



A Study of EMNEs Serving the Base of the Pyramid in South Asia:

Innovative Products from EMNEs

By

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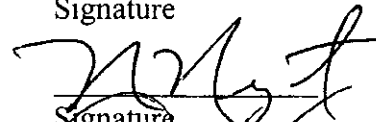
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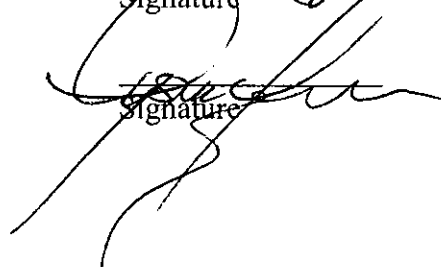
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ABSTRACT

The study explores that emerging market multinational enterprises (EMNEs) are serving the base of the pyramid (BOP) in their home market and beyond. EMNEs are growingly recognizing the benefits of serving BOP consumers in other markets, which are not dissimilar to their home market. Appropriate innovations from EMNEs are instrumental in serving BOP consumers in their home market and other similar markets. The study draws upon multiple theories in the areas of innovation, BOP, and internationalization. The study primarily uses a conceptual framework, case studies of Indian EMNEs along with a descriptive statistics model that applies data from the survey performed in South Asia. This study analyzes the trade interaction of EMNEs and product demand of BOP consumers. The theory of product innovation applied to EMNEs points to market similarities, including product affordability, product quality, and product usefulness, among others, as the driving forces of demand for these markets. EMNEs' products features, targeted towards BOP market are well suited to the demand of the BOP consumers. The findings suggest that EMNEs are largely serving the BOP consumers in their home market and similar markets abroad compared to MNEs from the developed economies. The findings from the research indicate that BOP product elements are directly associated with the consumers' acceptability of innovative BOP products. The data collected from the field survey strongly supports the findings that the BOP product elements (affordability, multipurpose, simplicity, and usefulness) are important factors in building innovative products to serve the consumer segment. The findings from the research also contribute to the BOP product study by providing insights of innovative BOP product strategies that firms need to implement in serving BOP consumers.

Keywords: BOP, Disruptive innovation, Frugal Innovation, Internationalization, EMs, EMNEs & Innovative Product Framework

1 INTRODUCTION

During the most of the 20th century, the majority of internationalization of MNEs originated from the developed economies. Moreover, the larger share of foreign direct investment (FDI) inflows and outflows recipients were developed economies. The OECD (2002) report presents that mostly in the past and even in the year 2002 the total world inflows of FDI reached 1.3 trillion US dollars with more than 80% of the inflow recipients located in developed countries. Over the same time period more than 90% of the initiators of the outflows, were located in “developed economies”. The trend has changed in recent years, not only did inward FDI flows to developing economies substantially grow, but UNCTAD (2014) also reports that developing economies inward FDI flows reached \$681 billion, which presents that developing economies expanded their lead in inward FDI flows. The inward FDI into developing economies has reached a new height.

The growing participation of EMNEs in the internationalization process not only focuses on developed economies but also towards emerging and developing economies. Gammeltoft (2008) suggests that during the past two decades the internationalization of firms from emerging markets has been quantitatively and qualitatively unlike from the previous phases; the internationalization of firms not only become more diversified in terms of destinations and international acquisitions mode but also firms in the service sectors clearly emerged and asset-seeking investments became more and more important. In their internationalization process, the EMNEs are growingly recognizing the benefit of serving the BOP segment not only in their home market but also in other similar markets, while Western MNEs are struggling to turn the BOP segment into value-segment consumers. Simanis (2009) informs that four billion people in

the world live in poverty, and Western companies are finding hard to turn the poor into customers. Large MNEs that are serving BOP consumers have been inconsistent, only a few key MNEs, such as Unilever and GE are demonstrating a high level of commitment to serve the BOP segment due to the firms' innovations. Explaining the challenges faced by MNEs that are operating in emerging markets, Khan (2005) states that MNEs operating in emerging markets have good chances to establish, grow, and sustain since emerging markets are getting stronger and better year after year, yet, the author cautions that MNEs should not forget that these markets are highly unpredictable, unstable, and less profitable.

