Sectors Model for Social Issues Solving Model*

Whereas the Hayami model was a model among the three factors that basically constitute the issues in developing countries, a social problem-solving three-sector models that solves social issues in developed countries has emerged. As is shown in Fig. 2.3, the three-sectors model is between public sector, profit sector, and non-profit sector (Doh, 2003; Kotler & Lee, 2009), between public sector, profit sector, and the third sector (Teegen et al., 2004), and between the government sector, the private sector, and the plural sector (Mintzberg, 2015).

The common view is that social issues-solving theories based on a two-sectors model between the public and private (for-profit) sectors are no longer effective in resolving the contradictions that have typically emerged in the United States that led to the uneven distribution of wealth and the downfall of the middle class. They propose to work on the basis of the above three-sectors model. Mintzberg (2015) calls for the basic orientations of the public, private, and plural sectors, based on "citizenship," "ownership," and "communityship," respectively.

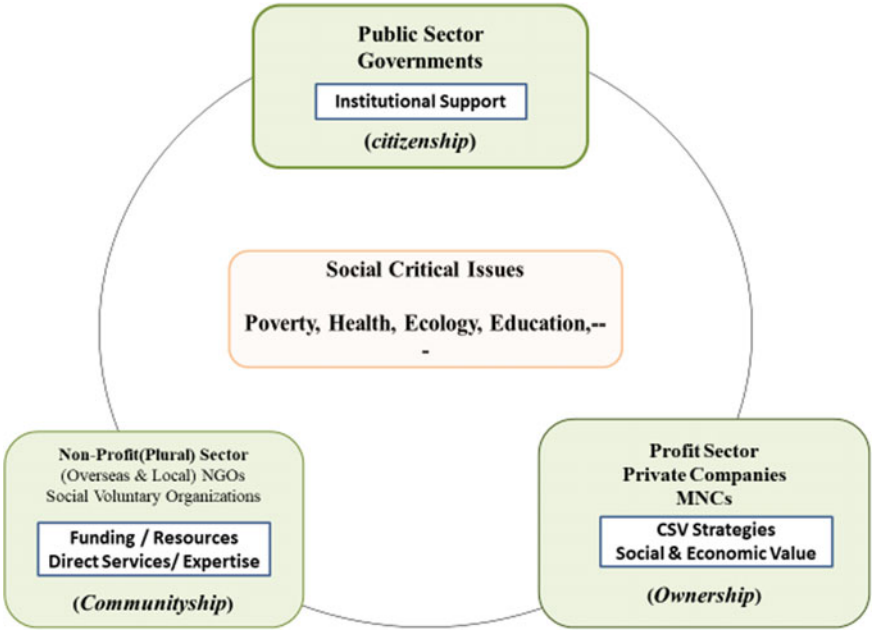

Fig. 2.3 Model for solving social problems among the public (government), for-profit (private) and non-profit (plural) sectors. *Source* Created by the author based on Doh (2003), Teegen et al. (2004), Kotler and Lee (2009), and Mintzberg (2015). *Note* Mintzberg (2015, p. 35) described that the public (government), private, and multi-dimensional sectors aspire to citizenship, ownership, and community-ship, respectively. Teegen et al. (2004) described the non-profit sector as the third sector

These three-sector models and the developing country version of the three-factors model of Hayami (1995) are basically similar in a sense that two sectors (factors), government and markets alone, are no longer effective in solving social issues.

On the other hand, Porter and Kramer (2011) developed a strategic management theory of common value, so called CSV theory, in which they suggest three ways[1]) keeping the stock value and ROE (return on equity) in the private sector (profit sector). While their point is suggestive, it only suggests how to create a balance between economic rationality and social issues as a company, based on the prerequisites of the stock value and ROE (return on equity) in the private sector (profit sector).

In contrast, Hayami (1995), Teegen et al. (2004), Kotler and Lee (2009), and Mintzberg (2015) mentioned above argue that balancing three sectors can solve critical social issues. The question is that, similar to Hayami's models as depicted in Figs. 2.1 and 2.2, no central entity in the ecosystem, which addresses itself to social problems, exists in the model shown in Fig. 2.3 as well. Thus, any self-governing and systematic structure to companies' business strategies which can independently address problems is ignored. In other words, the latter three-party relationship diagram must be recognized as an effective support diagram on the side of external support for social issues.

Furthermore, it can be said that these figures show trickle-down policies that do not consider bottom-up policies, which create the local value chain. However, in developing countries, the market is basically divided into a market that corresponds to the informal economy and a market that corresponds to the formal economy because of the division between the informal sector and the formal sector. Therefore, in developing countries, the effectiveness of trickle-down policies is positive and at the same time has great limitations inherently (Hayashi, 2016).

Next, we analyze the case of Grameen-Euglena (GE) in Bangladesh, a joint venture between Grameen Bank and Euglena in Japan, to find out what business model has been effective in solving poverty issues in developing countries.

2.3 Current Stage of Social-Business Model by Grameen Bank and Grameen-Euglena

2.3.1 Current Stage of Grameen Model

To improve the models for the negative and positive chains of 'market, government and community' in developing countries shown respectively in Figs. 2.1 and 2.2 and the economic-development business model for solving social problems in the countries shown in Fig. 2.3 at microscopic level, what type of development entity should be incorporated? The optimal model is examined using social business

[1] They consist of the following three methods; (1) Review products and markets, (2) Redefine the productivity of value chain, (3) Create industrial clusters to support the regions where companies are based (Porter & Kramer 2011).

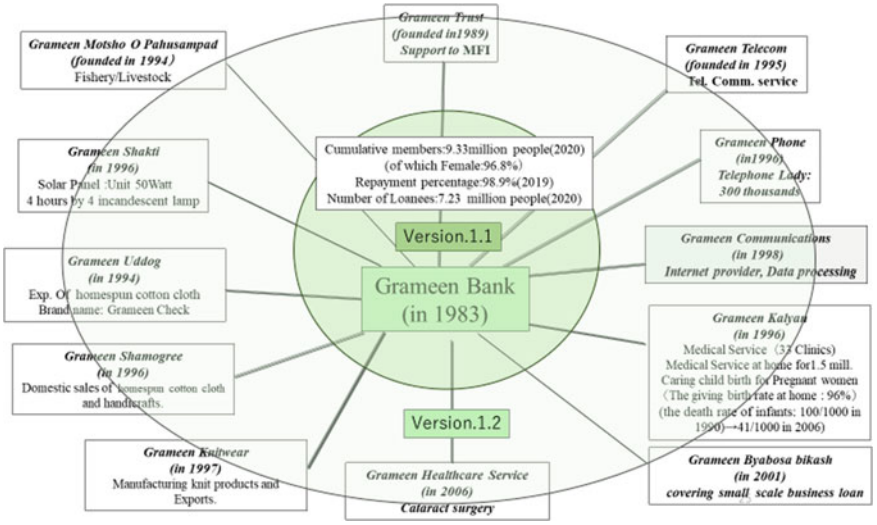

Fig. 2.4 Social Business Group of Grameen Bank. *Source* Created based on Grameen Bank Annual Report, data provided by Yunus Centre

projects centering on the Grameen Bank. Figures 2.4 and 2.5 show an outline of various social business projects centering on microfinance in Bangladesh.

As shown in Fig. 2.4, the number of customers contracting microfinancing with the Grameen Bank was approximately 9.3 million as of December, 2019. Of these, women accounted for 96.8%. The biggest item of disbursement to female is agriculture and forestry, accounting for 43.8%, followed by processing and manufacturing with 21.7%, and trading with 19.7% in 2019 (Grameen Bank Annual Report 2019). The number of loanees is 7.0 million people. The microcredit provided by the Grameen Bank for poor female farmers enables them to purchase seeds and agricultural chemicals, to cultivate crops for markets, and to launch various microbusinesses. As a result, poor families have been able to gain financial independence. The financial independence of poor families acquired by maintaining micro-businesses results in health maintenance, improved educational environments for children, and enhancement of capabilities required for jobs in the future. Microfinance in developing countries enables the daily cash flow of the poor to be flexible, while also allowing them to be financially stable and sustainable (Collins et al., 2009).

The development and networking of social-business projects centered on the Grameen Bank (the business model of which is expressed as version 1.2 in Fig. 2.4) results in the improvement and enrichment of basic fundamentals, job creation, reduction of social costs, and increases in income.

However, while micro-businesses created by poor family members could help sustain their family lives financially, more advanced technologies and business management capabilities are indispensable, so as to increase income on a nation scale.

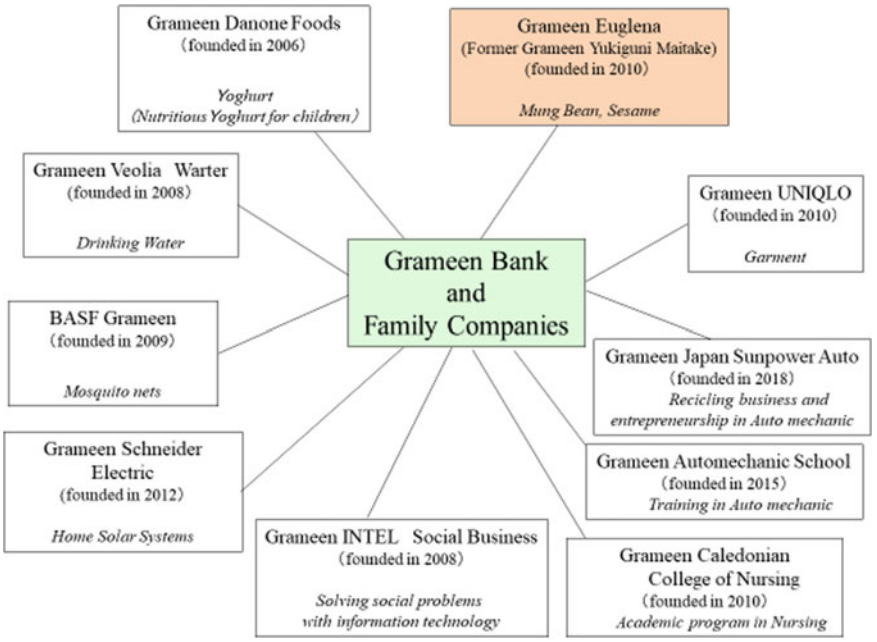

Fig. 2.5 International social business joint venture group of Grameen Bank. *Source* Created from the report presented by Yunus Center

By establishing joint-venture operations foreign companies (or MNCs) that possess various excellent business resources, such as technologies, marketing and management know-how, can be acquired from foreign companies, and jobs can be created. For that purpose, Grameen Bank has established international joint social businesses with foreign companies, as is shown Fig. 2.5.

Based on such circumstances, to create an optimal development model, we begin by analyzing Grameen Euglena Ltd. as a specific case. Grameen Euglena Ltd. is a joint-venture operation between Grameen Kurishi Foundation and Japan's Euglena that has obtained outstanding business performance as a social-business project.

2.3.2 Social-Business Model of Grameen Euglena Ltd.

2.3.2.1 Social Business Model of GE, Version 1

As shown in Fig. 2.6, Grameen Euglena Ltd. (hereafter GE) concluded mung-bean cultivation contracts with approximately 3200 local farmers as of 2015.

Through employing local field supervisors (FSs), GE provides high-quality mung-bean cultivation techniques and know-how for local farmers. GE also assists in

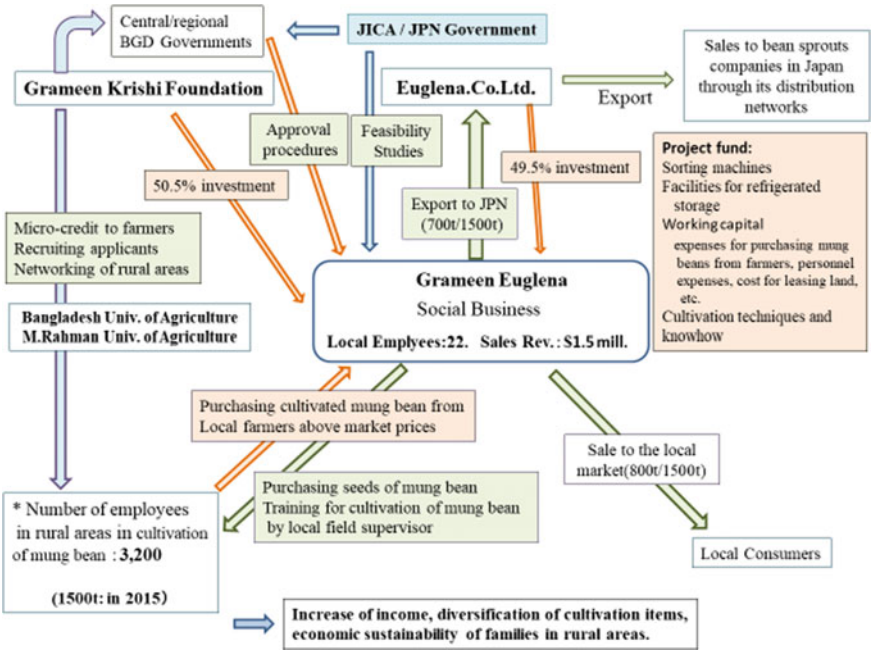

Fig. 2.6 Social-business model for Grameen Euglena Ltd. *Source* Based on information obtained from Japan International Cooperation Agency (JICA) (2014), Hoshino (2012), interview survey with Mr. Satake (joint representative of GE) in Tokyo, and interview surveys with Mr. N. Shaydu (administrative officer) and Mr. A. Rahman (senior accounts officer) in Dhaka, Bangladesh

harvesting and purchasing the mung beans, and either sells them to local markets or exports them to Japan (60% exported and 40% locally sold). Thus, GE has created a business model to secure profits (surpluses). Regarding the cultivation, harvest, and selection of mung beans, as of 2015 there were around 3200 farmers in charge of cultivation, and around 7000 (mainly women) involved in de-husking harvested beans. The timeline of the process from cultivation of mung beans to sales and export is as follows;

Recruitment and contract of contract farmers from December to January, sowing from mid-February to mid-March, cultivation and harvesting from the end of April to early May, sorting for local market and export from May to August, and finally from September to November, small mung beans are sold to the local market, and large mung beans are exported to Japan.

In the past, the price of harvested mung beans purchased by local middlemen from contract farmers was as low as 35% of the market price, but those purchased by GE from contract farmers realize 65%. At the time of the company's visit in 2016, the number of contract farmers had increased to about 6000. The income earned by these contract farmers from mung bean cultivation was $260 per a contract farmer

during the cultivation and harvesting period of about 60 days, accounting for about a quarter of the total annual income.

Thus, GE has helped to raise incomes among contract farmers. The profits (surpluses) obtained through these activities are used to increase the income of local farmers through the improvement of their cultivation techniques. The main reasons why this business model contributes to the expansion of mung-bean production and the reinvestment of the obtained profits are as follows:

The first is that Euglena Co., Ltd. possesses the mung-bean cultivation techniques, know-how, and an overseas market (Japan), and Grameen Krishi Foundation, a non-profit organization that recognizes the actual situations of local agricultural villages and farmers, jointly invested with Euglena to establish GE; GE plays a key role in this entire business ecosystem. For this ecosystem to function effectively on a platform based on GE's mission to 'reduce poverty among farmers in Bangladesh and ensure stable supply of foodstuffs to Japan', a mechanism needed to be developed, as described below.

The main roles of the Grameen Krishi Foundation, which belongs to the Grameen Group, are (1) to secure the money needed for farmers to purchase mung-bean seeds and specified agricultural chemicals and fertilizer by using microcredit (through the Grameen Bank); (2) to assist farmers by participating in briefing sessions, to recruit farmers, and to create a network of farmers; and (3) to negotiate with administrative organizations about approvals and licenses.

The GE Tokyo Division of Euglena Co., Ltd. in Japan, which succeeded the former Yukiguni Maitake Co., Ltd., is in charge of providing business funds, such as those used to purchase the separators and cold-storage facilities needed for GE as well as the funds to operate GE; it also provides cultivation techniques, imports the beans to Japan, and sells the imported beans to bean-sprout suppliers in Japan.

GE is in charge of providing mung-bean seeds to contract farmers, instructing them in cultivation, purchasing harvested mung beans, selecting the quality and grain size of the purchased mung beans, storing them in cold places, and exporting them to Japan. GE is also in charge of training local field supervisors graduating from local agricultural institutes, so that they can appropriately teach cultivation techniques to contract farmers.

It is interesting to note here that the process of constructing a value chain centered on GE has also been a process of constructing a hybrid value chain, in which the local value chain of mung-bean cultivation by local farmers coexists with the cross-border value chain of exporting the beans through the GE Division of Euglena Co., Ltd.

2.3.2.2 Social Business Model of GE, Version 2

However, the income from this local business model did not always guarantee a stable financial base. One of the reasons is the low market price of bean sprouts in Japan, and the other is the geological and climatic problems in Bangladesh. Therefore, as shown in Fig. 2.7, the characteristics of the new business model adopted after 2019 are that the main crops are converted from bung-bean to sesame.

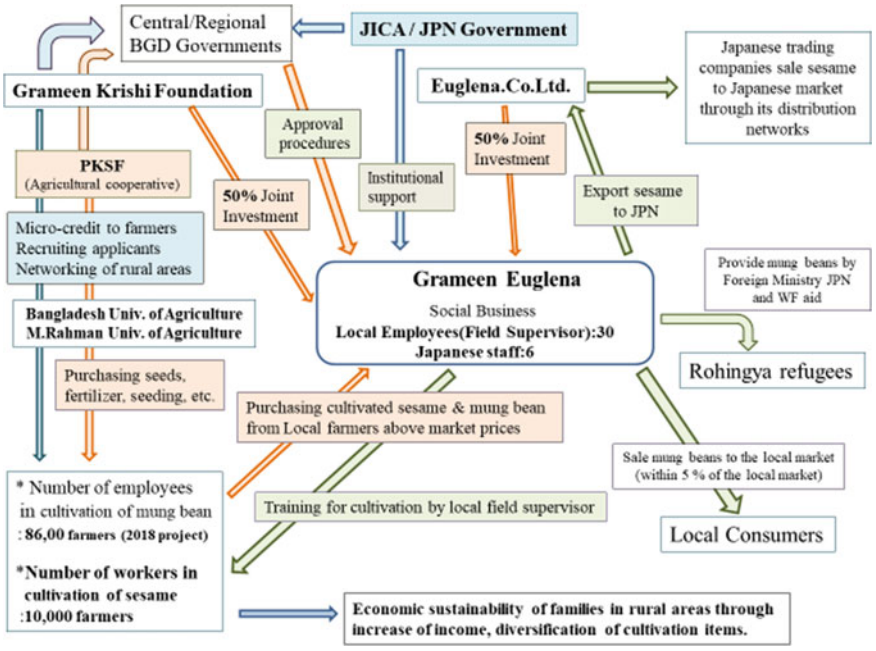

Fig. 2.7 Social-business model to reduce poverty among the public (government), private, and multi-dimensional sectors in emerging countries *Source* Created from interviews and field surveys

Along with it, the cultivation region of mung beans in the north was converted to the south, and the cultivation of sesame began in the north region. The main aim of the shift from mung bean cultivation to sesame cultivation is that the world's major sesame cultivation regions are dispersed in Nigeria, Tanzania, Paraguay, Myanmar, Egypt, etc. Due to the regional diversification of imports of sesame seeds, it is difficult to establish price control by a specific country, while the supply and demand of sesame seeds is tight at the Japanese market place. As a result, the prices are higher and stable at the Japanese domestic market.

In addition, when exporting mung beans from Bangladesh to overseas markets, since mung beans are used locally as a staple food curry ingredient, the local government has set an upper limit of 50–60% of the shipping value in principle. In the case of sesame seeds, they are not subject to export restrictions. Therefore, a further increase in export value will contribute to improving the trade balance of the local country and strengthening the company's economic base. When the company exports Bangladeshi sesame seeds to the Japanese market, they are sold to wholesalers with whom they do business through specialized Japanese trading companies. Therefore, the stabilization of export operations provides the company with a more sustainable financial base.

Another important turning point in the business model is the change in the investment ratio. The company's initial investment in 2014, version 1, was 50.51% for the

Grameen Krishi Foundation and 49.49% for Euglena. Now, as is shown in Fig. 2.7, is that the investment ratios of both the Grameen side and Euglena side are 50.0% each on an equal footing. This guarantees a more equal relationship than the previous time for GE, and enables more flexible business execution in decision-making such as personnel affairs, selection of cultivation area, purchase price, etc. In addition, GE's ability to export almost all of its selected sesame seeds means that it has become even more financially independent from its Euglena headquarters.

At the on-site briefing session for farmers as of February 2020, the number of contract farmers who started sesame cultivation was expected to increase further than before to about 10,000 farmers. In general, farmers have to be extremely reluctant to stop the conventional crops and switch to the cultivation of new crops. Because, it is uncertain whether they will be able to cultivate and crop agricultural products safely, and sale at an appropriate price.

Behind the expected number of contracts between 10,000 farmers and GE, the following factors may have played an important role:

(1) Grameen's philosophy and name recognition for social contribution,
(2) various requests to the central government through JICA and the local Japanese embassy,
(3) calling local farmers to participate in local information sessions by the Grameen Agricultural Foundation, the Local Agricultural Cooperative (PKSF), together with local governments,
(4) provision (sales) of fertilizers and pesticides suitable for cultivation, provision of microfinance by Grameen Bank,
(5) the technical guidance and the purchase guarantee of qualified quality agricultural products were presented to the farmers as a package from GE side.

Regarding mung bean cultivation, the center of the cultivation area has moved from the conventional northern region to the southern region, which is more suitable for cultivation. According to the 2018 plan, the number of contract farmers was expected to be 8600 farmers. The interesting system to be noted here is that the mung beans cultivated in this southern region are purchased in collaboration with the Ministry of Foreign Affairs of Japan's economic support and the World Food Program (WFP), and are provided to Rohingya refugees from Myanmar. Therefore, GE's social business model centered on mung bean and sesame cultivation is an interesting business model that simultaneously aims to solve both the issues of poverty and refugee support, which are the important goals of the United Nations SDGs.

2.4 Articulation Between GE Social Business Model and Socio-Economic Structure of Developing Countries

The paper now examines the composition of the positive linkage between the development of Grameen-Euglena model and the socio-economic structure of Bangladesh,

a developing country. The conventional business strategy of MNC subsidiaries in developing countries is basically defined by the stock price and ROE as the value standard at the location of the headquarters, rather than the solution of social issues at the developing host countries. At the same time, local businesses of these subsidiaries in developing countries have to rely, more or less, on interdependent relationships with existing power mechanism with licensing rights and local conglomerate corporate groups. On the other hand, both local governments and large local companies need foreign investment and introduction of advanced technologies and management know-how. As a result, the alliance with the multinational corporation, the local government, and the local conglomerate corporate group will continue to some extent. Therefore, even if local businesses of MNC subsidiaries are maintained, the basic composition peculiar to the existing socio-economic structure in the host developing country is maintained, and social issues tend to remain as they are.

On the other hand, if a business entity that aims to solve social issues through mutual investment between a multinational company (or an overseas company) and a local NGO develops a social business based on agriculture, it is expected that the following positive linkage could take place.

As seen in the case of GE, the company (1) signed mung bean and sesame cultivation contracts with local farmers in rural regions where poverty is concentrated, and gradually diversify varieties of crops and improve the qualities in cooperation with local NGOs and local governments. At the same time as increasing the cropping volume, sales amount of contract farmers will increase by selling crops to GE at a price higher than the market price.

As a result, (2) an increase in farm income and economic stability of family life will be brought about, which will gradually lead to a decrease in the poor in rural areas.

This leads to create conditions necessary for (3) improving the nutrition and educational conditions of children in local households, improving the educational environment by local governments through increasing tax revenues, which could create conditions for acquiring various specialized abilities for the middle class in the future. On the other hand, (4) increasing income in rural areas will increase demand not only for daily necessities but also for industrial products such as various home appliances and agricultural equipment, and will encourage imports and direct investment from overseas and at the same time locally. The rise of companies will gradually build a local value chain. It means that, (5) agriculture and industry will shift to getting on an expanding track, and together with the expansion of related service industries, the formal sector, which is the basis of so-called stable employment, will expand. As the labor demand in the formal sector increases, (6) the unstable working families who have been forced to live their daily lives in the informal sector will be gradually absorbed by the formal sector. Especially in rural areas, the younger generation, who has become able to receive appropriate education, will gradually acquire the job abilities required in the formal sector and will gradually be able to move from the informal sector to the formal sector. This is a fundamental difference from the previous movement of labor from the informal sector in rural areas to the informal sector in cities. Absorption of precarious employment from the informal

sector by these formal sectors, and the decrease of the poor will lead to (7) not only the depth of the urban middle class, but the strengthening of social voice and civil rights. These trends not only increase GDP, but also (8) promote political democratization and redistribution of wealth through the tax system, narrowing income inequality and improving social capital, and breaking away from crony capitalism, which gradually move toward normalization of market functions. Figure 2.8 shows the above flow by incorporating it into a three-factor, three-sector model.

The essential differences between the models shown in Figs. 2.1, 2.2 and 2.3 is that in the last model (Fig. 2.8), we can see the levels of responsibility based on ownership as lying at the hub of a business ecosystem addressing itself to social problems, and the various value chains centering on a social business. We can thus schematize the above four models, the main goal of which is to reduce poverty, from the perspective of business organizations. Furthermore, the question the paper would like to point out here is that in the model shown in Fig. 2.1 and Fig. 2.2 between the factors (and/or sectors), the driving force that links these three sectors as a positive cycle was not presented. Therefore, Fig. 2.8 tries to show the dynamic relationship between the three parties, by showing an ecosystem with a social business entity as a keystone (Iansity and Levin 2004), which is a mutual investment between a foreign company and a local NGO, as a driving force to circulate between these sectors. The development of GE's business activities shown in Figs. 2.6 and 2.7 will gradually move the positive cycle between the three parties by continuously fulfilling

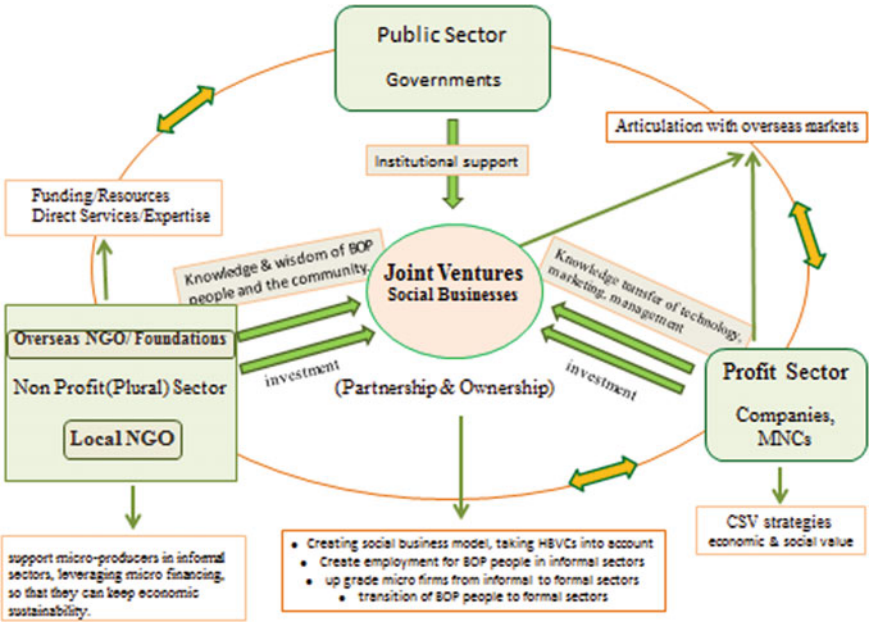

Fig. 2.8 Social business model and virtuous circle mechanism of developing economies. *Source* Created from data sources of Figs. 2.1, 2.2, 2.3 and 2.4

the function as the driving force of the keystone in Fig. 2.8. As seen in the case of GE, along with the increase in the number of contract farmers, the production of agricultural products and the sales amount, as well as the escape from poverty in rural areas, the increase in the purchase amount of various household electrical products and agricultural equipment could lead to expanding the demand for industry and building local value chain. Furthermore, by linking the local value chain with the international value chain through the export of products (agricultural products) to the overseas market (Japan), not only economic benefits, but also technical improvements to meet safety and various other international standards and qualitative improvements of local government agencies will be constantly required.

In other words, the linking of local social businesses in developing countries with the international value chain can be an important opportunity for the above three sectors to function in a positive cycle. However, why is it difficult for overseas companies and business people with advanced technology and management knowledge to develop social businesses like GE in developing countries and connect them to the above positive cycle? In the next section, we will consider this point from the perspective of business management.

2.5 Challenges from a Development-Business Management Perspective Raised by Business Models in Developing Countries

In relation to the above viewpoints, we will focus on the nine development-business management issues raised by the Grameen Euglena model in developing countries.[2]

First of all, in order to continue the local social business model, (1) mutual trust based on sharing the social philosophy and purpose with the local partner is a major premise. Based on this, technical and payment (monetary) credit on the overseas partner side is indispensable. In the case of GE, in principle, based on Grameen's social business philosophy, they have equal authority based on mutual ownership. Therefore, it is possible to operate the business based on mutual trust with local farmers. However, in conducting such social business locally, it is not always possible to meet local partners who can share the same philosophy, and even in that case, it is not always possible to continue long-term relationships. Moreover, (2) even if it is a popular technology that has been developed in the home country and has already been commercialized for a certain period of time or longer, considerable time and effort will be required in terms of adapting to the site. In the case of GE, it required recognition and mutual understanding of soil characteristics, climate, local farmers' unique cropping styles, and cultural styles. In addition, (3) it is critically important for GE to cooperate with local agricultural cooperatives (PKSF) and Grameen Agricultural Foundation regarding arrangement of suitable fertilizers, pesticides, seeds

[2] Of the nine issues pointed out here, issues (2) to (8) are based on the indication of Mr. Yukoh Satake, GE's CO-CEO (Hearing at the Tokyo head office: March 18, 2020).

and microfinance as purchase funds. Besides, collection of agricultural products cultivated from about 10,000 contract farmers, payment work for each purchase, and introduction of IT for organizing and communicating with farmers are indispensable issues.

(4) Mechanization of the sorting work process, which requires labor in accordance with the export standards for collected agricultural products (sesame, mung beans), and manual work are required to be shared and dealt with. In the case of mung beans, those with a particle size of 3.5 mm or more are for export to Japan, and those with a particle size of less than 3.5 mm are for local sales. (5) Collection work from many farmers, an appropriate storing system for collected agricultural products for a certain period of time, and various time-consuming approval procedures with central and local government related departments for export operations during that period.[3] (6) When selling to the local market, it is indispensable to compete with the local company in terms of price, and at the same time, make a difficult strategic decision of consideration and cooperation for the survival of the local company. For example, the amount of local mung bean sold via GE is limited to less than about 5% of the local mung bean market, and care is taken not to disturb the local market. Moreover, (7) when finishing local products for overseas markets, work to ensure various international standards such as safety for international markets, cost, and quality is required. Even after these processes, (8) the troublesome work of developing channels and markets for overseas markets remains. And finally, the most difficult task is (9) to find and develop home and local human resources at the home and host country who share the idea of social business and who are continuously involved in business operations together as a member of the organization for that purpose.

The above is a summary of the indication by Mr. Ukoh Satake, Co-CEO of GE., on why new business launches and operations in developing countries tend to be difficult to continue. Many of the above points may not apply to local subsidiaries of multinational corporations in developing countries that can financially afford and hold global value chains. In other words, the above issues can be said to be issues when trying to launch a social business independently as a separate organization. In order to theoretically answer these individual issues from a corporate management perspective based on social business, it is clearly insufficient not only from the conventional "business administration", and "business management" perspective, but from the perspective of macroscopic "development economics."

[3] In the case of export of mung beans to Japan, following application procedures to central and regional governments were required; production certificate from Agricultural Extension Bureau (DAE), application to Ministry of Agriculture (MOA) for permission to export, and finally application to Ministry of Commerce (MOC) for issuing export permission. After the above procedures are completed, the customs clearance procedures are carried out. In this case, since the issue date and time of various certificates required for the export procedure is unclear, there is a troublesome risk that the schedule may be different from the advance freighter arrangement, port arrival, and cargo reservation date and time required for the export procedure. This point is reported in more detail in JICA/Yukiguni Maitake Co., Ltd. (2014, pp. 67–68).

Therefore, as a summary of this section, if the academic research area as "development management" is established, it is worth to reexamine the major academic areas that can be composed, paying attention to the above points.

"Comparative cultural theory" and "international development studies" required to understand cultural styles such as religions, languages, and lifestyles unique to each development; "Rural sociology" including landowner-tenant relationships based on the large land ownership system, or the small farm economy; and "Agricultural economics" analysis, including the economic situation and consumption behavior of rural households, and joint labor system with other farmers, including irrigation, crop harvesting, and collection work; an "Agricultural" approach to the relationship between soil geology and climate, and crop characteristics and fertilizers, pesticides, etc.; "Agricultural management" aspect of agricultural product prices, various costs, and profits; in the manufacturing industry, "Engineering" understanding of the development and introduction of locally adapted technology considering advanced technology and locally unique grassroots innovation; and in particular, from the perspectives of "economy as a social system" and "development", a theoretical approach from "Development economics" as "International economic theory" based on such various issues as poverty, inequality, ecological environment, urban and rural, formal sector and informal sector, and trade and direct investment; furthermore, research on "crony capitalism" -like "Social and economic structures", including governance peculiar to developing countries found in central and local governments and local conglomerate companies, is indispensable.

Based on these studies, in developing countries where the functions of the market economy are more or less restricted, a new theoretical construction as "Development business management", in which these above areas are combined with the development of management areas suitable for business operations, is being asked.

In the area of business management, for example, as one of the important areas peculiar to developing countries, risk management that can deal with such following issues can be pointed out as; Crimes such as local money escape, removal of equipment, replacement of forms, fraud, illegal kickback, bribery, robbery etc. terrorism, political turmoil, climate illness, traffic conditions due to underdeveloped industrial infrastructure, power outages, voltage instability, and natural disasters.[4]

This means that it is necessary to keep in mind the "risk management" of business operations peculiar to developing countries against the risk of occurrence of time and related costs on a huge scale due to the above factors.

Regarding "marketing", 3A (Affordability, Access, Availability) (Prahalad, 2002), 4A (Availability, Affordability, Acceptability, Awareness) (Anderson & Bilou, 2007) corresponding to the unique market structure and market segmentation, and the five gaps between the developed and developing markets performance, sustainability, regulatory, preferences, etc. (Govindarajan & Trimble, 2012), it is essential to have

[4] Dealing with these risks was a common topic in hearings not only with local social businesses but also with Japanese companies operating locally. Items not mentioned in the risk management specific to developing countries mentioned above are more diverse depending on the local circumstances, from dental treatment to sexual troubles, but they are omitted here.

a country-specific marketing strategy and product development management that conforms to such above conditions.

Therefore, the BOP strategy theory described in this paper is a new "development business management" that leads to poverty reduction and quality improvement of living conditions of the poor people in developing countries, which is different from the "business management" peculiar to developed countries.

2.6 Discussion and Conclusion

The paper has first examined the significance of the development economic model found in the three-factor and three-sector models as an approach to solving social issues that have been raised in the past in relation to the BOP strategy theory for poverty alleviation. After that, we examined the effectiveness as a social business model of Grameen Euglena (GE), which aims to reduce poverty in Bangladesh. As a result, as a social problem-solving model that complements the limitations of the three-factor/three-sector models and makes its effectiveness function, the paper proposed a social problem-solving business model, centering on key stones as a so-called driving force for mutually circulating these three factors. The paper discussed that this keystone-mediated social business ecosystem will positively function the links between the factor/sectors that compose the socio-economic structure peculiar to developing countries, thereby eliminating the negative aspects. And finally, it has tried to theoretically reexamine various points about why social business models are difficult as a business in developing countries, centered on issues posed by Mr. Y. Satake, Co-CEO of GE.

In order to theoretically respond to social issues such as poverty peculiar to developing countries from the perspective of social business, the conventional approaches from development economics alone or business management theory alone is obviously inadequate. For that purpose, it is inevitable to build a new academic field as "development business management" that includes various factors, composing the "social system" or "socio-economic formation" unique to developing countries. However, it is important to keep in mind that in developing countries in Asia, the conventional economic development-oriented approaches that focus exclusively on agriculture and manufacturing have now significant limitations in discussing the economic development models. This point is clearly found from the case analysis of India and the Philippines,[5] where the IT service field based on ICT technology has

[5] While the growth rate of the manufacturing sector in these developing countries has been stagnant, the number of employees in the IT service sector has been rapidly increasing. As a result, the number of workers in the service industry, including the IT service sector, far exceeds the number of employees in the manufacturing sector. Regarding the position and importance of this sector, Ishigami (2017), Hori (2016), Hayashi et al. (2017), and offshoring and industrial development of Japanese ICT companies to Asian countries, Hirakawa et al. (2017), the locational advantages of offshoring in various Asian regions are discussed in more detail in Oshri et al. (2015, Chap. 3) and others.

played an extremely important role as an employment absorption sector since 2000. A "development management" approach that can propose a new inclusive business development strategy based on these IT services is also left as a new research subject in the future.

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Chapter 3
Digital Healthcare and a Social Business Model to Ensure Universal Health Coverage (UHC): A Case Study of Bangladesh

Ashir Ahmed, Forhad Hossain, Nuren Abedin, Rafiqul Islam, Faiz Shah, and Hiroshi Hoshino

3.1 Introduction

All UN member states have agreed to try to achieve Universal Health Coverage (UHC) by 2030, as a part of the SDGs. The objective of UHC is that all individuals and communities have access to the healthcare services they need without suffering financial hardship. At least half of the world's population are still out of essential healthcare service coverage. About 100 million people were pushed into extreme poverty (defined as living on 1.90 USD or less a day) in 2010 by healthcare costs (Khokhar, 2010). Over 800 million people (almost 12% of the world's population) spend at least 10% of their household budgets to pay for health care.

UHC does not mean to provide free health service for people but to prevent catastrophic medical costs. It encompasses all components of the health system: health financing, health service delivery systems, the health workforce, health facilities and communications networks, health technologies, information systems, quality assurance mechanisms, and governance and legislation. UHC also ensures progressive expansion of coverage of health services and financial protection as more resources become available. UHC not only required individual treatment services, but also population-based services for health camps for non-communicable disease prevention. Taking steps towards UHC is not only about healthcare, but also equity, development priorities, and social inclusion and cohesion.

Unfortunately, the people in the developing countries are out of UHC coverage due to the poor healthcare infrastructure and unfair distribution of healthcare resources.

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Most of the public and private healthcare facilities are concentrated in the city areas. Government healthcare facilities in the rural areas do not have enough qualified doctors and nurses. NGO initiatives are short-termed and lack sustainability. Commercial private clinics are too expensive for the rural low-income community. Thus, the villagers have no options but to go for the unsafe local treatments offered by the so-called village quack doctors.

According to WHO, there should be at least 12 certified doctors to serve a community of 10,000 people. Many developing countries do not meet this requirement. Bangladesh is not an exception. Bangladesh has only 6.37 doctors for the population of 10,000. The government is working hard to improve the doctor-patient ratio by increasing the number of medical colleges and institutes. But it will take a long time to reach close to the requirement. Therefore, the role of the pharmacists (medicine shop owners) who serve as local health workers will remain very important. On one hand, we cannot ignore the services of these huge unskilled pharmacist communities, especially in the rural areas as village health workers. Also, there is no way to allow them to simply practice this uncontrolled service. Therefore, it is very important to empower the medicine shop owners (so called pharmacists) with proper training and facilities and help them to provide better healthcare service to the unreached communities for ensuring universal health coverage. We argue that digital healthcare service can fill the gap.

Life expectancy among the people of Bangladesh has significantly increased. In 2019, the life expectancy at birth was 72.9 years whereas it was only 66.43 years in 2002. Earlier in 1971, the average life expectancy of the population was just 46.6 in Bangladesh (Fig. 3.1). As the life expectancy of people is increasing, the number of senior citizens has also been rising. Chronic diseases are expected to grow rapidly as the lifestyle and environmental factors of Bangladesh are changing with the development of economic growth. Healthcare management costs are becoming a burden. There is a risk that the elderly population will become out of UHC.

The disease profile is also changing in correspondence with the demographic shift, lifestyle change, and rapid urbanization. Non-Communicable Diseases (NCDs) are rising, and acute diseases are replaced by chronic diseases (Ahmed et al., 2013). Major NCDs include diabetes, kidney failure, stroke, heart attack, and cancer. 20% of men and 32% women have raised blood pressure with 7.1 million cases of diabetes in 2015. The continued care required for these diseases and the expensive treatment can result in immense pressure on the health system and potentially catastrophic costs to families through out-of-pocket expenditure.

This paper addresses the Universal Health Coverage (UHC) issue in Bangladesh and proposes digital healthcare services be adopted to achieve SDGs. Section 3.2 describes the definition of the UHC and its monitoring framework. Section 3.3 introduces the initiatives and their status of progress toward UHC in Bangladesh, and describes five major unreached communities of the country. Section 3.4 explains the concept of the PHC system and the service delivery mechanism to reach the unreached communities. A social business model is introduced in Sect. 3.5 with a checklist of whether it complies with Yunus Social Business's seven principles. Section 3.6 concludes with remarks and future works.

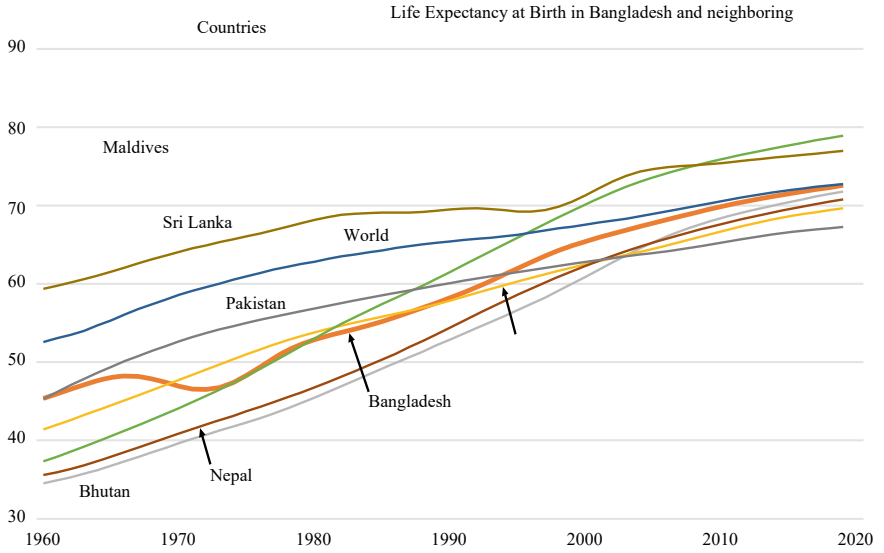

Fig. 3.1 Life expectancy in South Asian countries and World population (*Data source* WHO)

3.2 Universal Health Coverage (UHC)

The UN has defined frameworks for monitoring progress towards UHC by its sub-goals. Sub-goal #1 is to achieve at least 80% essential health coverage in all regions. This goal is monitored by measuring the proportion of a population that can access essential quality health services, known as SDG tracer 3.8.1.

This indicator includes 14 tracer indicators organized by four broad categories of service coverage. The categories are shown in Fig. 3.2. Sub-goal #2 is to achieve 100% financial risk protection from catastrophic health expenditure. The progress towards this goal is monitored by measuring the proportion of the population that spends a large amount of household income on health, known tracer indicator SDG 3.8.2. This indicator is the proportion of the population with large expenditure on health as a share of total household expenditure or income. There are two thresholds that are used to define "large household expenditure on health":

- greater than 10% of household expenditure or income
- greater than 25% of household expenditure or income

Many challenges still stand in the way of successful implementation of UHC. One significant factor is the nature of the healthcare system of a country. Countries with strong economies have well-integrated healthcare systems, where the government can centrally manage, regulate, and monitor the health sector. This is different for developing and poor countries where the health sector often consists of multiple key players like government, for-profit companies, non-government organizations

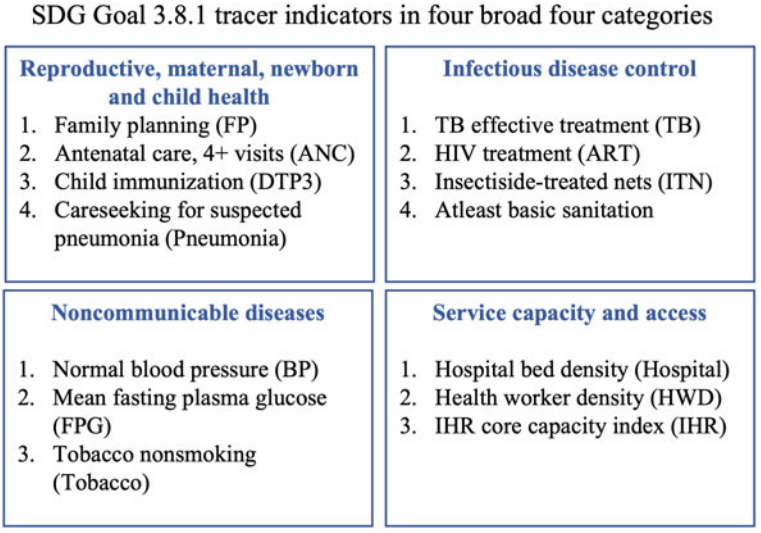

Fig. 3.2 Tracer indicators for SDG 3.8.1 (Source: SDG Indicator Metadata Repository)

(NGO) and International Organizations (IO). Such countries face a significant change for attaining 100% UHC. Poverty, insufficient health care funding, and a lack of a well-integrated national health care system are the main reasons for inadequate health coverage. For example, Ghana's National Health Insurance Scheme started in 2005, but only 4% of the population has coverage because people are unable to pay the premiums (Umeh, 2018). Distance to healthcare facilities is another big challenge to UHC (Osugi et al., 2016), because not being able to build strong and sustainable health systems that provide quality health care to everyone is a must for UHC (Binagwaho et al., 2019). NGOs, healthcare companies and other non-formal health providers often play a significant role in advancing UHC by increasing population coverage, service coverage in low- and middle-income countries (Sanadgol et al., 2021).

3.3 Status of UHC in Bangladesh and the Unreached Communities

Bangladesh, being one of the world's most densely populated countries, presents an enormous UHC challenge for a number of reasons. The health sector in Bangladesh is decentralized with multiple players who control this sector (Thelwell, 2020). According to WHO, people in Bangladesh suffer from geographical maldistribution of health care facilities that prevent convenient access to health facilities, which we call **Rurality** in this chapter.

There is an acute shortage of Human Resources for Health (HRH). As mentioned above, there are only 6.37 doctors (WHO recommended number of physicians: 12) and 3.9 nurses, patient-nurse ratio 3,542:1 in 2017 (WHO recommended patient-nurse ratio 7:1). Global Health Workforce Alliance states that a severe gap between sanctioned and filled health worker positions exist in the Human Resource for Health (HRH). There is 36% vacancy despite health workers being sanctioned in positions, and only 32% of healthcare facilities have 75% or more of the sanctioned HRH working regularly.

3.3.1 Status of UHC

The government of Bangladesh has pledged to work more progressively towards UHC as documented in the Health Care Financing Strategy of 2012 (HCFS). The target timeline is set as 2032, for Bangladesh to address key issues such as developing a national human resource policy and action plan for health services, establishing a national social health protection system, developing a good health information system, and strengthening the capacity of the Ministry of Health. To achieve its goals by 2032, Bangladesh undertook three strategies: (a) generating more resources for health, (b) improving equity by allocating resources in an equitable way, and (c) enhancing efficiency of health service.

Bangladesh has developed its own UHC monitoring indicators and tools based on its epidemiological and demographic profile, health system, health financing system, level of economic and populations' demand and expectations for collection of national health and household statistics. The healthcare system has three tiers of health facilities which are known as primary, secondary and tertiary level health services. There are approximately 13,000 community clinics for each 6000 population, which are connected to government hospitals at 5381 health facilities in union level and 610 government hospitals with 49,414 hospital beds in Upazilla (sub-district) levels. Secondary health facilities are district hospitals providing advanced and specialty health service. Tertiary hospitals include medical college hospitals and super specialty hospitals at national level high-end health services in specific fields. Secondary and tertiary health facilities are mostly located in urban areas making it difficult for rural population to access immediately in an emergency. Due to lack of a national health insurance and high cost of availing secondary and Tertiary health service, these facilities are inaccessible to the urban poor population.

A study on projection of UHC in Bangladesh (Rahman, 2019) found that 80% coverage can be achieved by 2030 for the services for childhood immunization, oral rehydration treatment, family planning and non-use of tobacco. However, services for mother and child health (coverage of four antenatal care visits, facility-based delivery, skilled birth attendance, postnatal checkups), treatment facilities for pneumonia, preventive, basic sanitation were not projected to achieve 80% coverage by the target year (Table 3.1).

Table 3.1 Country description and population demography of Bangladesh

Land area	130,170 km^2
Population	166.3 million (2021)
Gross national income per capita	$1580
Adult literacy	53.5%
Population growth rate	0.99% (2020)
Gender distribution	Female 49% Male 51%
Urban population	62.9 million (38.2%)
Rural population	101.8 million (61.8%)
Population age distribution	0–14: 27% 15–64: 68% 65 and above: 5%
Life Expectancy at birth (years)	72.9 (2020)
Infant mortality rate (per 1000 live birth)	24.3 (2020)
Under-5 mortality rate (per 1000 live birth)	29.1 (2020)
Maternal mortality ratio (per 100,000 live birth)	173 (2017)
Per capita total expenditure on health (PPP int. $)	46 (2019)
Government expenditure on health as of total health expenditure	18.6 (2019)
Total health expenditure as a share of GDP	2.5% (2019)
Hospital bed (per 10,000 population)	7.9 (2016)
Density of doctors (per 10,000 population)	6.37 (2019)
Density of nurses and midwives (per 10,000 population)	3.9 (2019)
Number of Government hospital	610 (2017)
Number of Commercial hospitals	5023 (2017)

Source World Health Organization, World Data Atlas, Ministry of Health, and Family welfare of Bangladesh (Knoema, 2022) (MOHFW, 2022)

The health care system in Bangladesh, like in most developing countries, has a high out-of-pocket (OOP) payment basis. Figure 3.3 shows the shifts in OOP payment ratios in Bangladesh, India and Pakistan, Malaysia and Thailand, Denmark, Japan, and the United States. Denmark, Japan, and the United States have been having a low and steady OOP payment system keeping it below 15%. Thailand, one of the rising economies of Asia, has been incredibly successful in bringing its OOP payment ration from 34% in 2000 to 8.7% in 2019. Since 2000, OOP payment ratios

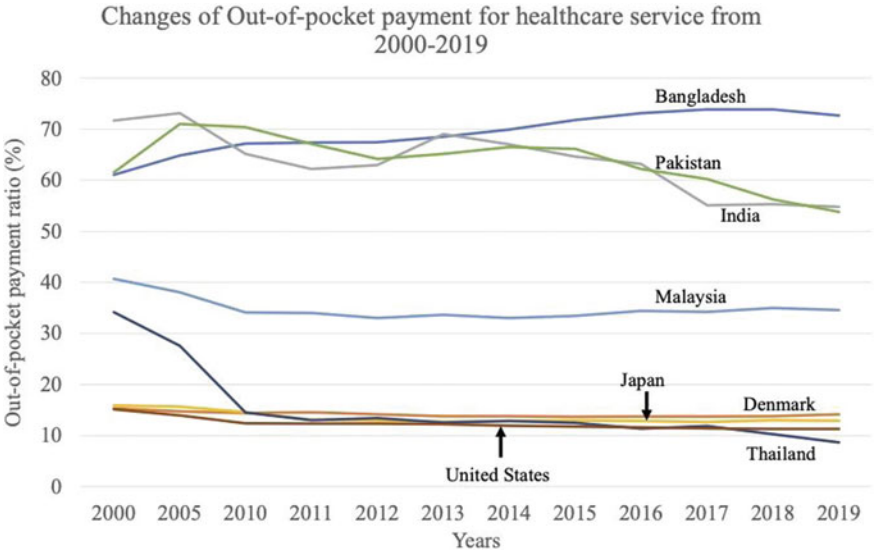

Fig. 3.3 Out-of-pocket payment ratio in total healthcare expenditure in Bangladesh, Pakistan, India, Malaysia, Thailand, Japan, Denmark, and United States (*Data source* World Bank)

in India have decreased by 17% and in Pakistan by 8%. However, this ratio has been on the increase in Bangladesh since that period. The average OOP payment by people is approximately 74%, making Bangladesh the highest OOP paying country for healthcare in the South-East Asia region. This number has increased by 13% compared to the beginning of this millennium. In this system, often the poor are observed to pay more than the privileged in terms of percentage of disposable income (Molla & Chi, 2017). But the richer house-holds were found to pay more in terms of gross health expenditure.

Thirteen percent people are observed to fall into impoverishment due to high OOP payment for healthcare service (Begum & Hamid, 2021). The study projected a 3% increase in catastrophic health expenditure and a 5% increase in impoverishment by 2030 with increasing financial risk being disproportionately more prominent among the wealthiest households of the country. The absence of a National Health Insurance system in Bangladesh is one major underlying reason for the increasing risk of catastrophic health expenditure and impoverishment. Catastrophic health expenditure incurs when a person seeks advanced and specialized treatment. With the limited number and capacity of government funded facilities, people with better affordability, seek healthcare services provided by private and for-profit healthcare services. According to the WHO country office report, 5.7 million people in Bangladesh are pushed into poverty due catastrophic health expenditure.

3.3.2 The Unreached Communities of Bangladesh

When determining the unreached population of UHC, it is important to understand if a community or target population can avail healthcare service when they need it. This ability comes with conditions (a) whether healthcare facilities are available within their reach (accessibility in terms of distance and travel environment conditions) and (b) whether their economic condition allows them to pay for healthcare service (affordability). In this section, we identified five unreached (out of UHC) communities in Bangladesh who come with these two attributes.

Academia: Students in Bangladesh, from primary to university level, make 23.2% (37.4 million people) of the total population of Bangladesh. Table 3.2 shows the number of students in different educational levels and their percentages. Students in Bangladesh do not have health insurance coverage that facilitates them to do regular or annual health checkups for monitoring and detection of health anomalies. Many young students' dropout at an early stage of their student life due to late diagnosis of diseases and a huge burden of treatment cost that comes along (Hamid et al., 2021). Similar instances are observed among the teaching body and administrative staff who do not get any health benefit package from the employer organization and are deprived of regular health monitoring services. Providing primary healthcare service through educational communities alone can make it possible to bring 23.2% (almost one fourth) of the population under UHC.

Industry and Service: The key economic sectors of Bangladesh are agriculture, industry, and service. With the economy undergoing structural reform, the employment share in agriculture has experienced a decrease while the employment share in service has increased. Employment share by these three sectors is shown in Table 3.3.

Table 3.2 Number of educational institutions, teachers, and students of Bangladesh in 2018 (BANBEIS, 2018)

Type of institution	No. of institution	No. of teachers	No. of students	No. of staffs	Total in education	% In education	% In population
Primary	133,901	623,964	17,231,350	267,802	18,123,116	48.5	11.2
Secondary	20,467	243,880	10,320,695	40,934	10,605,509	28.4	6.6
College	4419	120,934	3,872,960	8838	4,002,732	10.7	2.5
Madrasah	9303	113,761	2,453,363	18,606	2,585,730	6.9	1.6
Professional	877	10,816	168,469	1754	181,039	0.5	0.1
Teacher education	216	2700	35,071	432	38,203	0.1	0.0
Technical vocational	5897	34,716	891,964	11,794	938,474	2.5	0.6
University	135	28,568	856,726	5714	891,008	2.4	0.6
Total	175,215	1,179,339	35,830,598	355,874	37,365,811	100.0	23.2

Table 3.3 Economic sectors of Bangladesh and its population

Economic sector	Share (%) of employment	No. of People	(%) in country's population
Agriculture	43	25,585,000	16
Industry	20	11,900,000	7
Service	37	22,015,000	14

Data source World Bank, Statista (Farole et al., 2017; O'Neill, 2022)

Twenty percent of the population is employed in the industry sector that consists of textile or Ready-Made Garment (RMG) industry, furniture manufacturing, plastic manufacturing, and other industries. According to the International Labor Organization (ILO), RMG industry alone employs 4.5 million RMG workers that represents 3% of the country's population. Low-income workers are deprived from access to health care due lack of affordability. After meeting living expenses and financial support to families, RMG workers are left with very little disposable income for healthcare. A survey by Asian Center for Development (ACD) found that a RMG worker household spends only 7% of their total household expenditure on health care (BBS, 2014). Hence, a common practice among them is to ignore or overlook health issues for many years until a disease causes unbearable health conditions (Haque & Bari, 2020).

Apart from the RMG industry, there are 7.9 million Small and Medium Enterprises (SME) in Bangladesh, employing 25% of the labor force, in both industry and service sectors. More than half of these SMEs are located outside of Dhaka and Chittagong, two largest cities of Bangladesh. Low-wage employees in large, medium, small enterprises are a big portion of the population who remain out of UHC. Problems in accessibility and affordability arise when this large population seeks healthcare in the conventional out of pocket (OOP) healthcare service system.

Temporary Community Slums: According to the World Bank database, 47.2% of urban population live in slum areas in Bangladesh. The proportion of slum population has decreased to almost half compared to the proportion of slum population in the year 1990, when 87.3% of the urban population used to live in slums. Figure 3.4 illustrates the decrease of slum population proportion from 1990 to 2018. Dhaka, being the largest city of Bangladesh, has two city corporations, houses the 44% of total slum population, that counts for 31% of the city's population (BBS, 2014; WPR, 2022).

Slums are mainly home to domestic immigrants from rural parts of the country, RMG workers, domestic helpers, and a part of essential workers (e.g.: transport, food retailing and distribution, product retailers etc.) and their families. Most of the slum dwellers are very low-income workers who live below $1.9 a day. Despite urban areas having many health care facilities, most of them are beyond the affordance of slum dwellers. Few Government health care facilities are available, but the serving capacity of these facilities is insufficient to serve this large population.

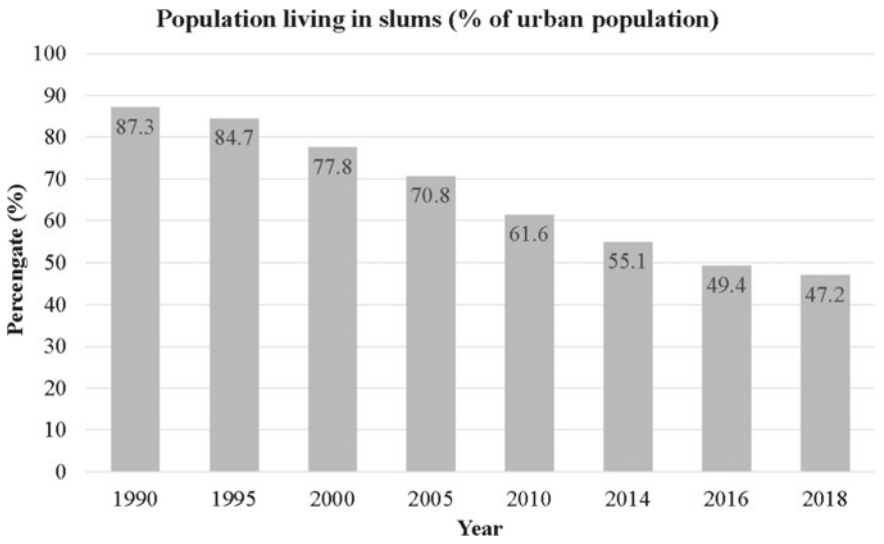

Fig. 3.4 Percentage of Slum population in Urban population of Bangladesh from 1990 to 2018 (World Bank, 2022)

Disaster Shelters: Due to its geographic location, Bangladesh often experiences floods and cyclones. During these natural calamities, many people move to disaster shelters temporarily. Floods, landslides, Tropical storms (cyclones) and extreme heat are the calamities this country is highly susceptible to (Think Hazard, 2020). In the year 2020, 8 million people (5% of the population) were affected only by flood and storm. During calamities, disaster shelters and affected areas get dis- connected from transport infrastructure, making it difficult to reach healthcare facilities when they need it the most. A study found that OOP health expenditure pushes 13% of households in high disaster-prone areas than households in low disaster-prone areas (Begum & Hamid, 2021). Reaching these sparsely distributed temporary communities transporting full capacity there gets almost impossible leaving them out of health coverage.

Refugee Camps: Since 2017, Bangladesh has experienced a huge influx of Rohingya refugees from the Rohingya state of Myanmar. According to the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), there are approximately 0.9 million Rohingya refugees staying in 34 temporary refugee camps in Bangladesh (UN-OCHA, 2022). These camps are usually densely populated. There are many health issues among this population e.g.: mental health issues, food and water-borne disease, infection and respiratory disease, reproductive health etc. There are 26 health organizations in Cox's Bazar providing health care facilities for the Rohingya population. These organizations are funded by grants and donations from International Organizations. One of the challenges with such a healthcare system is regarding sustainability. Like in other temporary communities, healthcare facilities

would be difficult to provide with no fund and donation allocation. And like many rural areas in Bangladesh, unavailability of HRH in sanctioned healthcare facilities may create lack of access to healthcare service (IOM, 2022).

Rural Population: Rural residents make 62% (101.8 million people) of the total population of Bangladesh. While the mean age of the population is still young (27.6 years), the aging is on an increasing trend in Bangladesh. With 8.6 million people (5.18% of the population) being over 65 years old in 2019, the elderly population of Bangladesh is estimated to reach over 70 million by the end of this decade. Figure 3.5 illustrates the prediction of elderly population growth of Bangladesh. The elderly population in rural areas of Bangladesh is one of the vulnerable groups deprived of UHC that accounts for 3.21% of the nation's population.

Another vulnerable group deprived of UHC is the population with disabilities. Persons with disabilities (PWD) in rural areas account for 0.92% (5.3 million) of the country's population. Table 3.4 demonstrates the PWD and elderly (over 65 years old) population of Bangladesh and its percentage in total population. Pursuing healthcare for these groups often comes with being unable to avail resources for traveling to healthcare facilities. As a result, most of them ignore symptoms of diseases until their health conditions become unbearable. Providing healthcare service to these two groups can provide UHC to 4.13% population of Bangladesh.

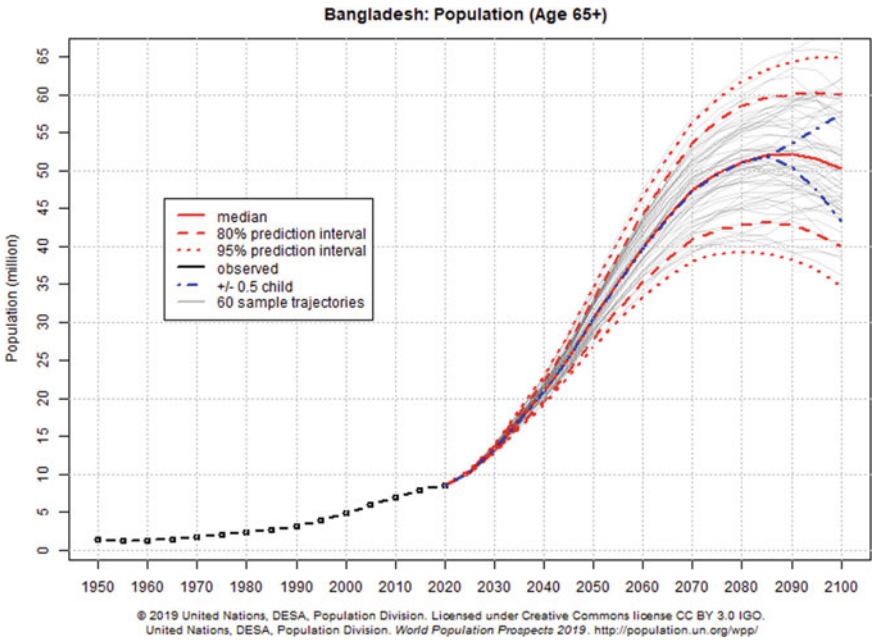

Fig. 3.5 Elderly population (aging 65 years and over) prospect of Bangladesh (UN, 2022)

Table 3.4 PWD and elderly population in rural and urban areas of Bangladesh

Area	Total	PWD	Elderly (65 +)	(%) of PWD	(%) of Elderly
Rural	101,800,000	1,534,716	5,336,960	0.92	3.21
Urban	62,900,000	940,632	3,271,040	0.57	1.97
Country	166,300,000	2,475,348	8,608,000	1.49	5.18

Data source UN World Population Prospects 2019, BANBEIS, Ministry of Social Service Bangladesh (BBS, 2021; MSW, 2022 UN, 2019a, 2019b)

Urban Population: 38% area of Bangladesh is urban with 62 million urban population. 3.2 million people are 65 years old or above, that accounts for 1.97% of the nation's population (Table 3.4). Elderly people need regular health monitoring, but there are limitations in accessibility with challenges lying in the transportation system and lack of attendants. The available public transports are not user-friendly for elderly, minor and people with disabilities. They need to make arrangements for private transport for them to go to health facilities which are expensive and not affordable for everyone. Also due to the busy lifestyle of urban residents, it is also difficult to find family members or attendants for going to the health facilities. Similar challenges are observed for urban PWD population groups that account for 0.94 million people and 0.57% of the country's population. Similar to rural areas, providing healthcare service to the elderly and PWD groups can help achieve UHC for another 2.54% of the population.

Summary on the unreached population of Bangladesh: Five communities are discussed as unreached population who, in total, accounts for 56.1% of the country's population shown in Table 3.5. The reason for this is the out-of- pocket (OOP) payment healthcare system; and difficulties with accessing healthcare facilities due to distance from mostly rural areas and lack of affordability.

In the latter part of this chapter, we describe Portable Health Clinic (PHC) models that can accelerate achievement of UHC in Bangladesh in two ways: (a) by eliminating rurality and giving access to healthcare service through tele-medicine system; (b) by facilitating prevention and early diagnosis of diseases through health monitoring and thus reducing the prevalence of serious diseases causing catastrophic health expenditure and impoverishment.

3.4 Concept of PHC as a Driver of Achieving UHC

Portable Health Clinic (PHC) is a digital health care system to provide primary health care services in an easy and affordable way (Ahmed et al., 2013, 2015) to ensure universal healthcare coverage targeting rurality, poverty, and disability (Podder et al., 2021). It is a unique human assisted system designed with smart technologies based on the concept of Japanese health management service. It offers individual health management services to all with some special features for children, women, and

Table 3.5 Proportion of the unreached (out of health coverage) population in Bangladesh

Communities	Detail	Proportion (%)
Academia	Students and staffs on education from Primary to university level	23.2
Industry and Service 1	RMG industry	3.00
Industry and Service 2	SME in manufacturing and service	5.00
Rural Elderly and PWD	People aging above 65 years old and people with physical disabilities living in rural areas	4.13
Urban Elderly and PWD	People aging above 65 years old and people with physical disabilities living in urban areas	2.53
Temporary: Slum	People living in slums areas	18.24
Temporary: Disaster shelter	People affected by natural disasters (Number varies each year)	–
Temporary: Refugee camp	Rohingya Refugees from Myanmar (Not included in the population proportion)	–
Total population out of health coverage		56.10

elderly populations at their premises. It can also offer group services for organizations to bring organizational benefits. The system is jointly developed by Kyushu University, Japan and Grameen Communications, Bangladesh as a research initiative. The PHC research team has served more than 50,000 people in 7 countries since its inception in 2008.

Any individual can subscribe to the PHC system and become a member. A health worker visits a member with the PHC box, measures his/her vital information and uploads the data together with the medical history to an online server using the GramHealth Client Application installed in a tablet PC inside the PHC box. The remote doctor accesses this data and makes a video call to the member for further verification. Finally, the doctor creates an online prescription and preserves it under the member's profile into the online server. The health worker accesses the system to retrieve the prescription, prints it and delivers it to the member with detailed explanation. The entire process takes approximately 30 min to complete a service. In case of an organization, a team of 5 persons can serve 50–70 members per day as a group service. The system introduces a triage protocol to classify the members into four categories: (i) green (healthy), (ii) yellow (suspicious), (iii) orange (affected), and (iv) red (emergent), based on a gradually increasing risk of health status. The members classified as orange and red are primarily diagnosed as high-risk and they require a doctor's consultation. The members classified as yellow and green do not need medication and they are served with the guidance of the health worker. The PHC services include basic health check-ups, online consultancy, and regular follow-up. Besides the primary basic health check-ups, the PHC services have been expanded to some other disciplines too. It can produce pathological reports with the support of distant pathologists (Telepathology), provides eye care services (Tele-Eyecare), and maternal and child health (Tele-MCH) care service.

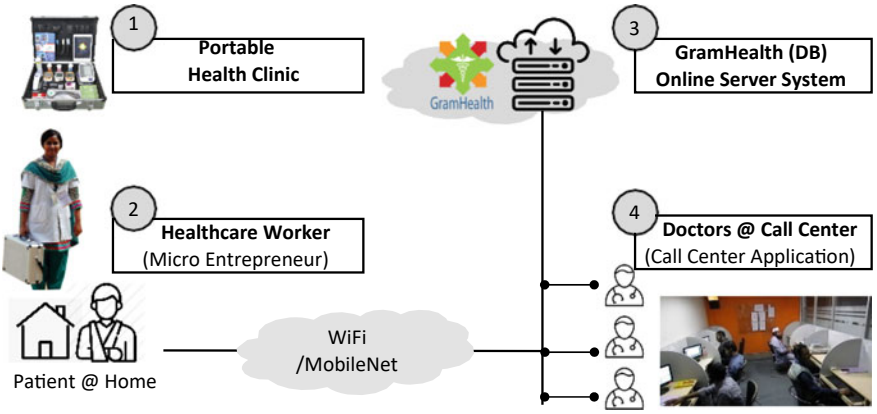

Fig. 3.6 Four components of the PHC system

The PHC services are targeted to a variety of communities, namely (a) the rural unreached communities, (b) the urban aging communities, (c) the urban small- and medium-sized corporate, academia communities, and (d) urban morning walker communities. The data has been used for predicting health status of the existing members (Tabassum et al., 2020a, 2020b, 2020c) (Sampa et al., 2020) to contribute to healthcare cost reduction (Tabassum et al., 2020a, 2020b, 2020c), understanding consumer behavior (Hossain et al., 2018), converting doctors' cursive handwriting to digital prescriptions (Hossain & Ahmed, 2021). The PHC system also contributes to solving doctor and health worker shortages by ensuring productive usage of the doctor's time with the support of the digital health data management and visualization tools. It helps the doctors to make quick and accurate decisions. It also helps to reduce medical errors and medical costs (Hossain et al., 2022).

The system consists of four major components, as in Fig. 3.6: (1) PHC Device Box (2) Healthcare Worker (3) GramHealth Online Server System and (4) Doctors Call Center. As a remote health care service, the PHC can offer doctor consultation services to any unreached community which has not been easy before. It also reduces medical costs and time because there is no physical movement of the doctor and patient. Thus, the PHC offers essential primary healthcare services in an affordable way so that everyone can access healthcare services without financial hardship and contributes to achieving the UHC.

3.4.1 PHC Service Structure

Several experiments and trials have been carried out across different low- and high-income communities in several countries, including Bangladesh, Cambodia, India,

Table 3.6 Four major components of the PHC system

Symbol	Name	Description
	PHC device box	A set of sensors (thermometer, blood tester, urine tester etc.) to measure health status and GramHealth Client software tool to collect healthcare data and transmit to the server
	Healthcare worker	A licensed healthcare worker to operate the portable health clinic box, collect healthcare data and explain the results and prescriptions from the doctor
	GramHealth online server	A cloud-based software system to archive personal health records, produce statistics and provide healthcare tips to individuals
	Doctors call center	A physical or virtual call center with connected licensed doctors

Indonesia, Malaysia, Pakistan, and Thailand, for the purpose of testing PHC functions, for measuring social and technological acceptance, and for defining appropriate service delivery models. Findings from these initiatives inform a Social Business model for the PHC (Table 3.6).

The four core components of the PHC remain stable across all implementation models. However, with constant advancement in the technologies utilized in the PHC components, the devices used in the system must be updated frequently. At the same time, because of the expanding outreach of the PHC, and natural attrition of trained PHC operators, there is a need to build training capacity to prepare PHC personnel associated with the service delivery from time to time.

Therefore, in addition to the four core components, two more support components have been added, opening doors to collaboration with academic and industry research organizations as in Fig. 3.7.

3.4.2 Service Delivery Models

Our field experience suggests that a single delivery model cannot be applied across the large variety of under-served communities the PHC can serve, and their diverse local contexts. We propose three core delivery models designed to respond to demands of typical communities and their demographics.

Micro Health Entrepreneur (MHE) Model: Micro entrepreneurship is at the heart of the Grameen ethos and forms the basis of this service delivery model. It aims to create livelihood opportunities for unemployed women in disadvantaged areas by providing training for them as MHEs. The candidates must have a government license to serve as a community health worker or paramedic, which requires 6 and

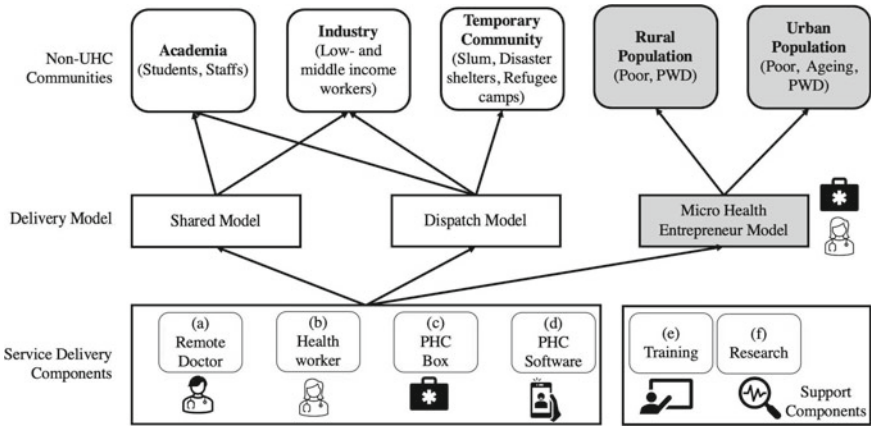

Fig. 3.7 PHC service delivery architecture

24 months for obtaining their licenses respectively. A subsequent technical training delivered over a week enables the candidates to use the PHC box and the PHC client software. This is followed by a two-week entrepreneurship training that imparts a basic understanding of business management and service orientation. The MHE model suits rural or peri-urban communities, where entrepreneurial spirit combined with the necessary training as certified health workers and basic competencies in technology use and business management, can turn a relatively unemployable woman into an economically empowered and socially respected member of the community.

The MHEs have a significant role in enhancing access, affordability, and quality of basic healthcare services because they can provide quality healthcare service to the patients at their doorsteps by connecting a qualified doctor on-demand in real-time. And they can provide this service at a fraction of the cost of a comparable service and without requiring travel and income loss. In tandem with existing government healthcare services, the MHEs can supplement or substitute essential healthcare delivery within national regulatory and operational frameworks.

(a) Genki Home: Genki is a Japanese term which means physically and mentally healthy. The idea is to make a home Genki by providing regular health checkups to the family members, especially the members who need to consult a doctor. The MHEs can make pre-scheduled home visits or attend on-demand calls. The MHE model can be applicable in both rural and urban communities. In target areas, the households can be encouraged to register for a periodic health checkup service by paying through a subscription as a micro-insurance plan. In certain target areas, more targeted client groups can be provided on-call services charged through micro-insurance products, as well as through insurance plans or pay-per-service. This on-call model may be particularly attractive to elderly clients or PwDs among urban middle-income populations. In both these market segments, the key selling proposition is that the MHE helps patients with limited mobility overcome access challenges by effective triage

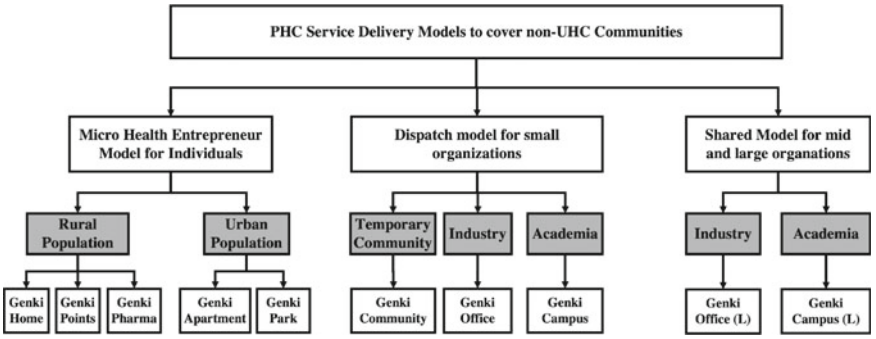

Fig. 3.8 PHC Service Delivery Models to cover non-UHC areas

and prescriptions provided by qualified physicians without leaving home, while at the same time being integrated into the community healthcare delivery system and its health records.

(b) Genki Point: A Genki point is a service point to provide health care services in a specified point in a community. An MHE will visit the point and members around that location will come to receive the services. Rather than visiting individual houses, an MHE can serve a group of people in a single location to save her time and cost. This is suitable for areas where the population density is small. People in that area will be pre-announced of her visiting hours (Fig. 3.8).

The Genki point can be a pharmacy where there are rooms for an MHE or can be a community space where people can easily come and receive services. This model was experimented in the Social Service in Wheel (SSW) project. The project found the model effective for rural areas where transportable facilities are available for the MHEs. Multiple MHEs can collaboratively work to serve a large community. Finding a vehicle in rural areas has been a big issue for the MHEs.

(c) Genki Pharma: Compared to other developing countries, Bangladesh is an exception in terms of the availability of pharmacies. Although there is a huge shortage of hospitals and health workers in rural areas, there are medicine shops called pharmacies in every corner of rural Bangladesh which provide primary medical support to the local communities. Many of them are operated by a certified paramedic. These pharmacists are licensed to sell medicines, but they do more to increase their income. Traditionally they act as village doctors to provide free consultancy and sell medicines. Table 3.7 shows that almost 60% of people go for unqualified services.

Table 3.7 Ratio of treatment seekers

No.	Description	Percentage
1	Treatment-seekers use government services	13
2	Use private/NGO services	27
3	Go for unqualified services	60

Bangladesh has 134,508 pharmacies, 76% of them owned by individuals, being operated in an organic way. Sixty five percent of customers visit these pharmacies without any prescriptions. A case study was carried out on 16 pharmacies in Matlab Uttor Upazila in Bangladesh on February 22–25, 2021. In the study, a pharmacy owner/manager played the role of an MHE.

The following are the key observations: (i) Eight of the studied pharmacies expressed their willingness to employ PHC to expand their business. These pharmacies were all run by relatively young owners; were situated in an area where there were no other pharmacies; or were owned and operated by a village doctor. The remaining eight pharmacies did not show interest in the PHC because they felt it imposed added costs without matching returns; their operations were too small to cover additional overheads; or their low-income village clients considered regular health check-ups a lower priority. (ii) The direct online connection to a doctor generated mixed feelings among the pharmacies. Thirteen of them were already providing prescription services, and therefore, saw the telemedicine protocol as a threat to their existing income and worried whether a portion of their income would have to be shared (iii) Pharmacies studied had very different income ranges. Ten of them had monthly revenues of under BDT 300,000 (USD 3,000) per month. Three of them earned between USD 3000–5000 per month, and two of them took in over USD 5000 per month. (iv) None of the 16 pharmacies maintain digital health records. (v) Client volume varied significantly among the pharmacies studied, being from 70 clients per day to 700 per day.

Current pharmacy businesses in Bangladesh cover only selling medicines (both OTC and antibiotics) and some pharmacies have maximum 2/3 basic sensor sets to test body temperature, blood pressure and blood glucose. But in case of rural pharmacies, having sensor sets for basic testing is merely available. The following requirements were identified—(a) A database/software to preserve Patient Health Record (PHR) (b) A complete set of diagnostic tools that are available, usable by them and affordable (c) Doctor call center support (d) Additional strip-based test items like HbsAg, Dengue (e) An isolated or private space for patient and healthcare worker/doctor.

(d) Genki Apartment: Urban people usually live in an apartment building and these multi-storey apartments contain 10–100 families based on apartment sizes. Most of the apartment buildings are situated in Dhaka which is the capital of Bangladesh.

Healthcare workers with a PHC box can visit the apartment building with pre-schedule. Aging community and PwDs can take regular health checkups and primary health services at their home. An experiment was carried out in 50 apartments in Dhaka city. Almost all the members wanted the service at home. Most of the patients are educated and aware of their health conditions. PHC offers only limited indicative screening tests, but they expect more detailed blood testing and face-to-face doctor consultancy.

(e) Genki Park: In Dhaka city, there is an organic need for health management services for affluent people who visit parks for a morning walk as a part of their physical activities. They are interested in checking their weight, blood pressure,

and blood glucose level. To meet this demand, some young individuals started this business to measure these items inside parks almost in the open air. A study was carried out by us to understand their business model and to introduce PHC as a tool to support their business. They do not have any fixed place or any formal business setup, it is a portable service point one man with 4/5 medical devices. The following challenges were observed to use the PHC system for their business.

- As there is no fixed regulation for this business, they found the formal structure more complex. Getting formal training is an extra burden.
- Digitization of health records is time consuming and there is no need as they have their notebook-based records, and these are sufficient.
- Initial investment for a PHC box is not affordable.

Dispatch Model: In the dispatch model, all the major components will be utilized at the core, called PHC support center. This will not be an MHE model. Healthcare workers will be recruited, trained, and appointed in the support center. Depending on the business size, the number of human resources and PHC boxes will be determined. A team of 5 people (2 healthcare workers, 1 doctor, 1 ICT assistant and 1 communication manager) can work for the dispatch model to serve 70 people per day in a specific location. This model aims to serve the following groups of non UHC communities: Academia, Industry and Temporary community.

(a) Genki Community: Three types of communities are considered under this model—(a) urban slums (b) disaster shelters and (c) refugee camps. Urban slums cannot afford hospitals in their community. NGOs have funds but may not have the technology and healthcare delivery professionals. The PHC dispatch model can fit the NGOs' requirements. Disasters cannot be planned on time. After a disaster occurs, people need immediate health assistance. It is impossible to build healthcare infrastructure. PHC can send the dispatch team immediately. The software system of PHC has two operating modes- one for regular situations and one for emergencies. Triage follows a different logic, called d-logic to determine the health status during a disaster situation. Also, the system can work in an offline mode if the network is not available or has limited bandwidth. The PHC box also has an extra energy source. Refugee camps can be served in the same way as urban slums.

(b) Genki Office: By Genki office model, PHC targets to reach millions of construction workers, garments workers, employees in small offices who cannot afford to own a health center in their office campus. In Bangladesh, there 7.5 million Micro Small and Medium Enterprises (MSMEs) exist where almost 24 million people are employed (Hossain, 2021). Readymade Garments (RMG) is the major industry for Bangladesh, and we have approximately 4 million workers. Big industries can afford health centers at their premises but not the MSMEs.

PHC conducted health checkup programs to apparel industries. Two large renowned groups supported the health checkup programs in their campuses in Bangladesh. And as of now, 12,523 garment workers received healthcare services through PHC. The program created awareness among workers, officers and company decision makers. Their health status improved in six months. In 2022, a market survey

was carried out by our team in a small IT cost company to know their opinion about their interests to deploy Genki Office. 100% of the employees agreed to receive the health checkup. It was their first time for that IT company to receive a group health checkup. The head of the company found a new value to attract the employees to retain the company. This is because of the fact that IT engineers switch jobs so frequently. The health management program can be added as a welfare and benefits package. If the price of the package becomes within the range, they are ready to use it.

(c) Genki Campus: Genki Campus targets the people in academia who are out of UHC. There are 104 universities in Bangladesh (33Public universities and 71 private universities). The total number of students is 85,3267 (454,530 from public universities and 739,873 from private universities) (Adnan, 2016). There are 108,515 primary education institutes where 19,552,979 students are enrolled, and 482,884 teachers. Besides, there are 13,406 madrassas with 230,732 teachers and 3,340,800 students. Healthcare centers are available in big universities. However, they serve when any of the students have complaints. There are no regular health checkups in school, college, university, or any other educational institute. "Genki Campus" model has been designed to support the academia community. Recently we conducted a health checkup program in four primary schools for 900 students in two villages in Bangladesh. The school children enjoyed the program. The financial model is not created yet.

Genki Campus model was also piloted at 5 educational institutes in Bangladesh, Nepal and Thailand. Under the Genki Campus model, a brief survey was carried out in seven universities in Bangladesh to know whether they can start an annual health check-up program at their premises. Some universities have their own health center for primary care not for regular health checkups or health data management. The shared model can be suitable for them to provide healthcare service in a collaborative approach. The dispatch model will be appropriate for the organizations who do not have any sort of medical facilities in their premises.

Shared Model: The shared model will also target the mid and large size of academia and industries. Big universities accommodate 10,000—30,000 students. Some of the academic institutes have their own health center, medical doctor, mental health counselor, health workers, and basic equipment for fast aid or primary healthcare. But they use it only for emergency or on-demand services, they are not using those facilities to maintain regular health checkups or health data management. Some large industries have 10,000—50,000 employees. Some of them can maintain health centers in factory premises. Our shared model will collaborate with them to increase their efficiency and to serve regular health checkup programs to increase productivity at campus. The share model will utilize their existing health center, doctor, health worker, or equipment and PHC will provide the software system for health data record and management. Training and research facilities will also be provided from PHC.

3.5 PHC Social Business

Nobel laureate Muhammad Yunus (2009) defines Social Business as a non-loss, non-dividend company, formed solely to apply entrepreneurial solutions to society's most pressing problems. Profits from a social business are invested into providing products or services that improve the quality of life for the most vulnerable of populations, and for scaling the business to reach more and more people. A portion of the profits is kept in reserve to cover risk from uncertainty.

PHC is particularly suited as a social business, and when applied in the context of the UN Sustainable Development Goal for "Good Health and Well-being" (SDG3) it can help accelerate the achievement of UHC in measurable and inclusive ways. Healthcare service delivery models are well-established as businesses. Health and wellbeing are a 1.5 trillion-dollar industry which is growing fast in the preventive and well-being segments. With ubiquitous digital technologies like the PHC, this high-demand market segment can be expanded to the bottom of the pyramid.

3.5.1 Yunus Social Business Seven Principles

There are seven principles of social business set by Professor Muhammad Yunus. The implementation model of PHC complies with these principles (Table 3.8).

3.5.2 PHC and SB Compliance

PHC aims to address one of the world's most pressing social problems, namely affordable access to primary health care because it weaves quality health services with access for unreached communities. The front-end interface is a community health worker, usually a woman from the host community itself, where she is familiar within the community, and has easy access to all households of the community.

The health worker is equipped to be a healthcare micro-entrepreneur. The PHC makes her an important intermediary between the home-based individuals and the formal healthcare hub. She can build her service business in her own community and can work around her own home environment. She feels safe in her community. The operational cost can be reduced as she does not need to rent an office or a house to live in. Therefore, she can offer the service in an affordable range to the rural poor. A study showed that a health worker can sustain the business if she can serve 200 patients per month.

For initiating this micro-entrepreneurship business, she needs an investment of US $1200. This amount will cover—(a) Two weeks training on PHC system and micro-entrepreneurship business operation (b) the PHC service device box including a

Table 3.8 Seven principles of Yunus social business in PHC

Seven Principles	Adoption of the Principles in PHC
1. Business objective will be to overcome poverty, or one or more problems (such as education, health, technology access, and environment) which threaten people and society; not profit maximization	PHC aims to achieve UHC, increase access to healthcare services, reduces health expenditure burdened by an individual
2. Financial and economic sustainability	PHC's business model is designed to achieve financial sustainability, all costs will be covered by its own operation
3. Investors get back their investment amount only. No dividend is given beyond investment money	Investors' money can be paid back within 3–5 years. Investors won't get any dividends
4. When investment amount is paid back, company profit stays with the company for expansion and improvement	After making a profit, the service will expand to other areas to reach more people and create bigger social impacts
5. Gender sensitive and environmentally conscious	PHC provides priority to women to engage them as micro health entrepreneurs. Medical wastes from PHC operation are encouraged to be processed in an environment-friendly way
6. Workforce gets market wages with better working conditions	The workforce in PHC have legal contracts where competitive packages are offered
7. Do it with joy	PHC team members are like family members. They enjoy doing it because they can witness a problem to be solved

printer for prescription printing and a tablet PC with internet connectivity for communicating with online system, (c) user access to PHC online server and application and (d) access to call center doctor. Healthcare services are required at each and every corner of the society. We assume that at least 85,000 micro entrepreneurs will be required in 85,000 villages in Bangladesh. They will also require assistants to provide services. This way, PHC or similar programs can create thousands of job opportunities.

Although the initial investment is small, it's not very easy for a village woman to invest by herself. For this purpose, they can receive the amount as a loan from various micro-finance institutes. One such program is "Nobin Udyokta" or the Young Entrepreneurship program of Grameen. This is a social business initiative. So, the young entrepreneurs can get a loan for such promising projects, and they just need to pay back the original amount as per schedule without any interest. However, they need to pay a small service charge as consultancy fees. In return, the new entrepreneur gets professional support from the professionals' body of the "Nobin Udyokta" program on business development and operation that helps the inexperienced entrepreneur to make her business sustainable with minimum risk. Thus, this is a Social Business initiative from the point of "Nobin Udyokta". However, it is a regular business for the young entrepreneur. She can enjoy the profit from this business.

The number of female health workers is very limited in the rural community because there is a very limited job opportunity in the rural health facilities. In contrast to this, PHC does not offer jobs but entrepreneurship opportunities for the young courageous youth. After completing 12th grade higher secondary school certificate, they can attend 1–3 years paramedic diploma and qualify for PHC micro-entrepreneurship opportunity. Although village female health workers are suitable for home delivery service, young men are also encouraged to be PHC health micro-entrepreneur. They can provide pharmacy based PHC telehealth service in the rural communities. Thus, PHC not only creates job opportunities for the village youths to earn their living hood, but they can work in their own communities. This brings an immense pleasure to them for serving their relatives and community peoples. And the community also feels very comfortable when they can get service from one who is very known to them. This community-based health service also reduces the transportation cost of the low-income village people for traveling to a long-distance health facility. It also contributes to minimizing CO_2 emission.

3.5.3 Impact of PHC Social Business to Achieve UHC

PHC Social Business will definitely create a good impact on achieving Universal Health Coverage as well as achieving other indicators of SDG goals. SDG#3.8 is defined as "Achieve universal health coverage, including financial risk protection, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all". The concern is with all people and communities receiving the quality health services they need (including medicines and other health products), without financial hardship. Two indicators have been chosen to monitor target 3.8 within the SDG framework. Indicator 3.8.1 is for health service coverage and indicator 3.8.2 focuses on health expenditures in relation to a household's budget to identify financial hardship caused by direct health care payments. Taken together, indicators 3.8.1 and 3.8.2 are meant to capture the service coverage and financial protection dimensions, respectively, of target 3.8. As a measure of SDG indicator 3.8.1, the UHC service coverage index combines 14 tracer indicators. The World Health Organization uses 16 essential health services in 4 categories as indicators to measure UHC.

Reproductive, maternal, newborn and child health: In this category UHC measures by observing the improvement of the following matters: family planning, antenatal and delivery care, full child immunization, and health-seeking behavior for pneumonia. In the Portable Health Clinic there is a module for maternal and child healthcare (MCH) where a patient can get primary health care services and health monitor services during the pregnancy and childcare after birth. A triage protocol uses to distinguish high-risk patients from the early stage of the continuum of care who need special care and refer them to specialized physicians to prevent unwanted deaths (Islam et al., 2021).