When a firm from an emerging market builds a product for its home country's BOP consumers, the firm takes into account several important factors, such as local culture, income, infrastructure (hard and soft), environment, BOP consumers' needs and demands, and others. Doing so allows the firm to be better equipped in dealing with institutional voids in emerging and developing markets. In explaining the EM's conditions, Khanna & Palepu (2006) connote that firms have to operate with unreliable power, congested ports and roads, corrupt bureaucracies, political and regulatory uncertainties, weak educational institutions, and a range of other "institutional voids." Ramamurti & Singh (2009) explain EMNEs' ability to function effectively in the difficult conditions of emerging markets, where both the 'hard' and 'soft' infrastructures were underdeveloped, allow EMNEs to enjoy an advantage relative to foreign firms. This shows us that as EMNEs build their ability to serve the BOP consumers in their home market dealing with existing hard and soft infrastructures, and uncertainties, they are also capable of achieving success in their expansion into foreign markets, particularly the markets with similar structures as the EMNEs' home market.

Examining the BOP population's economic condition since the industrial revolution, there have been enormous improvements in the economic condition and social well-being of a large number of the global population. Roser & Ortiz-Ospina.(2017) share the vast majority of people were living in extreme poverty in 1820, yet, the progress in the economic growth over the last 200 years brought higher incomes to a large number of people, with poverty falling continuously. Economic growth worldwide in the last couple hundred years has been vital in the transformation of our global economy, resulting in the reduction of poverty. The Economist (2013a) mentions Harry Truman's inaugural speech, "more than half the people in the world are living in conditions approaching misery. For the first time in history, humanity possesses the knowledge and skill to relieve the suffering of those people". In the last few decades, over one billion people in extreme poverty worldwide from emerging and developing economies were uplifted in the economic ladder. Suggesting that the global poverty reduction took much longer than Truman had hoped, the Economist (2013) states that between 1990 and 2010, numbers of poor fell by half in developing countries, from 43% to 21%—a reduction of almost 1 billion people. The United Nations' Millennium Development Goals Report (2015) informs that the poverty rate in the developing regions has plummeted more than two-thirds, from 47 percent in 1990 to 14 percent in 2015. Even though it looks promising that global poverty would reduce in the decades ahead, the BOP population will remain a majority of the global population for the foreseeable future. Based on World Bank projections, Prahalad & Hart (2002) state that the BOP population could swell to more than 6 billion people over the next 40 years, as a majority of the world's population growth could occur in the BOP economic tier.

BOP consumers' individual income is minimal in comparison to the consumers in the middle and upper tiers of the economic pyramid. However, that doesn't mean that they do not have spending

power or their demand for their goods and services is minimal. In fact, Prahalad (2002) puts a figure of BOP consumers' aggregate demand close to \$5 trillion. Firms need to serve the consumers' products that meet their needs at an affordable price. Despite the enormous poverty in the BOP market, studies suggest that BOP consumers' accumulated income is more than five trillion a year. The market that remains largely untapped by MNEs from developed markets. Prahalad & Hart (2002) study on the international market expansion of MNEs, the authors find that the MNEs are discouraged from entering the largest BOP market. In this regard, Tasavori et al. (2014) study in context to India state that the large BOP market has been traditionally ignored by the Western MNEs due to the dominant poverty in India.

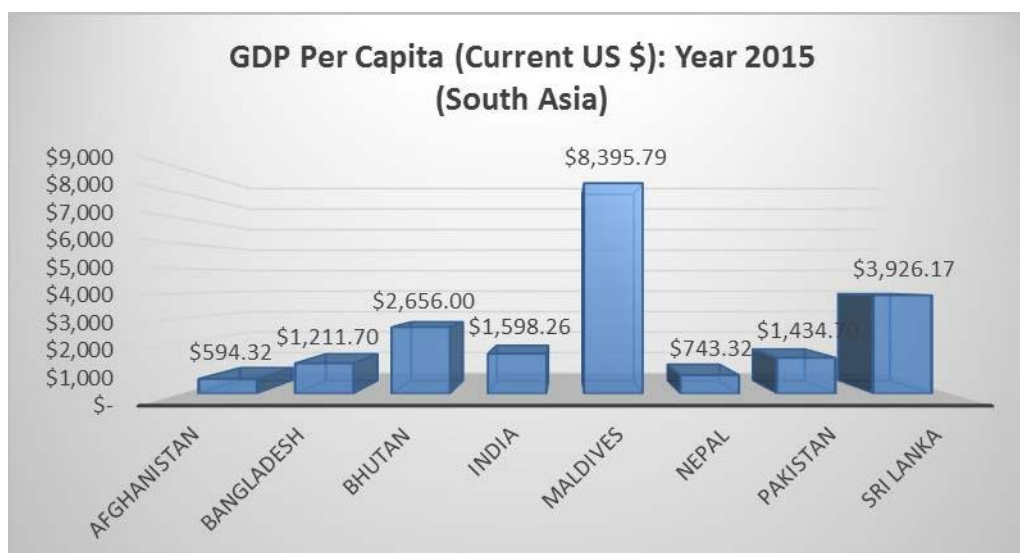
1.1 Introduction of the Problem

Globalization has provided a huge opportunity to EMNEs in accessing the global market. Over the last two decades, an increasing number of EMNEs has seized the opportunity to internationalize due to a better economic environment globally, along with economic reforms in emerging and developing economies. "Since the 1991 onset of economic reforms in India, the internationalization of Indian EMNEs has increased substantially" (Mazumdar, 2010). Indian EMNEs in their internationalization process have identified the opportunity posed by other similar economies. On the other hand, a majority of MNEs developed economies have not identified the opportunity provided by developing economies, especially the opportunity to serve BOP consumers. Global poverty is associated with BOP consumers as all the low-income consumers fall under the BOP economic segment.

Despite all the years of progress in poverty reduction, still, the majority of the world population is considered the BOP. The BOP population is over 4 billion and people at the bottom of the pyramid earn \$1500 or less per year (See figure 2.1, based on purchasing power parity in US

dollar). Unlikely, the BOP earnings may differ in other studies. The World Resource Institute (2007) reports that the 4 billion people at BOP hold incomes below \$3,000 in local purchasing power and they are living in relative poverty. Prahalad & Hammond (2010) show that four billion people, a mere 65% of the world's population earns less than \$2,000 each per year. According to the BOP Innovation Center, “BOP is a demographic term that covers the approximately 4 to 5 billion people who live on less than US\$ 8 per day”. Presenting the study by the Pew Research Center on the number of population out of poverty in between 2001 and 2011, Kochhar (2015) connontes in 2011, a majority of the world's population (56%) continued to live a low-income existence, compared with just 13% that could be considered middle income by a global standard. The majority of the low-income 4 billion populations are located in Asia, South Pacific, and Africa. “Regionally, the world's poor and low-income populations are concentrated in Asia, South Pacific, and Africa” (Kochhar, 2015).

Figure 1.1



Source: World Bank

Examining the size of the BOP population and understanding the importance of innovation in fulfilling the BOP consumers' growing needs, Prahalad (2002) rejects the idea on thinking of the poor as victims or as a burden, instead recognizing the poor as resilient and creative entrepreneurs and value-conscious consumers. Citing Prahalad, *The Economist* (2010) argues, “The world's poor represent trillions of dollars' worth of pent-up spending power.” When there exists a population of four billion at the base of the pyramid, MNEs could gain an enormous business opportunity by accessing the market and providing quality products and services at an affordable cost. Importantly, in serving this segment and exploiting the untapped market opportunity, innovation is necessary. Prahalad (2002) suggests that serving the BOP consumers will demand innovations in technology, products and services, and business models. Further, a particular type of innovation may not be able to fulfill the growing demand of consumers from all economic segments nor will it support the economic growth of all nations. Sustaining innovation is growingly embraced by firms from developed economies where consumers have higher disposable income and are sophisticated; however, the innovation tends to be less effective in serving BOP consumers in emerging and developing economies. Christensen (1997), in explaining the distinct differences of disruptive as compared to sustaining technologies, states, “disruptive technologies change the value proposition in a market, when they first appear, they offer lower performance in respect to the attributes that mainstream customers care about”. In examining from a firm level strategy on innovation, Leger and Swaminathan (2006), cite Lall (2003) study on innovation in the LDC [least developed countries], the LDC's firms' ability to assimilate, imitation might be a preferred strategy as they enable learning through imitation and reverse engineering. The studies presented above address that innovations in emerging markets require a different mindset in building products in better

serving the BOP consumers. The growing phenomenon of internationalization from EMNEs into other developing economies in serving BOP consumers with their innovations is important to evaluate closely by scholars and businesses.