Infectious diseases: UHC measures the Infectious diseases in the following categories: tuberculosis treatment, HIV antiretroviral treatment, use of insecticide-treated bed nets for malaria prevention, and adequate sanitation. PHC service is contributing to reducing infectious diseases as it is providing health care services remotely. During the COVID-19 pandemic, it was necessary to ensure healthcare services without direct engagement with the patient. In that case, PHC might be a good model to provide primary healthcare services as remote healthcare. Using the distributed service platform of PHC, a trained healthcare worker with appropriate testing kits can screen high-risk individuals and can help optimize triage to medical services. PHC with its new triage algorithm (C-Logic) classifies the patients according to whether the patient needs to move to a clinic for a PCR test. Through modified PHC service, we can help people to boost their knowledge, attitude (feelings/beliefs), and self-efficacy to execute prevention measures (Sampa et al., 2020).

Noncommunicable diseases: Under the noncommunicable diseases UHC measures on prevention and treatment of raised blood pressure, prevention and treatment of raised blood glucose, cervical cancer screening, and tobacco (non-) smoking. In PHC service, blood pressure and blood glucose monitoring are the two vital screenings. After screening, patients can monitor their health status to observe these and can take preventive measures. PHC served more than forty thousand patients till now and those patients can maintain their health status digitally by taking regular PHC service. This can help to observe their blood pressure and blood glucose on a regular basis.

Service capacity and access: In this category UHC measures the following items: basic hospital access, health worker density, access to essential medicines, health security: and compliance with the International Health Regulations. In rural areas of developing countries access to a certified doctor is quite difficult and costly. In PHC telemedicine service a patient can take a certified doctor consultation service from anywhere in the country and it costs less than USD $1 which is almost ten times lower than a regular doctor consultation fee. It ensures increased access to basic healthcare. PHC offers 14 health screening services which can be considered vital screening services for primary healthcare. This service ensures health monitoring and preventive care as well as helps to reduce the load on healthcare workers and hospital facilities.

3.5.4 Impact of PHC Social Business on Other Issues

PHC social business is capable of creating various social impacts for society.

Business Sustainability: One of the major characteristics of social business is to ensure business sustainability. From our field level piloting, it is estimated that PHC can offer an annual primary health screening service as a yearly subscription model within USD $12 a year or $1 per month. This is very affordable considering the

income level of general people. The existing health screening prices in the market are few times higher. To reduce business operation costs, transportation hassle, and to promote entrepreneurship, it is required to spread the business as a partnership model. Every franchising partner can be an entrepreneur and they will operate PHC service with the support of the mother organization. In that case, an entrepreneur with a 5 member team (including herself) can form a franchise. A rough estimation says, the business will reach break-even if they can serve 10,000 patients. These 10,000 subscribers will come from group clients like a university, school, college, factory, office, community group, etc. If the educational institutes and SME industries are considered, there are 35 million people, and the market demand is USD 400 million per year. Strategies are required to cover a substantial portion of the market share. One percent market share will generate 4 million dollars.

Replicability in Other Communities: PHC services experimented in Bangladesh, Nepal, India, Pakistan, Indonesia, Malaysia, Cambodia, Liberia, and others. We have found that these countries have almost the same scenario to replicate this service. The operation model and service cost are almost the same. Policy and market competitors are the main obstacles to replicate this model in different regions, however, that can be minimized by the collaboration with the government/other organizations. Recently we have experimented with the PHC service in the universities in the health entrepreneurship model with 5 team members in Nepal, Thailand, and Bangladesh, and the cost and operation model were almost the same. The major challenge was policy issues.

Gender Equality: PHC social business also working to solve the problem of gender equality which states in SDG#5. We are giving priority to the women to become our Micro Health Entrepreneur (MHE). In our previous services, we recruited more than 70% of women as MHE or health workers. SDG#5 targets to achieve gender equality and empower all women and girls. Bangladesh has a long way to go to achieve that. Once PHC like models are widely deployed, it can assist this SDG#5 to be achieved.

Unemployment: By 2020, the global unemployment rate reached 6.5%, up 1.1% points from the previous year. The number of people unemployed worldwide increased by 33 million, reaching 220 million. Youth and women were especially hard hit, with employment losses of 8.7% and 5.0%, respectively, in 2020, compared with 3.7% for adults and 3.9% for men. Before the pandemic, the unemployment rate of youth was already three times that of adults. During the crisis, women were more likely than men to drop out of the labor force to care for children (UN, 2022). About 3.6 million people in Bangladesh are expected to remain unemployed this year, surpassing the pre-pandemic level by half a million, according to a report by the International Labor Organization (ILO). The country's unemployment rate will likely remain at 5% in 2022, higher than the pre-pandemic level by 0.6% (Hossain, 2022). PHC social business model is designed to expand its business by franchising entrepreneurship model. It will support enthusiastic people to become health

entrepreneurs to work on PHC services. PHC will provide technology, tools, materials, training, and further consulting support to start and accelerate their business and to become a successful entrepreneur.

3.5.5 Challenges

The PHC Social business model is a prospective business model to contribute to SDGs. It has unique demand in developing countries. But, to maintain continuous operation and development, there are the following challenges.

Remote Healthcare Policy: Healthcare service is a sensitive issue in every country and involves legal issues. Healthcare data collection needs ethical approval. Data storage needs privacy protection as mentioned in General Data Protection Regulation (GDPR), ISO 27701, etc. Healthcare data sharing with authorized physicians, healthcare experts, and family members is important to make clinical decisions. Patients face difficulties when they migrate from one place to another, but the data should travel with them. Medical sensors used in the PHC box need approval before use from the respective country.

Cope with advanced technology: PHC as a digital health service we are using a technology-based sensor set for health screening. Health data management uses advanced software technologies. These technologies change very rapidly and become challenging for the health workers to cope with the rapid changes. PHC service needs to observe the technological changes in the relevant market and need to develop a strategy to adjust to new technology for better outcomes.

Training to the healthcare workers: To maintain common standards providing healthcare services in all PHC sites we need to provide quality training, monitoring, and evaluation. Doctors, healthcare workers, health entrepreneurs, and all other staff need regular training for their development and adjustment to the new strategy. To provide healthcare services we require certified health workers, but they need further training for continuous development and adjustment to the PHC model.

Social Business Fund for MHE: In PHC, social business model we will expand the service in the franchise model and these franchisers' will be considered Micro Health entrepreneurs (MHE). From our experiment, we have found that to form one franchise with the 5 members team MHE needs to invest around USD 10,000. In that case, all MHE may not afford this kind of investment and due to this investment, this service will be difficult to spread out. If we can create a social business fund and lend them this amount of money, they can start their business and pay back the only investment amount without interest and dividends.

Health Education: Annual health screening, healthcare management, and preventive healthcare practice are not common in developing countries. Most people are not aware of that. They are yet to be convinced about the advantages. Therefore, it

has been challenging to spread out digital health services e.g. PHC services in the various communities. Due to the recent COVID-19, people First, we need to provide basic health education to make them conscious of the importance of regular health screening and healthcare management.

3.6 Conclusion

This chapter described the status of UHC in Bangladesh, introducing the communities that are out of health service coverage. Regular health screening and monitoring have been a luxurious activity in developing countries. Digital healthcare brings affordability, ubiquity, and demonstrates the immediate benefits of healthcare monitoring. Portable Health Clinic, an affordable, usable, and sustainable digital healthcare delivery system was introduced that could reach the unreached communities. A Social Business Model that brings financial sustainability as well as creates a big social impact was introduced. Challenges include coping with advanced technological development, healthcare policy in the country to provide remote healthcare services and training to the healthcare workers are described.

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Chapter 4
Sari-Sari Stores as Sustainable Business by Women in the Philippines

Toyoko Funahashi

4.1 Introduction

4.1.1 Research Objectives

More than 700 million people, or 10% of the world's population, still live in extreme poverty. The poverty rate is as high as 17.2% in rural areas, more than three times higher than in urban areas. They struggle to meet the most basic needs of human life, such as health, education, water and sanitation.[1] And nearly 60% of women work in the informal economy, which increases their risk of falling into poverty.[2]

Sari-sari stores[3] in the Philippines are a generic term for micro-retailers that sell a variety of products, from daily necessities to foodstuffs, and play a major role in the economic independence of women and the consumption activities of the Philippine BOP.[4] This chapter examines the sari-sari store from the perspective of SDGs Issue 1, Poverty, and Issue 5, Women's Independence. It also examines the peculiarities of

[1] United Nations, "Goal 1: End poverty in all its forms everywhere", https://www.un.org/sustainabledevelopment/poverty/. Accessed January 30, 2021.

[2] United Nations, "Goal 5: Achieve gender equality and empower all women and girls", https://www.un.org/sustainabledevelopment/gender-equality/. Accessed January 30, 2021.

[3] Sari-sari means "various" in Tagalog.

[4] 1998 Prahalad and Hart conceived the term "BOP". The term "BOP" refers to the bottom of the economic pyramid, which consists of income groups. The word "Pyramid" means "the base of the economic pyramid". Pyramid means "the economic pyramid that constitutes the income stratum" and represents the distribution of wealth in the world and the ability to generate income.

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the Philippine market, where 20.8%[5] of the total population lives on a daily income of US$3.20[6] or less, and examines the potential of the BOP market and the Philippine market.

4.1.2 Promising BOP Markets and Poverty in the Philippines

Since the 1980s, multinational corporations, which operate globally with production and service bases in multiple countries, have begun to turn their attention to the huge emerging markets as they develop their internationalization, and have come to focus on the poor in emerging countries, who were not incorporated into their traditional business structures, as a huge potential market.

In the report "The Next 4 Billion" by Hammond, et al. (2007), as shown in Table 4.1, "BOP" is defined as those who earn less than US$3,000 per household per year in developing countries. The BOP is defined as those with an annual household income of less than US$3,000 in developing countries. This represents about 72% of the world's population, about 4 billion people, and is a promising market worth as much as US$5 trillion.[7] Of this, water is worth US$20 billion, information and communication technology US$51 billion, healthcare US$158 billion, transport US$179 billion, housing US$332 billion, energy US$433 billion and food US$2,895 billion.[8] If this is applied to the Philippines as of 2019, it means that the market, serves 20.8% of the total population of the Philippines, those who earn less than US$3,000 per household per year (Figs. 4.1 and 4.2).

The Philippines is located in Southeast Asia where it is hot and humid most of the year. The population will reach 108,117,000 in August 2019, making it the 13th most populous country in the world and the second most populous in ASEAN after Indonesia.[9] According to the 2000, 2010, 2015, and 2020 censuses in the Philippines, the average population growth rate from 2015 to 2020 was 1.63%,[10] and the % age

[5] The World Bank, "Philippines Economic Update October 2019", https://www.worldbank.org/en/country/philippines/publication/philippines-economic-update-october-2019-edition. Accessed January 30, 2021.

[6] US dollar, purchasing power parity.

[7] US dollar, purchasing power parity.

[8] Hammond, et al. (2007), p. 3, p. 9.

[9] United Nations, "Total Population-Both Sexes", https://population.un.org/wpp/Download/Files/1_Indicators%20(Standard)/EXCEL_FILES/1_Population/WPP2019_POP_F01_1_TOTAL_POPULATION_BOTH_SEXES.xlsx. Accessed January 30, 2021.

[10] Philippine Statistics Authority, "Table A—Population and Annual Growth Rate for the Philippines and its Regions, Provinces, and Highly Urbanized Cities", https://psa.gov.ph/sites/default/files/attachments/ird/pressrelease/Table%20A%20-%20Population%20and%20Annual%20Growth%20Rate%20for%20the%20Philippines%20and%20its%20Regions%2C%20Provinces%2C%20and%20Highly%20Urbanized%20Cities_AGBA_0.xlsx. Accessed December 27, 2021.

Table 4.1 Sales composition by business type (2019)

classification	Amount (billion pesos) 〔billion USD〕			Composition of sales value (%)		
	2009	2019	Average annual growth rate (%)	2009	2019	difference
Retail sales	1,652 〔33〕	3,155 〔63.1〕	6.7	100.0	100.0	0.0
Store brand retailing	1,609 〔32.2〕	2,900 〔58〕	6.1	97.4	91.9	−5.5
Food and general merchandise retailing	507 〔10.1〕	1,029 〔20.6〕	7.3	30.7	32.6	1.9
Modern retailing	325 〔6.5〕	782 〔15.6〕	9.2	19.7	24.8	5.1
Traditional retailing	182 〔3.6〕	248 (5)	3.1	11.0	7.8	−3.2
Non-food retailing	953 〔19.1〕	1,556 〔31.1〕	5.0	57.7	49.3	−8.4
Department stores, etc	148 〔3〕	314 〔6.3〕	7.8	9.0	10.0	1.0
Non-store retailing (e.g. Internet, mail-order, etc.)	44 〔0.9〕	255 〔5.1〕	19.3	2.6	8.1	5.5

Source Compiled from Euromonitor
Notes nominal value, excluding tax

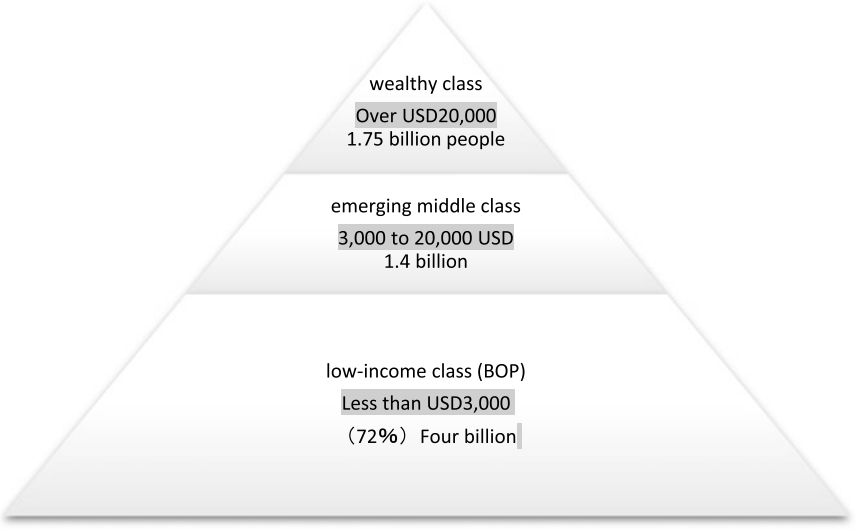

Fig. 4.1 The world economic pyramid. *Source* Compiled from Hammond et al. (2007). *Note* Annual income is converted to US dollars at purchasing power parity

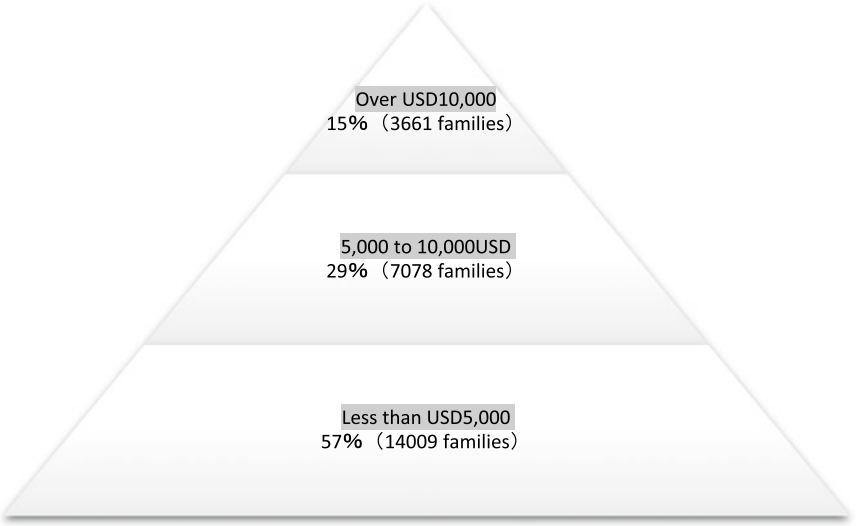

Fig. 4.2 Percent distribution of Families by Income Class (In thousands), Philippines 2018. *Source* Compiled from Philippine Statistics Authority, "2018 Family Income and Expenditure Survey"

of the population by age group (2020) was 30.0% for the age group 0–14,[11] 64.4% for the age group 15–64,[12] and 5.5% for the age group 65 and above.[13] The average age of the population is 23.5 years[14] (the median is 25.7 years[15]).

In this way, the Philippines, which is experiencing an increase in population, especially among the young as a labor force and consumers, has a large room for economic development, and its economic development index has been rising rapidly since around 1988 as far as the figures are concerned.[16] Since the income level is expected to rise, it is a potential market with a promising future where consumers are

[11] The World Bank, "Population ages 0–14(% of total population)-Philippines", https://data.worldbank.org/indicator/SP.POP.0014.TO.ZS?locations=PH&name_desc=true. Accessed December 31, 2021.

[12] The World Bank, "Population ages 15–64 (% of total population)-Philippines", https://data.worldbank.org/indicator/SP.POP.1564.TO.ZS?locations=PH&name_desc=true. Accessed December 31, 2021.

[13] The World Bank, "Population ages 65 and above (% of total population)-Philippines", https://data.worldbank.org/indicator/SP.POP.65UP.TO.ZS?locations=PH&name_desc=true. Accessed December 31, 2021.

[14] Mitsui Fudosan Residential, Mitsui Fudosan Realty, "Philippines real estate investment guide", https://www.31sumai.com/concierge/pdf/real_estate_investment_guide_201907.pdf, p. 6. Accessed December 31, 2021.

[15] United Nations, "Median Age of Population", https://population.un.org/wpp/Download/Files/1_Indicators%20(Standard)/EXCEL_FILES/1_Population/WPP2019_POP_F05_MEDIAN_AGE.xlsx. Accessed December 31, 2021.

[16] Miki (1993), pp. 147–148.

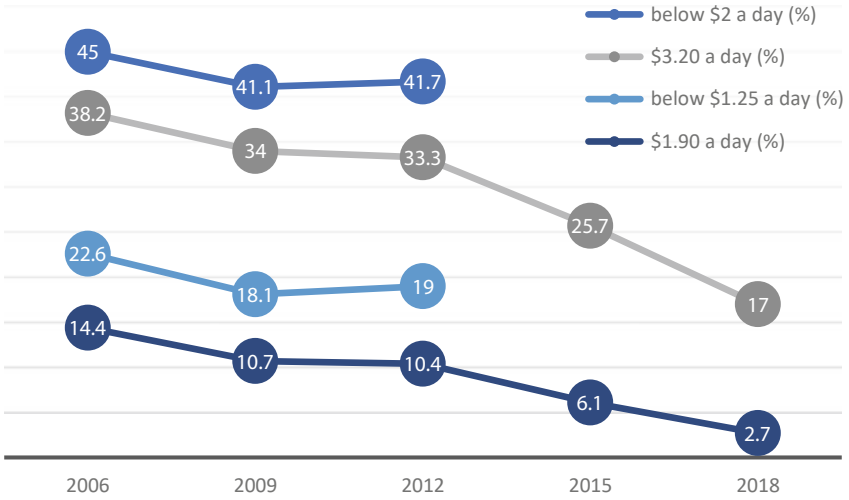

Fig. 4.3 Philippines poverty rate, 2006–2018. *Source* Compiled from The World Bank

beginning to demand highly satisfactory and value-added products. However, development is limited to a few areas such as Manila and Cebu, and in most other areas, the majority of the population is poor and the situation is still the same.[17] Income inequality is large, and while overseas migrants and executives of large companies such as conglomerates earn high incomes, in 2012, 19.0% of the total population lived on a daily income of US$1.25 or less, and 41.7% of the total population lived on a daily income of US$2 or less.[18] Figure 4.3 shows the poverty rate in the Philippines. Although the poverty rate in the Philippines has improved,

those living on a daily income of US$1.90 in 2018 still accounted for 2.7% of the total population,[19] and those living on a daily income of US$3.20 in 2018 accounted for 17.0% of the total population. According to the Philippine Statistics Authority (2018a, 2018b), the average annual income per household in the Philippines (national/2018) is 310,000 pesos (about 6,200 USD), with 11% of households earning less than 100,000 pesos (about 2,000 USD).

Poverty areas in the Philippines are found in scattered farming and fishing villages and densely populated urban slums, where infrastructure (railroads, roads, communications, water, sewage, and electricity) is inadequate. Among the reasons for poverty are natural disasters such as volcanic eruptions and typhoons in the farming and fishing villages, pollution of the sea, and overfishing by foreign vessels, which has

[17] Ibid.

[18] World Bank Group, "2015 World Development Indicators", https://openknowledge.worldbank.org/bitstream/handle/10986/21634/9781464804403.pdf?sequence=3&isAllowed=y, p. 33. Accessed December 31, 2021.

[19] The World Bank, "Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population)—Philippines", https://data.worldbank.org/indicator/SI.POV.DDAY?name_desc=true&locations=PH. Accessed December 31, 2021.

made it impossible to sufficiently farm and fish. In addition, urban slums are always overflowing with people because of the constant migration of people from farming and fishing villages to urban areas in search of work. Urban slums will not disappear unless the conditions in rural areas are improved. There is no hunger in either area, but young children tend to be malnourished. There are no medical facilities in the area (and even if there were, there is no money to pay for them), and medical and sanitary conditions are often poor.

Occupations in rural areas include fishermen, laundry workers, carpenters, electricians, farmers, merchants, truck drivers, tricycle drivers, and livestock farmers. The income of a squid fisherman is 70–150 pesos (about 1.4–3 USD) per day, and that of a coconut farmer is about 250 pesos (about 5 USD) for dropping 1000 fruits per day, but there are days when there is no harvest and no income. A cement truck driver earns about 300 pesos (about 6 USD) for three days if he has a job. The monthly income of a livestock farmer is 2500–4000 pesos (about 50–80 USD), and that of a tricycle driver is about 30 pesos (US$ 0.6) per trip over short distances, depending on the number of customers per day, but half of the daily sales are paid to the tricycle owner.

Occupations in the urban slums include scavengers,[20] sari-sari stores, street vendors, water vendors, and tricycle drivers. The income of a scavenger is 250 pesos (about 5 USD) for a day of collecting garbage, and 50 pesos (about 1 USD) for a day of collecting garbage. In urban slums, scavengers obtain information about jobs such as scavenging and construction site day labor from their countrymen, and after a few years, they obtain relatively stable jobs such as tricycle drivers and factory workers before leaving the slums.

Elementary school is compulsory education, but since children are good enough workers to pick up garbage and help farmers, many children engage in labor and do not graduate. In some cases, children are unable to attend elementary school because they cannot afford the cost of commuting to school by tricycle or other means because the elementary school is too far away. Those who have not graduated from primary school are not able to get white-collar jobs engaged in office work, even those who have left urban slums.

In the Philippines, poor areas and farming and fishing villages are scattered throughout the country, and there are not enough jobs and little cash income, so companies need to be creative in targeting the poor in order to make a profit.

4.1.3 The Philippine Retail Industry, Where the Old and the New Coexist

The retail structure in the Philippines consists of modern and traditional retailing. Modern retailing includes department stores, hypermarkets (large supermarkets),

[20] A person who earns a living by picking up trash. A scavenger collects recyclable items, such as plastic bottles, copper wire, and gold and silver items, to sell in junk shops.

supermarkets, and convenience stores. Traditional retailing includes micro-retailers, street shops, etc. Many of the micro-retailers are family-run sari-sari stores, which are general merchandise stores that sell in small quantities and small packs. According to Euromonitor, a British research organization, the number of retail outlets in the Philippines in 2015 was about 930,000, of which about 810,000 were sari-sari stores.

In the retail market, sales of food and daily sundries account for about 55%, and others (medicines, home appliances, books, etc.) for about 45%, of which food and daily sundries are handled by a high percentage of small retailers such as sari-sari stores, which account for about 70% of the market.[21] In the Philippines, household consumption of food and beverages accounts for 42.2% of the household budget,[22] and the role of the sari-sari stores that provide these products, which account for more than 40% of the household budget, in people's lives is significant.

Table 4.1 shows the sales composition of the retail sector by type of business. The market size of the retail sector in the Philippines in 2019 was 3155 billion pesos (about 63.1 billion USD), with an average annual increase of 6.7% in retail sales over the 10 years from 2009. In 2019, modern retailing and traditional retailing accounted for 24.8% and 7.8% of total retail sales, respectively. Although the sales value of modern retailing is increasing, the presence of traditional retailing in the Philippines is strong. In addition, the owners of traditional sari-sari stores are also the customers of modern retailers because many of them purchase products from modern retailers such as supermarkets for sale in their own stores. Therefore, it can be said that the enclosure of traditional retailers is indispensable for the growth of modern retailers.

Figure 4.4 shows the change in sales (nominal value) by type of food and daily necessities retailers since 2003. It shows that the sales of both traditional and modern retailers have been increasing. The table shows that the Philippine retail industry continues to grow even after taking into account the rate of price increase in the last decade.

Modern retailing has grown significantly in urban and peri-urban areas, but is rarely seen in mountainous or rural areas. On the other hand, sari-sari stores are continuously opening new stores, and the customers are segregated according to their class. In the Philippines, because of the large regional differences and disparities in income, the middle class has increased but is still segregated.

4.1.4 Micro-Retailers Exploited for Better or Worse

Micro-retailers are characterized by "small scale of business", "acquisition of living expenses for the business owner and his family", "management organization is maintained by the business owner and his family", and "management and household are

[21] ARC Country Situation Study Group by Country Situation (2018), pp.118–119.

[22] Philippine Statistics Authority, "National Accounts of the Philippines 1st Quarter 2017 to4th Quarter 2019(BASE YEAR: 2000)," https://psa.gov.ph/sites/default/files/Q4%202019%20NAP%20Publication-9ch3.pdf, p. 20. Accessed December 31, 2021.

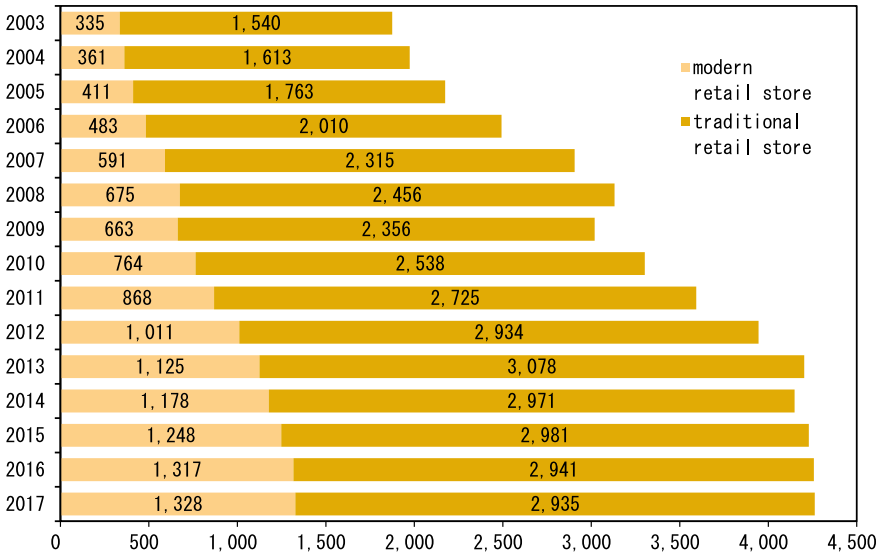

Fig. 4.4 Sales of Food and Daily Necessities Retailers by Type (Unit: USD Billion). *Source* Compiled from Euromonitor. *Remarks* Nominal value

undifferentiated". Another characteristic is that the spatial and regional scope is restricted to a very narrow geographical area.[23]

Micro-retail sari-sari stores in the Philippines have become an indispensable place for Filipinos to procure daily necessities and food and beverage items because of the heavy traffic congestion in urban areas and the lack of transportation and inconvenience in rural and mountainous areas. Therefore, as we have seen in Sect. 4.1.3, the number of stores and sales of traditional retailers in the Philippines are far greater than those of modern retailers. So what do oligopolistic manufacturing companies think of this current situation?

Micro-retailers fragment business transactions and increase the distribution costs of selling goods.[24] However, the oligopolistic manufacturing companies do not bear all the social distribution costs, but some of them are borne by commercial workers and some of them are borne by consumers, and the oligopolistic manufacturing companies make the micro-retailers bear most of the increased distribution costs caused by the increase of micro-retailers. As a result, micro-retailers pay distribution costs out of their earnings, and the profits they receive are lower than the wages of commercial workers. Therefore, the oligopolistic manufacturing companies do not exclude the micro-retailers but even encourage their increase.[25] On the other hand, since the micro-retailers are scattered in large numbers in close proximity to the consumers, the oligopolistic manufacturers try to use the micro-retailers to spread

[23] Iwanaga (2017), p. 1.

[24] Morishita (1970), p. 253.

[25] Ibid., p.346.

their products all over the market and make as many consumers as possible aware of their existence.[26]

4.1.5 Micro-Retail Sari-Sari Store

The term "sari-sari store" is a generic term for small retailers in the Philippines that sell a variety of products from daily necessities to food. It is a "neighborhood store" that has taken root in the community and pursues the ease of purchase for customers by devising sales methods and payment methods. Because they sell on credit, even the poor can buy their products, and at the same time, they sell in bulk, sell by weight, and rent out their products. They are found all over the Philippines and are indispensable to the lives of people in urban commercial areas, urban slums, mountainous areas, and farming and fishing villages, and handle many processed beverage foods from domestic and foreign manufacturers. More than 90% of the shopkeepers are women, and those with a relatively high level of education in each region, such as those who have graduated from high school or higher, are employed in this business. Since they do not need a lot of capital to start their business, they start their business as a household supplement or as the first stage of entrepreneurship, enabling women's economic independence, employment of shopkeepers and vendors, supply of daily commodities, and purchasing activities of the BOP.

Products include rice, bread, vegetables, fruits, canned goods, confectionery, instant foods, beverages, alcohol, cigarettes, seasonings (vinegar, soy sauce, fish sauce, coconut oil), luxury goods, simple medicines, white kerosene, charcoal, soap, toilet paper, stationery, and comic books.[27]

There are also stores that sell SIM cards for mobile phone communication, charge mobile phones, and recharge communication charges.

For example, daily necessities such as cigarettes, mosquito coils, shampoo, and conditioner can be purchased by the piece, seasonings such as salt and sugar can be purchased by the gram, and sweets such as candy and gum can be purchased by the piece.

In rural areas, customers pay after the fact, while in urban areas, they basically pay in cash. In rural areas, they have many relatives nearby and have lived in the area for many years, so shop owners feel secure that they can get paid even if they have to pay later. In the case of families with overseas migrants, they wait until the time of remittance. On the other hand, in urban areas, payment is basically made in cash because there is a risk of not being able to collect accounts receivable due to less fluctuation in income and greater mobility of residents compared to farmers.

A typical sari-sari store is operated in the shop owner's house, and the average size of the store is 2 m by 4 m, and it also has display shelves, a storage room, and a workshop. They generally sell their products to customers outside the store

[26] Ibid.

[27] Nakanishi (1991), p. 150. and Hayashi (2016), pp. 64–65.

through latticed windows, and some stores have a rest area and a cafeteria. Most of the shopkeepers are women, and their families work in shifts from around 7:00 in the morning until almost 10:00 at night to keep the shops open. The shop is a place for residents to exchange information and relax, where they can not only buy products but also get information about jobs and local communities. They usually located on the main street near public buildings or on the side of the road.[28]

4.1.6 Existence of Support for women's Economic Independence and Purchasing Activities of the Poor

According to the Philippine Statistics Authority's Labor Force Survey, there were about 40.33 million employed persons in the country in 2017. Of the total employed, 62.5% (25.21 million) are wage and salary workers, of which 9.09 million (36.1%) are women and 16.12 million (63.9%) are men. Of the wage and salary workers, 61.6% of women work in the private sector, 17.9% in private business, 20.2% in government or government-controlled enterprises, and 0.4% in family-owned businesses or enterprises. In contrast, 88.0% of men work in the private sector, 1.9% in private business, 9.7% in government or government-controlled enterprises, and 0.5% in family-run businesses or enterprises.[29]

Income from female-headed households is high in the Philippines; according to the Philippine Statistics Authority's 2009 Family Income and Expenditure Survey, one in five of the estimated 18.5 million households in 2009 was headed by a woman. On average, female-headed families earn about P230,000 (about 4600 USD) annually, higher than the average of P200,000 (about 4000 USD) for male-headed families. More than one-third (35%) of female-headed households earned income from employment, and 16% from family-owned businesses or enterprises, including sari-sari stores.[30]

From the above, it can be said that sari-sari stores are important as a means of women's career choice and income generation, and also employment.

In the sari-sari store, goods are sold at a price that is about 10% higher than that of supermarkets. This is because the more steps a consumer goes through to purchase a product, the more the intermediary's margin costs, and because the BOP population has many distribution steps to obtain the product, the price of the product is inevitably higher. However, since the sari-sari stores allow people to buy only the quantity they need with the income they earn every day by "selling in bulk," "selling by weight,"

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[28] Chen (1997), pp. 8–9.

[29] Philippine Statistics Authority, "2018 gender statistics on labor and employment", https://psa.gov.ph/sites/default/files/2018%20Gender%20Statistics%20on%20Labor%20and%20Employment.pdf, p.149. Accessed December 30, 2021.

[30] Philippine Statistics Authority, "Female-Headed Families Have More Income Than Male-Headed Families", March 28, 2011, https://psa.gov.ph/content/female-headed-families-have-more-income-male-headed-families-based-final-results-2009-family. Accessed December 30, 2021.

and "renting out," it is an indispensable part of the purchasing activities of the BOP population, regardless of whether they live in urban or rural areas.[31] In other words, selling in small individual packages is the minimum necessary sales method for the BOP. In addition, the sari-sari stores play a role as a refrigerator for many of them. This is because the cost of electricity in the Philippines is higher than in developed countries, and electrical appliances are expensive, so the lower class people do not have refrigerators at home.[32]

4.1.7 Diverse Functions not Limited to Product Sales

Sari-sari stores also play an important role in the distribution channel that delivers products from producers to consumers.[33] It also plays a major role in information distribution, introducing new products and collecting and providing information on competitors. Companies access the BOP through the sari-sari stores, and sari-sari stores' consumers include the "people at the bottom of the economic pyramid" targeted by the "BOP market". Since companies can distribute their products over a wide area through the sari-sari stores, if companies pay attention to the distribution system through the sari-sari stores and develop products and marketing strategies that can be handled in the sari-sari stores, they will be able to increase their market share. Smart Communications, a telecommunication company in the Philippines, sells prepaid mobile phone cards through the sari-sari store to capture the Philippine market including the BOP segment.[34]

One of the characteristics of sari-sari stores in a mountainous areas is that the large sari-sari stores play a major role as wholesalers to small and medium-sized sari-sari stores. The acquisition of goods is more difficult than in urban areas because of the lack of developed infrastructure. For this reason, large-scale stores play a strong role in the distribution function, becoming the destination for the transportation of products from a manufacturing company through the sales company, distributors, and playing a wholesale role in reselling products to small and medium-sized stores. They also have a subsidizing function (finance), such as allowing deferred payment, which is not preferred by sales companies, sales agents, and distributors.

In urban sari-sari stores, the functions of commercial distribution, especially support for marketing activities and product assortment formation for producers, and price formation at the wholesale level, are significant. Because of the large number of products and competitors in urban areas, they also play a major role in the information distribution function.

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[31] Funahashi (2011), p. 51.

[32] Funahashi (2017), p. 204.

[33] A distribution channel is a distribution route for delivering a product from a producer to a consumer. In this study, I refer to the channels established by each company as "channels".

[34] Anderson and Billou (2007), p. 15.

4.2 Global Expansion of Research and Development

4.2.1 BOP Market Entry Strategies; Understanding Consumers' Lives and Needs is Key

When entering emerging markets, many companies are unable to create a business model for emerging markets and tend to follow the traditional domestic market model. As a result, they either have low margins or limit their customers to the wealthy, which prevents them from generating sufficient profits.[35] This is because the middle-income class in Western Europe is only a handful of affluent in emerging markets. In addition, many multinational companies bring their existing products and marketing strategies to emerging markets without understanding the consumers.[36] For example, many companies tend to focus on lowering prices, but overlook the fact that low-income consumers live in a state of economic instability. Global companies entering emerging markets rely on low-volume packaging, production by local low-wage workers, and low-cost material resources to offer low-priced products. They also sometimes develop their products locally. However, their basic profit formulas and operating models remain the same as those of existing markets,[37] and it has not yet expanded its market share significantly in emerging markets.

Thus, multinational corporations and other foreign companies face many difficulties in entering emerging markets, but what methods should be taken to deal with these new markets?

In this paper, I will discuss how manufacturers are utilizing the sari-sari stores throughout the Philippines in their business operations, and I take up Nestlé Philippines, San Miguel Brewery, and Yakult Philippines as examples of processed beverage manufacturers. The products of these three companies are sold all over the Philippines. The products of these three companies are sold in stores of all sizes in urban areas, farming and fishing villages, mountainous areas, and slums all over the Philippines, and there is no one, regardless of age, from children to adults, who does not know about them.

4.2.2 Nestlé Philippines—Strategy to Increase Awareness by Increasing the Number of Stores that Carry the Product

Nestlé Philippines, Inc. was established in 1911 as The Nestlé and Anglo Swiss Condensed Milk. In1962, local production started through a joint venture with San Miguel Corporation, which was renamed Nestlé Philippines, Inc. in 1986. Nestlé SA

[35] Eyring, et al. (2011), p. 89.

[36] Prahalad and Liberthal (1998), p. 77.

[37] Karamchandani et al. (2011), p. 89.

Table 4.2 Survey outline: San Miguel Brewery, Inc.

1. Research objectives	① Understanding Nestlé products channels in the Philippines ② Understanding distribution through sari-sari stores
2. Survey method	Interviews, field survey • Matignas, Ryan Joseph, SDC, Sales Operations and Development Group • Gozos, Darwin, Makati Sales Operations and Development Group • Ramos, Neil Bryan, Makati, Channel Category Sales Development • Bareng, Raul, Makati Sales-General Manager
3. Survey date	October 14, 2013, November 11, 2013
4. Survey location	Nestlé Philippines, Inc. (Metro Manila, Philippines)

owns a 100% stake in the company, which employs 3700 people and is engaged in the manufacture and sale of beverages and food products.[38]

Nestlé products are sold in stores of all sizes in all parts of the Philippines. In order to understand Nestlé's channels, I conducted a field survey by interviewing managers belonging to the sales promotion division of Nestlé Philippines, Inc. The following is a description of what we learned from the interviews (Table 4.2).

Nestlé Philippines started an experimental farm in 1994 and has provided training to farmers, coffee experts, and students. It has also provided free technical assistance to contract farmers to help them deal with problems such as sunshine and soil erosion. This support has helped farmers to improve the productivity and quality of their coffee beans. Many of the farmers have established direct trading relationships, which allows them to lower the price of their products because they do not have to pay commissions to intermediaries. Women who do not have jobs outside of the coffee farms are given the opportunity to earn a living by teaching sewing skills, and the finished products are delivered to companies and research institutes as uniforms. They also provide support to those who become entrepreneurs. There is also a Micro-Distributorship (MD) Program for unemployed people who have graduated from high school or above, which trains them to become small business owners and sell Nestlé products to the sari-sari stores. The program is responsible for selling to small stores in densely populated areas that are not covered by existing wholesalers.

Nestlé Philippines' customers include both modern retailers such as mass merchandisers and traditional retailers such as sari-sari stores. In 2013, the number of stores with sales of P5,000 (about 100 USD) or more per day accounts for only 18% of the total number of customers but accounts for 94% of Nestlé Philippines' total sales. On the other hand, the number of stores with sales of less than P5,000 (about 100 USD) per day accounts for 82% of the total number of suppliers but only 6% of the total sales of Nestlé Philippines. From this data, it can be expected that modern retailers with more products and larger store sizes will have a larger share of sales. However, on the other hand, Nestlé Philippines has many retail customers, including

[38] Nestlé Philippines, Inc., "History," http://www.nestle.com.ph/aboutus/history. Accessed December 30, 2021. http://www.nestle.com/aboutus/history/nestle-company-history. Accessed December 30, 2021.

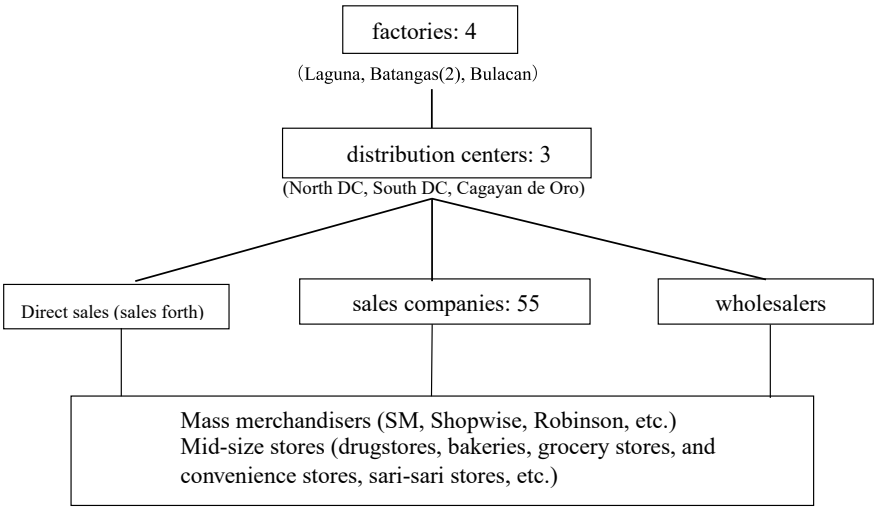

Fig. 4.5 Nestlé Philippines' Channels (as of 2013). *Source* Based on the interview with Nestlé Philippines conducted by the author

traditional retailers as well as modern retailers, and I believe that increasing the sales of each store, even if it is a small sari-sari store, will lead to increased sales of Nestlé products.

The channels of Nestlé Philippines are shown in Fig. 4.5. In the Philippines, there are two factories in Batangas and one each in Laguna and Bulacan. After the products are manufactured, they are delivered to distribution centers in North DC, South DC, and Cagayan de Oro, and then to mass merchandisers and sari-sari stores through Nestlé Philippines' sales force, 55 sales companies, or general wholesalers.

The strategy of Nestlé Philippines is to cover as many stores as possible even if they are retailers with only small sales such as sari-sari stores. The proportion of the middle class in the Philippines is increasing year by year, so the company is trying to increase the number of customers visiting its stores to increase future sales. Increasing the number of stores that carry Nestlé products means increasing the number of customers who come into contact with Nestlé products, and the stores also serve as a place for advertising and raising awareness of Nestlé. In addition, Nestlé Philippines has sales and distribution methods that are tailored to each product channel, utilizing local people. These are probably due to Nestlé Philippines' long history of business activities in the Philippines and the fact that it is a community-based business where all employees, including the CEO, are Filipinos.

Table 4.3 Survey outline: San Miguel Brewery, Inc.

1. Research objectives	① Understanding San Miguel beer channels in the Philippines ② Understanding distribution through sari-sari stores
2. Survey method	Interviews (Teruyuki Daino, then Vice President of San Miguel Brewery, Inc.)
3. Survey date	October 14, 2013
4. Survey location	San Miguel Brewery, Inc. (Manila, Philippines)

4.2.3 San Miguel Brewery—Leveraging the Parent company's Extensive Channels

San Miguel Corporation (hereinafter referred to as SMC) is the parent company of San Miguel Brewery (hereinafter referred to as SMB). SMC was the first brewery in Asia, and soon after its establishment, the Ayala Group, a Spanish conglomerate, became involved in its management, and since then, it has been run by the Sogliano family, a member of the Ayala family. Since the 1970s, the Cofanco family has gradually acquired stocks in San Miguel.

When San Miguel spun off its domestic beer business to establish SMB in 2007, Kirin sold all of its shares in San Miguel to acquire 43.249% of SMB.[39] Kirin and SMB have a good partnership, as they jointly developed products when SMB entered the non-alcohol business in 2015.[40]

San Miguel is the national brand of Philippine beer and SMB in the beer business controls 90% share of the Philippine beer market. And San Miguel beer is one of the top ten beer brands in the world.

What channels does San Miguel beer, which is sold at any place in the Philippines by stores of various sizes, go through to reach the consumers after production? In order to understand the channel of San Miguel, I conducted an interview with Teruyuki Daino, then Vice President of SMB. The following is a description of what I learned from the results (Table 4.3).

SMB's channels are shown in Fig. 4.6. In the Philippines, there is one factory in each of Pampanga, Metro Manila, Laguna, Negros, Cebu, and Davao. After the products are manufactured, they are delivered to GMA South, GMA North, Pampanga, Laguna, Cebu City, and Davao where the Area Offices are located. After that, the products are redistributed to three (3) Region Offices in GMA South, three (3) in GMA North, seven (7) in Southern Luzon, eight (8) in Visayas, and eight (8) in Mindanao.

While other Japanese breweries have only modern retail channels such as department stores, SMB has a rich channel with 500 distributors and 471,000 small retailers

[39] Kirin Holdings, "Share Acquisition for Investment in the Beer Business of San Miguel", https://www.kirinholdings.com/en/newsroom/release/2009/0220_01.html Accessed December 30, 2021.

[40] NIKKEI ASIA, "Kirin Holdings teams with San Miguel Brewery on soft drinks," July 3, 2015, https://asia.nikkei.com/Business/Kirin-Holdings-teams-with-San-Miguel-Brewery-on-soft-drinks. Accessed December 30, 2021.