1.2 Motivation

In recent years, businesses are increasingly recognizing the immense opportunity serving the BOP consumers that represent over 60 percent of the world population. As informed in the previous paragraph, the size and the market power of the BOP segment are growing, and BOP consumers are increasingly participating in the consumer market. However, even when a noticeable economic opportunity is offered by BOP market, only a few MNEs from developed markets have shown keen interest to serve the BOP markets. Prahalad and Hart (2002) connote that although this significant economic and social transformation has offered vast new growth opportunities for MNEs; its promise has yet to be realized. Despite a large global presence and resources MNEs, rely to a great extent on sustaining innovation in serving their existing consumers. Those consumers are at the upper and the middle tiers of the economic pyramid. The MNEs serving the middle and upper tiers of the economic pyramid benefit strongly with a higher profit margin, yet ignoring a large consumers base. The MNEs often consider it less attractive and less profitable to attempt doing business at the BOP market level. Informing that the MNEs cannot thrive just serving consumers at the upper economic tiers, Prahalad and Hart (2002) connote that if MNCs are to be successful in the 21st century, they must broaden their economic base serving the consumers from all the tiers of economic pyramid. Explaining that the western MNEs to reach the larger markets further down the socioeconomic pyramid, Prahalad & Lieberthal (2003) suggest that succeeding in these broader markets requires

companies to spend time building a deep and unbiased understanding of the unique characteristics and needs of developing countries and their peoples.

In recent years, a growing interest in serving BOP consumers by MNEs from developed economies is noticeable; however, the MNEs commitment to serve the consumers is highly based on humanitarian and corporate social responsibility grounds. Scholars are also increasingly rejecting the idea to treat BOP consumers as beneficiaries, disadvantage, dependent, and needy. For instance, Rangan et al. (2011) write that even if one focuses mainly on social impact and considers profits secondary, the base of the pyramid is a risky place: Projects that fail to make money will eventually be relegated to companies' corporate social responsibility departments, as Microsoft discovered. Simanis & Hart (2008) caution that despite five decades and over \$2 trillion dollars spent on foreign aid, the top-down prescriptions of the post-World War II "development regime" have proven ineffective, rather the BOP segment should be viewed as value-segment consumers. "When selling to poor consumers; companies need to begin by doing something basic: They need to create the market" (Simanis, 2009). Simainis (2009) further suggests that Western MNEs are struggling to turn BOP consumers into customers.

Conversely, EMNEs are increasingly fulfilling the product needs of the consumer segments in their home market and similar markets abroad. They are satisfying BOP consumers' product needs through innovations that are appropriate for the BOP markets and the consumers' particular demand. Innovation by EMNEs is vital in serving BOP consumers. Most of the literature on innovation is associated with developed markets and created by developed markets' MNEs. Christensen et al. (2001) terms the innovation as "sustaining innovation." Therefore, the MNEs that are serving the upper and middle tiers of the economic pyramid may fail to serve BOP segment, as the BOP product innovation process requires a different mindset. Examining

the Western innovation development process, Christensen and Raynor (2003) find that the majority of innovation outcomes focus on continuous improvement to product features and performance and targets firms' most attractive, profitable and demanding customers. This shows that the pattern of innovation processes differs among different economic tiers. In explaining how innovation is instrumental in serving developing economies, Leger and Swaminathan (2006) suggest that the innovation process could follow a different pattern in developing countries. In trying to understand innovation development strategies implemented by developed and emerging markets', Sharma & Jha (2016) connote that most of the researches on innovation has focused on Western firms and those researches on innovation cannot be applied similarly to the evolution exhibited by emerging market firms.

1.3 South Asia: Innovation in Emerging Market for BOP Consumers

In recent years, homegrown innovation championed by EMNEs is increasingly becoming an important solution in serving the BOP consumers' growing and challenging needs in emerging and developing economies. Malik & Aggarwal (2012) inform that EMNEs are rising to the forefront in innovation for BOP consumers with historically developed unique capabilities. Malik & Aggarwal (2012) also look at innovation coming out of emerging/developing economies, detecting trends in market sensing, political capabilities, relational learning, and acquisition capability. Guillén and García-Canal (2013) inform that EMNEs learn to make more out of less and to be comfortable with risk, volatility, and uncertainty. BOP consumers in emerging/developing markets might be able to demand and consume sophisticated products and services, but that does not mean a market for products and services cannot exist in that segment. Instead, firms have to find and address BOP consumers' needs. This is difficult because many of these consumers do not have easy access to share what they want. According to Anthony (2009),

the key is always putting the customers and their problem at the center of the innovation equation, sometimes giving consumers what they want and letting them co-develop the product or service. In South Asia, Indian EMNEs are successful in implementing such a strategy in their product development. Examining the internationalization method of Indian EMNEs, Ramamurti (2009) argues, “IB literature on how firms become multinationals is rather limited, and that research on the internationalization of Indian firms provides an opportunity to broaden and deepen that literature.” Sachin Joshi's interview (2010) informs that Indian companies have a solid record of accomplishment on innovations that make important goods affordable for poor people. For instance, an EMNE like Godrej and Boyce puts their consumers’ problems at the center of their innovation process when designing their product, such as ChotuKool refrigerator. Godrej and Boyce designed ChotuKool putting their home market BOP consumers’ demands and needs to be their top priority.

After exploiting the product opportunity in their home market, EMNEs took their products into other developing economies in close geographical proximity. Joshi (2010) connotes that once Indian EMNEs build their strong home market for their BOP products, then the EMNEs internationalized into other neighboring markets including Bhutan, Nepal, Sri-Lanka, Bangladesh, and Maldives. Indian EMNEs such as Dabur, G&B, Tata, and many others have implemented a similar strategy. Analyzing the adaptation of EMNEs products by its home market and other similar markets’ BOP consumers, Ramamurti & Singh (2009) state, “making such products adaptations require technical skills as well as intimate customer knowledge.” Ramamurti & Singh (2009) also argue that EMNEs’ products adaption by BOP consumers provide EMNEs defense against their foreign competitors in their home market, and provide a basis for internationalizing into other low-income emerging economies. India's strong economic

influence in its neighboring economies in South Asia is presented by the nation's export data to other economies in the region, presented in figure 1.2 below.

Figure 1.2

<u>Countries</u>	<u>% of total Imports from India</u>
Afghanistan	6.1%
Bangladesh	14.8%
Bhutan	72.3%
Maldives	9.0%
Nepal	57.0%
Pakistan	4.2%
Sri Lanka	20.7%

Source: CIA, the World Factbook (2014)

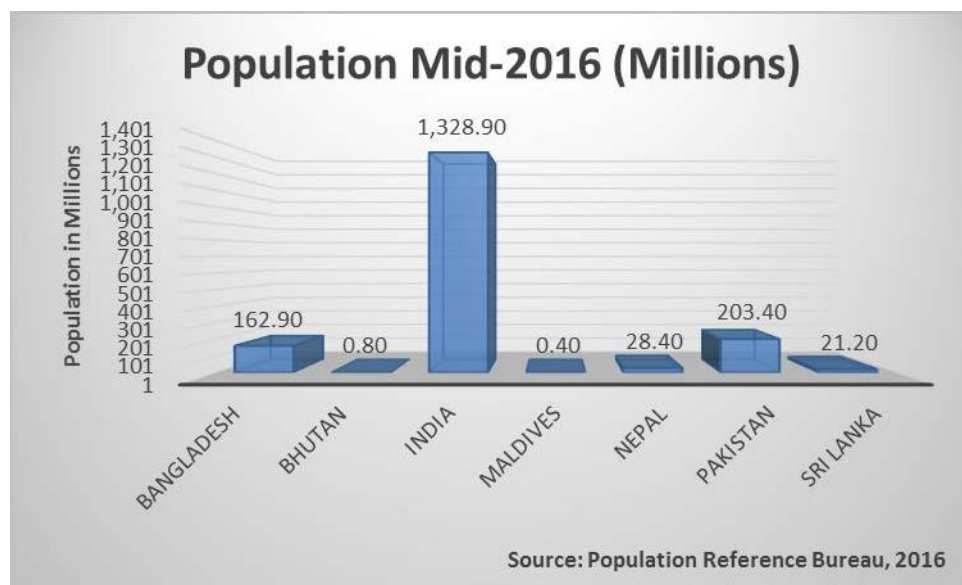
The figure above shows the percentage of India's products imported by other regional economies in South Asia in the year 2014.