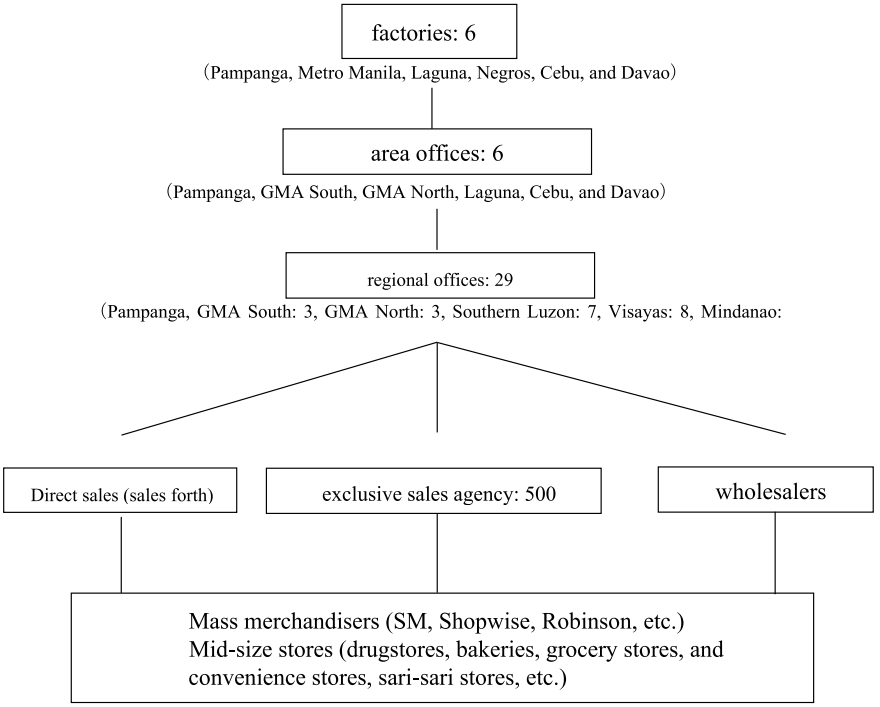

Fig. 4.6 Channels for San Miguel Brewery (as of 2013). *Source* San Miguel Brewery, "Plants and Facilities", http://sanmiguelbrewery.com.ph/plantsandfacilities.php (Accessed August 12, 2017), based on the interview with San Miguel Brewery conducted by the author

through SMC. Thanks to this channel, the company is able to cover the capillary-like network of micro-retailers throughout the Philippines, and maintains a 90% share of the Philippine beer market. The distributors are creating markets and jobs through the delivery of sari-sari stores, making the most of the Philippines' local distribution system and human resources.

4.2.4 Yakult Philippines—Providing Products to Every Corner Through Role Sharing

Yakult Honsha has a history of 85 years. The company started manufacturing and selling Yakult under the name of "Shirota Protection Bacteria Research Institute" in Fukuoka City, Kyushu in 1935. Today, Yakult is a global brand that is well known throughout the world.

Yakult Honsha's international business started in Taiwan in 1964, and has since expanded its network to Asia, the Americas, and Europe. Currently, more than 30

Table 4.4 Survey outline: Yakult Philippines, Inc.

1. Research objective	Understanding distribution channels through sari-sari stores of Yakult products
2. Survey method	Interviews (Sales Manager, Direct Sales Department, Yakult Philippines, Inc.)
3. Survey date	June 10, 2013, October 10, 2013
4. Survey location	Yakult Philippines, Inc. (Manila, Philippines)

million bottles of dairy products are consumed daily in 40 countries and regions. There are 29 overseas offices, and Yakult Honsha is expanding its offices and factories around the world, placing importance on the "local principle" of creating a production and sales environment rooted in the local community and fostering human resources in order to become a company that is well known and trusted in various regions beyond the borders of Japan. Yakult Honsha also has its own sales system, Yakult Lady, which provides home delivery in many countries and regions.

Yakult Philippines was established in 1977 and started its operation in October 1978. The capital is 1.8 billion pesos (about 36 million USD) and Yakult Honsha holds 40% of the investment,[41] and the purpose of investment is to develop the local market. The company has 1,419 employees,[42] all of whom are Filipinos below the management level. The business is the production and sales of Yakult, a lactic acid bacteria drink.[43]

Yakult, which is sold by stores of all sizes in any place throughout the Philippines, is well known for its use as a substitute for intestinal medicines for children and adults. In order to understand the Yakult's channels, interviews were conducted with sales managers who belong to the direct sales department of Yakult Philippines. The following is what I found out from the interviews (Table 4.4).

"Sales agency" mediate transactions between sellers and buyers. There are 38 sales agencies outside the Manila metropolitan area. From the distribution center in Manila, the products are delivered to the sales agencies, where the sales representatives and Yakult Ladies receive the products daily and sell and visit individual homes and offices for selling. Sales agencies have been focusing on Yakult Ladies, but they are beginning to focus on sales to sari-sari stores, which can provide products to a large number of end consumers.

The sales companies were established by Yakult Philippines, the parent company, and have the function of wholesaler to sell Yakult Philippines' products exclusively to local retailers and consumers. There are a total of 26 sales companies: 16 in Luzon,

[41] Philippine Primer, "17-Nen no Hi Yakuruto hanbai 13-pāsento-zō, 4-nen renzoku futaketa zōka"(Yakult Sales Up 13% in 2017, Fourth Consecutive Year of Double-Digit Growth), https://primer.ph/economy/top_news/2017-philippines-yakult-sell-increase/. Accessed December 30, 2021.

[42] Yakult Honsha, "Overview of Yakult", https://www.yakult.co.jp/company/pdf/gaikyo2020.pdf#page=33, p. 27. Accessed December 30, 2021.

[43] Yakult Honsha, "Supplementary Materials for Financial Statements For the Year Ended March 31, 2019", https://www.yakult.co.jp/english/ir/management/pdf/19_04_hosoku_en.pdf, p. 20. Accessed December 30, 2021.

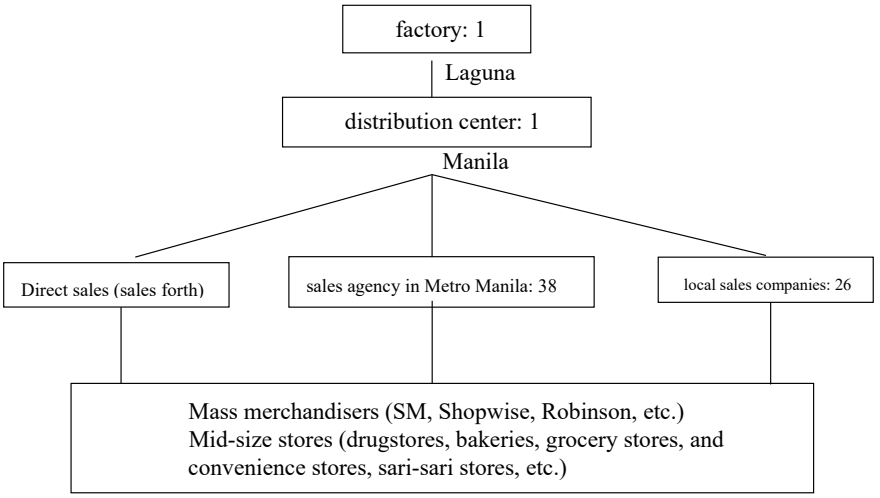

Fig. 4.7 Channels of Yakult Philippines (as of 2013). *Source* Based on the interview with Yakult Philippines conducted by the author

5 in Visayas, and 5 in Mindanao, outside Metro Manila. The sales representatives regularly travel to each region by truck to cover a wide area. All the sales companies in these districts were established by people from the respective districts and are familiar with the local conditions.

The channels of Yakult Philippines are shown in Fig. 4.7. All the products are transported directly from the factory through the distribution center to the retailers, distributors and sales companies to maintain the quality. Each product is so small and delicate that quality checks are essential.

Yakult Philippines has established a system to distribute its products to small retail stores in the Philippine market where there are many lower and middle income earners. This system is probably due to the fact that Yakult has sales representatives throughout the Philippines and that all sales representatives, including managers, are Filipinos. One noteworthy point is that the functions of the sales companies are utilized all over the Philippines. The distributors deliver Yakult to supermarkets, grocery stores, sari-sari stores, and households, and all products distributed in the provinces go through the distributors. All the products distributed in the provinces go through the sales company. The power of the local people is fully demonstrated, and Yakult is distributed all over the Philippines. It can be said that the company has been able to gain a large number of end consumers by successfully incorporating the sari-sari store into the channel.

In this way, the three companies are creating a system to supply their products to rural and urban areas, as well as to all income groups, by creating a channel and an organization that utilizes the sari-sari stores that are spread throughout the Philippines. In order to distribute their products throughout the Philippines, they are actively introducing their products to the sari-sari stores. Maximizing the use of local channels

is important for a company's success. The Philippine retail industry is a coexistence of modern retailing and traditional retailing like sari-sari stores, and unlike many countries in the Philippines, the number of micro-retailers is still increasing. This situation needs to be taken into account by foreign companies seeking to enter the Philippines, and is likely to be the case in other emerging markets where micro-retailing is still prevalent.

4.3 Conclusion

This study elucidates the indispensability of sari-sari stores to the Philippine market, especially to the purchasing activities of the BOP and the majority of women shopkeepers. Sari-sari stores are owned and operated by mainly women, which enables women to be economically independent, create employment for shopkeepers and vendors, and supply daily necessities. It is also essential for the BOP population to be able to obtain a variety of goods in the quantities they need without having to spend money on transportation. It is also a place for customers to exchange information and relax. Because of this organizational and mutual support role, and the flexible business operations depending on the region, the sari-sari store has strong support from the lower and middle class people.

The BOP market is promising, but entry strategies are not succeeded by accident. Marketing strategies similar to those of the wealthy and consumers, in developed countries will only end in failure, and proactive efforts to reach new markets are necessary. In the Philippines, poor areas and farming and fishing villages are scattered all over the country, and there is not enough cash income. Therefore, in order for companies to make profits targeting the poor, they need to devise ways to distribute their products to sari-sari stores where they can be paid in deferred and sold in small quantities.

In the future, with the economic growth of the Philippines, modern retailing may grow in urban areas and traditional retailing may decrease. However, in the mountainous areas and rural areas of the Philippines where the economic disparity is greater and the infrastructure is inadequate compared to urban areas, traditional retailing will probably continue to exist as a career choice for women, located in the neighborhood and can be purchased in small quantities.

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Chapter 5
Bottom of Pyramid Strategies by MNEs and NGOs: A Case of UNIQLO

Negishi Kanako

5.1 Introduction

The garment industry's workers and factories throughout the supply chain in the Asia–Pacific region have been negatively impacted by the COVID-19 pandemic. In the first half of 2020, clothing imports from Asia by major purchasing countries, such as Japan, were estimated to have declined by up to 70%. This was due to the collapse of consumer demand, government restrictions, and turmoil in raw material imports essential for producing clothes. As a result, thousands of factories faced temporary or indefinite closure throughout the region (ILO, 2020).

Traditionally, the industry has faced various challenges, such as less than ideal working conditions and environmental pollution. However, garment manufacturing is a key industry in those countries seeking economic and social development. In Asia, as elsewhere in the world, multinational enterprises (MNEs) have long and complex global supply chains. SPAs (specialty store retailers of Private Label Apparel) play an important role in the economy of developing countries. This is by way of earning foreign currency through the export of its products and by job creation. In addition, MNEs are motivated by the low cost of labor rendered by the SPA system in Asia—a major reason for their competitiveness. Since they benefit from the low cost of labor, it follows that MNEs may be reluctant to improve working conditions in developing countries.

The MNEs in the garment industry also face sustainability agendas in their home and host country supply chain, which is a challenge to those business models emerging in developing countries. We examine whether the ideas and concepts of bottom of pyramid (BOP) (Prahalad et al., 2004) and social business (Yunus, 2007) resolve the previously mentioned challenges of MNE's industry. For the population situated at the BOP, they aim to address the most pressing needs of food, healthcare,

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shelter and clothing. Nikkei Business, as an example, provides the few textiles and garments that are affordable (Nikkei Business n.d.). There are also a few examples in MNEs of garment industries such as Fast Retailing (FR) in the BOP market (Hayashi et al., 2016).

It is necessary to apply the concept of bottom of pyramid (BOP) (Prahalad et al., 2004) and the concept of social business (Yunus, 2009) to ensure the sustainability of global businesses. With this in mind, we analyzed how FRs have managed overseas production, keeping sustainability in mind. The study uses historical and content analysis to explore this sustainability. For this investigation, UNIQLO (Fast Retailing Ltd.) was used as a case study. This company was awarded the Porter Prize in 2009 due to its unique supply chain and position offering high quality and low prices (Porter Prize, 2009). Their social business demonstrated, early on, improved conditions for workers (Tsuboi, 2012). The supply chain expanding to Asia is key to the company's success. This study demonstrated that the transition of FR's history of sustainability management.

This paper is organized as follows: Sect. 5.2 presents the working conditions in three garment MNEs in Asia and illustrates the changes in the behavior of MNEs and the roles of the host country and NGOs regarding sustainability. Section 5.3 reviews MNEs' responses to the problem of sustainability. FR's struggles for its sustainability overseas are examined in Sects. 5.4, 5.5, and 5.6. Section 5.8 concludes by describing the contributions of this study to the literature on BOP and social sustainability, its limitations, and topics for future research.

5.2 The Problems in Garment Industry in Asia and the Role of MNEs and NGOs

The clothing and textile industries are criticized as "some of the most polluting industries" because of their characteristics of resource intensity and production of polluting effluents (Boström et al., 2016). Some products and processes in the garment industry have advanced technology, while others are labor-intensive and low-priced. The products with advanced technology are developed and manufactured in industrialized countries, whereas the others are exclusively developed in less industrialized countries.

Since the beginning of the twentieth century, poor working conditions in developing countries in Europe and North America have been highlighted (ILO, 2019). However, these often remain dire.

Vogel (2005) criticized Nike for outsourcing to contracted factories in developing countries where labor is exploited. This raises labor and environmental issues arising in the global supply chain of MNEs and raises question as to global responsibility.

When labor catastrophes arise in foreign factories they don't control, Nike denied then their responsibility. Because the factory is not their own factories in which it has invested. Nike argues against the expansion of the scope of its responsibility because

the company simply bought products from the contracted factories. However, though Nike's argument is legally sound, it has faced serious criticism and its brand value has declined (Ruggie, 2013; Vogel, 2005).

The above instance illustrates the nature of the debate regarding the responsibilities of MNEs. However, the idea that labor-related issues of companies in the supply chain are also the responsibility of the MNEs has gained wide acceptance, and how the ordering MNEs meet their responsibilities has become a major area of interest in studies (Ruggie, 2013; Vogel, 2005).

The collapse of the Rana Plaza Building in Bangladesh in 2013 was the most notorious catastrophe in the garment industry. This is because the provisions of the laws do not prescribe the level of working conditions at par with those in the developed countries. At least 1132 people lost their lives and more than 2500 were injured. Only five months before this, at least 112 workers had lost their lives, trapped inside the burning 'Tazreen Fashions' factory on the outskirts of Dhaka (ILO, n.d.). Later in the day, The Fire and Building Safety Accord in Bangladesh was signed in 2013. In total, 190 brands and retailers signed the 2018 Transition Agreement with trade unions worldwide.

These recurring incidents in the global supply chain indicate the importance of MNEs disclosing information about the factories to which they outsource their work (Akbar et al., 2021). The factory lists publicized by the largest fast-fashion MNEs like Inditex, H&M, and FR were among these disclosures.

Furthermore, in 2020, the Australian Institution flagged a new problem in the supply chain regarding the international division of labor employed by MNEs. Specifically, they highlighted problems associated worker's human rights in outsourced factories. Some factories in China manufacture at least 82 well-known brands, including Apple, BMW, Gap, Huawei, Nike, Samsung, Sony, and Volkswagen. However, the workers are Uighurs and other ethnic minorities who have been mass-transferred by the Chinese government from the westernmost region of the Xinjiang Uygur Autonomous Region, raising the possibility of forced labor (Xu et al., 2020).

Nike and H&M face backlash in China for expressing concern that Uighurs were forced to work in cotton production in the Xinjiang district in 2020. Many people in China called for a boycott of their products, and celebrities cut off ties with the two companies. In addition, online shopping sites blocked H&M (BBC, 2021).

The expression concerning to Uighurs by the two companies in China were in response to criticism they faced in their home countries and evoked opposition in China the host country. The two companies were caught between the government and consumers in their home country and the host country.

China, unlike other Asian countries that are markets for MNEs' products, is particularly important because it is both a production base and a market. For example, among H&M's top ten net sales market in 2020, China ranks fourth over its home country Sweden and France (H&M, 2020). As noted later, China accounts for 22.7% of FR UNIQLO sales. The high sales are exceptional in Asia.

The factories in developing countries that accept outsourced work from MNEs (outsourced factories) must also bear the responsibility for their working conditions. However, there is a gap between developing and developed countries. Unlike in

the case of developed countries, observing local laws does not solve the problems regarding working conditions in developing countries. This is because the strictness of the law variations from country to country are clear. For example, the World Bank provides six indicators of national governance in The Worldwide Governance Indicators (WGI) project. One of them—regulatory quality, capturing perceptions of ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development—also varies from country to country (World Bank, 2021).

The relationship between MNE and host country governments is also sometimes complex. For example, Nike withdrew from Cambodia in 2000 after issues regarding working conditions in the country surfaced. The withdrawal impacted the $1 billion garment industry, which had accounted for 80% of Cambodia's commodity exports. However, despite the trade agreement between Washington and Phnom Penh, the Cambodian government was reluctant to implement the necessary improvement in the working conditions of factory workers. This was despite the fact that implementing them would have resulted in an annual textile allocation bonus of 18% for the country (Vogue, 2002).

In the case of MNEs, it is necessary that they take measures beyond those required by local law. Furthermore, from the aspect of the prevailing culture, what is considered good corporate social responsibility (CSR) in developed countries is not always ensured by laws in developing countries (Gugler and Shi, 2008). The measure for local conditions provide MNEs with some complex and difficult agendas. MNEs face difficulties in fulfilling their responsibility toward the outsourced factories that are part of their complex global supply chains. The state plays an important role within this framework (Knudsen, 2011). Following Nike's case, MNEs' activities are now being monitored by several citizen groups including NGOs, who can discover and disseminate international issues through a global information network. Awareness created by these organizations through media, generates financial support. Therefore, these groups have a close relationship with the media in terms of attracting public attention to serious issues (Brown et al., 2000).

While pressure exerted by NGOs is effective, as seen in the Nike example, it has drawbacks. Not all companies attract attention from the media, NGOs, and consumers. Further, not all companies are equally pressured. For example, a company that sells directly to consumers or owns a well-known brand is under more pressure than a company that does not (Vogel, 2005). They strongly relate with the media to create changes in the performance (Brown et al., 2000; Deegan 2014). Renowned companies attract strong negative media attention and that induces the companies to change their attitude towards the outsourced factories, which, in turn, affects the companies' performance.

While NGOs may not build friendly relationships with MNEs, they often play an important role in the BOP by sharing knowledge, creating values, and solving local problems (Cañeque, 2015; Prahalad, 2005). NGOs are not "troublesome opponents" but are business partners who share the same goals with MNEs and often play important roles in solving local problems that affect the performance of MNEs.

For example, NGOs and the media play essential roles in these matters. Companies, trade unions, citizen groups, and public benefit organizations participated in the Accord on Fire and Building Safety in Bangladesh. Furthermore, the UN advocates sustainable development goals (SDGs) and the Global Compact. The UN also created the concept of "constituencies" of the representatives of the UN member-countries, "private sector," and "civil society" (Sugawara, 2010). Now SDGs provide some platforms to cooperate with various actors to archive the goals. As a result, issues regarding social responsibility in supply chain problems are no longer resolved between companies—the solution is found within a framework with the participation of diverse participants.

5.3 Problem-Solving by MNEs in Outsourced Factories

5.3.1 Limitation of Social Responsibility in the Current System

The garment industry faces problems in the global supply chain. Many efforts are being made to resolve these problems. One of these efforts is factory disclosure. Many MNEs now disclose the list of their outsourced factories. In addition, publishing sustainability reports is now common among large companies (KPMG, 2020).

The number of outsourced factories is large, and it is doubtful if the entire cost of meeting the responsibility can be recovered by increasing the price of low-to-middle-priced brands. This inability to pass on the cost is one of the reasons that problems recur in the industry. While measures such as educating, training the workers in their outsourced factories, rating the factories, and making the rating public are recognized as part of MNEs' responsibilities, these burden MNEs and outsourced factories (Vogel, 2005). In addition, outsourced factories receive little external financial assistance from MNEs to introduce responsible labor practice (Vogel, 2005). Therefore, the SPA system with MNEs and outsourced factories limit these activities to reduce the burden of improvement costs. As a result, the working conditions in outsourced factories are often below the expectations of the consumers in developed countries. Moreover, it is unlikely that developing countries would impose strong regulations on industries that support national exports. Therefore, MNEs cannot spend large amounts of money on operations, ratings, checks, and education and training in the host countries that do not have adequate laws and regulations. Rather, inadequate laws and regulations give MNEs a comparative advantage by sourcing products from such countries to sell in developed countries. Therefore, there are limits on how much MNEs can spend on solving local problems within the CSR framework.

5.3.2 BOP and Social Business

The aforementioned responsibilities involve changing or modifying the business model of an MNE in order to solve the problems regarding the working conditions in developing countries through the supply chain. The BOP and social business, which incorporate activities into the business of MNEs such as information disclosure, education, and training, can be effective solutions to the problem.

The concept of the BOP has evolved through many practices. BOP 1.0 aimed to deliver products and services to customers who previously did not have access to diverse products. Behind this is the saturation of markets in developed countries. This approach was criticized for modifying and launching traditional products into new markets and being a new form of imperialism (Cañeque, 2015).

To overcome the problems caused by BOP 1.0, BOP 2.0 was created. BOP 1.0 caused some problems while trying to distribute products and services that were distributed in other markets. It emphasized co-creation of wealth with the locals and NGOs and avoiding unilateral product launches from developed countries (Cañeque, 2015). Following this, BOP 3.0 was conceptualized.

There is a need to find new perspectives on the BOP in the garment industry. For example, the manufacture of apparel is widely distributed among outsourced factories in Bangladesh. Aarong of Bangladesh, an affiliate of the giant NGO, BRAC, has the highest annual sales of $60 million. Aarong has a clothing lineup of 109 items and 13 direct sales stores (JETRO, 2016). The garment market in Bangladesh is developing and diversifying. There is a wide range of retail formats—from modern shopping malls and specialty stores to traditional street vendors. Products based on various concepts and designs are on sale, and some brands have retail chains in major cities (JETRO, 2016).

Considering the burgeoning population of Bangladesh and its growing economy, it is a promising market. However, local companies are already active in the local market. Therefore, MNEs must enter the market with solutions that differ from those of local companies to differentiate from local competitors. It is implied that the modified MNE's business model needs to solve the problems caused in their supply chain that are noted above.

Rising purchasing power is one of the key points in the BOP market. Many BOP markets in Asian countries have a large population, and their economies have been developing more rapidly than those of developed countries. This is expected to place more spending power in the hands of individuals at the BOP and boost the sales of affordable garments. As the economy grows, workers in the garment industry demand higher wages. For example, in 2019, in various parts of the city around Dhaka International Airport, workers went on strike demanding wage hikes (JETRO, 2019). When there was a strike in 2013, the minimum monthly wage in Bangladesh was $38, which was about half that of competing Asian countries such as Vietnam and Cambodia. However, Reuters (2013) reported that factory managers had rejected the demand, claiming that the demanded increase was too large.

If this added value earned by the outsourced factories can be redistributed to local workers, it may be possible to alleviate poverty (Yasumuro, 2016). In the case of Mother House, their philosophy is "We spotlight the potential of developing countries through our products to establish an international brand." They prepare for local top-class working conditions such as position promotion, high salary level (depending on skill improvement), well-developed pension systems, and medical insurance. They have markets in Japan, Taiwan, Hong Kong, and Singapore.

FR, whose home country is in Japan, has a wide supply chain in Asia. Sustainability in Asia is an important success factor for them. In the following sections, we explore how they have historically tackled their agendas.

5.4 History of UNIQLO (FR)

5.4.1 About FR

FR's philosophy is "Changing Clothes—Changing Conventional wisdom—Changing the World." FR was established in 1963 in Japan. Its first overseas store was opened in London in 2001. The number of full-time employees (consolidated) is 55,589, and the paid-up capital is 10,273 million yen. By sales turnover in 2020, it was the world's third-largest manufacturer and retailer of private-label apparel (FR, 2021). They own brands such as UNIQLO, GU, and Theory. In 2021, UNIQLO, FR's core brand, had 2312 stores spread across various regions of 25 countries. The Chairman, President, and CEO, Tadashi Yanai, has played a central role in the company's domestic and international growth.

Though the company's operating profit has decreased slightly from year to year, it has shown an overall increase (see Fig. 5.1).

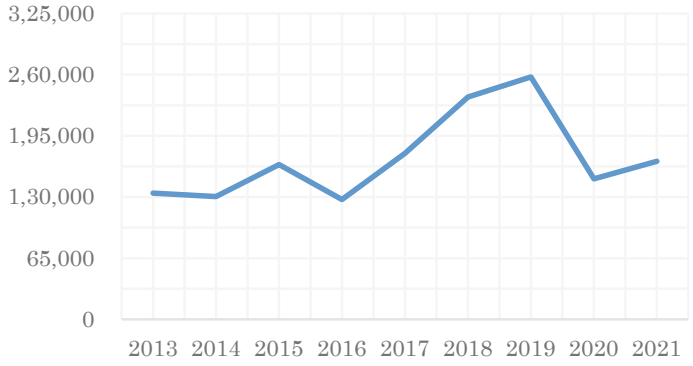

Fig. 5.1 Operating profit for FR 2013–2021 (millions)

The operating profit has grown steadily, and the number of stores has increased from year to year. FR has not yet done business overseas after Nike faced criticism, as shown in Fig. 5.2.

According to FR's report, the share of sales in 2021 by region was as follows:

- Japan, 40.2%,
- Greater China, 22.7% (Including Mainland China, Hong Kong, and Taiwan),
- Rest of Asia and Oceania, 10.2% (Including Korea, Singapore, Malaysia, Thailand, Philippines, Indonesia, Australia, Vietnam, and India),
- North America and Europe, 9.1% (the United States of America, Canada, England, France, Russia, Germany, Belgium, Spain, Sweden, Holland, Denmark, and Italy).

Although Japan is still FR's main market, the overseas operating profit has gradually increased. Greater China contributes a large portion of the overseas operating profit as shown in Table 5.1.

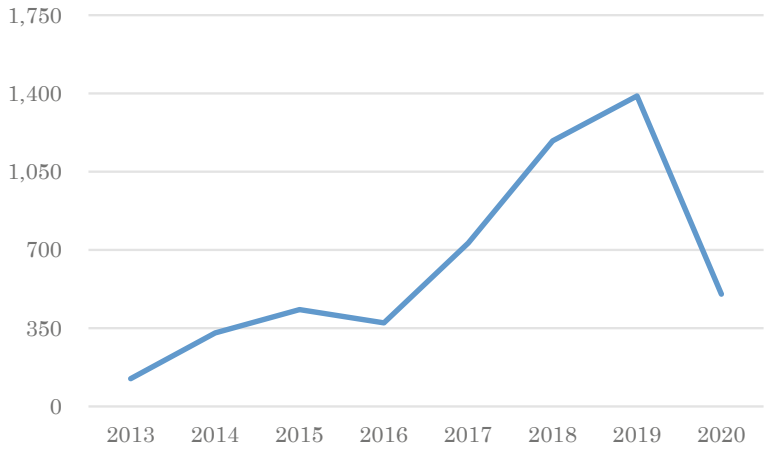

Fig. 5.2 Operating profit of FR from overseas operations (millions)

Table 5.1 The opening dates of UNIQLO stores

2001	England	2012	Philippines
2002	China	2013	Indonesia, Bangladesh (Grameen UNIQLO)
2005	Korea, Hong Kong	2014	Australia, Germany
2006	United States	2015	Belgium
2007	France	2016	Canada
2009	Singapore	2017	Spain
2010	Russia, Taiwan, Malaysia	2018	Sweden, Netherland
2011	Thailand	2019	India, Vietnam, Denmark, Italy

Table 5.2 Apparel manufacturing factories and subcontractors

S. No.	Country	No. of facilities	S. No.	Country	No. of facilities
1	China	167	11	Malaysia	5
2	Vietnam	52	12	Peru	5
3	Bangladesh	23	13	Bulgaria	2
4	Indonesia	19	14	Madagascar	2
5	Cambodia	16	15	Tunisia	2
6	India	9	16	Sri Lanka	2
7	Portugal	8	17	Italy	2
8	Turkey	6	18	Japan	1
9	Myanmar	5	19	Morocco	1
10	Thailand	5	20	Romania	1

Table 5.1 shows the history of the opening of overseas FR stores. It was first launched in the United Kingdom and then expanded to the United States and France. Since 2014, stores have been opened in Europe. At the same time, FR continues to expand in Asia. The number of stores in Greater China increased to 965 by 2021. In 2021, Vietnam, where the first store was opened in 2019, had nine stores.

Although founded in 1963, the first overseas store was only opened 38 years later because of the strong domestic demand. The number of stores steadily increased, mainly in Asia, and to a lesser extent in the rest of the world. UNIQLO sales first exceeded domestic sales in 2021.

Table 5.2 shows FR's overseas manufacturing facilities arranged country-wise in the descending order of the number of facilities.

Table 5.2 shows that the number of outsourced factories in China is more than three times that in Vietnam. Bangladesh, Indonesia, and Cambodia follow.

Thus, China is a market and a production base of FR. It is the largest market for FR after FR's home country. Although the number of overseas stores is increasing, the combined sales in Asia and Oceania are 10.2% of the total sales. FR stores in Vietnam are the second most popular; those in Indonesia are ranked 4th and Bangladesh 3rd, excluding Grameen UNIQLO (FR, 2021).

The top five countries in the above Table, except China, are production bases, not markets. Therefore, looking at the order of store openings and changes in the number of stores in each country, we can observe that the idea of not expanding the BOP market has been followed. The factor that is driving the expansion is the existence of large enough markets in developed countries.

Except for China, FR's main market is the home country and neighboring countries, and production is based in the Asian region. In these aspects, FR resembles Inditex and H&M. There is still room for expansion in developed and emerging markets and, therefore, the prospects for these companies switching to BOP seem distant. For example, FR started in Bangladesh only as a social business, and the total BOP sales are not large.

5.5 FR's Sustainability Abroad

The so-called first year of CSR in Japan was 2003, when the discussions on CSR began taking place in earnest. However, social responsibility had already been discussed in the 1970s. "Corporate social responsibility" mainly refers to "social contribution activities" represented by philanthropy and patronage, and the cautionary note, "do not bother society," was used appropriately as "corporate ethics" and "compliance" in the 1990s (Umeno, 2006).

In 2003, against the background of domestic corporate scandals that took place between the latter half of the 1990s and the 2000s, CSR became more active in Japan and some of the statements and institutionalization regarding CSR began. For example, the Ministry of Economy, Trade, and Industry proposed the introduction of domestic CSR. Keidanren, a broad-based federation of Japanese businesses with 1461 Japanese companies as its members reported "The fundamental way of thinking promotes responsibility." To avoid being regulated by the government, the Whistle-blower Protection Act was enacted in 2004, and the ISO advisory group published a working paper on CSR standardization (Demise, 2004).

Against the background of these developments in Japan, FR published its first CSR report in 2006. As for philanthropic activities, FR has historically provided aid during disasters at home and abroad, and for waste recycling. It has cooperated with the UNHCR since 2009 to support refugees (FR homepage n.d.).

In the year 2010, an incident triggered FR's sustainability activities. An article criticizing the labor problem at FR's Chinese garment factory was published. FR responded by dispatching their CSR staff to the factory to conduct surveys and interview the factory management, managers, and employees. The CSR staff were reported as saying that there was no problem with the working environment at the factory. FR's overseas business started expanding in 2010, which brought it attention from NGOs, whose criticism increased the company's awareness of the importance of good working conditions.

In 2010, FR commenced its efforts in Bangladesh as a joint venture with Grameen Bank Group and established a company to launch a social business. However, it did not begin operations because of the Rana Plaza building accident of 2013.

In 2014, there was a strike in FR's manufacturing partner in China. A report released on January 11, 2015, by Hong Kong NGO Students & Scholars Against Corporate Misbehavior (SACOM) pointed out problems with the working environment of the two factories producing UNIQLO products in China. In the same year, they were mentioned in a report by Human Rights Now, an international NGO, which claimed that the working conditions at garment factories in Cambodia were unsatisfactory.

In 2017, FR first disclosed the list of its partner factories. This disclosure could have been related to labor issues that occurred between 2014 and 2016. Further, in 2018, the company received criticism from SACOM over the working conditions in its partner's factory in China. Several international NGOs lobbied UNIQLO to

financially compensate the former employees of PT Jaba Garmindo in Indonesia and those in labor disputes in Cambodia in 2018 (FR homepage n.d.).

Through participation in the United Nations Global Compact in 2018, FR entered into partnerships with various international organizations. It has been working with the UNHCR for an extended time to support refugees. In 2019, it collaborated with the UN (UN women) and ILO. In 2020, FR was selected for the first time as a constituent of the MSCI (Morgan Stanley Capital Investment), Japan ESG (Environment Social Governance) Select Leaders Index, and DJSI (Dow Jones Sustainability Index), which are the main indicators of ESG investment, and participated in UNEP's Sustainability Action Kick-Off Dialogue.

In 2021, FR signed the Microfiber 2030 Commitment. It is a new global initiative to minimize the impact of microfibers on the natural environment and introduces the new International Accord for Health and Safety in the Textile and Garment Industry to improve the safety of the facilities of all their suppliers in Bangladesh. In the same year, FR's greenhouse gas emissions were also approved by the Science-Based Targets Initiative (SBTi).

In this way, FR initially provided support mainly through its philanthropic work and later, in part because of its growing presence overseas, and due to the criticism it faced. It disclosed information in the same way as other companies. Since 2018, it has been actively involved with external partners in initiatives on sustainability.

5.6 Content Analysis of FR's Sustainability Reports

In the previous section, we observe how FR's actions on sustainability has historically transitioned. In this section, we also explore historically by content analysis to show not only text but figures.

5.6.1 Methodology and Data

Content analysis involves the analysis of various qualitative data such as text, audio, and video recordings (Higuchi, 2020). It is used to identify the overall trends that appear in environmental (Kolk, 2004) and sustainability reports (Kosaka, 2018). FR's sustainability reports show the transformation of its sustainability performance over time. The first section of the analysis covers the years from 2006 to 2021. The pivotal year of performance noted in the first section is 2010. The next section focuses on the years 2006, 2010, and 2021. The 2006 report is FR's first report, and the 2021 report is the most recent. Then, the top 20 frequencies of reporting are extracted to capture the overall social business trend of the company.

5.6.2 Results

Table 5.3 shows the frequency of the words in each report and demonstrates the transition in FR's perspective on sustainability.

FR's first sustainability report was published in 2006. In that year, the ranking of the words shows that FR's sustainability concern was "employees." The second word, "activity," relates to "CSR" (CSR activity) and "volunteer" relates to voluntary activity. Finally, "code" relates to the conduct (code of conduct).

In 2005, FR Co., Ltd., which supervises and oversees group companies, established a CSR committee for the group. As a corporate group involved in apparel retailing pivoting on the SPA business model, they established themes and priorities about the types of stakeholders to whom they are responsible, the kinds of responsibilities they are obliged to fulfill, and the nature of the relationships that they need to build (FR, 2006). The report for the same year was a revision of the September 2004 "Code of Conduct (CoC)," which was related to the progress of business globalization and to ensure "basic certainty" in corporate behavior.

Table 5.3 The top 20 words and their frequency in 2006, 2010, and 2021

	2006		2010		2021	
No	Extracted words	Frequency	Extracted words	Frequency	Extracted words	Frequency
1	Employee	75	Factory	90	Refugee	49
2	Activity	61	People	68	World	44
3	Customer	56	Store	68	People	43
4	Store	56	Employee	56	Sustainability	34
5	CSR	50	Customer	52	Clothing	31
6	Product	45	CSR	49	Country	28
7	Factory	41	Item	49	Store	27
8	Information	34	Refugee	44	Japan	26
9	Code	29	Activity	43	Employee	24
10	Japan	29	Product	43	Information	24
11	Conduct	28	Partner	42	Initiative	23
12	Partner	28	Disability	38	Attali	22
13	Management	27	Clothing	35	Customer	22
14	People	25	Environment	33	Activity	21
15	Committee	24	Support	32	Life	21
16	Volunteer	23	Worker	32	Product	21
17	Compliance	22	Camp	31	Committee	20
18	Improvement	22	Management	31	Support	20
19	Society	22	Work	31	Yanai	19
20	Monitoring	20	Manager	29	Society	18

As mentioned above, it can be argued that the first step was to focus on addressing basic stakeholders, such as employees and consumers. The second step was to establish a CSR system and its systems of management, governance, and compliance with a focus on three stakeholders, namely, consumers, suppliers, and employees.

In 2010, "factory" was the most frequent word. "People" relates to "disability" and "employment." "Store" relates to "staff" and "manager." "Item" relates to "clothing," the company's main product. The other words that appear are "refugee" and "refugee camp." The company's sustainability at this stage focused on factory workers, the environment, and supporting refugees, reflecting its global expansion and addressing the criticism of overseas outsourced factories. In addition, it emphasized ongoing support for refugees.

This changed significantly by 2021. Of course, the impact of COVID-19 was mentioned in the report. The top word was "refugee," related to "camp," "people," and "support." The words "world" and "people" were related to various other words. Compared to the 2006 and 2010 reports, the content was greatly expanded and included content from around the world.

We can observe the transition of FR's thought of sustainability from the reports. The year of 2006 is the first year of report publication. Although FR became increasingly active for overseas expansion, the actions regarding sustainability were limited to Japan and mainly philanthropy activities (FR homepage). This is also consistent with the results of the text analysis. This is the first stage where they began to create a system for corporate governance.

Around the year of 2010, while launching a joint venture with Grameen (noted in the next section), they were criticized about the labor conditions in production consignment factory. This has continued several times since then. As shown the Table 5.3, the word "factory: is most frequent. Disability, staff, manager, refugee, and so on are mentioned as well.

The report on 2021 changed greatly in comparison to the reports of 2010 and 2006. During this time, overseas expansion also accelerated. Collisions with NGOs, factory list disclosures, and collaborations with external organizations were carried out. Though these experiences, the content of the report in 2021 is not limited to the conventional "people" about the company.

Whether we examine FR's sustainability historically or by content analysis, we can see the transition progresses gradually. Nike's labor condition cases occurred in the late 1980s and early 1990s. FR first opened a store overseas in 2001. In 2004, C. K. Prahalad proposed the concept of BOP and cited the importance of collaboration with multiple institutions and organizations, rather than a single company as a success factor. FR should have had plenty of time to learn from the Nike case and Prahalad. However, FR's main focus at the first was on philanthropy and within their company, and as the presence overseas increased, it became criticized the working conditions. Then they are to solve to the problems and collaborated with external organizations. The progress about sustainability would be difficult to leapfrog.

5.7 Grameen UNIQLO

How would Grameen UNIQLO, a joint venture launched by FR with Grameen, be understood from a social business perspective? Grameen UNIQLO Ltd. was established as a joint venture in Bangladesh in 2010 to produce and sell apparel in Bangladesh. The returns are reinvested in the business. In addition to casual wear and traditional clothing, they also sell charity T-shirts and use the profits to support the poor. The business aims to contribute to Bangladeshi society by providing an environment in which factory workers can work peacefully. In addition, the company provides basic education (such as knowledge about nutrition and household budget) needed to lead a healthy life. According to the 2021 Sustainability Report, in December 2020, the joint venture had 16 stores.

Grameen UNIQLO completes all business processes from production to sales in Bangladesh because its mission is to contribute to solving local problems. Therefore, its business model differs from the complex global supply chain used for supplying products manufactured with low-cost labor to markets in developed countries. However, it is one of FR's most important actions for sustainability in Bangladesh.

Grameen's salespeople who are consigned to sell Grameen UNIQLO's products began selling products at an average price of US $1 to economically disadvantaged people, primarily in rural areas. They visited rural homes to sell their product instead of selling at their stores (October 2010 to March 2021). Thus, they developed a unique social business framework, quite distinct from the traditional business models. Over time, they shifted their focus from rural areas to the capital city of Dhaka. The company has tried to sell its products in various locations and used various creative methods, such as using vans and mini buses, to understand customers' needs and wants. This resulted in the addition of new products such as polo shirts and colored shirts to the existing line and the expansion of the price range from $2 to $4.

They learned from over three years of experience and began targeting middle-income earners and young people. As a result, they expanded their product lines significantly through continuous product development and a strong commitment to high quality.

Grameen UNIQLO has added new products to its product line, including garments produced using concentrated chemical fibers, soft and stretchable materials, polyester, etc. Additionally, newly opened stores have accelerated the growth of social businesses. This business contributes to the economic and social development of Bangladesh by providing its people with good-quality clothes at affordable prices, and jobs in the newly opened stores.

Through such local ingenuity, Grameen UNIQLO has expanded to 16 stores in 10 years. While Bangladesh faces problems of poverty and health management, Grameen UNIQLO aims to contribute to solving such local problems.

Shareholding ratio influences decision making in a company. Grameen UNIQLO Ltd. has a capital base of US $100,000. The board consists of Grameen UNIQLO

Ltd., Grameen Healthcare Trust, UNIQLO Co., Ltd (Bangladesh), and two directors from FR. The investment and contributing partners are UNIQLO Social Business Bangladesh, Ltd. (a 99% subsidiary of Fast Retailing Co., Ltd.) and Grameen Healthcare Trust (1%). UNIQLO Social Business Bangladesh, Ltd. was founded in 2010 with a capital of approximately US $4.6 million. It is fully owned by FR. The board consists of two members from FR and one from UNIQLO Social Business Bangladesh.

When companies form a joint venture with the Grameen group, the investment ratio is not always constant. There is some joint ventures between Grameen and Japanese company. For example, Grameen Yukiguni Maitake is the first project between the Grameen group and a Japanese company with Kyusyu University (Hoshino, 2012). The project aims to cultivate mung beans (the raw material for bean sprouts). The capital stock is US $100,000 and the ratio is 75: 25 by Yukiguni Maitake and Grameen Kirishi Foundation.

Grameen Euglena aims to also reduce poverty and stabilize food supply through the Mung Bean project. Japanese technology is used to bring improved stability to the productivity of mung beans grown by Bangladeshi farmers and eaten locally as a highly nutritious food source. The Beans are produced and provided to both the Japanese and Bangladeshi markets (Euglena homepage, n.d.). The joint venture was established on a 50:50 capital ratios by the Grameen Kirishi Foundation and Euglena Co, Ltd.

Watami, a Japanese domestic and overseas food business also established a joint venture with Yunus center to solve social problems (poverty, hygiene, education, food education) in Bangladesh through "food". The capital ratio is 90:10 by Watami and Yunus center (Watami, 2012). Some companies however, do social business without establishing a joint venture. Hindustan Unilever Limited (HUL), famous for soap and hygiene products in India targeted solving local problems. It is one of the subsidiaries of Unilever. Unilever is one of the world's largest suppliers of food, home and personal care, and refreshment products (HUL homepage, n.d.). Unilever India's strategy is a part of Unilever's global social reputation and strategy to increase corporate value (Hayashi, 2011).

The joint venture ratio between Japanese companies and Grameen varies, but the FR is high even when compared to the same joint venture. Looking only at the investment ratio, even though it is a joint venture, FR's stake in Grameen Uniqlo is the 99% stake noted above. It is supposed to be similar to HUL, so it seems possible to carry out business strategically with more emphasis on the decision making by FR. In fact, they have increased the number of stores through local ingenuity.

However, not like HUL, Grameen Uniqlo does not seem to play a part in a company's BOP strategy. Although Grameen UNIQLO is a valuable business contributing to improved conditions in the country it is not directly related discussion of the supply chain problems in the previous sections. No such efforts exist outside Bangladesh currently.

No matter how high the shareholding ratio or the labor problem is in Bangladesh, the problem of the consignment factory is separated. There is no doubt that Grameen UNIQLO's business model should be evaluated for its contribution. However, it is a

matter of workers in the same country. The situation of workers is different in the case of factories incorporated in the global supply chain and in the case of joint ventures such as Grameen UNIQLO even if they produce products from the same company. We can find other local ingenuity in Grameen UNIQLO's business, besides co-creation, and engagement with local communities, which are, as noted above, characteristics of BOP 2.0. However, the involvement of NGOs has not been confirmed.

5.8 Conclusion

This study traced the history of FR's performance in the field of sustainability. The garment industry has been criticized for its working conditions in developing countries. Even in current times, the industry is prone to major accidents, such as the Rana Plaza collapse in Bangladesh. Therefore, there is a need to incorporate a mechanism to improve labor conditions and fulfill social responsibility.

There are few case studies on BOP and the social business of MNEs in the apparel industry. Our study was focused on FR and derived certain key findings. The first finding was that despite external organizations (particularly MNE's AND NGO's) supposedly working together, this is initially not the case. Grameen UNIQLO, who are a remarkable case in the garment industry. People in Bangladesh engage in marketing, procurement, manufacturing, and sales. However, though the external organization was included in other sustainability initiatives of FR, cooperation with the external organizations was mainly established only after 2018. Further, Nike's worker problems had already been revealed in the 1970s, as noted in Sect. 5.2. However, it is not easy for other companies, including FR, to learn a lesson from Nike's case. Even for companies that are competitive and have already been active in Asia, the sustainability activities have been promoted in stages rather than leap frogging to catch up with stakeholders' expectations.

Second, it was found that even if the investment ratio for a joint venture was high, in FR's case the joint venture was not positioned as key to entering and expanding BOP markets. The number of stores is in fact increasing due to the ingenuity of local Bangladeshi workers, but this does not affect the workers in the same Bangladesh production consignment factory. Although they are workers in the same country and are involved in the production of the same FR, it can be said that they are separated. In Bangladeshi production, there is a dual structure where employment conditions differ among the same Bangladeshi workers, depending on whether it is a Grameen UNIQLO or a production consignment factory.

Regardless of the product distributed in the BOP market or exported from a developing country to a developed country, "added value" plays a significant role in competition and sustainability performance. Technology transfer has traditionally been one of the most crucial factors when adding value to products produced at production consignment factories. FR has a Takumi team—UNIQLO's team of specialists with exceptional skills in dyeing and material production techniques—stationed at UNIQLO production offices in China and Vietnam, and it directly visits the business

partners' material and sewing factories to provide technical guidance. However, this study could not explore the system from the perspective of sustainability.

This study has limitations as it was focused on the behavior of MNEs. However, it is also necessary to analyze consumer behavior. The behavior of consumers in developed countries, which are the main markets, also has an important role in solving sustainability problems. Although co-creation in the BOP and social businesses includes several stakeholders, consumers still play a significant role in persuading MNEs to change their business strategies.