1.4 Regional Analysis: South Asia & India

South Asia consists of the largest concentration of world population (See figure 1.3) The World Bank's (2015) report indicates that South Asia consists of 1.744 billion populations and a GDP of \$2.6 trillion. All the economies in the region have a significant concentration of BOP consumers. Examining the BOP population size, "Asia has by far the largest BOP market with 2.86 billion people and income of \$3.47 trillion". (IFC, 2007). IFC (2007) also state, "BOP market represents 83% of the region's population and 42% of the purchasing power".

Examining further, South Asia region is not only the largest concentration of BOP consumers in Asia, but also the region has presented a healthy economic growth that has helped to uplift hundreds of millions of population from extreme poverty. The World Bank (2015) report indicates that a strong economic growth in South Asia “has translated into declining poverty and impressive improvements in human development,” however, “poverty in the region remains high”. South Asia has presented impressive economic growth and consist the largest concentration of BOP population, therefore, the region offers a great environment to study BOP population and products. The region is not only vast but also consists of a great diversity in terms of culture, language, tradition, tribe, and religious faith. However, the region still has a lower penetration rate when looking at its mobile phone market. Asia-Pacific (2015) reports that the large South Asian economies, India, Pakistan and Bangladesh have a combined population over 1.6 billion, but still unpenetrated markets, which is only 36 percent.

Figure 1.3



The figure above presents the population of South Asian countries in mid-2016.

India is the largest emerging market with a highest concentration of BOP consumers in the region. Indian EMNEs exhibit how EMNEs can serve its home market BOP consumers and other similar markets abroad. The dynamics of India, politically, economically, socially, culturally and innovatively may be representative to other developing and emerging markets. Leavy informs (2014), as Ravi Venkatesan, emerging market veteran suggests that the military acronym VUCA (volatility, uncertainty, complexity, ambiguity) “describes well the business environment in India,” and he believes that most other emerging markets, “especially in Africa, Latin America, and Asia,” tend to “resemble chaotic India far more than they do centrally direct and efficient China.”

In learning about EMNEs in India, it is important to look at the macroeconomic picture of the country. Regarding India’s GDP based on the current US dollar, the World Bank (2015) data presents the size as 2.089 trillion, which ranks the country within top seven in the world. India has a second largest population, and according to the United Nations’ recent study (2016), India will surpass China in becoming a number one country with the highest population in the world by 2022. Analyzing India’s economic growth and poverty, Bloom & Rosenberg (2011) mention, “India has experienced rapid economic growth, but continues to suffer widespread, extreme poverty as well.” “While economic growth and innovative interventions are fueling some improvements and a growing middle class, the report projects that the BOP will still account for 78% of India’s population or 997 million people by 2015” (Unitus Seed Fund, 2014). Ahmed & Kumar (2015) suggest that the number of MNEs serving BOP consumers in India is insignificant, and quoting Paul (2008) they also find that still the main focus of attention of MNCs in India is the MOP, the middle of the pyramid/middle class and TOP, top of the pyramid, higher income groups, with the strength of the middle class estimated at 400 million. This

explains us that the remaining BOP population of India, which accounts approximately over 700 million, is underserved consumers by MNEs, even though the market opportunity posed by the BOP consumer segments in India is huge. Debasish & Mallick (2015) mention that the Indian consumer markets represent a huge demand base that is not fully exploited, thus offering a vast opportunity for existing and emerging companies. India's EMNEs are increasingly serving their BOP consumers through their innovations and at the same time stand at the forefront in adopting different innovations. Markides (2012) explains the innovation process brewing in today's emerging markets, especially India and China, and provides examples that are often mentioned include the Tata Swach, an eco-friendly, portable water purification system and Chotukool, a portable, low-cost refrigerator.