Appendix

The data and description about FR are from FR's homepage.

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Chapter 6
The Growth of the IT-BPO Industry and Women's Work Choices in the Philippines

Yoshie Hori

6.1 Introduction

The development of the ICT industry bolstered economic growth in the Philippines and India. In the Philippines in particular, which did not experience the same impressive manufacturing industry growth as the Asian Newly Industrializing Economies (NIES) countries or Thailand, a system had emerged whereby the migration of labor overseas from the 1970s was supporting not only families but also the national economy. However, the Philippines Statistics Authority started to publish statistical data relating to the IT-BPO industry from around 2005, and the country notably replaced India as the world's largest call center base in 2010. And it could be said that the IT-BPO industry has been driving the economy of the Philippines to this day.

Kleibert has compared the emergence of the IT-BPO industries in India and the Philippines, classifying India as having developed through "brain circulation", the return of engineers who learned IT-development in the U.S, while the Philippines has grown mainly in labor-intensive and subcontracted sectors such as call centers (Kleibert, 2016). Having identified that the IT-BPO industry in the Philippines developed in response to an accelerated offshoring of the service sector since the 2008 global financial crisis, Raquiza points out that the challenge now is to achieve further growth by providing added value through the training of personnel, and so on (Raquiza, 2016) Patel clearly describes the happiness women get from earning money in India by working in transnational call centers, as well as their struggles with societal norms that consider a woman who works at night to be a "bad girl" (Patel, 2010). Based on these previous studies, the questions for this paper are what kind of transformation the growth of the IT-BPO industry has brought about to the economy and society in the Philippines, and how Filipina women's working lives and familial structures are changing.

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As a first step in such enquiries, in 2014, I interviewed women working in call centers. Through these interviews, I learned that there were married women in their 30 s at the time, as well as single mothers, staffing the call centers after having migrated overseas for work. There were also women who had worked in the call centers ever since graduating university in the 2000s. Accordingly, it was demonstrated that call centers were a vehicle for the reception of women who had returned to the country after a period of migrant labor overseas and that, unlike women in their 30 s, recent graduates were starting their careers at call centers rather than export processing zones or the like (Hori, 2016). I felt that it was also necessary to analyze the working conditions for women working in areas other than call centers.

This paper, therefore, investigates specifically how the growth of the IT-BPO industry is promoting the formation of a middle class, through case studies undertaken from 2017 to 2018 of 12 women working for companies in the fields of software development and medical transcription (tape transcription of oral medical records), and a Japanese company. With these 12 case studies, this paper also considers how the IT-BPO industry is providing increased opportunities for Filipina women to work independently within the country.

This paper is organized as follows. First, it provides an overview of the transitions of the economic growth in the Philippines, and of the IT-BPO industry. There follows an examination of case studies at three IT-BPO companies visited in 2017 and 2018. Finally, the paper sets out challenges that this industry must face in the future.

6.2 Economic Transition in the Philippines

Having gained its independence from the United States of America in 1946, the Philippines was referred to as the "show window of democracy in Asia" from the 1950s to the early 1960s, the first country in the region to start industrialization through American economic support and an import substitution industrialization policy. However, faced with challenges such as a small market, inefficiencies in manufacturing caused by the difficulty of technology transfer, and bureaucratic abuse of power and corruption, the country shifted to a policy of export-oriented industrialization (Dronila, 1992).

Even though the Marcos administration set economic growth as its top priority in the 1970s, however, corruption became rampant as the Marcos family amassed wealth and their cronies' established monopolies. Political instability was exacerbated when, in response, the Communist Party of the Philippines organized labor disputes, the New People's Army engaged in guerrilla activity in rural areas, and the Muslim population in Mindanao established the Moro National Liberation Front (MNLF) and started a separatist movement (Steinburg, 2000). This political instability had a significant impact on the economy of the Philippines. For example, the nation struggled to attract direct investment, as can be seen in Fig. 6.1. Furthermore, credit concerns spread when, on top of the Second Oil Crisis and deteriorating international economic environment, the entrepreneur Dewey Dee fled the country in 1981, leaving

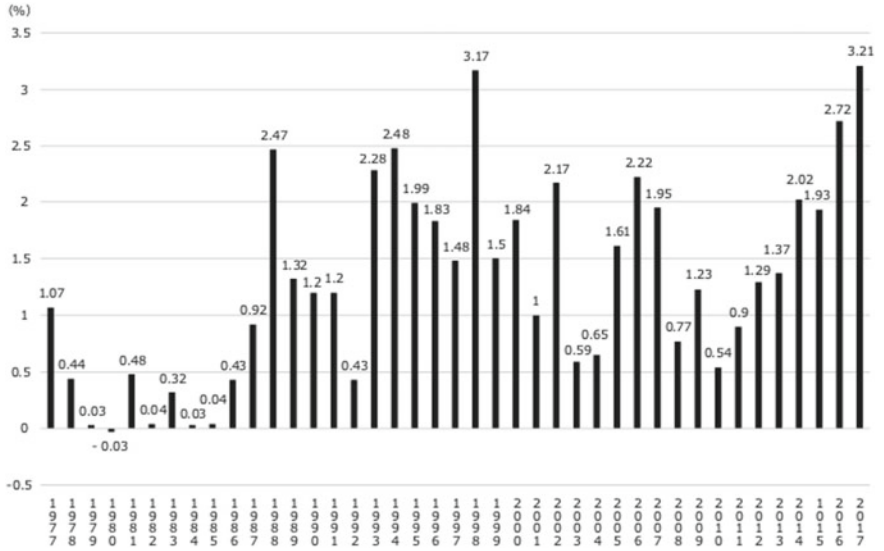

Fig. 6.1 The proportion of the Philippines' GDP constituted by foreign direct investment (as a percentage). *Source* Created by the author, based on information from the Bangko Sentral ng Pilipinas

behind an enormous debt of more than ₱600 million. Capital flight became even more of a problem with the political uncertainty following the assassination of Senator Aquino in 1983. The country entered a debt crisis, unable to pay foreign creditors, and was subject to structural adjustments under the strict control of the IMF until the 2000s (Steinburg, 2000). Looking at Fig. 6.2, one can see that the country's economic growth rate fell into the −7% range from 1984. This can be said to have led to political change in February of 1986, as anti-Marcos voices among the general public became even more energetic.

As a result, when the path of an expansive fiscal investment and loan policy funded by foreign debt cut off, the Philippines entered a low-level equilibrium trap under fiscal austerity. Delayed infrastructure spending, caused by low levels of public investment, and a low rate of gross capital production led to the formation of a society with slow growth, weak job creation, and persistent severe inequality (Abinales & Amoroso, 2005; Steinburg, 2000). The appreciation of the Japanese yen in the latter 1980s, due to the Plaza Accord, led to Japanese direct investment in nearby Asian countries such as Thailand; although these countries, and Thailand in particular, saw their economies grow, this wave passed the Philippines by.

In order to solve the problem of high unemployment caused by this economic stagnation and political instability, the government of the Philippines started encouraging migrating to work overseas in 1974. At first it was envisaged that men would work on the construction of oil plants in the Middle East, or similar, but from the 1980s it was noticeable that women were moving to Asian NIES countries as domestic labor,

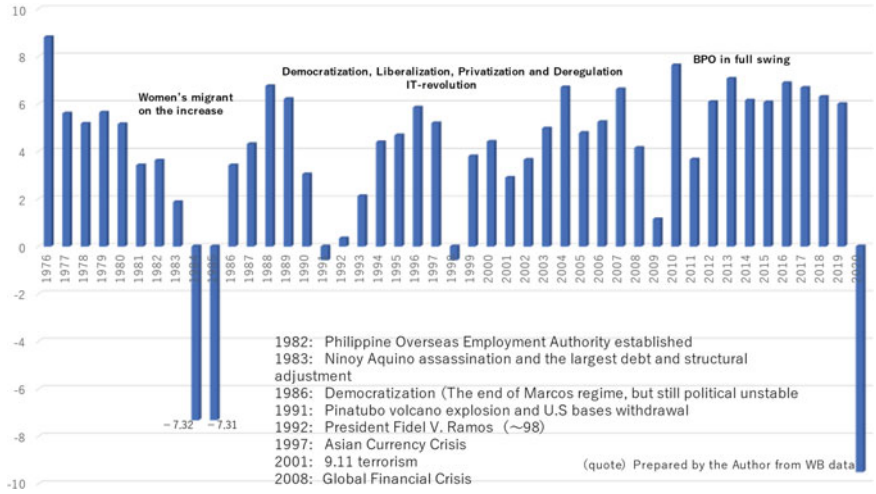

Fig. 6.2 Philippine real growth rate (%) (1976–2020). *Source* Created by author, based on WB data

and even working in pubs and snack bars in Japan. This phenomenon is referred to as the "feminization of international migration," and there are numerous examples of previous research on the topic (Choy, 2003; Ito and Adachi, 2008; Ogaya, 2016; Parreñas, 2015). According to government sources, the number of Filipinos and Filipinas working abroad demonstrated an upward trend from 795,000 in 1995, 978,000 in 2000, and 1.33 million in 2005 (these figures combine those working on land and at sea) (PSA, 1996, 2000, 2005). The latest number during the period of April to September 2020 was estimated at 1.77 million (PSA, 2020) Of course, these figures reflect those who were legally issued visas for work, and do not encompass the numbers of people finding work illegally. Remittances from such people is an important source of income for their families. As shown in Fig. 6.3, the proportion of GDP composed of remittances annually has been rising. Such were the trends in the Philippines when a new factor entered the scene: the IT-BPO industry.

6.2.1 The Emergence of the IT-BPO Industry in the Philippines

Why did the IT-BPO industry develop in the Philippines? The answer to this question can be broadly divided into international factors and domestic factors. Looking first at the international factors, there is the fact that the global financial crisis of 2008 accelerated the process of offshoring service departments by American and European multinational corporations. Direct investment in the BPO industry in the Philippines rose from $376 million in 2006 to $696 billion in 2012 (Raquiza, 2016). One can

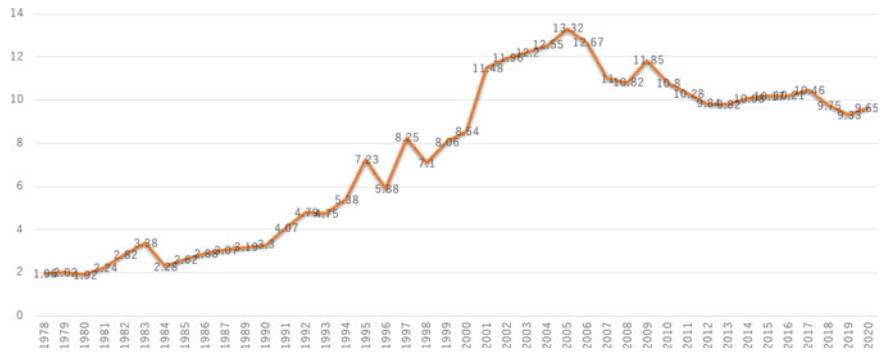

Fig. 6.3 The proportion of the GDP of the Philippines comprised of remittances (as a percentage). *Source* Created by the author on the basis of information from the database of the Federal Reserve Bank of St. Louis

also infer the influence on this of wage growth being as high as 14.5% per annum in India during the same period, compared to a more restrained 7% per annum in the Philippines (Takaoka, 2007).

Moving now to domestic factors, successive administrations since democratization in the 1980s have set up IT parks in special economic zones in an effort to invite direct investment from overseas. And, more than anything else, it is significant that the Philippines has an abundance of personnel available with superb English, as a result of school education using English since the country's occupation by the United States of America in 1898. Furthermore, Filipinos are familiar with American culture, speak a form of English that is similar in intonation to American English, as well as being cheerful, friendly, and good at communicating. This makes them suitable for human-facing work, such as at call centers; despite stemming from a history of colonial rule these particularities led to the country's superiority in the market, when combined with low labor costs. As a result, the Philippines passed India as the world's biggest base for call centers in 2010 (Takaoka, 2007).

As seen in Fig. 6.4, the IT-BPO industry was only worth $3.3 billion in 2006, and but it looks catching up with the value of remittances from overseas in 2014. Total revenue in 2018 were $24.8 billion, accounting for approximately 7.5% of total GDP. Additionally, nominal GDP per capital in the Philippines surpassed $1000 in 1999 (at $1078) and although there was a recession following the September 11 terror attacks in 2001, there has been an upward trend since then. This measure rose above $2000 in 2010, reached $2924 in 2016, and crossed the $3000 mark (at which point a surge in middle class consumption is expected) in 2018, with a figure of $3104z (IMF Data). In 2020, although the COVID-19 caused GDP to record −9.5%, the worst in the post war period, the BPO industry remained stable at $2.67 billion. On the other hand, remittances was down 0.8% from the previous year to $2.99 billion. The COVID-19 has had a negative impact on the migrant workers.

Therefore, it is characteristic of the IT-BPO industry in the Philippines that it started with labor-intensive businesses such as call centers, medical transcription,

Fig. 6.4 Scale of the IT-BPO industry in the Philippines, and the volume of remittances from overseas Filipino workers (OFWs) (Unit: billions of dollars). *Source* Created by the author, based on sources such as material from Mitsubishi UFJ Kokusai Asset Management Co., Ltd., and the Philippine Daily Inquirer website

and data processing departments, and has now expanded into knowledge process services such as design, research, and system development, which combine specialized areas of knowledge with IT proficiency. Currently, the IT-BPO industry in the Philippines has expanded the scope of work undertaken into a range of areas that includes software development, programming, medical information management, animation and computer graphics, game development, and document processing. Having started out in labor-intensive sectors, it is thought that the IT-BPO industry has provided workplaces that women are able to enter without difficulty. Illustrative of this is the fact that of the 81,578 people employed in the BPO industry in 2005, 45,225 were women (55.4%). If one looks at the proportion of employees that are female by business area, 58.8% of call center employees are women, 65.2% of data processing employees are women, and as many as 74.5% of medical transcription employees are women (Philippine Statistic Authority, 2009). Wages are approximately equal to the national average income for the Philippines, as described below. India's IT-BPO industry, by contrast, started with Information Technology Outsourcing (ITO) in the 1990s, and one can observe a specialization in IT services, where more specialized knowledge is required and there is more added value (see Fig. 6.5) (Kleibert, 2016). From this, it can be inferred that the IT-BPO industry in the Philippines is more concentrated in labor-intensive sectors, with lower added value.

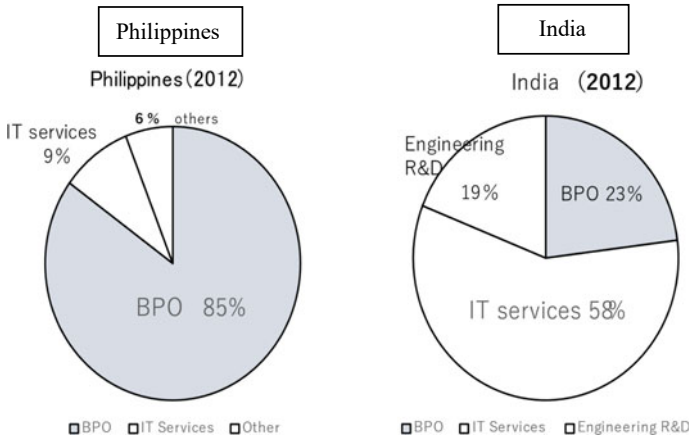

Fig. 6.5 Breakdown of offshore exports in the Philippines and India. *Source* Created by the author, based on information from Kleibert (2016)

6.2.2 The Impact of IT-BPO Growth on the Society in the Philippines

Figure 6.6 is a graphic representation of socioeconomic changes brought about by the development of the BPO industry over approximately 20 years since the 2000s, in terms of female labor and the society and economy of the Philippines. The intention of this diagram is to show, first, that the growth of the IT-BPO industry has created employment within the country, and created an option whereby working overseas is not essential. Of course, there are still many people from the Philippines who continue to participate in migrant labor overseas. However, increased domestic employment opportunities and the existence of call centers, and other areas of the IT-BPO industry as a landing spot for those returning from work overseas, can be described as transformative for the economy, society, and gender issues in the Philippines.

Second, an increase in the number of workers receiving greater than average salary has caused an expansion of the middle class. As previously pointed out, this creates a virtuous cycle for the economy of the Philippines as a whole, as the BPO industry aggregates, cities develop, and consumption and investment increase. As BPO clusters dealing with IT infrastructure form in the heart of Metropolitan Manila, a more complete urban environment takes shape in terms of real estate, the dining industry, 24-h convenience stores (night work is common in order to align working hours with those of the United States and Europe), and the like. One could also say that Metropolitan Manila has developed into a more global city, due to increased financial investment by individuals as well as personal consumption.

Let us now take a look at some figures relating to workers in the IT-BPO industry and their income. There were 1,150,000 workers in the IT-BPO industry in 2016,

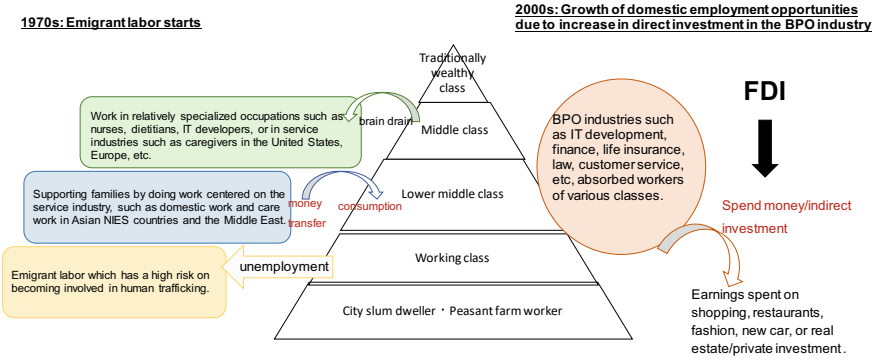

Fig. 6.6 Changes to the labor market for Filipinas brought about by the IT-BPO industry. *Source* Author's Original Work

1,230,000 in 2018, and 1,288,000 in 2019 (IBPAP, 2018). Figure 6.7 provides information relating to average annual income for workers in various industries in 2017. The BPO industry ranked joint-fourth in the Philippines for highest average income, alongside the IT and communications industry at ₱406,000 (approximately $8142)—in contrast to ₱313,000 (approximately $6277) for all industries when considered together—meaning that only the electricity and gas, finance and insurance, and real estate industries had higher average income.

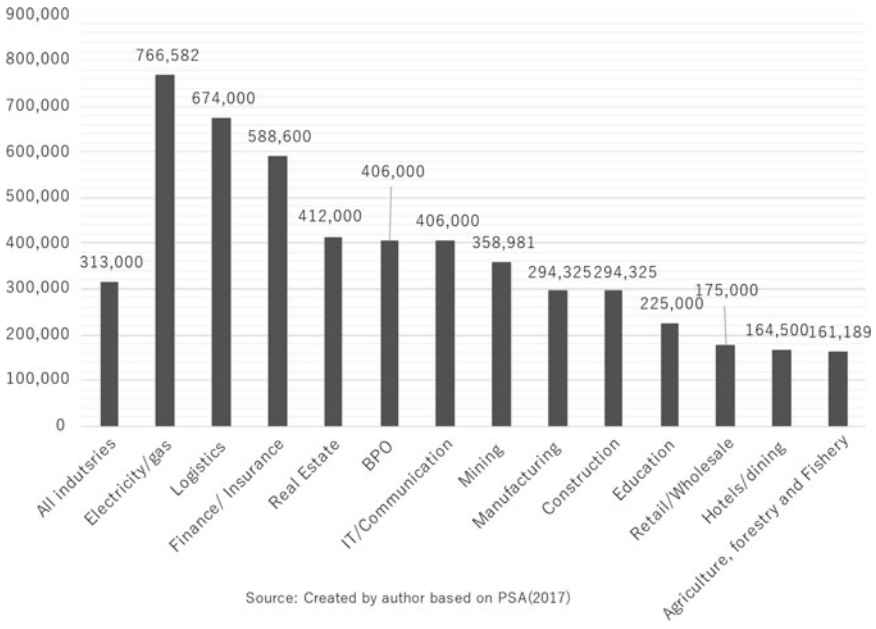

Fig. 6.7 Average income by industry in 2017 (pesos)

The minimum wage in Metropolitan Manila in November 2019 was ₱537 (approximately $10.77) per day, so a person working 20–25 days per month would have an approximate monthly income of between ₱10,000 and ₱14,000. According to Takaoka, the starting salary for university graduates outside of the manufacturing industry has been rising by ₱1000 each year since around 2009, which can be said to be the result of competition for human resources in the BPO industry. In 2019, many Japanese non-manufacturing businesses in the Philippines gave bonuses to newly graduated recruits, and apparently the most appealing offers are of ₱20,000 (approximately $401) (Takaoka, 2020). From the above, the IT-BPO industry could be described as a relatively high-wage industry in the Philippines.

However, there is a large wage gap even within the IT-BPO, depending on the type of job. Let us look at Fig. 6.8. When one looks at results from a survey carried out by the Philippines Statistics Authority in 2016, the area with the highest annual income per employee was software development. Meanwhile, the average for call centers or medical transcription was only 60–70% as much. Additionally, considering the fact that the average annual income for the industry as a whole was ₱313.000, the salary for those working in call centers and medical transcription (sectors employing a relatively high number of women within the IT-BPO industry) is roughly equal to that average. What might this mean for women in the Philippines?

Of the 32 women working in call centers that I spoke to in 2014, 24 women had an annual income of ₱250,000–300,000 (approximately $5013–6016) even in that year (Hori, 2016). Statistical data was not collected for 2014, but the average annual income was ₱235,000 (approximately $4712) in 2012 (Philippine Statistics Authority, 2012), and ₱267,000 (approximately $5354) in 2015 (Philippine Statistics

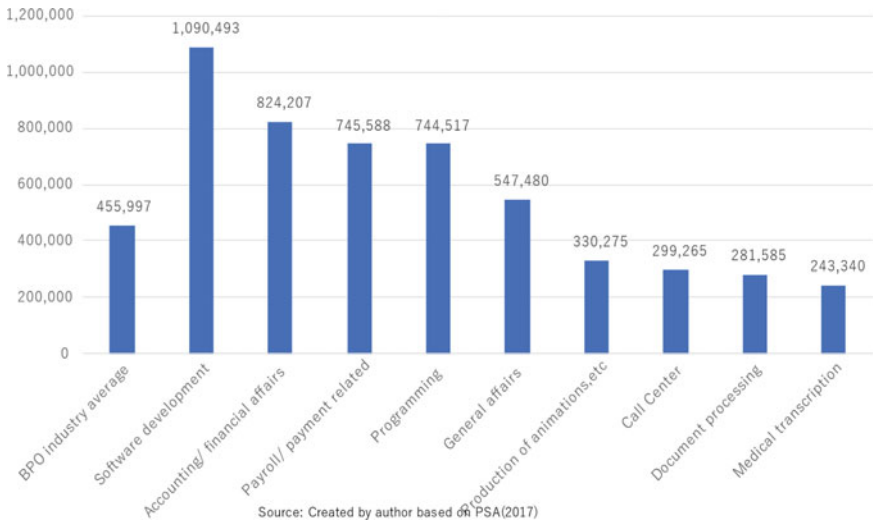

Fig. 6.8 Average income by BPO sector in 2017 (pesos). *Source* Created by the author based on material from PSA (2017)

Authority, 2015). Accordingly, it would appear that the women were earning roughly the average salary. Although many of the women were university graduates, they had not attended top-flight universities, and there were also those who had previously worked in a range of other areas, such as export processing zones, domestic labor overseas, and English tutoring. There were also single mothers who lived at their family home and left their children with their parents to work night shifts. For such women, working at call centers is thought to mean being able to support their families with average salaries within the country, without having to migrate for work. There were also women who found employment at call centers as soon as they graduated university, when call centers started to become more common in Metropolitan Manila in the 2000s. Migrant labor may become a less likely option in women's lives in future (Hori, 2016). In particular, the women in their 20 s had more disposable income than the single mothers, and I could observe that they were enjoying the consumption that allowed.

6.2.3 Case Studies of Filipina Women Working in IT-BPO Companies

What kind of career do women working professional or managerial positions in the IT-BPO industry have? The text that follows details interviews with employees at three companies, undertaken by the author on two visits to the Philippines (in August 2017, and August 2018), concerning "women working in the IT-BPO industry." Company A is a local Philippine company, with a female president; Company B is a medical transcription company founded by a Mexican of American descent, with a Filipina vice president. Company C is a Japanese company, just established in 2017, at which 20 of the 40 professionals are Filipinas. All three companies are characterized by the fact that many of the staff are women. Interviews with regular employees were conducted on the basis of introductions from their employers, as time was limited during working hours. Individual names have been renamed to protect privacy.

(1) Company A

Company A is a software company established in 2003, wholly owned by Philippine nationals. Its vision and mission are to create more opportunities for people from the Philippines to work within the country. Apparently, the company president always tells her employees, "Stay here in the Philippines, earn in dollars but spend in pesos."

Ms. Alma, the company president, majored in chemical engineering at university in the 1970s. But she started working as a computer programmer at a company. She took advantage of her experience to set out independently, together with some peers, in the latter half of the 1980s. Thereafter, in 2003, President Alma was one of nine individuals to establish Company A, the second company she has launched.

Company A started out working on IT providing software development, maintenance and testing services in the United Stated and other countries. In order to respond to automation and digitization enabled by developments in IT, however,

Company A now works predominantly in software development, a higher value-added area. It was also the first company to develop a mobile banking application in the Philippines. In 2017, Company A posted annual revenue of $ 31.4 million and had over 1000 regular employees, roughly half of whom were women. Additionally, two of the seven-person management team were women (including the president, also serving as CEO).

What about recruitment criteria at Company A? First, the company was not concerned about the gender or alma mater of applicants. Employment decisions were based on a comprehensive evaluation of not only IT competence but also factors including cognitive ability and competence in analysis and design. The majority of regular employees are recent graduates who have been hired after the satisfactory completion of a three-month training period (referred to in jest as a "Boot Camp"). Company A is taking young new graduates with flexible thinking and analytical ability and training them with the necessary skills in IT for software development and the like. More, employee salaries are much higher than the average for the Philippines, and employees can afford to own a private car and buy a house or an apartment. She stated that employee consumption is having a positive impact on the growth of other industries in the Philippines.

So, what is life really like for employees at Company A? Table 6.1 provides a summary of information obtained from interviews with employees in August 2018. The selection of interviewees involved the company president speaking to the personnel department, and the personnel department designating interviewees for me. Some of them had a longer tenure of eight or 12 years at the company, and others had been there for a shorter time, two or six months. I was only able to interview five people, and so it is not possible to draw ready conclusions as to the characteristics of Company A. The information is therefore more for reference, but some trends can nevertheless be observed.

First, all of the interviewees were managers (in management or leadership roles) or professionals (business analysts), or working in management departments such as the training department. They were all graduates of famous universities in the Philippines.

Second, the interviewees live with other people—parents, siblings, or friends—and support their families. One can also see that they also own cars and real estate, are very interested in insurance and personal investment, and have enough surplus income for savings and travel. In this way, this company consists of IT professionals and their lifestyles are similar to those of the middle class in Japan. This is a typical example of how BPOs are shaping the middle class in the Philippines.

This company also grew even with the Covid challenges. They were 100% Working from Home on day −1 of lockdown. It enabled them to continue with their work. In fact, their clients directed some of the workload from other vendors adversely affected by the Covid lockdowns. They were able to accomplish this given their BCP (Business Continuity Plans) that immediately kicked in once lockdown was announced by the government. This company could protect their employees while providing continuity of support to their clients.[1]

Table 6.1 Interviews with staff at Company A (August, 2018)

	Age (years)	Sex	Time at post	Position	University	Major	Graduation year	Marital status	Cohabitees	Owns a car	Owns a home	Insurance/financial investments	Domestic laborer	Other expenses	Other
1	50	Female	12 years	Project manager	University of Santo Tomas	Mathematics	1988	Single	Niece	Yes	Yes	Yes	Yes	Savings, travel (including overseas)	25 years of career experience in the IT industry
2	32	Female	12 years	Business analyst / training department	University of Santo Tomas	Political studies	2006	Single	Friend	Yes	No	Yes	No	Savings, travel (including overseas)	Became unable to work night shift for health reasons, so reassigned to management department
3	30	Male	8 years	Project leader	De La Salle University	Electrical engineering	2009	Single	Parents	Yes	Yes	Yes	No	Savings, medication for parents	Training at the gym to stay healthy
4	30	Female	6 months	Training department	University of the Philippines	Communication	2010	Engaged	Returns to parents' house on weekends	Yes	Yes	Yes	No	Savings, sending money to family, graduate school fees	Previously worked at a financial institution in the country, and currently majoring in psychology at graduate school

(continued)

Table 6.1 (continued)

	Age (years)	Sex	Time at post	Position	University	Major	Graduation year	Marital status	Cohabitees	Owns a car	Owns a home	Insurance/financial investments	Domestic laborer	Other expenses	Other
5	30	Male	2 months	Business analyst	Mapua University	Electrical engineering	2009	Single	Parents, siblings, cousin	Yes	Yes	Yes	Yes	Travel (domestic only)	BPO for other companies

Source Created by the author

(2) Company B

Company B's business is centered on medical transcription. This company was established in 2001 by a Mexican of Mexican descent (currently president and CEO of the company). Ms. Mirai (44 years old at the time of the interview, in 2017), the company president, has been working at Company B since it was established. As well as medical transcription, the company also works in the following four business areas.

① Creating medical record summaries: Surveying a person's medical history and creating a summary if a person is injured or becomes ill, and if lawyers make an inquiry as to whether that injury or illness is covered by insurance.
② Medical Legal: The preparation of documents as required for submission to lawyers during a lawsuit or the like, when an insurance claim is made.
③ The calculation of medical impairment ratings (a ratio used to reflect the level of an individual's impairment).
④ Insurance business: Checks of whether medical claims were properly executed, and similar operations.

Because Company B's operations are concerned with personal information, it thoroughly trains its staff on the prevention of information leaks, prohibits employees bringing mobile phones or USBs into the workplace, and has installed surveillance cameras. In 2017, the company had between 450 and 500 employees, of whom 70% were women. The number of staff fluctuates to a certain degree depending on the volume of work the company has been contracted to undertake at a given time. In terms of recruitment criteria, the company prioritizes the hiring of personnel with at least three years of experience in the BPO industry, and who majored at university in medicine, nursing, pharmaceuticals, medical therapy, or in a field with significant overlap with medicine, such as biology or chemistry. In contrast, the company is not concerned with applicants' gender, age, or alma mater. In 2017, 70% of all employees were women, as well as the vice president and five of the 13 individuals comprising top management. Five of the 18 individuals of managerial level were also women. Thus, Company B is a workplace where women are in a majority, and so the company president stated that they are devising ways to arrange shifts in such a way as to make it easy for single mothers to take vacation time in consideration of their children's schedules, in accordance with the Solo Parents Welfare Act of 2000 (Republic Act 8972). The company president told me that she considers it to be her responsibility to consider how to avoid resignations, particularly of talented employees, as a result of family circumstances. From the fact that the company president takes such a stance, one may infer that Company B would be a comfortable place to work for both men and women.

In the Philippines, many of those with qualifications or who have graduated from study in departments related to medicine hope to work overseas. Working at a hospital in America in particular not only secures a high level of income but also raises one's status in Philippine society. Accordingly, many people hope to work in America in particular. However, not everyone can easily realize this ambition. Therefore,

working at Company B presents the advantage of being able to acquire knowledge of how the American healthcare industry works while still in the Philippines (for some people, perhaps while working on the application for a visa to work overseas). On the other hand, there are two or three doctors and nurses who had already actually tried working in America but were not able to adjust to the working environment there, and work at Company B after having returned to the Philippines. Future challenges for Company B are not only rising labor costs but also rising costs in areas such as office rent and internet charges. There also seems to have been the feeling that it was necessary to develop the professional skills and English language ability of young people in the Philippines.

So, what kind of people work at Company B? Table 6.2 takes a similar format to the previous table for Company A, and sets out information relating to five Company B employees interviewed by the author. All of the interviewees, a group that included the company president, were of a managerial level and had a relatively long history of service at the company. In the IT-BPO industry the turnover rate is high, and these are individuals who can be described as having risen to management positions. As one might expect, they all majored in fields relating to medicine at leading universities in the Philippines. In particular, Interviewee 10 even has a license to practice medicine. She responded in our interview, however, to the effect that that was because her parents told her to become a doctor, and she works at Company B because she herself did not share that desire.

For those who responded that they did not own a car, it is expected that the reason for this is that they live in apartments close to Company B and so have no need of one. The area of Manila in which Company B is located has many offices and luxury apartments, and apartments are expensive to rent or buy. The fact that the interviewees were able to live nearby, even so, could itself be taken as indicative of a high level of income. The responses of Interviewees 7 and 8, both women, may be helpful in considering whether Company B is an easy place for women to work. Interviewee 7, a woman, lives with her quite elderly mother, for whom she has to provide care. She can work at Company B without employing a domestic worker (*yaya* in Tagalog) because, if something comes up, she is able to consult with the company president and her colleagues to make the necessary arrangements.

Meanwhile, Interviewee 8 is a woman with a son at elementary school; her husband also works at the same company, and they alternate who takes the night shift and who takes the day shift as a couple. Although she does not employ a domestic worker, it appears that she is able to continue working at Company B because her mother-in law provides assistance instead, providing the necessary care to her son. This could be described as not too dissimilar from the dual income model in Japan. However, she stated that she was able to continue with her job because she spoke openly to her colleagues and the company president about her family circumstances, and it was possible to adjust her shifts. It can be inferred that the company president has indeed implemented the policy of creating an environment in which it is easy to work, taking into account the family circumstances of staff.

Table 6.2 Interviews with staff at Company B (August, 2018)

	Age (years)	Sex	Time at post (years)	Position	University	Major	Graduation year	Marital status	Cohabitees	Owns a car	Owns a home	Insurance/financial investments	Domestic laborer	Other expenses	Other
6	45	Female	17	President	University of the City of Manila	Medicine	Not disclosed	Married	Husband	Yes	Yes	Yes	No	Savings, travel (including overseas)	Husband has experience working in America, daughter is a nurse in America
7	42	Female	17	Senior manager, management department	University of the Philippines	Physical therapy	1999	Single	Mother	No	Yes	Yes	No	Previously paid for niece's tuition	Takes Sunday as a family day
8	42	Female	16	Manager, customer service department	Philippine College of Physicians	Physical therapy	1998	Married	Husband, one child	No	Yes	Yes	No	Child's education expenses	Transferred to the company after working on medical transcription elsewhere. Her husband works at the same company, so they take care to arrange their shifts around childcare. Her mother-in-law also helps
9	36	Male	15	Manager, record review department	University of the City of Manila	Physical therapy	2002	Single	Sister's family	No	No	Yes	No	Nephew's tuition	

(continued)

Table 6.2 (continued)

	Age (years)	Sex	Time at post (years)	Position	University	Major	Graduation year	Marital status	Cohabitees	Owns a car	Owns a home	Insurance/financial investments	Domestic laborer	Other expenses	Other
10	46	Female	14	Assistant manager	University of Santo Tomas; University of Perpetual Help	Biology; medicine	1995; 2000	Single	None	No	No	Yes	No	Savings, travel (including overseas)	Has a license to practice medicine, worked in Singapore for a year and a half

Source Created by the author

(3) Company C

Company C is a Japanese CAD center established very recently, in 2017. Preparations for this center had been underway since 2012. 40 CAD staff from the Philippines (20 of whom, half of the total, are women) work at the center, with the location manager and five male Japanese managers, as well as a receptionist and three clerical workers (from the Philippines). The company's business is predominantly CAD work based on orders received from Japan. For the purposes of this paper, it was possible to speak to two CAD chiefs (see Table 6.3).

Interviewee 11, a man, had majored in civil engineering and then worked for a construction company in Manila after graduating, at construction sites in Malaysia for three years from 2005, and in Singapore for seven years from 2008. The company he worked for during that period was an affiliate of Company C. His competence was held in high regard by the Japanese staff, and he has been involved with work for Company C since the preparation for its launch. Because the roads in Metropolitan Manila are so congested, he rents a room near the company on weekdays to commute, and spends the weekends at his home in the suburbs. His family consists of a wife, who stays at home to take care of the household, and three children; two of the children are of middle-school age, and attend a private school. He was satisfied with the work environment and his income, and left management of the household finances to his wife. Although the interviewee himself was a man, I would like to consider in this paper the fact that his wife was a housewife. The reason that mothers (and daughters) from the Philippines have previously gone overseas to participate in migrant labor is that their husbands (or fathers) frequently earned a low level of income. However, the example of Interview 11 may indicate that the growth of the IT-BPO industry is causing the emergence of a "male breadwinner model," where men earn enough to support the livelihood of their entire family.

On the other hand, Interviewee 12 is a woman from Davao City, on the island Mindanao, who studied civil engineering at a local university. She graduated in 2009, found work in Manila and moved to the capital, and worked at a construction site in Qatar, in the Middle East, for a year and a half form 2011. She started working as a regular employee at the office of the predecessor to Company C in 2012, following a three-month trial period, and was promoted to CAD chief at the same time that Company C was established. She took on a position as CAD chief, sharing responsibility with Interviewee 11.

Her family is composed of a husband and four children. At the time, in 2018, a 13-year-old and an 11-year-old were being cared for by Interviewee 12's mother in Davao City, and her self-employed husband worked flexible hours while taking care of the housework and a 10-year-old and a three-year-old. From this, one can observe that in this household a woman is the main provider of the family finances, and a man is responsible for the daily housework and childcare. When asked about whether she employs a domestic worker, she responded that finding a *yaya* is more difficult than it had been before. Her income is predominantly spent on the following: living expenses, a mortgage, remittances to her family in Davao, and tuition fees for her children. She stated that she has also made limited personal investments, and

Table 6.3 Interviews with staff at Company C (August, 2018)

	Age (years)	Sex	Time at post (years)	Position	University	Major	Graduation year	Marital status	Cohabitees	Owns a car	Owns a home	Insurance/financial investments	Domestic laborer	Other expenses	Other
11	38	Male	2	CAD chief	Technological University of the Philippines	Civil Engineering	2002	Married	Wife and three children	Yes	Yes	No	No	Housewife manages the household expenses	Came to Company C after experience at a construction company in Manila, Malaysia, and Singapore
12	38	Female	2	CAD chief	Cor Jesu College (Davao del Sur)	Civil Engineering	2001	Married	Husband and two children	No	Yes	Yes	No		Came to Company C from Davao, after experience at a construction company in Qatar. Two more children live at her family home in Davao

Source Created by the author

she returns home to Davao twice a year. On the subject of what it is like working at Company C, Interviewee 12 responded that she is happy there because she likes her Japanese boss and has a stable salary. She also stated that she wants to work within the Philippines, because she has children. In contrast to Interviewee 11, Interviewee 12 is in a household where a woman is the main breadwinner. Although this phenomenon has previously been common in the Philippines in cases of migrant labor, in this instance the interviewee is a woman taking advantage of her own specialist expertise to work at a Japanese company he many interviewees themselves for giving me their time even when busy with their own work.

(4) Discussion

This paper has introduced, in the preceding text, the examples of 12 regular employees at three companies. The IT-BPO industry is wide-ranging, including areas such as data entry, customer service, medical transcription, and software development. The time I had with the interviewees was limited, and they could not be described as representative of the IT-BPO industry as a whole, but some commonalities were observed.

First, perhaps due to the substantial income and benefits, many of the interviewees owned cars and real estate. Additionally, they were enthusiastic about insurance and personal investments, with only one of the 12 interviewees not engaging with either. They saved, and had an interest in travelling, including trips overseas. Their lifestyles were not very dissimilar to those of the middle class in Japan. Therefore, one can understand the growth of the IT-BPO industry leading to the emergence of a new middle class in Philippine society. Second, while the rate of female employment was high at each company, their gender did not mean that women were unable to reach positions of responsibility, such as company president or manager. On this point, it is worth noting that the Philippines was ranked 16th on the Global Gender Gap Index, published by the World Economic Forum. The detail provided in that institution's Gender Gap Report shows that there is almost no difference in the Philippines ratio of men to women in managerial positions or in professional and technical occupations (Mind the 100 Year Gap). The case studies in this study can be taken as evidence of that.

Why are Filipinas able to advance in society in this way? There would appear to be several factors. First, whether for factory workers in the export processing zone, migrant laborers, or professionals in the IT-BPO industry, being a woman is not a hindrance; on the contrary, one of the factors contributing to the employment of women has endured in the Philippines since the 1970s, a period of more than 40 years already. That is to say, although the Philippines is not a society without gender discrimination, economic conditions in which a household cannot be supported without female labor are widespread.

The second factor would appear to be the fact that *yayas* (domestic workers) came from rural villages to cities in great numbers, and could be hired at low wage. It would seem that women have been to work, even if they are married and have children, because of the availability of people who can move in and take care of the reproductive labor in their place. However, this study showed that the situation for

yayas within the country is also changing. Fewer households than expected employed domestic workers. Interviewees gave reasons such as, "Recently, it's difficult to find a *yaya*," "The number of people who think that they would earn more money going overseas for domestic work, rather than be a *yaya* in the Philippines, is increasing," or, "the cost of labor has gone up." In this study, there were examples of childcare being provided by relatives such as a mother-in-law (Interviewee 8), or children being entrusted to the family home (Interviewee 12), as alternatives to using a *yaya.* Interviewee 11 also earned enough himself that his wife was able to stay home, with his household taking the form of a housewife and three children. Many of the people encountered in this study were also single in any case, and no one had more than four children. From the above, one can see that even in the Philippines, urban lifestyles are changing: there may have been a transformation in the nature of the family, with people spending longer single, and an increase in the number of nuclear families.

A third, more distant, factor may be that the Philippines has always had a form of bilateral kinship, derived from Malay culture. Bilateral kinship is extremely widespread in Southeast Asia: familial rules, governing inheritance or the like, are not restricted unilaterally in the manner of patrilineal or matrilineal systems. Therefore, institutional arrangements reflect principles of gender equality, comparatively speaking, and rules on inheritance are based on principles of equal division (Nakaishi, 2001). Perhaps the perspective on gender constructed within the unique culture of the Philippines also has an indirect effect.

However, continued developments in AI or similar areas are certain to bring about the end of simple and routine work in the industry, such as data entry or call center work. At the time, a relatively large proportion of these labor-intensive and low-skilled roles even in the IT-BPO industry were occupied by women, and the question remains as to what will become of these women in the future. On this point, Takaoka visited three companies directed by women of Philippine nationality for interviews on the human resource strategies they are implementing. According to her research, all three companies were aware that, simply in terms of cost, they would lose their competitiveness in the future, that the IT-BPO industry involves work of a highly technical nature, and that the industry is undergoing dizzying change. The presidents of each of the three companies are putting structures in place to encourage self-development in environments in which both women and men find it easy to work, with the objective of adding value to their services. They take the view that such structures will also lead to enhanced organizational performance (Takaoka, 2020).

6.3 Conclusion

What kinds of changes has this paper shown the IT-BPO industry to be bringing about in the society and economy of the Philippines, and how are the lives of Filipina workers and the structure of their families changing? The paper investigated three companies—in IT development, medical transcription, and a Japanese company—as case studies. It verified that women in the Philippines are not only working in

call centers but are also achieving financial independence in more specialized and managerial roles. This research has shown that the society and economy of the Philippines are changing, and that the growth of the IT-BPO industry can be considered to be driving the expansion of the middle class. Of course, this is not to say that the growth of the IT-BPO industry in the Philippines is a direct solution to problems of extreme poverty in the country. Nor will the phenomenon of migrant labor disappear. Furthermore, because this is "extrinsically driven" economic growth and foreign direct investment has a significant influence, changes in the IT-BPO industry will be largely determined by the international situation. In any case, the fact that the growth of the IT-BPO industry has given women in the Philippines the option of not having to leave home to find work can be described as a real transformation for their families. Increasing labor costs and the wave of digitization mean that the IT-BPO industry in the Philippines is on the verge of a period of reorganization, and the female workforce will also undergo relocation and rearrangement. I would like to proceed with further gender analysis to investigate future changes to working conditions for women and the arrangement of female labor in the Philippines.

Postscript

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Notes

1. Based on comments received by e-mail from the president of Company A on Aug 16, 2022.

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The Manila Times, November 13, 2019.

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Chapter 7
IT Business Process Outsourcing (BPO) Strategy as a New Development Strategy in Emerging Countries: Focusing on the Philippine IT-BPO Industry and Lewis Turning Point Theory

Takabumi Hayashi

7.1 Introduction

This paper aims to clarify how the IT Business Process Outsourcing (IT-BPO) industry,[1] which is rapidly emerging in the Philippines, is positioned from the perspective of the "Base of the Pyramid (BOP)" strategy as a poverty reduction strategy. In terms of conventional development economics, increased productivity and farmers' income through agricultural technology improvements and land ownership system reform expand food production, stabilize food prices at a lower level, and create an excess labor force. At the same time, it frees many farmers from the poverty line and expands rural markets. It will promote the market expansion of industrial products required for farmer families' lives and their agricultural work and will be linked to further growth and reproduction of the industrial sector on track, especially the manufacturing industry. In this way, the industrial sector's expansion generates intra- and inter-sectoral output and job creation effects, absorbing the excess labor force in rural areas. In other words, the expansion of the formal sector, which is mainly composed of major companies in the industrial sector, including the manufacturing industry, will gradually absorb the BOP population that is an unstable employment group that mainly stays in the informal sector in rural areas, in conjunction with the growth of the service industries such as transportation, finance, and commerce. In other words, increasing productivity, reforming the land ownership system, dismantling the farmer class, and expanding rural markets in the agricultural sector, as well

[1] There are more cases in which IT-BPO industry and the government in the Philippines use Business Process Management (BPM) instead of BPO from the standpoint of the contractors.

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as the development process of the industrial and related service sectors, will eventually be essential triggers of the so-called "Lewis turning point" (Hayami, 1995; Janvry & Sadoulet, 2016; Lewis, 1954; Taylor & Smith, 2011; Todaro & Smith, 2011).[2] After this turning point, it is expected that the surplus labor force begins to exhaust, especially in rural areas, and wages generally begin to rise. It leads the country to a new development trajectory with the positive aspects of a growing middle class and expanding consumer market and a negative part of the "middle-income country trap"[3] on the other hand. In terms of development economics, which focuses on the linkage effects between the development of the agricultural sector and other sectors, the productivity improvement of agriculture and its industrialization through forward and backward linkages in these emerging countries significantly contribute to its absorption of surplus labor and economic development.

At the same time, many emerging countries, which are struggling with a shortage of capital, have improved the environment for foreign direct investment in their countries by reducing or exempting corporate taxes and import tariffs on raw materials and intermediate goods for export, establishing export processing zones equipped with infrastructure for production, logistics, and various procedures, and providing other preferential measures to foreign affiliated manufacturers. By doing so, industrialization is supposed to be promoted to acquire foreign currencies and absorb surplus labor.[4]

However, except for some East Asian countries that have emerged as "Newly Industrializing Economies"(NIES), so-called emerging countries, including the Philippines, have not avoided the absolute expansion of these BOP population that stay in rural areas. In particular, the employment ratio in the manufacturing sector to the total number of workers in the Philippines remains in a single digit, as described below. In this context, the IT-BPO industry, which belongs to the services sector as the IT-business service sector, has been rapidly increasing its share of GDP and the employed population. In this paper, the author will clarify the problems of surplus labor in the Philippines, as an emerging country, discussed by conventional theorists in line with the original argument of "Lewis turning point" (Lewis, 1954).

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[2] Hayami (1995, 85–87) and Janvry and Sadoulet (2016, 343–346) discuss the "Lewis turning point" by comparing agriculture to industry, whereas Todaro and Smith (2011), and Taylor and Smith (2011, 249–265) discuss it in a two-sector comparison between traditional sector (agriculture) and modern sector (industry and services). Lewis (1954), on the other hand, discusses the turning point not as a direct comparison between agriculture and industry, but as a comparison between the "subsistence sector" and the "capitalist sector" by including farmers, day laborers, small retailers, maidservants, and the like as part of subsistence sector. Therefore, according to his logic, it signifies that not only agriculture but also surplus labor staying in many service industries were included in the scope of comparison.

[3] Agenor et al. (2012) summarize the main points regarding the "middle-income country trap." This term seems to have been popularized since Gill and Kharas (2007) began to use. In this paper, the concept of the "middle-income country trap" is positioned as the one that is applicable to only some emerging countries, while the concepts of the "underdevelopment trap" and the "poverty trap" are positioned as more suitable ones for many emerging countries.

[4] Hirakawa (1992,1993) was referenced for the development structure of the so-called NIES.

We have examined the position of this country's IT-BPO industry in the comparison between GDP and the amount of final household consumption, between GDP and remittances from abroad, between the employed population in the manufacturing sector and the BPO industry, and in terms of itemized income, the export amount, and the number of workers in the IT-BPO industry and gender (Hayashi, 2017). In this paper, we will examine the position of the Philippines' IT-BPO industry in its national industrial economy from the perspective of the new industrial development trajectory.

7.2 IT-BPO Industry in Terms of Employment Ratio and GDP Share Trend

7.2.1 Trends in Employment Ratio by Industry and IT-BPO Industry

Figure 7.1 shows the percentage change in the number of workers in agriculture, industry, service sectors, and the IT-BPO industry in the Philippines. As shown in the figure, the agricultural sector's share in the total working population has been on a downward trend of 20.4 percentage points from 45.2% in 1990 to 24.8% in 2020* (refer to note of Fig. 7.1). On the other hand, the industrial sector's share increased only 3.3 percentage points over the past 30 years, from 15.0% in 1990 to 18.0% in 2020. Remarkably, the manufacturing sector's share, which occupies a significant position in the industrial sector, has stagnated from 10.1% in 2000 to 7.6% in 2020, showing a relative decline. Initially, the industrial sector ratio was supposed to keep rising and cross or going toward the direction in which it is anticipated to intersect with the agricultural sector's ratio showing a declining trend.

However, the labor force pushing out from the agricultural sector has been absorbed into the service sector. The ratio of workers in the service sector has increased by 15.9 percentage points, from 39.7% to 55.6%. In such a trend, the IT-BPO industry's share in the total working population continued to rise from 0.5% in 2005 to 3.3% in 2020. Trend analysis of IT-BPO sector is examined in detail in Sects. 7.3 and 7.4.

7.2.2 IT-BPO Industry in Terms of GDP Share by Industry

This trend can be seen more clearly by looking at each industry's added values in terms of percentage of GDP (see Fig. 7.2). The agricultural sector has been on a downward trend since its high of 29.5% in 1970, falling to 10.2% in 2020. The industrial sector also has been on a downward trend since its high of 38.8% in 1980, falling to 28.4% in 2020. The manufacturing sector, which occupies a central

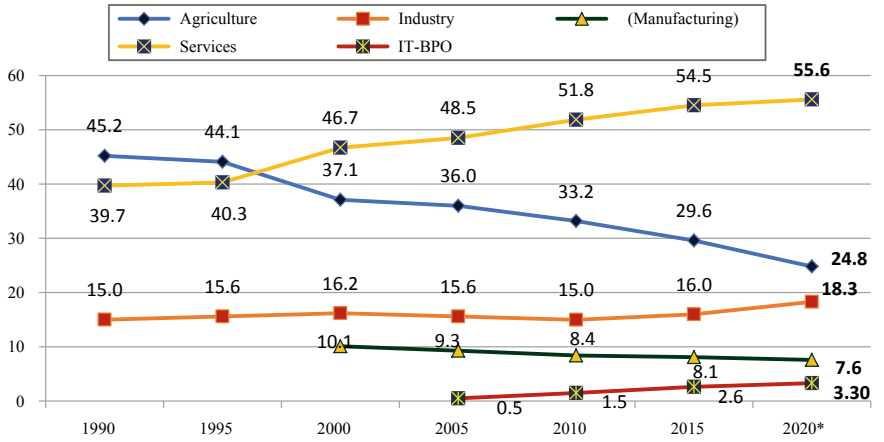

Fig. 7.1 Trends in employment ratio by industry and IT-BPO in the Philippines. *Source* Data compiled from World Development Indicators, the Philippine Statistics Authority (PSA), and IBPAP. *Note* Figures of 2020 is October 2020. Regarding the way of calculation of (IT-BPO), refer to Sect. 7.3.1 and Table 7.2

position, followed a consistent downward trend from 24.5% in 2000 to 17.7% in 2020. Therefore, the trend of each sector's value-added ratio to GDP shows that the percentage in the agricultural sector, and the industrial sector together with the manufacturing sector have been consistently declining. It does not offer a "turning point" in a way where one sector of an upward trend crosses with others of downward trends.

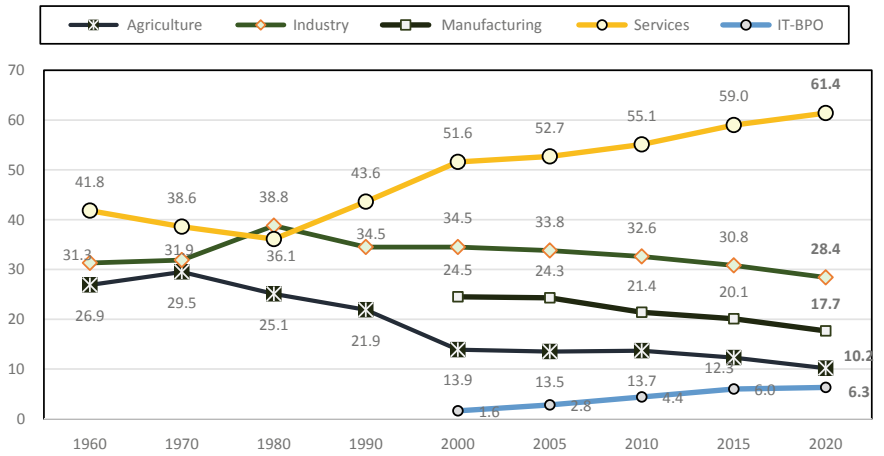

Fig. 7.2 Gross value added share of GDP. *Source* World Development Indicators, Philippine Statistics Authority (PSA). *Note* Figures for 1960–1990 are sourced from WDIs; 2000 and after are sourced from PSA

In contrast, in terms of GDP percentage, only the services sector had also shown a downward trend, from 41.8% in 1960 to 36.1% in 1980, but has been on an upward trend since then, increasing to 61.4% in 2020. Within this service sector, the professional an business service sector centering on IT-BPO sector rose to 6.3% of total GDP in 2020. If this trend continues, it will reach a point where the ratio of the agricultural sector to GDP will cross the percentage of the IT-BPO industry within the next few years.

7.2.3 Trend of the Number of Agricultural Workers and Growth in Rural and Urban Populations

The transition of rural and urban populations is usually associated with industrialization and the development of finance, transportation, wholesale and retail trade, and other service industries, making the labor force shift from the agricultural sector to other sectors. As a result, the rural population begins to decline as the population moves to cities where they are concentrated, and the urban population exceeds the rural population. Note that the definitions of the rural population and urban population discussed here follow those of the World Bank Indicators.[5]

The ratio of rural population to urban population in Japan from 1960 to 2015 is shown in Fig. 7.3, with the urban population already exceeding the rural population by more than 36 percentage points as of 1960. Furthermore, as shown in Fig. 7.4, the rural population has declined in absolute numbers from 33.98 million to 8.25 million over the past 55 years.

On the other hand, the Philippines' cases are shown in Figs. 7.5 and 7.6. While the country's rural population ratio had been on a downward trend from 69.7% in 1960 to 51.4% in 1990, it has been on a sustained upward trend, reaching over half of 55.6% in 2015. Conversely, the urban population ratio had been on a downward trend since 1990, falling to 47.4% in 2020. At the same time, it is worth noting that since 1960, target years of comparison, not only the urban population but also the

[5] The World Development Indicators, a data bank of the World Bank (WB), defines rural and urban as follows.

Original descriptions extracted: Urban land area in square kilometers, based on a combination of population counts (persons), settlement points, and the presence of Nighttime Lights. Areas are defined as urban where contiguous lighted cells from the Nighttime Lights or approximated urban extents based on buffered settlement points for which the total population is greater than 5000 persons. Urban population refers to people living in urban areas as defined by national statistical offices. It is calculated using World Bank population estimates and urban ratios from the United Nations World Urbanization Prospects. Aggregation of urban and rural population may not add up to total population because of different country coverages.

Rural land area in square kilometers, derived from urban extent grids which distinguish urban and rural areas based on a combination of population counts (persons), settlement points, and the presence of Nighttime Lights. Areas are defined as urban where contiguous lighted cells from the Nighttime Lights or approximated urban extents based on buffered settlement points for which the total population is greater than 5000 persons (World Development Indicators).

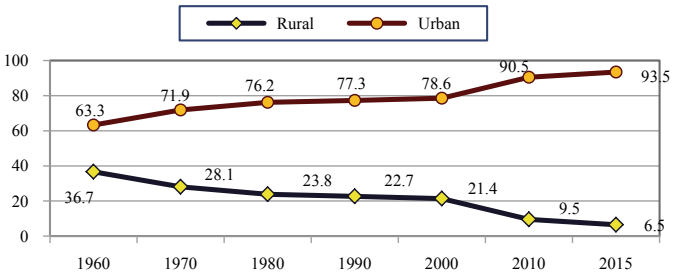

Fig. 7.3 The open jaws of an alligator: Japan's rural population to urban population ratio (: %). *Source* World Development Indicators

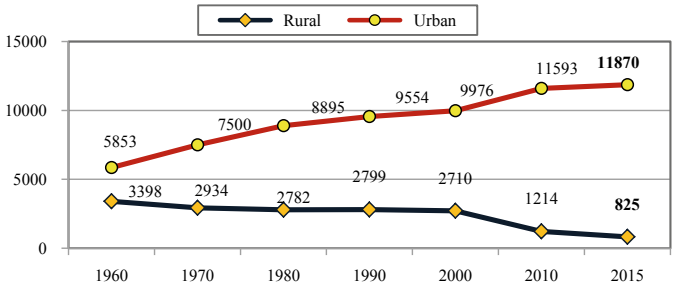

Fig. 7.4 The open jaws of an alligator: rural and urban population (Japan) (:10 K). *Source* World Development Indicators

rural population has been on a consistent upward trend. In 1960, the rural population had exceeded the urban population by 10.35 million. While by 1990, the difference between the two had narrowed to 1.75 million, the rural population is still more than urban population by 5.58 million in 2020.

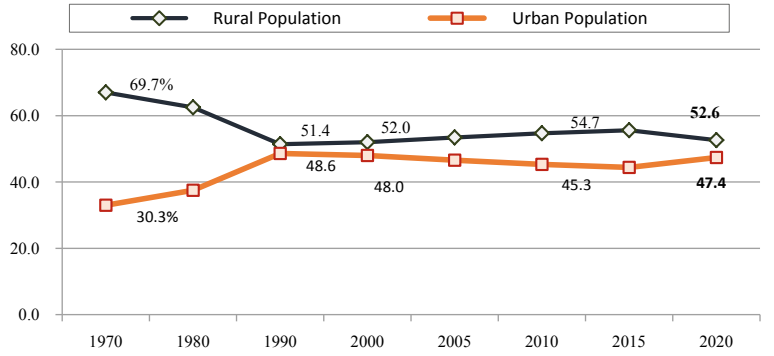

Fig. 7.5 Rural to urban population ratio (Philippines). *Source* World Development Indicators

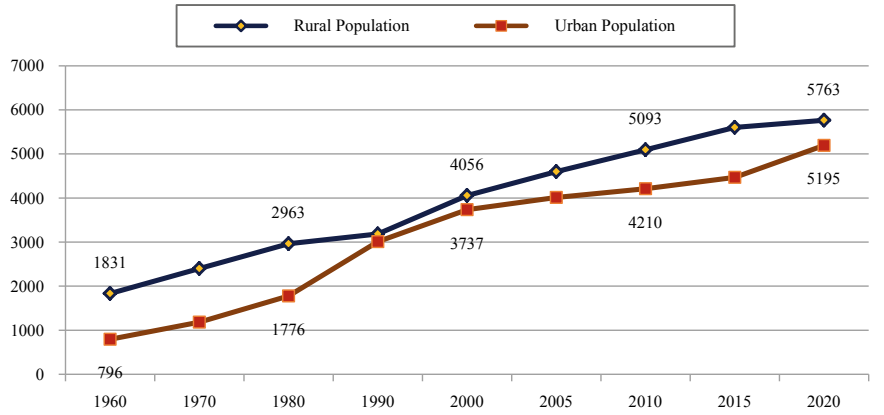

Fig. 7.6 Rural and urban population trends (Philippines) (Unit: 10 K). *Source* World development indicators

This chart shows that the Philippines' urban population has never surpassed the rural population in the nation's history. In other words, the rural population has not yet reached the turning point at which it crosses the urban population.

As was shown in Fig. 7.1, the number of agricultural workers as a percentage of the total working population has been consistently downward. Nevertheless, what factors have contributed to the rural population's upward trend in both relative and absolute terms? Let's look at the number of workers in agriculture, forestry, and fisheries in the country (see Fig. 7.7).

As shown in the figure, the absolute number had been on an increasing trend until 2011 and has been decreasing since then. Until 2011, the absolute number was increasing, and the relative number was decreasing; while after 2011, both the absolute number and relative number have been declining.

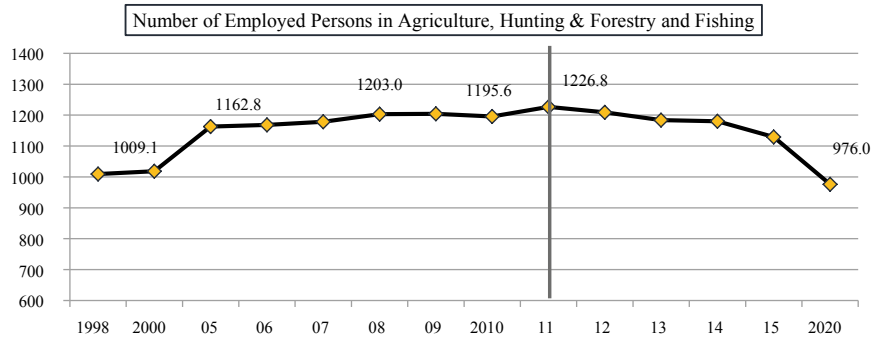

Fig. 7.7 Changes in the number of workers in the agriculture, forestry, and fisheries industry (Philippines: 10 K). *Source* Philippine Statistical Authority

Nonetheless, what are the factors of continued increase trend of the rural population and the not-shrinking gap between the rural and urban populations from 1.75 million in 1990 to 5.58 million in 2020? From the traditional perspective of the "Lewis turning point," the rural population should have continued to decline as the modern industrial sector in cities continued attracting surplus labor from rural areas along with capital accumulation.

7.2.4 Rural–Urban Population Growth and Service Industries

As mentioned above, the number of agricultural workers increased in absolute number and followed a downward trend in relative number until 2011. Since 2011, however, the absolute number has been on a downward trend. Nevertheless, the fact that the rural population has been on the rise in both relative and absolute terms is synonymous with the fact that a growing proportion of the rural population is employed in non-agriculture sectors. In particular, as shown in Figs. 7.5 and 7.6, the rural population's growth since 1990 has been remarkable.

On the other hand, the ratio of workers in the industrial sector, including manufacturing, has only increased by 3.3 percentage points over the past 30 years, from 1990 to 2020. In contrast, the number of workers in the service sector rose by 15.9 percentage points over the same period. From the above point of view, the contradiction between the relative-absolute increase in the rural population and the relative downward trend in the number of workers in agriculture as well as the downward trend in absolute numbers since 2011, must be attributed to the increase in the number of workers in the service industry in rural areas. Then, what are the actual employment patterns of these service industries? Fig. 7.8 categorizes employment patterns in the country's agricultural and non-agricultural sectors into stable and unstable employment groups.

The number of workers in formal employment and informal employment shown in Fig. 7.8 is based on the number of workers in the formal and informal sectors. Also, the number of informal jobs in the formal sector and the number of formal employment in the informal sector were recalculated. According to this figure, the number of workers classified as informal employment accounts for 57.5% of the total 23.08 million non-agricultural workers.

It means that the precariously employed people staying in the rural areas who cannot cover their living expenses by agricultural sector alone are working in a variety of jobs in the so-called service industries as a means to make a living. For example, in a study conducted in a rural area outside San Pablo City, where we interviewed women of microfinance users by asking their occupations as well as their husbands' careers, we found that these women were engaged in the sari-sari store (traditional micro-retail) business, banana cultivation and sales, tocino (processed pork food) sales, and street hawker, and so on. On the other hand, occupations of their husbands include bicycle taxi drivers, daily construction workers, repair work (all-trade), street vendors, barangay guards (patrol work), and helpers for their wife in the

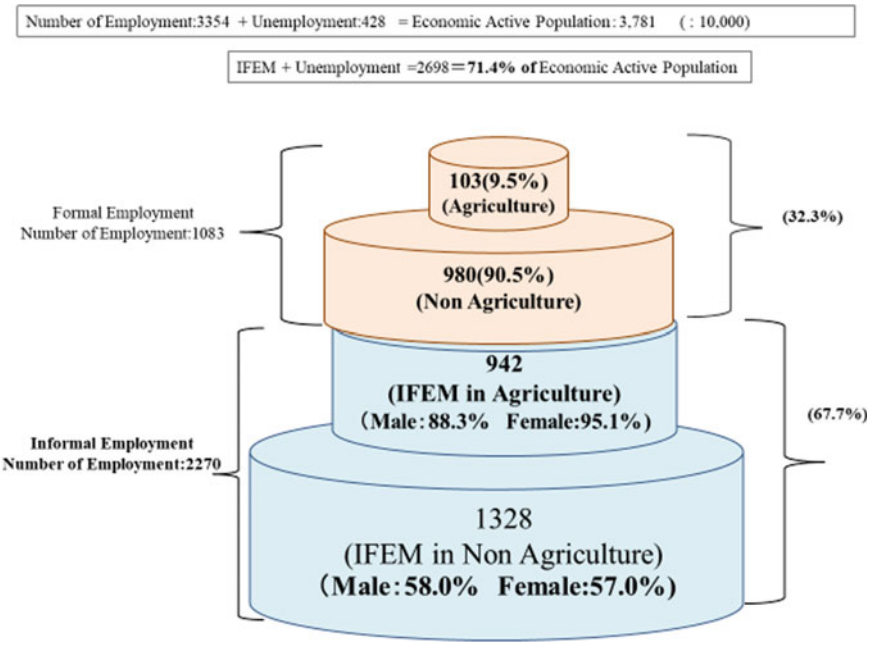

Fig. 7.8 Size and classification of workers by employment status (2006–2007). *Source* Hayashi (2016), p. 31. Original references are Heintz (2010), and National Statistical Coordination Board

jobs mentioned above.[6] Although some of these occupations, such as food processing and construction, belong to the industrial sector, most of them belong to the service sector-related occupations, categorized as unstable work under-employment.[7] These job contents are not the types of work performed in modern finance, transportation, and retail sectors, which can be positioned as the formal sector, but rather traditional and informal sectors.

Furthermore, due to the limitations of farmland expansion and advances in agricultural technology, rural areas cannot support the natural increase in the working population, and such surplus population tends to be pushed out to the cities. On the other hand, in cities, modern industrial and service sectors do not function sufficiently as pull factors to absorb the rural population's natural growth as a stable employment population. As a result, most of the increase in the working population in cities ends up staying as so-called slum dwellers with poor living conditions.

[6] Joint interview surveys, conducted by Hayashi, Iguchi, and Arai, with a team of women utilizing microfinance (NGO's CARD Bank) in rural villages near San Pablo City in March 2012, August 2013, and March 2014 (Hayashi, 2016, Chap. 4).

[7] Under employment workers are those who cannot meet necessary work hours under 40 h a week. Total number of under employment people is 7.2 million in 2014, which accounts for 19.2% to total employment.

Table 7.1 shows the percentage and number of slum dwellers of Asia's urban population from 1990 to 2018.

As shown in the above table, the percentage of slum dwellers in cities has been declining and improved living infrastructure, yet one in three or four people still live in slums. Moreover, in absolute numbers, it has not yet to be able to escape from the upward trend. In the case of the Philippines, the direction was upward until 2018.[8]

Thus, most of the labor force in rural and urban areas is positioned as precarious workers in the informal sector, rather than as workers in agriculture, industry, and the service industry as the modern formal sector.

7.3 IT-BPO Industry as a Formal Sector

7.3.1 Indirect Job Creation in the IT-BPO Industry

Most of the IT-BPO companies, which statistically belong to the IT services sector, are part of the formal sector mainly registered as a corporation respectively. The number of workers in the IT-BPO industry increased from 163,250 in 2005 to 1.30 million in 2020, accounting for 3.3% of the total workforce in 2020, 2.8 point up from 0.5% in 2005, as is shown in Fig. 7.1.

Moreover, the number of workers in the manufacturing sector as a percentage of total industry employment has shown a downward trend from 9.3% in 2005 to 7.6% in 2020.

In other words, from 2005 to 2020, the gap between the two industries as a percentage of total industry employment has narrowed from 8.8 percentage points to 4.3 percentage points, while the IT-BPO industry's share of the working population in the service industry has increased by 4.4 percentage points from 1.3% to 5.7% over the same period. It is interesting to note that every one worker is newly hired in the IT-BPO industry, two to three new jobs are estimated to be generated, especially centering on the service sector (Mitra, 2011, 2013a). In the case of India, it has been noted that for every one new employee in the industry, three to four jobs are generated (Sudan et al. 2010, p. 8).

It means that in the case of the Philippines, the 1,136,750 newly created jobs in the IT-BPO industry between 2005 and 2020 generated 2,273,500 to 3,410,250 new jobs in related other industry sectors.

Most of these newly generated jobs are estimated to be in the service industry, including retail, restaurants, and other services, such as food and beverages, personal consumer goods, lifestyle-related products, transportation, and communication-related expenses spent by IT-BPO industry workers and their families. Also, as the sectors in which companies in the IT-BPO industry invest or buy are telecom, building rental, electricity and water service, finance, and other essential sectors for business,

[8] For specific UN-Habitat figures on cities and slums, see also Janvry and Sadoulet (2016, Chap. 12).

Table 7.1 Percentage and number of urban of slum dwellers of Asia's urban population from 1990 to 2018 (%, 100 K)

	1990	1995	2000	2005	2010	2014	2018	1990	1995	2000	2005	2010	2014	2018
Bangladesh	87.3	84.7	77.8	70.8	61.6	55.1	47.6	184	218	241	272	286	295	290
China	43.6	40.5	37.33	32.9	29.1	25.2		1.317	1.514	1.691	1.835	1.806	1.911	–
India	54.9	48.2	41.5	34.8	29.4	24	34.8	1.221	1.232	1.209	1.163	1.119	1.006	1.603
Indonesia	50.8	42.6	34.4	26.3	23.0	21.8	30.4	282	303	306	274	278	293	449
Pakistan	51.0	49.8	48.7	47.5	46.6	45.5	38	168	195	222	248	278	302	280
Philippines	54.3	50.8	47.2	43.7	40.9	38.3	44.3	158	165	170	172	174	177	221
Thailand				26	27	25	24.5				64	80	80	85
Vietnam	60.5	54.6	48.8	41.3	35.2	27.2	13.5	84	91	95	95	95	83	47

Source United Nations Human Settlements Program (UN-Habitat), Global Urban Indicators 2020
Note UN-Habitat's definition of a slum is based on four components; improved water, improved sanitation, durable housing, and sufficient living area. However, it is unclear why the urban population living in slums in China has increased so much while both figures for India have decrease significantly in the above table

are also mainly categorized as part of service industries which jobs are created mainly in these sectors. Therefore, assuming that these indirectly created jobs are concentrated in the service sector, the 1,162,000 newly created jobs in the IT-BPO industry account for 32.7–49.0% of the 7.12 million jobs created by the service industry between 2005 and 2020.

7.3.2 Job Creation in the IT-BPO Industry and Its Position in the Service Industry

The number of new jobs created in the IT-BPO industry and the number of new employment indirectly created in other related service sectors have been discussed in the previous section. We further examine the number of new jobs created every four years from 2004 to 2020 in the same manner. Table 7.2 shows the total working population in the service industry, which has the largest number of workers between 2004 and 2020, and the number of workers in the IT-BPO industry which belongs to this industry, as well as the estimated number of employment created indirectly from this industry, and the change in the ratio in the service industry during the same period.

For example, between 2016 and 2020, 154,000 new jobs were created in the IT-BPO industry (C), and 385,000 new jobs were estimated to be created indirectly in other related sectors (D) during the same period. Thus, the total number of directly and indirectly created jobs (E) was 4,552,000.

As previously mentioned, it is assumed that most of the workers' household consumption, whose jobs were indirectly created by these other sectors, belong to service industries such as wholesale and retail services, other financial services, transportation, and services such as tenants, telecommunications, electricity, water services, etc. The paper assumes here that service industry absorbs the most part of increase in indirect employment.[9] It means that the number of new jobs created in these directly and indirectly created jobs related to IT-BPO sectors accounts for 20.0% of the total of the service industry in 2020.

As Table 7.2 shows, the number of workers in the IT-BPO industry accounted for 3.3% and 5.7% of the total working population in all industries and services in 2020, respectively, while the number of indirect workers created in non-IT-BPO sectors in the services industry accounted for 8.2% and 14.3% in the same year respectively. It means that the total number of direct and indirect workers created by the IT-BPO industry in 2020 (4.55 million) accounted for 11.4% and 20.0% of the total working population in all industries and services, respectively.

[9] We have to precisely calculate that expansion of these service sectors finally leads to increase of employment in such industrial sectors, as manufacturing, construction and power and communication related equipment through the input–output effect. This paper examines the employment trend without covering this point due to the lack of the detailed input–output table.

Table 7.2 Number of jobs created in the IT-BPO industry and manufacturing sector, and indirectly in other sectors (10 K)

	2004	2008	2012	2016	2020
Total working population (A)	3161.3	3408.9	3760.0	4083.7	3983.6
Service (B)	1523.3	1701.1	1976.6	2261.5	2277.6
IT-BPO (C)	9.5	37.2	77.7	114.6	130.0
Indirect employment created in other sectors (D) = (△C* 2.5 + D of the previous year)	23.8	93.1 (69.3)	194.4 (101.3)	286.7 (92.3)	325.2 (38.5)
E = (C + D)	33.3	130.3	272.1	401.3	455.2
F = (C)/(A)*100	0.3%	1.1%	2.1%	2.8%	3.3%
G = (E)/(A)*100	1.1%	3.8%	7.2%	9.8%	11.4%
H = (E)/(B)*100	2.2%	7.7%	13.8%	17.7%	20.0%
Manufacturing (I)	2940	2932	3120	3375	3028
J = Manufacturing(I)/(A)	9.3%	8.6%	8.3%	8.1%	7.6%
K = (I)*1.6	4704	4691	4992	5400	4845
L = (K)/(A)	24.2%	22.4%	21.6%	21.6%	19.8%

Source Philippine Statistics Authority, and BPAP (2011), IBPAP (2017), IBPAP (2020)
Note The estimated number of indirect employments created in other sectors every four years is calculated by multiplying the number of direct jobs in the IT-BPO sector by 2.5, relying on the calculation method of BPAP (2011). For every one new employee in the traditional manufacturing industry, 1.6 new jobs are estimated to be generated in the non-tradable sectors (Moretti, 2013a, 2013b).

Also, the total number of workers that increased directly and indirectly in the IT-BPO-related sector between 2004 and 2020 accounts for 55.9% (4217 K/7543 K) of the number of workers that increased in the service industry during the same period. Similarly, the former accounts for 51.3% (4217 K/8223 K) of the total working population.

Even more interesting point is that in the case of the US, for every one new employee in the traditional manufacturing industry, 1.6 new jobs are estimated to be generated in the non-tradable sectors (Moretti, 2013a, 2013b). If it holds to the Philippines, we get values, I to L in Table 7.2. As column L suggests the number of directly and indirectly generated workers to total working population has decreased from 24.2% in 2004 to 19.8% in 2020.

Keeping the above points in mind, what conclusions can be drawn when examining the country's employment structure from Lewis' turning point?

7.4 Lewis Turning Point and IT-BPO Industry

7.4.1 Applicability of Lewis Turning Point to Emerging Countries

The "Lewis turning point" (Lewis, 1954) is generally defined as "the point at which, as the process of industrialization progresses, the surplus rural labor force that was supplying workers required by the industrial sector will eventually be exhausted. After going beyond this point, labor shortage occurs in the industrial sector and wages start to rise" (Hayami, 1995, 85–87). However, what Lewis (1954) initially discussed were the transition of surplus labor from "the subsistence sector" to "the capitalist sector", the point of exhaustion of surplus labor in the former, and the transition point to the phase of rising wages (Lewis, 1954, 139–191, specifically, pp. 145–152). Yet, unlike the developed countries and former colonial countries that have been industrialized more favorably, in developing and emerging countries, the balance of their domestic industries had been severely destroyed as historically colonized countries.[10]

As shown in the previous section, there would be risks of falling into an inaccurate analytical vision if discussing the Lewis turning point with only "industry and agriculture" as independent variables in an emerging country that has subsistence sector as an informal sector across all industries, including the service sector. Rather than from the perspective of the labor transition among industries, it can be more useful to examine surplus labor transition with Lewis' original assumption on dual economies between the capitalist sector and the subsistence sector.

As mentioned earlier, the major employed and working people in the Philippines and many other emerging countries are not in "industry and agriculture" but in the service sector. Moreover, it is essential to note that the informal sectors with precarious workers are encompassed across all industries. Traditional family-operated micro businesses also dominate the industrial sector. Therefore, it does not make sense to replace the contrast between the "traditional sector" and "modern sector" with the one between agriculture and industry. However, in a strict sense, both of the traditional sector and the modern sector hold the subsistent sub sectors and informal employment inside. Rather, it is more appropriate to examine it from the perspective of the movement of surplus labor on the premise of a dual economy between "the capitalist sector" and "the subsistence sector" pointed out by "LEWIS".

With the historical background, the major industries are under the oligopolistic control structure of local family-controlled group companies and multinational corporations. Since the industrial sector is structurally vulnerable in terms of employment absorption capacity, a surplus labor force results in dwelling in the informal sector, mainly in the service industry.

[10] With regard to these arguments, the points made by the so-called dependency theorists, who emerged in the 1970s, have both limitations and validity at the same time from the perspective of dual or plural socio-economic formations (Hayashi, 2016).

Under these circumstances, how can we quantify the dwelling and transition of such surplus labor force in rural and urban areas as surplus labor transition between the "capitalist sector" and the "subsistence sector"? Furthermore, in such a case, the question is at which crossing point can be the "turning point" where the labor force shift between which sectors? And how can the rapid rise of the IT-BPO industry as a service industry, be positioned in the context of these analytical issues?

7.4.2 IT-BPO Sector as "Capitalist Sector"

Many companies in the IT-BPO (IT-business service) industry, positioned as service industries, are the ones in the formal sector as registered corporations that are mainly foreign-capital corporations, centering on U.S. based companies, which are set as the "capitalist sector" of modern industry in terms of the Lewis theory. However, the service sector has many precarious workers who are engaged in the informal sector. Therefore, examining Lewis's turning point by comparing the number of workers between "agriculture and service industries" is not accurate enough because both industries include many "subsistence sectors". In addition, most of the IT-BPO industry companies are currently located in Manila and Cebu, which are major cities with suitable business environments. However, when looking at the labor force contrast between "rural and urban", it will include many slum dwellers in the "subsistence sector" who have no choice but to stay in the informal sector to live day to day in the service industry in urban cities. Therefore, the author illustrates some "turning points" for convenience while keeping these issues in mind.

7.4.3 Lewis Turning Point and the Position of the IT-BPO Industry

Keeping Lewis turning point in mind on "subsistence sectors versus capitalist sectors" and the IT-BPO industry, the following eight opposing axes are worth examining. They are: "Number of workers in agriculture vs. industry", "Number of workers in agriculture vs. manufacturing", "Number of workers in agriculture vs. service industries", "Rural vs. urban population", "Number of workers in formal vs. informal sectors", and "Number of workers in IT-BPO industry-(directly and indirectly) related vs. agriculture", "Number of workers in IT-BPO industry-related vs. industry-related" and "Number of workers in IT-BPO industry-related vs. manufacturing-related".

This section will focus on the latter three points, considering the IT-BPO employment structure's viewpoint specific to the Philippines.

Figure 7.9 shows the ratio of the number of workers in agriculture (including forestry, and fisheries); the ratio of workers in the industry (mining, manufacturing,

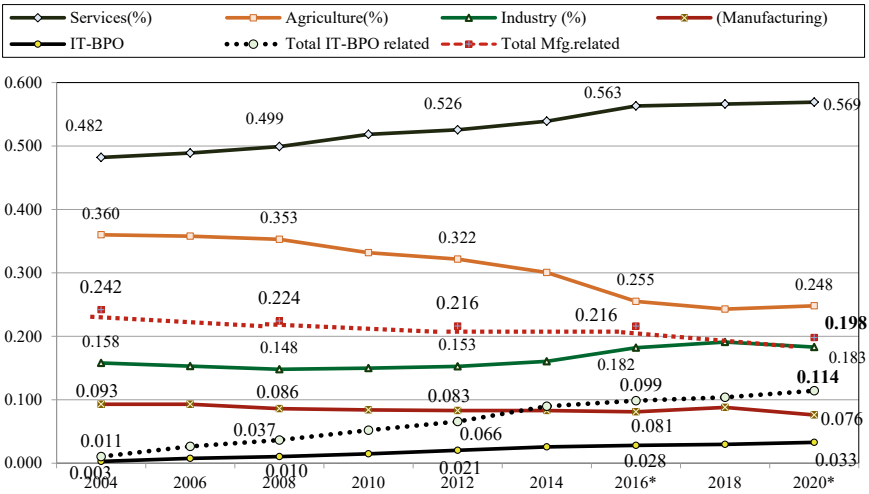

Fig. 7.9 IT-BPO industry and Lewis turning point. *Source* Same to Table 7.2. *Note 1* The figures in 2020 for IT-BPO are calculated based on IBPAP (2020) estimates. *Note 2* Calculation methods are shown in Table 7.2

construction, electricity, gas, and water supply); that of workers in manufacturing within the industry; that of total number of directly and indirectly generated workers in manufacturing; and the ratio of direct employment (full-time basis) in the IT-BPO industry, and that of the total number of directly and indirectly generated jobs by the industry, to the total working population in all industries.

As shown in the figure, the ratio of IT-BPO industry-related (direct and indirect) employment to the total working population has increased rapidly from 1.1% in 2004 to 11.4% in 2020, surpassing the number of workers in the manufacturing sector since 2014. When looking at the difference between the share of IT-BPO industry-related (direct and indirect) employment and that of manufacturing -related employment, the difference has shortened from 23.1 point to 8.4 point over the same years.

From the above figure, it seems that industry sectors that are most likely to cross one another in the future are between "agriculture/forestry/fisheries" and "industry", which difference between them is 6.5 point as of 2020. However, the difference between them has not closer in these years. On the other hand, when carefully examining the Figure, the number of IT-BPO industry-related (direct and indirect) employment and that of manufacturing sector-related employment appears to intersect sooner than between above two sectors. It means that the cross point in the nearest future would seem not to be between industry and agriculture, but rather between the IT-BPO industry-related and manufacturing-related employment.

Therefore, while the cross between the agricultural sector and service sector took place in 1996, as was shown in Fig. 7.1, the supposed next cross between the industrial sector and the agricultural sector has not yet taken place as of 2020.

How should we understand the transition of the number of employments related to the IT related business service industry and that in the manufacturing related industrial sector in terms of Lewis turning point?

The country has many completely unemployed people and precarious workers in the form of the so-called "underemployed" those who work less than a certain number of hours, as well as diverse precarious workers in various industrial sectors, rural and urban, mainly in the informal sector. Under such a circumstance, the next challenge for us is to theoretically clarify the implications for the future development process of the IT-BPO industry as a formal sector, of which increase in the number of direct and indirect workers reached a turning point in 2014 that crossed the number of workers in the manufacturing industry, which occupies a central position in the industrial sector.[11]

Traditionally, the transition of the working population in the economic development process progresses from agriculture to industrialization and then gradually shifts to the development of related service industries.

This is also the conventional transitioning process from industrialization to de-industrialization. What types of value-added creation will be the base of the service industry's development process led by the growing IT-BPO sector in the Philippines, not as traditional de-industrialization? To clarify this point, it is practical to examine this IT-BPO industry from work contents (Hayashi, 2017; IBPAP 2019, 2020). The business activities of companies in the IT-BPO industry in the country include voice communication services such as call centers, so-called such as back-office services including customer management, accounting, human resources, general affairs, and contracted software development, or operational processes such as medical transcription services. They are positioned in the value chain's downstream process, indirectly supporting the core value creation operations. The country's IT-BPO companies derive their revenue from exporting services to the U.S. and other English-speaking countries, sub-contracting these operations, processing them at low cost, and providing feedback. The source of these companies' international competitive advantage of the Philippines is their ability to use English and IT skills to process business operations in shorter periods and at lower costs. Therefore, their overseas competitors are Indian and other emerging countries where English is one of their official languages and where IT technology is developed at low costs with high processing capacity.[12]

This structure, in which the software-based information service industry, concentrated in the IT-BPO industry, plays a more central role in creating jobs and added values than the manufacturing industry, is different from the industrialization process

[11] Originally, it needs to clarify the value added and employment effects created by the manufacturing sector in other sectors in an industry-connected manner, and to position the number of direct and indirect employees in the BPO industry in contrast to the value added and employment effects created by the manufacturing sector in other sectors. However, this paper faces a challenge in doing so due to data availability.

[12] According to Tholons (2016), the Top 10 ranking of cities with the best conditions for BPO outsourcing overseas includes Bangalore (1st), Mumbai (3rd) and six other Indian cities. In the Philippines, Manila and Cebu are ranked second and seventh, respectively.

based on hardware technology in East Asian countries since 1970. On the other hand, the commonalities between the Philippines' IT-BPO industry's development structures and that of East Asian countries are found in the linkage with international markets through foreign capital and exports, that is, the global linkage of the value chain.

Theoretically explaining the heterogeneity and commonality in the development process between developing and developed countries, in terms of the de-industrialization, is a theoretical challenge.

7.5 Summary and Future Challenges

The paper has examined how the increase in the number of workers in the Philippine BPO industry, driven by its expansion and development, can be positioned in the nation's industrial development, keeping mind of the "Lewis turning point".

In doing so, the paper has discussed that it is not valid to examine the "Lewis turning point" from the perspective of "workers in agriculture vs. industry", because both the informal sector, which is the main economic area of underprivileged, so-called BOP population in the Philippines and the formal sector, to which the BPO industry belongs, mostly belong to the service sector. Also, it has been discussed that the development of the Philippine industrial sector based on manufacturing has vulnerability in employment absorption capacity. The important point here is that instead, it would be more useful to focus on the contrast between "subsistence sectors" and "capitalist sectors" in the analysis, which was the original comparative terms used in Lewis (1954). Therefore, while agriculture and industry also contain many workers with "subsistence wages," we have seen the importance of focusing on the service industries as the center of analysis, which also include "subsistence sectors" and "capitalist sectors," including the BPO industry, which has shown rapid growth and employment absorption capacity.

In this paper, we would like to conclude that, in any case, they have not reached the "Lewis turning point" in the country.

These BPO companies positioned in the formal sector have expanded their business areas from the metropolitan area and Cebu to the regional cities of Davao, Kagayan De Oro, Iloilo, Bacolod, and Dumaguete, which have been named "Next Wave Cities. (BPAIP 2011, 2017).[13]

It is important to note here that establishing the economic base of many women, who engage in the BPO industry, can be recognized not only as a means of expanding the individual consumer market but also as playing a role that can financially support

[13] According to "Tholons 2016 Top 100 Outsourcing destinations" (Tholons, 2016), the top 100 cities and districts from the Philippines as ranked by overseas outsourcing destinations in 2016 are Manila (2nd), Cebu City (7), Davao (66), Santa Rosa (81), Bacolod City (85), Iloilo City (90), Dumaguete (93), Baguio City (94), and Metro Clark (97).

According to this report, six Indian cities, including Bangalore (1st) and Mumbai (3rd), were ranked in the top 10 in the same year.

the life infrastructure of their entire family residing in the rural area, as well as health and education of their children. Therefore, if the BPO industry can maintain the expansion trend, it will also raise the educational level of their children and reproduce the future bearers of the industry. In other words, it suggests that the BOP population, as a group of precariously employed people who were previously forced to stay in the informal sector, may gradually transit to the formal sector. An increase in the number of women workers in the industry could gradually lead to an expansion of the middle-class population and a reduction in the underprivileged people.

In case of examining this country's IT-BPO industry development in the Philippine-style economic development structure in terms of "Lewis turning point," next theoretical challenge remains to examine how the IT-BPO industry's development will get on the industrial sector's development track, specifically the manufacturing industry, through expanding the consumer market, or on the de-industrialization development track centering on the IT business.

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Chapter 8
New Industrial Development Path Based on IT Service Business in the Case of the Philippines

Antoinette R. Raquiza

8.1 Introduction

The Philippine IT-business process management industry is in transition to a world that has been profoundly impacted by the COVID-19 pandemic. In the last two decades, it has grown into a multibillion-dollar industry and a global leader in voice-based services, mainly on account of its large pool of English-speaking, relatively low-cost yet skilled labor. Today, as the global outsourcing industry finds itself at the center of a more digitally integrated world in response to the disruption caused by COVID-19, it is also pushing the Philippines to shift to high-skilled, knowledge-based services in order to stay ahead of the competition. What will it take for the domestic industry to climb up the value chain? More strategically, will this emerging trend help pave the way for the country to build its own manufacturing base and thus effect structural transformation?

This chapter examines the Philippine IT-business process management (IT-BPM) industry in the context of the changing fortunes and demands of the global BPM industry, on the one hand, and the Philippine government's heightened efforts to promote inclusive, innovation-driven development in response to Industry 4.0, on the other hand. The chapter focuses on the rising demand for manufacturing services, specifically those involved in producing innovation, defined in this study as the development of a new or improved commercial product.[1] The study has two preliminary findings. First, as suggested by government figures, the increase in IT-BPM investments in the post-pandemic transition coincides with a growing interest in manufacturing services, including engineering design and data analytics. Second, the country seeks to leverage its leading global industry position and large high-skilled pool in order to stay ahead of rising destinations such as Poland and Malaysia. Nevertheless, for the Philippines to transition to complex and technology-intensive services,

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it will need to gear up human resources and digital infrastructure, and ensure a robust university-industry interface—two prerequisites for the country's own push toward industrial development.

The next section will discuss the domestic industry's changing fortunes in the context of the global economy. It will then examine industry trends from the perspective of policymakers and the industry and conclude with a brief discussion on the road ahead for the Philippines.

8.2 COVID-19 Pandemic and the Rush to Digital Transformation

"With crisis comes opportunity" is an age-old saying that finds new meaning in the IT-BPM industry in the Philippines and beyond. After going through slowing growth even before the pandemic (Cortez, 2018), the domestic industry seems revived. According to the Information and Technology and Business Processing Association of the Philippines (IBPAP), the industry raised its revenues to US $29.49 billion and created 122 thousand full-time jobs in 2021 (Crismundo, 2022). Against the backdrop of the economy contracting by nine percent the year before, the industry's 10.6% increase in revenues signaled 2021 as its "rebound year."[2]

In the main, its recovery was due to the increase in demand for third-party services from global corporations that, prior to the pandemic, had begun to prioritize insourcing or building internal capacities to handle previously outsourced business processes (Olson, 2010). The pandemic was seen as intensifying this trend as the disruptions to supply chains and businesses sent global companies reeling. In fact, the Philippine IT-BPM industry's own report projected a flat growth for global services in 2020 in light of the global recession and companies seeking to lessen their risk exposure in offshore locations (IBPAP, 2020).