It is important to recognize that the region remains far behind in economic integration. Anderson & Ayres (2015) brief that with interregional trade remains well below its potential caused by important factors including transport costs, protectionist policies, and political tensions, South Asia remains as one of the least economically integrated regions in the globe. However, India's neighboring economies have a moderate to strong trade relationship with India, even when some logistics, protectionist and political tension exist over India. The economic influence of India in its neighboring economies is supported by the data in the figure 1.2.

1.5 Statement of the Problem

Having identified that there is a large growing market at the BOP segment; scholars are still debating whether MNEs could profitably serve the segment. Arora & Romijin (2009) note that key assumptions underlying the predicted 'winwin' outcomes on serving BOP markets have raised sincere doubts about the viability and desirability of the world's leading corporations to

assume the lead role in anti-poverty strategies. It has been increasingly noticed that EMNEs are recognizing the benefit of serving BOP consumers in their home market and similar markets abroad, which is explained by the growing number of EMNEs serving the BOP consumers in their home market and similar market abroad. Even though noticeable, EMNEs' serving the BOP consumers in their home market and abroad is less recognized in the literature. Most of the past and current literature looks at the internationalization of MNEs from developed economies' viewpoint. South-South investment is a less studied versus North-South investments. There is insufficient scholarly work on product innovation that serves the consumers at the base of the pyramid. Studies from Karnani (2009) and other scholars have suggested that BOP consumers lack purchasing power; therefore, serving the consumer segment by MNEs is seen less market-oriented and more service based. Examining at the BOP product elements, there exist some significant studies on the BOP market and products, but limited studies exist on BOP consumers' product element. Importantly, appropriate innovations from EMNEs are instrumental for serving BOP consumers in their home market and other similar markets abroad. EMNEs are well equipped and knowledgeable to the unique BOP market environment because at the most part EMNEs are serving their home market from their birth. Hart and Christensen (2002), Bhatti (2012) and Qiu & Fan (2013) suggest the opportunity in BOP markets and emerging markets' approaching innovation in a different way when serving the BOP segment.

1.6 Nature of Study

This research is primarily based on the qualitative study along with the implementation of descriptive statistics method. Differently, then some existing studies that analyze EMNEs position in serving the base of the pyramid, this research attempts to look beyond the trade interactions between BOP markets and BOP consumers' product demands. This research seeks

to develop EMNEs innovative BOP product framework, capturing how EMNEs take advantage of market similarities, including product affordability, product quality, and product usefulness, among others. The dissertation contains three case studies of EMNEs products: ChotuKool refrigerator, Swachh water purifier, and Micromax low-cost mobile phone. The case studies reflect Indian EMNEs that are serving BOP consumers in their home market and beyond through appropriately directed innovations. Three case studies of BOP products from Indian EMNEs are closely studied from the viewpoint of BOP product framework. A factor rating method will be performed using data collected from the survey in understanding whether one BOP product serves better than other BOP products in the studies when all three products are successfully serving BOP consumers in the region. Furthermore, the method allows examining the level of importance of individual BOP product element in the BOP product framework.

In this research, primary data is collected through a field survey in South Asia with a major focus on India. Sharing that their study was grounded in India, Hammond et al. (2007) explain, “Their research was carried out in India as the country accommodates a considerable share of the world’s BOP population.” The survey respondents rate the BOP products presented on the survey questionnaire. If the survey respondent were not using the specified product, the respondent could answer from their experience using a substitute product that they are using. The three products in the study are rated on the level of importance and satisfaction. The product importance is based on consumers’ ranking on BOP product elements prior to the purchase of the product. Likert 5 points scale approach was implemented while five being very important and one not important. Similarly, the product satisfaction is based on consumers’ ranking on BOP product elements after using the product they had purchased. Likert 5 points scale approach was implemented while five being very satisfied and one not satisfied. The collected data from the

survey allows studying the importance of BOP product elements to BOP consumers. For instance, what BOP product elements are the highest priorities to the consumers? How well are the existing BOP products meeting the consumers' needs? In addition, what other substitute products in contrast to the products in my study that BOP consumers are using?