The slowdown proved temporary, however. As it turned out, the pandemic had the opposite effect: the need for companies to resume operations against a hostile business environment became a matter of survival and led them to turn to IT and BPM providers to cut costs while ensuring business continuity. One industry expert wrote:

> There are one-time opportunities emerging from the disruption of the pandemic....Through outsourcing, businesses can create a pool of additional funds, from the elimination of expenses from non-core activities, thus enabling opportunities for growth and innovation. The outsourcing model reduces expenses by eliminating the need to hire or train new employees and/or the support staff…and increase occupancy costs and investment in additional office space and equipment (Pissarides, 2021, n.p.).

The pandemic also raised the profile of the IT-BPM industry in a more strategic way: the massive disruption to global supply chains and business operations compelled companies to move en masse to digital platforms. What was once mainly a mode of service delivery, therefore, had also become the main mode of work.

The turn to remote work, due to the travel restrictions to address the health crisis, saw corporations playing catch-up with digital technology—a process that industry experts say the pandemic hastened by six years (Krajewski, 2021). In this connection, the IT-BPM industry has also played a key role in easing companies' digital transformation.

The Philippines is positioned to reap windfall gains from the rising global demand for IT-BPM services. Largely known as a global leader in call centers, the domestic industry has also provided non-voice services in software development and medical transcription. Three sectors received a boost during the pandemic: healthcare, supply chain management, and game development—the latter due to the growing demand for streaming services.[3] But other services have also expanded. An IBPAP executive, for instance, noted that there has been an increase in demand for finance and accounting, human resources, and procurement—critical processes that multinational corporations had previously kept in the US and Europe.[4]

More strategically, the global IT-BPM industry has also begun to drive manufacturing services. As with other business services, the industry could be expected to further facilitate the fragmentation and dispersal of work involved in the commercial production and distribution of goods. In this light, one IBPAP (2020) study identifies the key business services connected with manufacturing as IT services, procurement, and finance and accounting. Yet, manufacturing services also cover activities embedded in the early phase of the value chain and are thus considered intermediate inputs sold to manufacturers or producers or are done in an offshore location but within the same firms (USITC, 2013).[5] These services may include work that is performed between research and development and product launch, such as product design, testing, and data analytics—knowledge-driven services that may be done in different locations and by distinct teams through the use of digital technology.[6]

The present study will focus on services that are embedded in manufacturing's early stage, mainly because they are part of innovation that companies have begun to outsource to third party providers or perform in offshore locations. While in the main, most of these functions, including research and development, continue to be performed in the US, Europe, or inshore, as early as the 1990s, US and European corporations had gradually shifted at least 15% of research and development and product development to emerging economies (Glennon & Dollar, 2021). This trend in the use of third-party providers for such services may be said to contribute to the changing "global geography of technological innovation" (Crescenzi et al., 2021). Factors reinforcing this shift include the greater opportunity and space for collaboration afforded by digitalization, assured quality and productivity control while cutting on labor cost, further fragmentation of the production process and transformation of the workplace, as well as proximity to booming markets.

8.2.1 Industrial and Innovation Policies

The Philippine government has always cited the IT-BPM industry as one of the bases for its rapidly growing economy, and included in its annual Investment Priority Plan, thus making the industry eligible for fiscal and other incentives. Since the mid-2000s, the industry has been a top dollar earner, with its revenues almost rivaling the amount of remittances that come from migrant Filipino workers. It provided alternative employment from overseas work to more than 10% of the country's estimated 500 thousand college graduates every year (World Bank, 2013). As such, the industry has fueled household consumption, and as consumers, those in IT-BPM have contributed to the growth of domestic services, from banking and real estate to retail businesses (Raquiza, 2016).

The growing trend that links the discrete services to manufacturing might be a game-changer for the domestic IT-BPM industry, long associated with the more visible high-rise call centers that have come to define Metro Manila's skyline. While engineering services have long been part of the government's list of high-skilled activities under IT-BPM services, other activities necessary to transform outputs of research and development into commercial products have not made it to the official list. Yet, services such as product design, proto-typing, testing, and data analytics are equally important additions to the mix. As noted above, the Philippines has begun offering some of these manufacturing services—partly because of the demand coming from global in-house centers (GICs) but also fairly recently via smaller outsourcing companies including startups, offering specific manufacturing services to multinational corporations.[7]

That manufacturing services now appear as a category in government statistics indicates its increasing impact on the economy. In fact, the current conjuncture has shown an even bigger expansion of manufacturing services than business services. A breakdown by the Philippine Statistics Authority (2022) of the sub-service industries' contribution to the 16.2% growth of trade in services in the first quarter of 2022 reads: business services, nine percent; telecommunications, computer, and information services, 12.1%; and, manufacturing services, 18.9%.[8] While the PSA did not mention what activities fall under manufacturing services, interviews with government and industry officials reveal an increase in interest in engineering design and data science. Thus, a Department of Trade and Industry (DTI) official noted: "The country's participation in the manufacturing global value chain is not only in producing parts and components, but also in research and development."[9]

No doubt, this trend is both a product of and cause for government setting up the innovation governance needed to open up and solidify new investment areas in the business service industry. The last six years saw the passage of critical pieces of legislation that directly and indirectly will contribute to the expansion of the IT-BPM industry and, in particular, innovation-driven manufacturing services. Immediately, the effort to keep pace with Industry 4.0 saw the enactment of Republic Act No. (RA) 10,844 in 2016 that established the Department of Information and Communications Technology (DICT). The setting up of the DICT, which entailed merging the different

government offices and units that handled information communication technology,[10] and the greater liberalization of the telecommunication industry are expected to facilitate the country's development and extension of the country's digital and broadband infrastructure. Needless to say, the establishment of the DICT has also provided the IBPAP a partner agency in addressing industry members' infrastructure needs and policy concerns.[11]

In 2019, the government also enacted the Philippine Innovation Act (RA 11,293) and Innovative Startup Act (RA 11,337) that together set up the governance structure, ensuring closer coordination in the formulation, planning, and implementation of the country's innovation programs. The Philippine Innovation Act is a landmark policy in that it places science and technology at the core of national development and reaffirms the constitutional provision on the importance of research and development, invention, and innovation. It also adopts a "whole of government approach" by setting up the National Innovation Council (NIC) under the Office of the President with the National Economic and Development Authority (NEDA) as Vice Chair and that has as members all other cabinet agencies, notably the Department of Science and Technology (DOST) and Department of Trade and Industry (DTI) that have led the charge in promoting inclusive and innovation policy. The DOST's flagship "Filipinovation" Program bridges the gap between science and technology and commerce in the country largely by providing research grants, while the DTI's "Inclusive Innovation Industrial Strategy" (i^3S) promotes high-value production activities across industries and provides fiscal and other incentives toward this end. The NIC is in charge of formulating and overseeing the implementation of the 10-year National Innovation Agenda and Strategy Document (NIASD). For its part, the Innovative Startup Act establishes the convergence of the DTI that partners with industry, DOST that is embedded in the science and technology community, and DICT that sets up the digital infrastructure in nurturing micro, small, and medium enterprises, notably startups, as the basic units of the innovative entrepreneurial culture and ecosystem.

Equally critical is the need to prepare the workforce. As early as 2016 when the IBPAP was drafting the 2022 Roadmap, it sounded the alarm that due to the routine and manual nature then of most jobs in the domestic BPM industry, more than 85% of the workforce would be impacted by Industry 4.0, particularly by automation (IBPAP, 2017). Government and economists had also anticipated a plateauing industry partly due to slowing recruitment of college graduates (BM, 2019). They contend, therefore, that the industry needs to raise the workforce's skill set. In response to the high attrition rate in the industry, the IBPAP as early as 2017 also welcomed digitalization to ensure a "flexible environment and higher workplace mobility" and open "potential career paths" for employees (IBPAP, 2017, pp. 4, 10).

Today, the government agencies directly engaged with the industry have their work cut out for them as the need to upgrade the workforce has gained greater urgency. The imperative today to "reskill" and "upskill" the IT-BPM workforce takes on two thrusts. One is to work toward ensuring a match between the graduates of universities and needs of specific industries. For the IBPAP this means working with the DICT on the development of ICT training modules as well as some of the global IT software manufacturers mainly for training the current talent pool.[12] The DTI also has its

hands full with a two-pronged approach. On the one hand, it has begun organizing trainings for services in high demand by industries such as logistics and supply chain management as well as game development,[13] and, on the other hand, the DTI has set up Regional Inclusive Innovative Councils (RIICs) with state universities outside Metro Manila to discuss curriculum development to create a pipeline of graduates to meet the needs of the IT-BPM industry.[14] In this way, the DTI trade and investment official stated: "We try to identify skills that we need to develop based on the kinds of industries we want here in the Philippines."[15]

The other thrust is to mobilize universities to undertake research and development and produce outputs for commercial use. In this sense, the DOST plays a unique role in scaling up the industry. The DOST has a more organic link with the universities and thus undertakes a distinct approach. Mobilizing the science and technology community to respond to the growing demand for manufacturing services entails getting it to produce for the market. As a "Filipinovation" document explains:

> Before 2007, the Philippines struggled to develop a system for innovation. The old linear model of innovation states that any technology generated will eventually be commercialized when it becomes fully developed and infused with generous financial capital. Ideally, any publicly funded R&D activity should generate new knowledge to advance current understanding in a particular field. The major challenge for R&D institutions and public incubators in the country is how to transfer and commercialize the new knowledge in fulfillment of the government's role as the main facilitator of technology and knowledge diffusion. This implies, however, that any drive to diffuse developed technologies is limited by the availability and extent of investment….(Dela Pena, 2020, p. 137)

Given this assessment, the DOST has thus gone about providing grants for research and development and supported the establishment of university-based business innovation centers in the hope of helping establish startups.

In fact, in accordance with their respective mandates, the three departments at the frontline of setting up the startups engage capacity-building at different stages, with the DICT providing the digital infrastructure, the DOST coming in to provide funding for product development, and the DTI helping set up the startup as a formal business by walking it through formal registration and licensing and investment mobilization.[16]

8.3 Conclusion

It would seem that those at the forefront in advancing an inclusive, knowledge-based economic development know what is at stake with the opportunities and challenges occasioned by the intensifying economic globalization, and specifically the changing organization of global manufacturing. For the Philippines and beyond, these changes may be seen in the rising demand for manufacturing services in the developing world. The digital transformation that the world has been forced to adopt as a way of life and mode of work due to the COVID-19 pandemic provides the Philippines and other

capital-poor but labor-rich countries a way into industrial development. That point of entry, the study will suggest, may very well be through manufacturing services.

Going by global trends, the demand for manufacturing services will continue beyond the pandemic. The literature, in fact, suggests another factor to the geographic dispersal of technology centers to emerging markets: the rising costs in advanced countries of transforming an idea to a commercial product. The gap or space between product conception to commercialization is what has been referred in industry and policy circles as "the valley of death"—figuratively speaking, the place where, for lack of funding, an idea fails to advance through the necessary stages, from the research and development laboratories to the marketplace, and thus "dies" (Fernando, 2021; Rossini, 2018). Noteworthy, these stages revolve around product design, prototyping, testing, data analytics, branding—activities that fall under the rubric of manufacturing services and are gradually migrating to the developing world, where knowledge and technology production would be relatively cheap.

The increase in demand for high-skilled or knowledge-based services in the IT-BPM industry seems to have given a new dimension to the country's industrial policy. Previously, industrial policy had mainly relied on bringing in foreign technology to set up domestic manufacturing without any clear path linking that work to the economy beyond job creation. While manufacturing services are directed by and will be used for foreign businesses, this may be the first time that the knowledge and skills of the country's scientists, engineers, and policy experts would be nurtured to serve as inputs to also grow Philippine manufacturing.

Moreover, it may be that the push toward inclusive development, or at least a more equitable regional development, may have gotten more support. There is a dawning awareness of the need to build the country's digital infrastructure throughout the archipelago in order to face present and prepare for future disruptions caused by cross-border and national pandemics, environmental or economic crises, or geopolitical factors. In this connection, the expansion of business and manufacturing services may serve to bring together parallel efforts of government and the industry to spread development.

The IBPAP has long announced the setting up of "digital cities," partly to help recruit into its talent pool fresh graduates in other parts of the country. As the industry shifted to work from home, many employees actually went back to their home provinces and have since expressed a preference for such a work arrangement. While the possible change in workplace has raised problems with regard to the incentives that BPO economic zones are entitled to,[17] it also raises the possibility of growing local economies. More, the spread of digital infrastructure to other regions may very well dovetail with government's plan to set up innovation hubs in different parts of the country as well: in particular, the Department of Trade and Industry's Regional Inclusive and Innovation Centers (RIICs) and Department of Science and Technology's Niche Centers in the Regions (NICER) for R&D program.

The proposition that seems to drive the country's efforts today is that, given its experience and place in the global IT-BPM industry, it has an edge over other countries, save for India, in what is still an open field of opportunity. Nevertheless, it is also a highly competitive field in which other emerging economies are in striking

distance. In this light, much still needs to be done lest the Philippines is overtaken by countries like Malaysia and Vietnam that have heavily invested in knowledge-based industries. Already, the national government's failure to provide the PhP 1 billion yearly budget for innovation programs as contained in the Philippine Innovation Act, raises serious questions on how far current efforts will go in turning policy into reality (Tan, 2021). A DOST official also noted that for the past 30 years the government budget for research and development represents only 0.14–0.18 of the country's gross domestic product—way below the two percent that UNESCO recommends for R&D spending (Cruz, 2021).

The Philippines currently finds itself in a very interesting moment, rife with opportunity, provisioned with abundant human resources, but facing potentially significant global competition. The provision of manufacturing services has the potential to accomplish a number of goals that have long eluded development planners: the proliferation of higher value employment, the expansion of domestic demand for more highly skilled scientists, engineers, data analysts and product designers, and the potential to link the provision of IT-BPM enterprises to an indigenous innovation economy. If many have doubted the capacity of service provision to serve as the bedrock for sustained high value development, this new generation of manufacturing services seems positioned to forge a path forward.

The work will not be accomplished, however, without a set of government supports that are currently non-existent or insufficient. Closer relationships between universities and industrial concerns will benefit from even stronger coordination than currently exists under government auspices. For as long as government remains the main source of investment and grants into the innovation economy, those supports need to expand—with special emphasis on a few strategically selected industries that can jumpstart broader development. Tax policy and investment incentives as well need to embrace this new business terrain. Finally, government should be a player, alongside private industry, in reversing the brain drain out of the country. Individual incentives, from research grants to tax abatements and government sponsored employment, will help make the choice of remaining in the Philippines and working in the innovation sector increasingly attractive.

The key, at the moment, is timing. The Philippines entered this auspicious moment with a good supply of skilled English language workers, an infrastructure set up to support a broad spectrum of BPM industries, and a corps of highly skilled college graduates in science and engineering. These advantages have allowed the country to gain a foothold in this new economic climate. Whether it will retain that foothold in the face of intensifying global competition, or, maybe more importantly, convert the work of servicing foreign innovation companies into a launchpad for a more vibrant domestic economy, remains to be seen. The disruption of the pandemic has made many new things possible, even as it upended old ways of doing business. Where the country will sit when the dust settled depends on whether the government will make a transformative commitment to these new economic possibilities.

Notes

1. As per the Philippine Innovation Act (Republic Act No. 11293), an innovation is defined as the "creation of new ideas that results in the development of new or improved policies, products, processes, or services which are then spread or transferred across the market.
2. Interview with Carole Gaffud, Associate Director of Research, Information and Technology and Business Process Association of the Philippines (IBPAP), on May 25, 2022.
3. Interview with Lanie Dormiendo, Director, International Investments Promotion Service, Board of Investments, Department of Trade and Industry, on June 3, 2022.
4. Interview with Gaffud, May 25, 2022.
5. Such services are used in the production and distribution process of manufacturing. Examples of services that are done all throughout the value chain are financing and accounting services while those that come later include sales and maintenance and repair (USITC, 2013).
6. Interview with Rafael Nestor Mantaring, President, UP Engineering Research and Development Foundation, Inc., on May 25, 2022.
7. Interviews with Mantaring, May 25, 2022, and Dormiendo, June 3, 2022.
8. Official and industry data does not provide specifics on the activities that fall within the broad category of "manufacturing services" (and "contact centers," for that matter). Nevertheless, it is instructive that manufacturing companies that have approached government and industry interviewees were looking to invest in data analytics and engineering services. In the PSA'a first quarter 2022 report, manufacturing services were qualified as those "on physical inputs owned by others".
9. Interview with Dormiendo, June 3, 2022.
10. These included the Information and Communications Technology Office (ICTO), National Computer Center (NCC), National Computer Institute (NCI), and related offices under the then Department of Transportation and Communications (DOTC). The DOTC was, in turn, reorganized as the Department of Transportation.
11. Interview with Gaffud, May 25, 2022.
12. Ibid.
13. Interview with Ivan Bernardo, Research Associate and Project Coordinator, Department of Trade and Industry, on June 3, 2022.
14. Interview on June 3, 2022 with Karl Pacolor, Division Chief, Innovation and Collaboration Division, Department of Trade and Industry.
15. Interview with Dormiendo, June 3, 2022.
16. Interview with Pacolor, June 3, 2022.
17. The BPO companies registered under the Philippine Economic Zone Authority are required to be located and conduct their business in the ecozones in order to avail of the fiscal incentives. This provision has been relaxed when the industry shifted to work-from-home arrangements during the pandemic.

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Chapter 9
The Burden and Autonomy of Women in the IT-BPO Industry in Metropolitan Manila: Under the COVID-19 Pandemic

Makiko Ota

9.1 Introduction

This chapter aims to discover how the COVID-19 pandemic has affected the lives of Filipina women in the IT-BPO (Information Technology-Business Process Outsourcing) industry. The Philippines have sent a myriad of migrants internationally and their remittances have been a pillar of the national economy. Furthermore, from the mid-2000s, the country created a new pillar in the export sector, the IT-BPO industry. The industry is a new foreign exchange earning sector next to overseas remittances that have earned approximately 10% of the Gross Domestic Product. Since 2005, the Philippine economy had experienced stable economic growth, recording annual GDP growth rate from 4 to 7% except 2009 and 2011, until the incredible economic contraction caused by the COVID-19 pandemic in 2020 (de Vera 2020; World Bank n.d.).

Several media outlets reported that the IT-BPO industry could generate middle-class workers and create a new segment of the market (e.g. Rappler, 2013). As Hori argued in Chap. 6, the growth of the IT-BPOs promotes the increase of the domestic middle class, who are bolstered by their higher compensations from the enterprises. In Metropolitan Manila,[1] the center of the IT-BPO industry in the Philippines, middle-class workers[2] consisting of managers, professionals, technicians and associate professionals, and clerks increased in number from the early 2000s to the

[1] "Manila" in this chapter means Metropolitan Manila or the National Capital Region (NCR), which consists of 16 cities and one municipality.

[2] The term "occupational middle class" in this chapter is based on Kimura's definition (Kimura, 2003). Kimura classifies clerks as belonging to the marginal middle class, while professionals, technicians and associate professionals, and managers belong to the new middle class (Kimura, 2003).

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late 2010s (DOLE, 2018; Ota, 2016). On the other hand, the World Bank report states that the percentage of the middle-income class population in the Philippines increased very slowly, compared with its regional peers and most countries at similar levels of development (World Bank, 2020, p. ix).

The report regards the IT-BPO industry as a pocket of opportunities for workers to earn middle-class wages (World Bank, 2020, p.42). Their higher salaries could contribute to upgrading the living standards of workers and their families. In addition, the development of the IT-BPO industry has increased economic opportunities for women in the Philippine's labor market, since a large portion of employees in the industry are women, especially in labor-intensive subsectors such as customer relationship management (CRM) (e.g. call center). The subsector accounts for nearly 70% of employees in the whole industry (PSA, 2020).

The growth of the IT-BPOs could transform traditional gender norms that have been imposed on Filipina women and enhance their economic power and autonomy. However, women's participation in gainful work would also increase their household burdens. The responsibilities Filipina women face vary according to their socioeconomic conditions. Therefore, the degree of damage Filipina IT-BPO workers suffered as a result of the pandemic varied as well.

Studies on the impact of the COVID-19 crisis on labor and employment found that the pandemic deepened preexisting inequalities, along with gender, class, and other lines (Hirano, 2021; ILO, 2021; Tejani & Fukuda-Parr, 2021). The influence differed across industrial sectors as well (ILO, 2020, 2021; Tejani & Fukuda-Parr, 2021). Since the IT-BPO industry was exempted from the suspension of economic activities during the period of Enhanced Community Quarantine and Modified Enhanced Community Quarantine from March 17 to May 31, 2020, the damage to the industry was regarded as less extensive than the damage suffered by other industries (DOLE, 2020; Ibañez, 2020; Cabuenas, 2021; PDI, 2021).[3]

In the Philippines, one measure to contain the spread of infection in the early stage of the pandemic was the strict lockdown that restricted mobility, suspended non-essential business activities, and encouraged work-from-home (WFH) arrangements (ILO, 2020, p. 37). Researchers and media outlets reported serious affection for IT-BPO workers, especially with respect to their working environments and conditions (BIEN, 2020; Macaraeg, 2020; Tejari & Fukuda-Parr, 2021; Thompson, 2020). However, it is still necessary to explore how the crisis has influenced the entirety of their lives, including their gendered household roles, by focusing on women in the IT-BPOs themselves.

The pandemic increased the poverty rate in the Philippines to 23.7% in the first half of 2021, due to job losses and high consumer prices (de Vera, 2021). In Manila, it rose to 7.8% in the same period (de Vera, 2021).

The socioeconomic changes due to the pandemic could deepen the difference among the IT-BPO women that goes back to the prepandemic days because the

[3] The "Administrative and Support Activities" sector, which includes most IT-BPO sub-sectors, saw only a 14.3% decline from April 2019 to April 2020 (ILO, 2020, p. 30). In 2020, the industry employed 23,000 new workers, and its revenue grew by 1.4% compared to 2019 (Cabuenas, 2021).

workers from low-income households tend to have greater economic burdens for their family. Moreover, loss of income resources of their family members could increase their responsibilities, and the pandemic could exacerbate their own working conditions.

The crisis could have damaged the attempts of many IT-BPO workers to improve their lives and achieve upward mobility. This chapter focuses on the impact of COVID-19 on women in IT-BPOs, their lives, and household roles, in addition to their life stories in the prepandemic days.

9.2 IT-BPO Workers and Class Dynamics in Metropolitan Manila

9.2.1 IT-BPO Industry and Class Structure

Metropolitan Manila is the capital of the Philippines. It has a population of nearly 13.5 million people, which is equivalent to 12.4% of the total population of the country (PSA, 2021b). Over 30% of the GDP is concentrated to the region (PSA, 2021a), and this proportion is larger if we consider the provinces in its vicinity, such as Cavite, Rizal, Bulacan, Batangas, and other surrounding provinces.

In the post-war era, Manila experienced rapid urbanization by the 1990s. This change in demographic can be explained in terms of the poverty in rural areas and people's attempts to upgrade their lives through migration toward Manila (Aoki, 2016; Ota, 2016). However, the migrants have been partially integrated into the urban socioeconomic structure as exemplified by the mushrooming population in the informal service sector and informal settlements. Both of them serve as reservoirs for the newcomers from the countryside.

The capacity of the metropolis is unable to offer decent livelihoods and housing to migrants. A significant percentage of the employment population of the region comprised informal service workers, since the manufacturing sector was stagnant and employment generation was too moribund to absorb the excess population. The proportion of the service sector in the employment population was over 70% in 1990s, primarily due to the informal sector workers (Ota, 2016, pp. 7–9). However, the recent population increase can be explained by the natural increase in the local population in the region rather than the rural–urban migrant population. This is because the immigrant population that settled in Manila has produced their second and third generations born in Manila (Aoki, 2016; Ota, 2016).

Recent labor statistics show that approximately 80% of the total employment population in Manila works in the service sector (PSA, 2019). However, an internal composition of the current sector should be understood through the context of the growth of the IT-BPO industry.

Since the mid-2000s, the industry has altered the employment structure of Manila, by increasing the number of a new type of service employee, including middle-class

workers (Ota, 2016). Moreover, the percentage of traditional livelihoods for low-income women like manufacturing, vendors, and domestic helpers shrank from the early 2000s to the early 2010s,[4] while the economic opportunities for low-income men expanded (Ota, 2016, pp. 23, 27–29).[5]

Studies have explored the association between economic growth and informalization of labor (UN-Habitat, 2016; Sassen, 1998). Informal workers still seemingly make up a substantial share of the workforce in Manila, since the development of the formal sector is associated with low-wage workers serving enterprises and higher-paid workers (Aoki, 2016; Ota, 2016; Sassen, 1998). Many of the workers are unstable and short-term employees in the formal sector, whose numbers have proliferated due to the contracting of labor in the Philippines (Aoki, 2016). The growth of the IT-BPO industry has increased hiring in various unstable and low-wage occupations such as janitors, security guards, sales staff, repairmen, and so forth. Furthermore, it has increased the share of workers in the transportation and construction industries, which are typical industries for low-income men. From 2013 to 2017, those sectors accounted for an increasing share of total male employment, from 28.7% to 31.1% (DOLE, 2018).

Most profits in the IT-BPO industry are generated in Manila. The region is a production-site of young, English-speaking, and western culture friendly workforce (Sallaz, 2019). Such agglomeration attracts foreign investment for the outsourcing of a variety of operations such as customer service, back-office, sales, medical transcription, legal affairs, and accounting. In particular, the call center industry has been the biggest earner in IT-BPOs.

The IT-BPO industry is centered in business districts such as Makati, Ortigas, Bonifacio Global City, East Wood City, Cubao, and so on. To develop such areas, labor is required to construct buildings and infrastructure, and the increased number of commuters leads to a need for more transportation workers. The complexes consist of office buildings, condominiums, shopping malls, restaurants, cafes, and 24-h convenience stores that target for middle- and upper-class consumers and the highly paid employees working there. These kinds of facilities demand a low-wage service workforce (Ota, 2016).

However, the proportion of occupational middle-class workers in employed population expanded, as did the highly educated workforce (Ota, 2016, 2021a). The ratio of occupational middle classes to the total employed population in Metro Manila increased from 37 to 43% between 2002 and 2017 (Ota, 2021a, p. 10). This suggests that many workers in middle-class occupations experienced generational upward mobility; their parents were assumed to be less educated and had more precarious occupations.

However, these changes in occupational and educational structure have not necessarily been associated with the achievement of upward mobility for many people in terms of income. The growth rate of the middle-income class in the Philippines is

[4] Further examination of the recent trend of occupational structure by gender should be conducted using newer data resources, but I would like to analyze them in another article.

[5] See also Shatkin (2009).

lower than those of other developing countries (World Bank, 2020). Furthermore, notwithstanding strong intergenerational mobility in education, economic mobility continues to stagnate (World Bank, 2020, p. 28).[6]

One of the characteristics of the IT-BPO industry in the Philippines is the female-oriented workforce. PSA estimates that approximately 55% of IT-BPO workers are women (Errighi et al., 2016, p. 20). Accorindg to Sallaz (2019), approximately 70% of call center workers are estimated to be women. This could offer an opportunity for many female workers to earn a decent income without traveling abroad. The recent expansion of occupational middle classes has been led by highly educated women (Ota, 2016, 2021a, 2021b). Women account for about 55% of the occupational middle classes in 2017 (DOLE, 2018).

This indicates a possible emergence of a category of female workers who can earn a high salary but are from low-income households (Ota, 2021a, 2021b). The informal workforce has never died out despite the economic growth and constitutes a significant part of the urban economy. These circumstances increase the household responsibilities of many women working as breadwinners in the IT-BPO industry, especially in cases in which other household members work in precarious conditions.

9.2.2 Attempt to Upward Mobility and the Pandemic

Empirical studies have examined the positioning of IT-BPO workers in the class structure in the Philippines (Hori, 2016, 2020; Padios, 2018; Sallaz, 2019).

Hori (2016) notes that the growth of the industry offered economic opportunities for university/college-educated women in the Philippines. This study explores how female call center workers experienced their various non-traditional life courses. In the same study, Hori points out the possibility of polarization among IT-BPO workers, specifically between call center workers and those from more knowledge-intensive sectors such as software development (Hori, 2016). Her recent study on managerial and professional workers in the non-call center sector of IT-BPOs argues that the industry has expanded the size of the domestic middle class in the Philippines. The study focuses on economically independent working Filipinas and explores their middle-class lifestyles: property and car ownerships, making investments, traveling, and so on (Hori, 2020).

Sallaz, who conducted an ethnographic study on call center workers in Manila, explains how they use the jobs for a class mobility strategy through education (Sallaz, 2019, pp. 90–93). This approach considers call center work to form a "middle path" between working abroad and engaging in underpaid professions in the Philippines. All 60 respondents of his study were from humble backgrounds, the so-called "*masa*" (mass) in the Philippines (Sallaz, 2019, p. 91). Sallaz argues that a typical call center

[6] In Manila, the pace of increase in the average household income from 2003 to 2009 was slow, despite the expansion of the occupational middle classes in the employment population from 2002 to 2011 (Ota, 2016).

agent in Manila is the "female breadwinner."[7] The study noted that there are two circumstances transforming Filipina women into breadwinners: being an elder sister or encountering some sort of "man problem" (Sallaz, 2019, pp. 109–133).[8]

Padios's ethnographic study questions emerging perceptions of call center workers as upwardly mobile subjects. This study identifies the difficulty in identifying answer whether call center workers can become part of the middle class owing to the broad meaning of the concept (Padios, 2018, p. 145). Padios notes that call center work contributes to a reproduction of workers' privilege among those who come from affluent or stable families, whereas it offers an unclear road to economic change for those who are not from affluent families (Padios, 2018, pp. 144–146). It tracks the life course of the research participants focusing on how the working and consumer cultures of productivity in the call center industry construct them as "productive youth" in the unpredictable era of neoliberalism (Padios, 2018).

IT-BPO workers are basically white-collar workers and are seemingly classified as "middle class" in terms of occupation.[9] However, whether one considers that the industry expands the size of the middle class depends on how the author defines the class and which subsector of IT-BPOs they focus on.[10]

Padios (2018) and Sallaz (2019) address call center workers' aspiration for social mobility, notwithstanding its feasibility. To my knowledge, many workers seem to attempt to move upward in terms of aspects such as housing, income, and lifestyles, as well as in terms of their career (cf. Ota, 2021a, 2021b). Furthermore, I second Sallaz's explanation of female call center workers that they enter the industry for economic reasons and became breadwinners (Sallaz, 2019), though not all of them are from underprivileged families.

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[7] Sallaz classified research participants into three groups by gender: women, gay (as in his fieldwork, gayness referred to individuals assigned the male sex at birth but who later adopt an alternate gender identity), and men (Sallaz, 2019, p. 98). Among these groups, women were more likely to be breadwinners than men, while gay workers were less likely to be part of a wage-earning couple relationship (Sallaz, 2019, pp. 103–106).

[8] For example, single mothering is often observed among female call center workers. Numerous married respondents in Hori's study on female call center workers were experiencing single parenting or had had a marriage separation (Hori, 2016).

[9] In the 2012 Philippine Standard Occupational Classification, occupations clearly related to a call center or "contact center" could be classified into four categories: managers, technicians and associate professionals, clerical support workers, and service and sales workers (Ota, 2021a). Only the first three groups were considered "middle-class occupations," whereas the last was considered "working class" (Ota, 2021a, pp. 12–14). The definition of middle-class occupation is based on Kimura (2003; Ota 2021a). See also 2.

[10] The compensation for the IT-BPO workers seems to vary according to sub-sector. According to a government survey on business establishments in 2017, the average annual compensation per capita of all sub-sectors of IT-BPOs was PHP 405,997 (USD 8,055). Employees in the software publishing industry received the highest compensation, PHP 1,090,500 (USD 21,635), followed by outsourcing of finance and accounting engineering (PSA, 2020). Employees of the CRM sector, the largest group, received the third-lowest compensation (PHP 299,265 = USD 5,937) following those in document processing and medical transcription (Hori, 2020, p. 14). The dollar amounts above were estimated based on BSP (n.d.).

Here, I suggest two viewpoints to examine how the COVID-19 pandemic affected women in IT-BPOs: (1) how it influenced their potential mobility and (2) the degree of damage to them by life stage. Regarding (1), I also referred to this in another article (Ota, 2021a), but I do not discuss it here owing to data limitations. In this chapter, I focus on Question (2). As explained later, young, low-income IT-BPO workers in financial need could be more seriously affected by the COVID-19 pandemic.

Tejani and Fukuda-Parr (2021) suggest a framework to analyze how the COVID-19 pandemic presents gendered affection for workers in global value chains in garments, electronics, and IT-BPOs, all of which depend on a highly feminized workforce. This illustrates how the health and lockdown effects of the pandemic impact well-being in relation to gender: they consider that the economy encompasses both the productive and reproductive spheres. The study highlighted that the pandemic amplifies the existing vulnerabilities of women workers in the global value chains. According to them, the IT-BPO industry was primarily affected by supply disruptions, while it rose in demand.[11] IT-BPO workers faced a stark choice between risking infection in unhygienic working conditions[12] and losing their income. Moreover, the stringent lockdown made most workers unable to commute, thereby leading to furlough or temporary leave (Tejani & Fukuda-Parr, 2021, p. 658). Women in IT-BPOs were more likely to lose their income due to job losses caused by their unstable labor contracts, compared to males in the industry (BIEN, 2020; Tejani & Fukuda-Parr, 2021, p. 658). Thompson (2020), who reported in detail on the worsening situation of IT-BPO workers caused by the pandemic, speculated that female job losses in the industry plunged their families into poverty (Thompson, 2020).

However, further empirical research should still be conducted on the effects of the pandemic on female IT-BPO workers, emphasizing the difference of vulnerabilities among workers owing to their life-stages and intra-household relationships. I focus on their household contribution and responsibility in prepandemic/pandemic days. This allows me to explore how the crisis affected IT-BPO women differently, according to conditions that they had prior to the pandemic.

9.2.3 Gendered Burdens in Households and the Pandemic

Working women in low-income households are less economically autonomous compared with those in higher classes. For instance, in respect to domestic chores and family care, working women in middle- and upper-class households tend to employ domestic workers, while many of those in the low-income class are obliged to rely

[11] Garments were most severely affected mainly due to demand contraction in high-income economies, while electronics were affected not only by demand contraction, but also, and more seriously, by supply disruption (Tejani & Fukuda-Parr, 2021, p. 662).

[12] During the strict lockdown from March to May, the IT-BPO firms were allowed to continue operations under conditions outlined by the government (e.g. providing appropriate temporary accommodation to workers) (Parrocha, 2020, Ibañez, 2020).

on reciprocal networks and assign their kin to housework (Parreñas, 2001). Moreover, highly educated single women from low-income households might have to be more responsible for paying their family's expenses, especially for their siblings (cf. Medina, 2015), because they often earn a higher income than other family members. Sallaz's study on call center agents stressed the heavy responsibility of "*ate*," the elder daughter as a provider for the family, specifically for educational expenses for younger siblings (Sallaz, 2019). Moreover, such devotion is observed among highly educated female workers in an informal settlement in Manila (Ota, 2021b).

The COVID-19 pandemic has worsened the preexisting differences among women. In the Philippines, total employment declined by 19.1% from April 2019 to April 2020, while Accommodation and Food Service, Transportation and Storage, Wholesale and Retail, Construction, and Manufacturing underwent steep declines, ranging from over 20% to 36% (ILO, 2020, p. 30). The worsening condition in the labor market harmed low-income households since the sectors include low-income jobs.

The disadvantage assigned to educated female workers from low-income class would be intensified, considering the stagnant growth of the middle-income class and the affection by the pandemic. They have become increasingly responsible for their family's survival. To verify this assumption, this article focuses on six women who work or had worked in IT-BPO industry. I depict their career and life histories with paying attention to their life stage and responsibility in family.

9.3 The Burden and Autonomy of IT-BPO Workers

The interviews with the six women[13] were semi-structured, conducted in English and Tagalog, and undertaken via online web meeting service in February 2022. All respondents were introduced through the cooperation of a non-government organization, that supports underprivileged children and people in the Philippines, especially in field of education. I met two of the respondents(A, D) in person and interviewed them in 2016 and 2017 in Manila, which interview the organization had also coordinated. Both in person and online, the NGO worker attended the interviews as a Tagalog–English interpreter. After the online interviews, I followed them up with e-mails. The respondents had at least two years' experience in IT-BPOs, and two of them had worked in managerial and supervisorial positions in CRM. In this chapter, I provide a discussion that is primarily based on data from four women in non-managerial/supervisory positions as only these four women responded to the follow-up email by July 2022. In comparison to the respondents in Hori's research

[13] I considered the six respondents as IT-BPO workers or persons with experience in the industry in a broad sense, since five of them currently/previously worked in call centers for foreign customers/clients, while one of them (C) worked in a foreign-based multinational IT-service company. At the company, she worked in the recruitment process of IT professionals for their clients (IT companies) and was involved in the hiring of IT-BPO workers (Table 9.1).

(Chap. 6), these four interviewees were younger and had a lower position within their companies. Three of them worked or had worked in CRM, and the last worked as a recruiter in a foreign-based IT-service company (C). The research included one respondent who had eight years of experience in CRM and who transferred to another occupation prior to the pandemic (A). Her experience in early stage of her career in IT-BPOs may be considered an epitome of call center workers and their difficulties.

Three respondents were from Manila and its surrounding provinces except for one respondent (D), though their parents were likely to have their own provinces distanced from Manila. The occupations of the parents varied: carrier, security guard, driver/mechanic, parking attendant, factory worker, babysitter, and shop keeper (Table 9.1). Some of them were in informal and low-wage/low-remuneration job. On the other hand, two respondents answered that their parents had short-term experience working abroad (Table 9.1).

When examining life stories of the women in detail, their socioeconomic situation varied. Those apparently from low-income class were two (C and D), judging from their housing and parental occupation (Table 9.1), though all respondents had experience hustling and struggling to transcend their hardships. Many respondents commonly encountered economic difficulties, family problems, and entered in the IT-BPO sector. They were "struggling women" attempting to support their family members and upgrading their lives. Their income was required for their own or their siblings' education, basic family needs, and the support for other family members. In the interview in February 2022, all the four respondents recognized themselves as a breadwinner.

Of the four women, three attained their own house outside Manila by themselves, although such locations are not accessible to the urban center. However, during the final interviews in 2022, all respondents were engaged in the WFH setup as a consequence of the pandemic. The environment allowed them to work and stay at home with their family, since they do not need to travel for long hours as commuters in the notoriously congested traffic of Manila. Such additional time might add other responsibilities, such as reproductive work, and sideline jobs.

Specifically, the WFH seemed to emerge difficulties for working mothers. For example, some respondents answered the online interviews while doing child-rearing and domestic chore at home. For them, whether they can rely on someone to care for their children is significant, even in the WFH setup. B purchased her own house in Cavite while she was still single. However, at the time of the interview, she lived with her family and worked in a narrow studio-type room owned by kins of her husband in Manila. She did not have anyone to care for her son in the area, and moreover, her husband worked too far from Cavite. Consequently, her mother-in-law next door cared for her child, while she was required to pay monthly rent in addition to the repayment for her housing loan.

Both respondents in their mid-twenties lived in the informal settlements (Table 9.1). Living in the informal settlements is a popular way for low-income households in Manila to save money, though the areas generally lack proper basic utilities, land titles, and enough space for living. Such an environment was a serious obstacle for informal settlers, in terms of their lives and work during the pandemic, as shown

Table 9.1 Basic Characteristics of the female workers/former workers in the IT-BPOs

ID	Age	Occupation	University major	Monthly Salary	Sideline Job	Marital Status	Spouse's Occupation	Place of Residence	Dwelling Status	Cohabitants	Father's Occupation	Mother's Occupation	Hometown
A	35	High School Teacher (former jobs: Agent, Quality Assurance Analyst in CRM)	Journalism	27,500P (536 $)	Tutor	Married	Food Delivery Driver	Bulacan	Homeowner	Husband , Two Children, Mother-in-Law	Mechanic/Driver** (former-OFW)	Housewife	Bulacan
B	28	Quality Assurance Analyst in CRM	Information Technology (University 3rd Year)	44,000P (858$)	none	Married	Technician	City of Manila	Room Rent*	Husband , Child	Security Guard**	Babysitter (former-OFW)	Manila
C	24	Recruiter of IT Professionals	Human Resources	30,000P (585$) and commission	none	Single	–	Northern Manila	Informal Settlement*	Parents	Carrier	Factory Worker	Manila
D	25	Customer Care in the Debt Settlement Company (former job: Agent in CRM)	Hospitality Management	22,000P (429$)	Virtual Assistant in E-Commerce	Single	–	Rizal	Informal Settlement (Southern Manila), Lodging (Rizal)	Partner, Partner's Mother	Parking Attendant	Shopkeeper of a Small Variety Store**	Leyte

Source Author's research

Note (1) Regarding dwelling status, respondents with * had houses other than those they resided. See text for details

(2) As for parents' occupations, those with ** are jobs that they had in the past

(3) OFW: Overseas Filipino Worker

(4) 1$ = 51.2807 PHP (February, 2022) (Banko Sentral ng Pilipinas, n.d.)

(5) In the research, the term "university" is used to refer to universities and colleges

in case of D, whose family members were obliged to live apart from each other to alleviate health risks. Moreover, as explained later, this led them to lose their jobs.

As far as I can tell from the interviews, their role as a breadwinner seemed to be enhanced due to changes caused by the pandemic. However, the affection on the workers during the crisis varied according to their life stage and family relation, especially siblingship.

9.3.1 Working Student

When I initially interviewed D in March 2017, she studied in the 3rd grade of Hospitality Management (HM) in a university, while working at a Canadian-based call center company in Makati. The interview was conducted at her house, which she called a "barrack," near a restaurant district where her parents worked. At the time of the interview, only four months had passed since she had started working at the call center company in Makati.

According to D, she was raised by her grandmother in Leyte. In the province, their lives were supported by the remittance from D's parents working in Manila. When D was in the 1st grade in university, the Typhoon Yolanda (Haiyan) hit the town in which they lived. The area became so devastated that she incurred mental trauma. This incident influenced her mother's decision to bring D to Manila.

In 2017, she resided in southern Manila with her parents, two brothers, and cousins. She had four siblings: two working brothers in Manila and two younger sisters living with their grandmother in Leyte. D sent remittance to her grandmother from her own salary, while her parents supported their daughters in Leyte. Simultaneously, D earned her own educational expenses by working at the call center.

D was overworked. She worked five days a week and nine hours a day while she studied for 3–6 h in classes after her midnight shift. She hyperventilated in her pre-call center days when she worked in the restaurant district. It got worse after she started working at the call center.

In the Philippines, studying at a course associated with overseas employment is generally much more expensive (e.g. nursing, HM) (Ortiga, 2018). Moreover, D had to "go back to zero" at the university in Manila despite the fact that she had studied in Leyte. The curriculum in Manila was differed from the one she studied in the countryside. At that time, D hoped to work as a chef or a housekeeper of an international cruise ship following graduation, as many graduates from HM working as Overseas Filipino Workers.

B, working as a quality assurance analyst in a contact center, stopped studying in university due to an overload. The financial situation of her family was precarious. B's father was a security guard but stopped working when she was in elementary school. She explained that his reason for not working was due to remittances from a relative in the medical profession abroad and a house inherited from his family. On the other hand, her mother got laid off before B was promoted to high school. Consequently, their life depended on financial assistance from the relative. When her

eldest brother, a nursing student supported by the relative, was in his second year in university, her mother decided to apply as an overseas domestic helper. However, after several months, she returned home since the second brother got his girlfriend pregnant and left home to marry. The relative stopped the assistance at that occasion. B stated, "the end of that, we were jobless again." They did not have any living expenses at that time.

Consequently, B became a working student at 17 and earned her tuition fee and family expenses. She worked as a fast-food chain store staff member, then transferred to a job in a call center. Her eldest brother, who finished his nursing course but worked in the BPOs, advised her to enter the industry. When B was in university 2nd year, her parents separated due to her father's violence. B and her brother worked to "finance our everything." However, coping with both work and study exhausted her, and she dropped out when she finished her 3rd year in university.

When I interviewed B in February 2022, her mother worked as a babysitter in her relative's house. B constantly gave financial supports to her mother.

9.3.2 Sibling Relationship

Educational expenses are often a burden for both students and other family members such as siblings. When I initially interviewed A in 2016, she worked as a sales representative in a call center in Ortigas for 4 years.

> I graduated Bachelor of Journalism. As we know, *walang pera doon* (no money there). The reason why I landed with call center job because I had to support my family. I had two younger brother and sister. They needed to go to school. I thought it was the way to help. …… My mother and father help me thru my studies. That time, I thought that's best job for me I know, I could do it.

In addition to parental support, A received a scholarship from a non-profit organization managed and supported by foreigners. Only one person in a household could become a beneficiary of the program, so her other siblings were unable to be recipients. A was the second among her siblings and was required to help her younger siblings. Her younger sister was in a nursing course.

> ……nursing is really (costing) high. Like 40,000 (USD 867 in 2007)[14] per semester. I, actually, just graduated from (state university), (I) only pay 300 pesos (USD 5.53 in 2003) for the whole semester. I thought 40,000 was high for my mom to support, and my father is just a mechanic.

According to A, her father worked for the minimum wage, though he had experience working abroad in the Gulf region for 2–4 years. The nursing course in the Philippines was expensive and was also connected to overseas employment. A entered the BPOs to support her younger siblings' education.

[14] The following dollar amounts are estimated based on the Philippine Peso–US Dollar Rate of BSP (n.d.).

A was from Bulacan, one of the neighboring provinces to Manila. When she was a student, she was obliged to travel long distances to the university. When A started working, she moved to her uncle's house in eastern Manila with her younger brother. She needed to let him in the semi-private university, which was expensive, while assisting her mother with her younger sister's nursing schooling.

Other than A, D expended tuition fees for their younger siblings, and C intended to pay for the children of her elder siblings in the future. This tendency whereby elder sisters support the educational expenses of their younger siblings were observed in the initial stages of their career (A, D), especially in their twenties.

9.3.3 Beyond Hardships

A was the one who achieved her goal in a profession outside of the IT-BPO industry. At the first company A worked, she was a sales representative on the international account of vacation booking reservation for the US clients. However, she made a serious mistake and transferred to a local account for the customer service of a mobile phone company in the Philippines. However, the compensation in the local account was so low that she decided to move to another company in Quezon city. During she worked in the second company, A got married with her husband.

When I initially interviewed A in 2016, she lived in a house of her husband's family that was accessible but narrow in the city of Manila. A has a daughter, but the child lived with her mother in Bulacan at that time. The daughter incurred a serious injury due to an accident at home, during which A had left her with a babysitter. After that, A asked her mother to look after the child her in Bulacan.

A attempted to change her job by studying at a review center to pass the board exam for a high school teacher's license. When asked why she tried to attain the license, she discussed her feelings about working for eight years in call centers:

> You work again get salary after resigning in private company, you get nothing. I just realize. I have my own family, I have lack of time for my family, especially to my daughter.

Furthermore, the existence of family members who were professional, including the younger sister that she supported, urged her to reconsider her own career.

> Even my younger sister in nursing, she has a career teaching profession. Teacher has two months' vacation, while we don't have even in BPOs. *Walang ganoon* (There are no like that). Even holy week you still have to go working. (The author: Is the salary of BPOs good?) Yes. (The author: Compared with work as a teacher?) When it comes to monetary.....

In recent years, the compensation level of public school teachers has been improved. When I interviewed A again in February 2022, she had a baby and lived in a newly constructed house at her family compound in Bulacan. She resided there with her husband, daughter, son, and mother-in-law. There were her kinspersons in the neighborhood. A changed her occupation to teaching several years ago. The high school in which she worked was in Manila, but she taught students online. Her

husband had worked as a motorcycle (tricycle) driver prior to the pandemic, but he changed to a food delivery service app driver. During their work, her mother-in-law supported them with the child-rearing. A showed a high satisfaction with the current situation because she was able to balance domestic chores, child-care, her work, and relaxation time with her family. In the final interview, she explained her current life as the following:

> My situation is a lot better now. Off course, I used that (BPO) work in order to acquire skills and for me to become better version of myself…… because there was a lot of opportunities, a lot to learn, a lot of skill that you can acquire, especially for younger ones who just graduated from college. Because admittedly you cannot learn all of these skills in school, even if you go to college. …… Again, in the BPO industry, unlike nowadays, you couldn't work at home……. You really have to go to the office, make your way, I mean, go through a lot of traffic here and there, wake up early and then you have to go home, late at night. Even if you don't still have foods on the table, I mean, you haven't cooked. I mean you don't have the time to cook to prepare something for your family. That is the downside of being in the BPO. Especially before.

Therefore, she was afraid that classes would return to a face-to-face setup, since it takes approximately 3–4 h to reach her school in Manila by public transportation. They would be able to live in their former house in the city, but A preferred to living in her own house in the suburb. She was thinking of working as a teacher in Bulacan.

The WFH setup provides her spare time that she could use in staying with her family and for her own relaxation. However, the difficulties in care giving that A had encountered at home in her call center days can be explained not only by the extended commute in the prepandemic days but also the workload that the industry assigns to workers. Her experience is an example of how hard it is for women, especially those with children, to continue working in the call center industry.

9.3.4 Amid the Pandemic

A had settled on her work for years, while those in their twenties experienced job hopping exploring better conditions after the outbreak of the pandemic. Consequently, this was likely to impact their career. Two of them (B, D) clearly explained their reason to move as results of worsening working conditions in the call centers.

For example, D worked in an Australian-based company after her graduation but quit during the pandemic despite the good salary and morning shift. She was assigned to the financial account and the office setup due to security. However, she was scared of infection and transferred to a US-based company that offered her a WFH setup but a graveyard shift in June 2020. However, after several months, D moved to a US-based debt settlement service company because she became depressed due to the attitudes of customers that she encountered there. Likewise, B also changed her job since her working environment and relationship among co-workers reached a "toxic level" during the pandemic. C, in the recruitment of IT professionals, already had

experiences of two job shifts during the pandemic. She worked for four months in her current company.

The other potential determinant of the respondents' economic situation is whether their households had income resources other than theirs. Following the outbreak of COVID-19, the Philippines experienced a significant increase in unemployment and unpaid leave. For example, B's husband, who was a technician of credit card machine, was not paid because of his company's policy during the first lockdown that lasted for two and a half months. However, as far as I discerned from the interviews, the respondent who experienced the most serious influence by the pandemic was D.

The foundation for their lives in Manila was vulnerable, in terms of decent housing and stable and sufficient livelihoods. D is a first-generation urban migrant, and the lives of her family have circulated between the province and Manila. During the final interview, in February 2022, D was the only respondent who clearly stated that her circumstances worsened after the pandemic.

> My circumstances got harder because of the pandemic. Almost all of my family members don't have work during the pandemic. So, I have to support to them by myself. Really got harder.

D's family lived in the house in a residential quarter resided by workers in the restaurant district and their families. However, due to the pandemic, D and her family members were obliged to live separately. The residential space of their house is very narrow, so only her father left there since he retained his job as a parking attendant in the restaurant district.

> ……and then due to the pandemic, off course, the barrack is very small. Now I have two nephews, my mother decided to move to Cavite with my two sisters.

The environment was not ideal as residential space during the pandemic. Her two younger sisters, whose tuition fees D sponsored, had children. The elder was now preparing for the board exam for her teacher's license, while the youngest was still studying in the university. However, since the fathers of the babies could not afford to support them, D was required to support the life expenses of her two sisters, the babies, and her mother who quit working as a shopkeeper of a small variety shop at the district to care for her grandchildren. Her eldest brother was a store attendant, and the youngest brother worked as a truck helper in Manila, but both decided to return to their hometown, Leyte. They started working there at (or under) the minimum wage. D needed to support her grandmother living in Leyte with the two brothers.

D was in her mid-twenties and still establishing her career path. When she was employed by the US-based company in June 2020, D lived in her female partner's house and worked remotely from there. In February 2022, D was in WFH setup as a client's care specialist in the debt settlement service company, while living in the house of the partner. According to D, it was similar with her previous work in IT-BPOs, since she contacted their clients abroad via phone, text, or email. She worked the graveyard shift from 12 to 9 am, while she also sidelined as a virtual assistant in an e-commerce business for four hours a day and earned PHP 15,000 (USD 292.5) monthly. However, she intended to increase the amount of her work on the sideline.

D still wished to travel abroad for work, but she planned to start her own restaurant business at the wet market in the province together with her family. She believed that this could generate a livelihood for her family and subsequently facilitate the focus on herself.

C lived in an informal settlement located in the northern area of Manila. She worked as a technical recruiter of IT professionals in a WFH setup. The environment in her neighborhood was too lively for WFH, so her mother sometimes asked their neighbors to lower their voices during her working hours.

The company, which is a global service provider, partook in a recruitment process for their clients (IT companies).[15] She had five years of experience in IT recruitment. After graduation, C's career began with at a startup recruiting firm in an IT field, and all of the companies she has worked for were related to her university studies and her major in human resources. Her schooling was supported by a non-profit organization from high school to university.

According to C, she was the main breadwinner in her household, while her parents still worked: her mother was a regular factory worker in the food industry, while her father was a carrier. Her sister and brother were already married and had their own family, while C lived with her parents. During the strict lockdown, her parents were affected since they had no work for most time. They only waited for a call from their employers, but this was only when they needed manpower. They received government support, such as cash and foods/groceries.[16]

The informal settlement had experienced demolitions due to government infrastructure projects, so their residential status in the area was unstable. However, C purchased a house and a lot in Bulacan and would move there next year. The reason why she purchased the house was primarily for her parents (since C considered their retirement).

C was the youngest among her siblings, and the only university graduate in the family. She had not supported her siblings constantly, but she was willing to do so in case of need. She assumed that she would support the children of her siblings for their future tertiary education. As for her own future, C intended to pursue her career in recruitment and IT.

9.4 Conclusion

The growth of the IT-BPO industry has provided new economic opportunities for women in predicament. As for the four women in this article, each respondent experienced economic difficulties and struggled to improve their living conditions before or during the initial stages of their career in IT-BPOs. Many of the respondents faced

[15] However, C did not consider her job to be in IT-BPOs. See also 13.

[16] The Philippine government offered social assistance programs, including cash and non-cash assistance to low-income families, informal economy workers, and other vulnerable groups (ADB, 2020).

personal crises and began working in the industry, especially as a consequence of their own or their siblings' tertiary education expenses. As Sallaz (2019) illustrated, the traditional role of elder sisters as providers for their family, especially for their siblings, was observed among respondents to my research.

The direct impacts of the COVID-19 pandemic on workers in the IT-BPO industry were less commonly reported than those experienced by workers in other sectors. However, according to my research, the exacerbated situation of other earners (especially male) in their families as well as their own working conditions due to the pandemic could have increased IT-BPO women's economic role in the household. Their household responsibilities vary according to their life stage.

The two married respondents in their late twenties and above experienced the difficult stage in their early years, especially in relation to educational expenses of their own and siblings. They gained more family time in the WFH setup, while they seemed to struggle because of their role as family care providers as well as income earners.

Both respondents in their mid-twenties are single women from low-income households, but they seem to have experienced different degrees of harm. The difference is likely explicable by divergence in their economic responsibilities, sibling relationships, and possibly the subsector they worked for.

The burdens of educational expenditures that were common to respondents fall heavily on young IT-BPO workers, if they need to earn money for their own education and have dependents to support. Young female IT-BPO workers who are from underprivileged families are likely to be more vulnerable to the pandemic. While compensation for young workers is typically limited, they often must provide for their natal families. Moreover, as in the case of D, their vulnerabilities prior to the pandemic (e.g., congested dwelling environment) intertwiningly could increase health risks and decline in the well-being of those from low-income families.

Notwithstanding the expansion of the highly educated population and the increase in the occupational middle classes, the growth of the middle-income class in the Philippines remains modest compared with other developing countries (World Bank, 2020, p. ix). The pandemic has harmed the efforts of struggling young low-income women to achieve upward mobility through education and work (Ota, 2021a). This study has limitations in its research method: online interviews with a small number of respondents. Further research is still necessary to conclude and explore how the crisis has affected their future prospects and potential class mobility of IT-BPO workers and larger trends in middle-class populations in the Philippines.

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Chapter 10
Joint IT Development Strategies Between Nepal and Japan: Based on Japan-South Korea-Nepal Trilateral Cooperation

Tetsuro Saisho

10.1 Introduction

In the modern global information society, offshoring that involves the outsourcing of Japanese business overseas is becoming increasingly common. A typical offshored business is information system development; however, the practice is now found in a wide range of industries, such as the overseas transfer of manufacturing departments in the manufacturing industry, overseas parts procurement, and the establishment of overseas customer service call centers.

Today, offshore information system development, which is an outsourcing of information system development to overseas, is a general, non-specialized form of business, though it involves the consignment of business to an overseas third party or a company's overseas base.

On-site offshore development services are also attracting increasing attention. Engineers from overseas companies with outsourced operations are frequently dispatched to Japanese IT (Information Technology) companies, and in one business variant, such companies are themselves responsible for system development. In the Japanese IT business, there are, in addition, cases of offshore development involving international collaboration. In this case, foreign engineers who wish to work at a Japanese IT company are educated locally in Japanese and IT field.

When this education is completed, such engineers are hired by Japanese IT companies to develop their information systems, in a new business form variant. Offshore development through international collaboration is an offshore development model that has enabled the formation of a win–win relationship between Japan, which has a marked shortage of IT human resources, and developing countries that are trying to increase employment.

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In the Japanese IT industry, the IT human resource supply cannot keep up with the growth in demand, and it is becoming more difficult to secure IT human resources year by year. In contrast, in developing countries, where the domestic industry is not well developed, even domestic human resources that graduate from university often cannot find employment that calls for their specialized skills, such as in the IT field. Thus, the Japanese IT industry is actively utilizing overseas IT human resources through offshore development, in order to make up for the increasingly acute shortage of IT human resources.

From the early 2000s to the early 2010s, a considerable amount of research was conducted on Japanese offshore development, mainly targeting China. However, since then (as of 2020), the number of such studies has gradually decreased, with markedly few studies, either in English or Japanese, on on-site offshore development services, including nearshore development (outsourcing to local cities in Japan).

In Japan's IT industry, Asian countries are the main recipients (business target countries) of offshore development contracts. Currently, Japan's offshore development target countries are expanding, from the initial targets of China and India, to ASEAN (Association of Southeast Asian Nations)[1] countries such as Vietnam, Philippines, and Indonesia, and LDCs (Least Developed Countries)[2] such as Bangladesh and Nepal (Federal Democratic Republic of Nepal) (The ASEAN Secretariat, 2015a).

In this study, offshore development involving international cooperation is defined as a development method involving on-site service in offshore development outsourced to overseas, or offshore development utilizing foreigners. Nepal will be discussed as an example of a country targeted for offshore development involving international cooperation between Japan and LDCs.

Until now, most of the research on Nepal has focused on its culture, poverty, education, and social issues. There has been very little research, either in English or Japanese, on Nepal's industries, companies, or business models; and though there are a few recent studies on Japanese offshore development, the practice has been most active in Asia. In general, however, offshore development is a valuable research field, as the practice is utilized by many companies and continues to develop in various business forms.

The future development of offshore development in Nepal, then, is an instructive and useful business model for promoting IT industrial policy in the Asian region and among LDCs. Therefore, in this paper,[3] we will focus on offshore development involving trilateral cooperation between Japan, South Korea, and Nepal. South Korea is participating in international collaboration in Japanese employment education in Nepal.

Then, focusing on a recent field survey in Nepal,[4] we will consider the current state and issues involved in a new offshore development model that involves the active utilization of overseas IT human resources to make up for the shortage of such resources in Japan.

10.2 Overview of Nepal and IT Industry

Nepal borders India on the east, west, and south, and the Tibet Autonomous Region of China on the north. It is a long and narrow landlocked country running from northwest to southeast, and is primarily defined by the Himalayas, including the world's highest peak (Mt. Everest, in the Sagarmata Zone), the central hills, and the Tarai Plain in the south.

The area of Nepal, 147,181 km^2 (93th in the world), is about 40% that of Japan. It has a population of 28.7 million (2018) and population growth rate of 1.1% (2017). Though it is a multi-ethnic nation, 80% of its people follow the Hindu religion. Its capital and largest city is Kathmandu, with an area of 50.67 km^2 and a population of roughly 1.4 million (2020) (EJN, 2019).

Nepal's economy has a nominal GDP (Gross Domestic Product) of approximately USD 30.69 billion (102th/192 countries), a per capita GDP of approximately USD 1,078.56 (165th/191 countries), and a real GDP growth rate 7.05% (9th/192 countries). It is one of the LDCs (IMF, 2020; MOFA, 2020). The percentage GDP by industry in Nepal is 26.5% for agriculture and forestry, followed by 14.4% for wholesale, 11.5% for real estate, 7.8% for construction, and 7.2% for transportation.

The working population of Nepal by domestic industry is 64.0% for agriculture, forestry and fisheries, 7.0% for wholesale, 5.9% for manufacturing, and 5.7% for social services (public servants) (EJN, 2019). Nepal's main industry, in terms of GDP and working population, is agriculture and forestry, and the IT industry forms only a small part of the emerging industry sector.

The Nepalese government has listed IT and BPO (Business Process Outsourcing)[5] as one of five priority export service sectors in the 2010 NTIS (Nepal Trade Integration Strategy) (FNCCI, 2020). IT outsourcing (offshore development, nearshore development, etc.) in IT/BPO is also called ITS-BPO (Informational Technology Enable Services-Business Process Outsourcing) of Nepal.

Nepal provides BPO services for both domestic and international markets. In Nepal, the labor cost of IT engineers is very low compared[6] to IT-oriented countries such as India and China. In addition, though more than 100 languages are spoken in Nepal, the population is large enough to communicate in English, especially in urban areas, so the country can function as an outsource for offshore development from Western countries.

The Nepalese government is implementing an IT industry policy with emphasis on development of the IT industry, which is an environmentally friendly industrial sector; and the IT industry is growing (developing) rapidly because it is focusing on developing IT human resources who support the industry. Since 2010, Nepal's IT industry has seen high growth and investment, and is expected to show great profit potential in the future, eventually becoming one of the most important growth areas of the domestic economy.

In Nepal, Japan is promoting an IT industry policy modeled on that of neighboring India, aiming at development of the country through the establishment of IT training institutions and the development of IT parks. Overall, Nepal's IT industry is attracting

attention as a new offshore development contractor (business target country), to replace India, China, and other ASEANs, where labor costs are soaring. The country has developed dynamic economic activities and corporate behavior not found in Japan, and has shown a high GDP growth rate of 7.05% (2019), with a total GDP of USD 30.69 billion (2019) (IMF, 2020).

One of the engines of economic growth in Nepal is its commitment to the IT industry, but its IT industry has only a brief history. All private elementary school classes in Nepal are conducted in English, not in the national language, Nepal; and the percentage of English-speaking people is high, especially in the metropolitan and other urban areas. Since most private Nepalese companies (including IT companies) use English in business, Nepal has been selected as a target country for offshore development by Western companies.

However, because the progress of industrialization in Nepal is slow, the employment is largely limited to agriculture, forestry, and tourism, and many Nepalese go to work abroad. Therefore, even human resources graduating from university often cannot find employment as professionals; the overall unemployment rate in Nepal is 11.2% (2019), and the unemployment rate for those with advanced education is also very high at 8.46% (2017) (EJN, 2019; World Bank, 2020).

In other words, in Nepal, there are very few opportunities to work in the IT industry, even for those who receive higher education as IT engineers. For this reason, many Nepalese university students wish to work in the Japanese IT industry, in order to utilize the expertise they have learned at university or to access professional employment opportunities.

As a result, young Nepalese IT engineers are expected to improve their skills and careers by gaining practical experience as white-collar workers, instead of unskilled labor (migrant workers), in Japan; and when they later return to Nepal, they are expected to contribute to the economic development of their own country, based on their experience working in Japan.

Nepal established diplomatic relations with Japan in 1956. Since then, it has been one of the world's most pro-Japanese countries, and has established friendly and constructive relations through reciprocal activities such as tourism.

As of the end of October 2019, the number of foreign workers in Japan was 1,658,804, 198,341 more than at the same period of the previous year (for an increase of 13.6%) and a record high since the Japanese mandatory foreign worker notification policy was implemented in 2007. During the same period, the top three countries with the highest growth rates of foreign workers in Japan were Vietnam with a 26.7% increase (401,326 workers), Indonesia with a 23.4% increase (51,337 workers), and Nepal with a 12.5% increase (91,770 workers) (MHLW, 2020a).

As aforementioned, the number of Nepalese workers in Japan is growing rapidly; in fact, there are 10 times more now than there were 10 years ago. In Okinawa Prefecture, for example, the largest number of foreign workers are Nepalese, accounting for 25% of the foreign workers. And as of May 1, 2019, the number of Nepalese students in Japan was 26,308 (up 1977 from the previous year), the greatest number of international students after China and Vietnam (MEXT, 2020).

The friendly relationship between Japan and Nepal has now spread to the business side, with Nepal attracting Japanese attention as a target country for active offshore development.

10.3 The Japanese IT Industry and Offshore Development

The market size of the Japanese IT industry is expanding year by year due to the construction of new systems, the expansion of IT utilization in business, and the creation of new e-businesses. On the other hand, the shortage of IT human resources in Japan has become acute due to the aging of IT engineers, worsening working conditions, difficulties in passing on technology, and diversification and sophistication in technology acquisition (Saisho, 2021).

According to a survey by Japan's Ministry of Economy, Trade and Industry (METI), the supply of IT human resources in Japan peaked in 2019 and is now in a state of continual decline. The content of the survey, in 2020, the shortage in human resources in the information security field is expected to increase to just under 200,000, and the human resource shortage in the advanced IT field will increase to 48,000 (METI, 2016).

According to a survey by Mizuho Information Research Institute (consigned by METI), by 2018, there will be a supply–demand gap in IT human resources in Japan, and the human resource shortage will increase from 164,000 to 787,000 in 2030. It is expected to expand to (according to MIRI research report on an output gap of IT human resources 0.7%) (MIRI, 2019).

Unsurprisingly, then, the effective job openings-to-applicants ratio (excluding part-time positions) by occupation in Japan, as announced by the Ministry of Health, Labor and Welfare in October 2020, was 1.20 for information processing and communication engineers, compared to 0.97 for all occupations, suggesting a critical labor shortage in the IT field (MHLW, 2020b).

In the Japanese IT industry, then, the supply of IT human resources continues to be unable to keep up with the ever-growing demand, and it is becoming difficult to secure IT human resources year by year, with even greater shortages projected for the future. Thus, in recent years, in order to address this shortage, offshore development that actively utilizes overseas IT human resources in information system development has been promoted in Japan.

Japanese IT offshore development[7] can be roughly divided into three main business variants: (1) Basic Overseas Outsourcing for Information System Development, (2) On-Site Offshore Development Service by Dispatched Foreign Engineers (System Development at Customer Locations), and (3) Offshore Development by Involving International Cooperation, (4) Domestic Outsourcing for Information System Development, depending on the respective IT engineer human resource management method (Table 10.1) (Hirakawa, 2017; JETRO, 2008).

This table is created with vertically direction of "Engineers Resources" and horizontally direction of "Outsourcing System Development". Engineers Resources can

Table 10.1 Classification of offshore development in it outsourcing and resources

		Outsourcing system development	
		Domestic type outsourcing business	Overseas type outsourcing business
Engineers resources	Internal engineers	(4) Domestic outsourcing for information system development	(1) Basic overseas outsourcing for information system development
	External engineers	(2) On-Site offshore development service by dispatched foreign engineers	(3) Offshore development service by involving international cooperation

Source This table was created from JETRO (2008), "*India Offshoring-Expanding Collaboration with the United States of America*", and Hirakawa (2017), Global ICT-Based Services Offshoring and Asia, "*Innovative ICT In-dustrial Architecture in East Asia*", of Created

be classified into "Internal Engineers" and "External Engineers". Also, Outsourcing System Development can be classified into "Domestic Type Outsourcing Business" and "Overseas Type Outsourcing Business".

(1) Basic offshore development is a business variant in which system development is simply outsourced overseas (domestic type outsourcing service), with foreign IT engineers (foreign IT human resources)[8] being contracted and system development performed locally. The main strengths of this variant are cost reduction and comparatively easy human resource access; the main weakness is the need for bridge SEs (bridge System Engineers),[9] to ensure effective communication regarding requirements, progress, etc.

(2) On-Site offshore development service involves foreign IT engineers (foreign IT human resources) being invited to Japan and dispatched to customers for system development. The main strengths of this variant are that important information is kept within the company, and the work can be monitored, informed, and improved by the dispatching company; the main weaknesses are that the dispatched staff handles the assigned work of the company, so the business know-how is accumulated by non-company staff, and again there are communicational challenges.

(3) In offshore development involving international cooperation, foreign IT engineers (foreign IT human resources) actually join Japanese IT companies and perform system development at the companies. The main strengths of this variant are that it is possible to hire human resources with high Japanese proficiency, it is easier to manage the progress of work by hiring in Japan, and there are few or no problems in communicating with the client regarding the system development. The main weaknesses are the time and cost required for hiring, and the relocation expenses, such as the application fee for residence status (visa), airline tickets, and housing (including hotel stay).

(4) In system development involving Japanese cooperation, Japanese IT Engineers (Japanese IT human resources) actually join Japanese IT companies and perform system development at the companies. Also, this system development is also called near-shore development. This system development is also called near-shore development. The near-shore development is the outsourcing of system development work, in part or in whole, to companies in relatively close distances, such as "outsourcing to local companies" or "outsourcing to nearby companies or business establishments".

Japanese offshore development has thus far been primarily aimed at cost reductions related to overseas (mainly Asian) labor costs, which are generally lower than in Japan. Recently, however, not only cost reduction but high-quality human resource access has been targeted by the practice, due to the aforementioned IT labor shortage in Japan.

Japanese offshore development began with China and India, and then spread to a number of ASEAN countries such as Vietnam and the Philippines, with the recent addition of LDCs such as Bangladesh and Nepal (Saisho, 2021).

It is expected that the shortage of IT human resources in Japan will continue, and not be easily resolved. Thus, the Japanese IT industry is actively utilizing overseas IT human resources, in offshore system development for example, to address this shortage.

The offshore system development involving international collaboration typically also involves industry-academia-government collaboration, industry-academia collaboration, industry-industry collaboration, etc., between Japan and other countries. In this business variant, a foreign IT engineer who wishes to work for a Japanese IT company will come to Japan, work as an employee of the Japanese company, and take charge of system development.

In the case of offshore development involving international cooperation between Japan and the LDCs, Nepal and Bangladesh participate based on two different but related models. International cooperation with Bangladesh is based on a simple, two-country model involving Japan and Bangladesh; whereas, international cooperation with Nepal is based not merely on this simpler model, but also on a more complex model involving the three countries of Japan, South Korea, and Nepal (RSIS, 2019).

With its more complex profile, Nepal, will here be considered as an example of a target country for offshore development involving international cooperation between Japan and the LDCs.

10.4 A New Business Model for Offshore Development

While the shortage of IT human resources in Japan continues, Japan, South Korea, and Nepal are building a new business model (foreign IT human resources development project)[10] for trilateral cooperation (International industry-academia collaboration) in offshore development.[11] The model consists of (1) Company A in Japan,[12] (2)

Yeungjin College in South Korea, and (3) Tribhuvan University, (4) Kathmandu University, and (5) Mid-Valley International College (MVIC) in Nepal.

In this new business model (foreign IT human resources development project), Japanese government-affiliated organizations such as JICA do not provide financial support such as subsidies. However, in South Korea, there is indirect financial support from the government for this project. Specifically, it has provided financial support of 185 billion won in the last 10 years to 126 universities (including Yeungjin University) in South Korea that provide tailor-made type education systems.

The tailor-made type education system for this project is the first practical education system created at Yeungjin University in Daegu Metropolitan City, South Korea in 1994 (Yeungjin University, 2021). In this tailor-made type education system, we receive orders from companies for the educational content (curriculum) and the number of employees hired, and train professional engineers accordingly.

The tailor-made type education system is a business model that does not involve Japan, South Korea, and Nepal government agencies completely, and has been introduced in many universities in Korea since 1994. Therefore, the specific number of hours of education in the advanced IT human resources Japan employment program at three universities (Tribhuvan University, Kathmandu University, MVIC) in Nepal varies depending on the curriculum of the tailor-made type education system.

(1) Company A in Japan was established in November 2007 to develop cross-border human resource business matching, and has branch offices in three countries: China, Vietnam, and Myanmar. Company A business is centered on global recruitment and worker dispatch. Its primary developmental focuses are global recruitment, to acquire excellent human resources for companies; student recruitment and employment support services, for educational institutions seeking to internationalize and receive foreign students; and solving social problems and revitalizing the Japanese economy by welcoming and introducing foreign human resources to Japan, for regional governments and local governments.

The core competence of Company A is the provision of a global online platform, using an in-house developed database (DB), which connects human resources and companies around the world based on artificial intelligence (AI) matching. The DB is used to match the respective criteria desired by recruitment candidates (applicants) and companies, and thereby automatically determine the most suitable matches between human resources and companies.

Such AI matching connects human resources and companies across national borders in a form of borderless recruiting, and offers a form of direct recruiting (via the online platform) for foreign job seekers who want to work in Japan and companies who want to hire highly qualified foreign nationals.

Since its founding in November 2007, Company A in Japan has been supporting the recruitment of companies by developing businesses specializing in foreign human resources. Company A is building a human resources database that combines the vast knowledge and achievements of recruitment support projects, as well as quantitative and qualitative data collected from around the world.

In the human resources database (DB), we are developing online and offline recruitment support for companies worldwide (including Japan) by optimally matching companies and human resources using Company A unique method.

In this way, Company A is developing a cross-border global recruitment support business that connects companies and human resources around the world. In addition, we are entrusted with projects from ministries and local governments to solve the chronic labor shortage in Japan.

Company A also cooperates with Japanese government agencies to provide employment support for young human resources in developing countries. In the past projects, we are building a win–win relationship by welcoming human resources from countries with insufficient employment (LDCs) to Japan (developed countries) where there is a serious shortage of human resources.

Company A has the following four main businesses.

(a) Foreign human resources recruitment support and human resources development business for the world.
(b) SaaS (Software as a Service) type direct recruiting service business.
(c) Human resources policy surveys, human resources policy recommendations and public works projects around the world.
(d) Various related businesses that make full use of the human resources database business.

(a) Currently, there are few excellent foreign human resources who can communicate smoothly in Japanese. Company A is developing Japanese language, culture, vocational training, etc. in each country in order to develop foreign human resources who can play an active role and become established in Japan. Company A is expanding the population to be hired by first selecting excellent human resources and conducting Japanese language education and vocational training in foreign countries.

In addition, Company A provides training necessary (Japanese, culture, Japanese-style business, business know-how, etc.) for employment in Japan to foreign human resources (including LDCs) who have expertise centered on IT, and also provides opportunities for employment in Japan.

(b) Company A holds events (direct recruiting, etc.) such as joint company information sessions and human resources selection meetings in Japan and overseas as a worldwide human resources acquisition support project. The SaaS type direct recruiting supports global recruitment across national borders.

In addition, Company A proposes hiring methods that meet the hiring needs of each company, based on all kinds of information such as business customs and culture of each country, educational circumstances, and employment trends.

(c) Company A provides not only private companies but also government agencies to support the acceptance and retention of foreign human resources from Japan and abroad.

Company A has an in-house think tank, "Next Generation Foreign Human Resources Acceptance Research Institute". This think tank collects and analyzes information from all over the world in Japan and abroad, and makes use of its abundant track record and knowledge of foreign recruitment support, boasting a track record of top-level government projects in Japan.

In addition, Company A is supporting the matching of foreign human resources with local companies in cooperation with central ministries and local governments to solve the shortage of human resources in Japan.

(d) Company A is building an online platform that connects companies and human resources around the world with AI matching. Online platforms allow businesses and human resources to connect directly online. Also, In Company A, companies and human resources can match the conditions they desire and automatically match the optimal companies and human resources around the world.

As of November 2021, the database developed by Company A contains 186 countries and regions around the world and a cumulative total of approximately 400,000 highly-skilled human resources (including professional personnel). Note that, the online platform has a transaction record of more than 400 companies, mainly major global companies and IT companies in Japan.

(2) Yeungjin University in South Korea provides bachelor's degree certification education (equivalent to that of Japanese junior colleges), sanctioned by the South Korean Ministry of Education (Yeungjin University, 2021).

Yeungjin University's mission is to train mid-career professionals who will form part of an efficient supply and demand balance of professional engineers in South Korea as an industrial society, responding effectively to the rapidly increasing sophistication of technical personnel.

In 1994, the university established its own tailor-made type education system of on-demand training (foreign IT human resources development project), South Korea's first business-oriented education system based on the educational requirements of companies. The system accepts advance orders for specific educational content and objectives, such as curriculum and requisite employee numbers, and provides training for specialized engineers that meet the needs of specific companies.

In this project, we will accept in advance individual orders (individual requests) such as necessary human resources of companies expanding overseas (including Japanese companies) and educational contents. It is a global innovation model of tailor-made education that promotes overseas employment of overseas students and domestic students through the management of a curriculum that is a characterized industry-academia collaboration.

As of August 2017, we have signed international collaboration tailor-made type education system agreements with 164 businesses in 12 overseas countries, and have ordered a total of 1536 tailor-made type education system (Yeungjin University, 2021) (Table 10.2).

(3) Established in 1959, Tribhuvan University was the first institute of higher education in Nepal, and is now the largest national university in the country (Tribhuvan University, 2021).

Tribhuvan University's mission is to develop the human resources needed for the overall development of Nepal, and to provide standardized higher education, preserving the culture and traditions of Nepal, and pursuing the wide-ranging, empirical, and timely acquisition of knowledge and research in the fields of art, science, technology, and the professions (Table 10.2).

Tribhuvan University contributes to the development and modernization of Nepal, the development of human resources, and the development of Nepal's society, culture, and economy.

Table 10.2 Number of participants at Yeungjin University into international-associated typed education

Country	Main contracted company	Regular course	University/Junior college	International student	Total
Japan	Partnership with OSP, Japan Tourism Corporation (Current JTC), Glocal etc	384	120	122	626
Korea	Samsung, LG, LS Group, SK Hynix etc	25	–	715	740
Russia	Orion Intemational Euro	–	–	1	1
USA	Holiday Resort & Spa Guam etc	20	–	–	20
Slovakia	Shinheung Precision, Dongwon Metal Co., Ltd etc	–	–	55	55
Vietnam	Samsung electronics	–	–	40	40
Others	Aioz New Zealand, Dubai Grand Hyatt Hotel, Union of Korean Industries of Taiwan, The Grace Sydney Hotel etc	15	120	9	24
Total		464	120	952	1536

Source Created by the author from the website of Yeungjin University (2021)

(4) Kathmandu University, founded in 1991, is Nepal's second national university and boasts seven faculties: the School of Arts (SoA), School of Education (SoEd), School of Engineering (SoE), School of Law (SoL), School of Management (SoM), School of Medical Sciences (SoMs), and School of Science (SoS); as well as the Confucius Institute, the KU (Kathmandu University) Technical Training Center (KUTTC), and a number of Affiliated Colleges (Kathmandu University, 2021).

Kathmandu University's mission of the university is to provide quality education for leadership, with the aim of becoming a world-class university dedicated to bringing advanced knowledge and technology to human services, serving the people by utilizing knowledge and skills to meet the needs of society.

(5) MVIC was established in 2011, and has two faculties, respectively offering a Bachelor of Business Hospitality Management (BBHM) and a Bachelor of Business Finance (BBF); as well as vocational and technical institutions (the Council for Technical Education and Vocational Training (CTEVT) and the Euro Skills Technical & Vocational Academy (ETVA)), an International Masters Degree Program, and an Internship Program (MVIC, 2021).

MVIC's mission is to provide a first-class education based on knowledge, skills, and professionalism, leading to the obtainment of an internationally recognized degree. Its aim is to provide advanced human resources to meet the needs of business and industry, equipping its students with valuable knowledge and skills, and contributing to the economic development of Nepal.

10.5 Mechanism of New IT Human Resources Employment Business Model

The three-country collaboration model involving Japan, South Korea, and Nepal is the provision of the advanced IT human resources Japan employment program (hereinafter, the Japan employment program),[13] which promotes IT human resource development and employment for Nepalese universities (Newsweekjapan, 2019). The Japan employment program also provides Japanese language and practical IT lessons necessary for Nepalese graduates to work in Japan, offers employment security after graduation, and contributes to filling the shortage of IT human resources in Japan.

In the Japan employment program, based on the Japan-South Korea-Nepal trilateral cooperation model (new business model), advanced IT human resources, who will work in Japan in the future, are trained at the top-class three universities in Nepal. Yeungjin University in South Korea and Nepal's top-class three universities, which latter lead the world in the number of graduates employed by Japanese companies, are jointly offering a Japanese employment program known as the "Japanese scholarship course based on the trilateral cooperation model".

For tailor-made type education system programs offered at three universities in Nepal, Yeungjin University is in charge of student selection, educational content, and class time organization. Note that, this project, data such as the number of applicants, the number of students, and the number of dispatched persons (number of employees) to Japanese companies have not been finalized due to the influence of the COVID-19.

The Japan employment program provides a business matching service on a global online platform, for highly-skilled Nepalese IT human resources who wish to work in Japan and Japanese companies with a shortage of IT human resources (IT Human Resources Lab, 2019). The selection process for the Japan employment program is entirely managed by the global online platform. In addition, unlike conventional performance-based recruitment services, the global online platform has a fixed monthly service usage fee, so the more hires a company makes, the lower the hiring cost per person.

Company A provides a Japan employment program for Nepalese students who have passed the company entrance selection test at one of the top-class three universities in Nepal. Nepalese students are granted a scholarship if they have received a job offer from a Japanese company, but students who do not receive such an offer can also enter the program. The program includes a two-year "Japanese language scholarship course based on the three-country collaboration model".

The Japan employment program meets the unique educational needs of companies in Japan. It uses the education curriculum of Yeungjin University in South Korea, which has the highest number of employments receiving custom-made education in Japanese companies (tailor-made type classes provided by Japanese companies).

The Japan, South Korea, and Nepal cooperate in offshore development through this program, Selection of Nepalese students, granting a job offer to Japanese companies, and after graduating from universities, get a job at a Japan companies, to create advanced IT human resources to work in Japan (Fig. 10.1) (Saisho, 2020).

At the top IT universities in Nepal, computer science education (2 years) and Japanese language education (1200 h: 2 years) will be implemented as part of the Japan employment program (standard education time). In addition, the Program will carry out early selection and training of Nepalese university students, to secure advanced IT human resources who understand Japanese and business. Then, the students of the Program will be educated in Japanese business etiquette, in addition to Japanese, in preparation for full-time employment at Japanese IT companies after graduation from university.

The tailor-made type education system for this project is the first practical education system created at Yeungjin University in Daegu Metropolitan City, South Korea in 1994 (Yeungjin University, 2021). In this tailor-made type education system, we receive orders from companies for the educational content (curriculum) and the number of employees hired, and train professional engineers accordingly.

The tailor-made type education system is a business model that does not involve Japan, South Korea, and Nepal government agencies completely, and has been introduced in many universities in Korea since 1994. Therefore, the specific number of hours of education in the advanced IT human resources Japan employment program

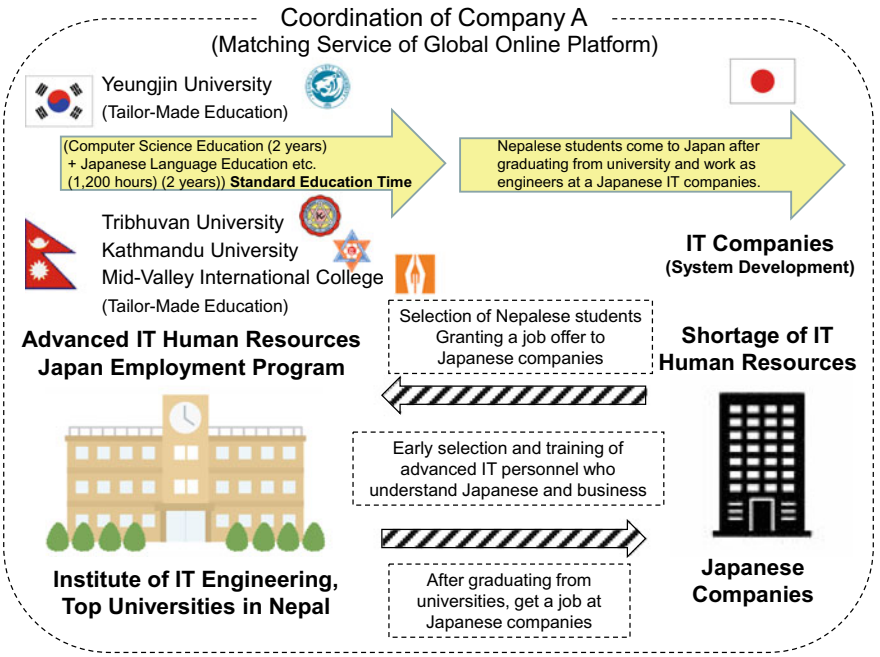

Fig. 10.1 System Development through Trilateral Collaboration. *Source* This figure was created by Saisho (2020), A study on the current state and issues of offshore development involving international collaboration with Japan

at universities in Nepal varies depending on the curriculum of the tailor-made type education system.

In addition, students of this project (new business model) will receive the education necessary for employment in Japan, such as training tailored to the unique educational needs of the hiring company; for example, training of specialized IT engineers in various fields such as mainframe, mobile, network, website, database, package, game, e-commerce, fund settlement, etc., development.

The impact of COVID-19 is also occurring for IT companies. This project (new business model) has also been affected by COVID-19. In Japan, due to the influence of COVID-19, it is not possible to issue new visas or enter Japan for foreign human resources (including IT human resources).

Currently, plans beyond the end of 2020 are undecided, informal job offers by Japanese IT companies that were made before the COVID-19 pandemic may be canceled. Although corporate performance is declining even in IT companies, due to a shortage of IT human resources, companies must resume recruiting activities by making the best possible response to the COVID-19 pandemic.

10.6 Conclusion

Based on the Japan-South Korea-Nepal trilateral cooperation model (new business model), the Japan Employment Program is a business model that develops advanced IT human resources in Nepal who will work in Japan in the future. The model enables a win–win relationship that benefits the three parties: Japan, which is in need of IT human resources; South Korea, which wants to provide its own education system; and Nepal's IT engineers (IT human resources in LDCs) who want to work in Japan.

However, at present the model does not depend on industry-academia-government collaboration, in which the 'public' (government) participates in industry-academia collaboration. On the one hand, in South Korea there is indirectly national financial support for universities.

Note that, in this project (new business model), Japanese government-affiliated organizations such as JICA do not provide financial support such as subsidies. However, the Korean government has provided 185 billion won (KRW) in financial support to 126 universities in South Korea (including Yeungjin University) that provide tailor-made type education in the last 10 years (Yeungjin University, 2021).

In other cases of Japanese international cooperation, the resources are provided by the government, JICA (the Japan International Cooperation Agency),[14] and/or local governments, facilitating stable implementation and operation. For stable operation of the Japan Employment Program model, on the other hand, it is necessary to access resources other than private companies and universities.

This project (new business model) is an international industry-academia collaboration based on a win–win relationship between Japan, South Korea, and Nepal with respect to IT human resources. The model is attracting attention in the IT industry as a new business model for human resource management in information system development in response to the shortage of IT human resources in Japan.

Further, in Japan, even in the same industry, there are business rules for each individual IT company, with no unified industry rules (coding rules, etc.). Therefore, even if Nepalese IT engineers receive company-focused education, it may take time for them to get used to the Japanese IT companies' protocols, and thus may not be ready for immediate responsibility. In addition, when Nepalese nationals work in Japan (excluding on-site system development), the salary system is the same as for Japanese workers, so no significant cost reduction can be expected.

In general, for all its international strengths, the Japan Employment Program model must be informed by a thorough understanding of system development in Japan, not in Nepal.

Currently, the coronavirus pandemic exerts a great influence on the model's functionality as well. For example, though not limited to those participating in the model program, the Japanese government has stopped issuing new work visas; so that, even if Japanese IT companies offer employment to advanced IT personnel in Nepal, such personnel cannot come to Japan, and companies cannot resume related recruiting activities until there is a real prospect of them being able to do so.

As aforementioned, Nepal is a multi-ethnic country with many religions, but more than 80% of its population follows the Hindu religion; and while the caste system was officially abolished in 1962, remnants of the system remain.

Therefore, it is necessary for the model to be take into consideration the religion, culture, dietary habits, etc., of the Nepalese. Offshore development involving international cooperation among the three countries has just begun; the results of future efforts will determine the success or failure of such business models in LDCs.

Notes

1. ASEAN is a regional cooperation organization to which 10 countries in the Southeast Asian region belong. ASEAN was established in August 1967 under the Bangkok Declaration with the aim of promoting regional peace and stability and economic growth. The initial member countries of ASEAN are Indonesia, Malaysia, the Philippines, Singapore and Thailand. Since then, Brunei, Vietnam, Laos, Myanmar and Cambodia have joined in sequence. For details on About ASEAN, refer to the ASEAN website (ASEAN, 2021).
2. LDCs are particularly underdeveloped countries that have been approved by a resolution of the United Nations General Assembly after being deliberated by the ECOSOC (United Nations Economic and Social Council) based on the standards approved by the CDP (United Nations Committee for Development Policy). The LDC list is reviewed once every three years. On November 24, 2021, at the 76th United Nations General Assembly, three Asian countries, Bangladesh, Laos, and Nepal, adopted a resolution to graduate from LDC, and on November 24, 2026, the prospect of graduating from LDC was decided.
3. This paper has been significantly revised, partly based on the author's "A Study on the Current State and Issues of Offshore Development Involving International Collaboration with Japan (JCSOS)" (Saisho, 2020).
4. Participated in the 14th IFEAMA International Conference held in Nepal, March 29, 2017 (Thursday); visited R&D Bridge Kathmandu Pvt. Ltd. and Tribhuvan University, Institute of Engineering in Kathmandu; and conducted interview surveys.
5. BPO means that a company outsources (all or partial) business processes, other than core business, to an external specialist. In the IT industry, BPO is being actively utilized because there is no need for new capital investment when outsourcing.
6. As of 2020, the monthly wages in Asia were about 70,000 yen for mid-level engineers in China, about 50,000 yen for mid-level IT engineers in India and IT engineers in Vietnam and Myanmar, about 40,000 yen for IT engineers in Cambodia, and about 30,000 yen for IT engineers in Nepal.
7. In the past study, Offshore development can be roughly divided into five forms: (1) Bridge offshoring, (2) Deformed bridge offshoring, (3) Direct offshoring, (4) Deformed direct offshoring, and (5) Global offshoring, based on to the outsourced form of system development (Saisho, 2014).
8. IT engineers include project leaders, project managers, system auditors, system analysts etc.
9. A Bridge SE (Bridge System Engineer) is a system engineer who is familiar with not only IT skills but also bilateral business customs such as language and culture (for example, Japan and China, Japan and India, etc.), and is thereby well-equipped to instruct foreigners in IT system development.
10. Various companies have started programs to train and hire Nepalese IT human resources who want to work in Japan in the future (Newsweekjapan, 2019).
11. Bangladesh, the same LDC as Nepal, is building a new business model for bilateral cooperation (International industry-government-academia collaboration) in offshore development between Japan and Bangladesh (Saisho, 2021).

12. Company A is engaged in (1) recruitment, acceptance, and retention support for human resources from all over the world, (2) technical test management for IT engineers, (3) cross-border human resource business matching (via its platform), (4) online and overseas Japanese language education, (5) servicing government offices and local governments, (6) study abroad support, (7) global marketing research, etc.
13. In addition to its focus on the IT industry, there is also a Japanese Employment Program variant for the food and beverage service industry (Kitakata Ramen) in Nepal (PR TIMES, 2020).
14. JICA (Japan International Cooperation Agency) provides international cooperation to developing countries as an implementing agency that centrally implements Japan's ODA (Official Development Assistance). For details on About JICA, refer to the JICA website (JICA, 2021).

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