1.7 Research Scope, Assumption and Limitations

The motivation for this study comes from the fact that many of the EMNEs are increasingly serving BOP consumers in their home market and similar markets abroad, but studies in the field are limited. Existing studies often look from Western MNEs' context. In addition, existing studies on BOP are often centered on BOP population and BOP market size, but limited studies exist on serving the BOP markets with innovative products that well serve the demand of the consumer segment. In addressing the issue, this research paper looks at existing innovative products especially from EMNEs for BOP markets to identify the key attributes of those products that make them scalable to other BOP markets. Next, often the studies performed on the BOP market and the consumers are qualitative and primarily based on business case studies. "BOP markets have, until now, relied principally on business case studies and rough estimates of market size" (Hammond et al., 2007). Even in early studies on the BOP market, in the 90's scholars had suggested that research on innovation in the emerging markets needed to be performed in the emerging markets' local environment rather than limiting to studies. Drazin and Schoonhoven (1996) advised that researchers and students of innovation should not just perform studies on innovation in emerging economies but also rather, test them in those environments. In addressing such issues, the survey is performed in the field where a larger concentration of BOP consumers exists in the world, South Asia. The approach could not only provide some valuable information on EMNEs serving on BOP markets, but also the BOP

consumers' product demands and needs. Furthermore, from the survey, collecting reliable data and performing suitable descriptive statistics method would enhance a solidification of the study.

The limitation of this dissertation is displayed as a specific region (South Asia) is chosen for the survey study, which may not accurately reflect all EMNEs product innovation for BOP consumers and the level of importance of BOP product elements to BOP consumers. The study is limited, as case studies are restricted to three cases that examine three BOP products.

1.8 Organization of the Study

The study is organized as follows: Chapter 2 presents empirical literature on innovation theories such as disruptive and frugal, internationalization theories, and the BOP theory in explaining EMNEs target. Chapter 3 provides seven propositions presented in the study. Chapter 4 discusses the methodology implemented in the study that includes innovative product framework, three case studies, and survey. Chapter 5 interprets the results and discussions. Chapter 6 concludes with further discussions, limitations of the study, and future research directions.

2 LITERATURE REVIEW

2.1 Introduction

The proposition presented in this study draws from three different theories in the areas of innovation, internationalization, and BOP. The literature is aimed at supporting theories for EMNEs serving BOP consumers in their home market and other similar markets. Many theoretical frameworks have been developed in identifying and examining the areas of internationalization of EMNEs, innovations, and BOP markets. However, most of these studies captured internationalization of MNEs and innovations from developed economies viewpoints. “The IB literature has traditionally been dominated by western-centric theories, whose applicability to the case of EM firms might be questionable” (Stucchi, 2013). Informing on the recent EMNEs emergence, Stucchi (2013) further argues based upon his previous argument that this has fueled a debate concerning their applicability to the EMNEs’ case.

When there are considerable theoretical explanations in the internationalization of developed market MNEs investing in other developed and emerging markets, theoretical explanation on the internationalization of EMNEs is a subject of debate among academics. Arguing that EMNEs behave differently than the MNEs from developed economies, Bandeira-De-Mello et al. (2015) mention, “some scholars argue that existing theoretical frameworks are not able to explain the internationalization strategies of emerging multinationals and call for the development of new theories.” Bandeira-De-Mello et al. (2015) further state, “the existing theoretical frameworks have empirically shown their validity, helping to identify determinants of internationalization strategies.” Cuervo-Cazurra (2012) shares that the existing theories remain relevant but need further specification. In this dissertation, I chose to implement the existing theoretical

frameworks in explaining internationalization of EMNEs into other developing economies. The use of the existing theoretical framework would allow me to identify the key phenomenon in the area of my studies and better understand the gap in the literature. Growingly, EMNEs are finding the opportunity to serve the BOP market with their innovations appropriate to BOP markets and BOP consumers' demand. Even though the BOP number is over four billion and has a huge market size of over trillions of US dollars, the market segment remains less attractive and noticeable to the MNEs from developed markets. Presenting the argument for selling products to the poor, Gunther (2014) connotes that there are strong arguments for selling products to the BOP market, "The world's poorest people are a vast, fast-growing market with untapped buying power". Prahalad & Hart (2002) suggest that companies that learn to serve BOP consumers can make money and at the same time, help BOP consumers escape poverty. With regard, why MNEs ignore serving the BOP segment despite such a large potential. Answers vary among scholars and businesses on whether it is profitable for the developed market MNEs to serve the market segment. In raising a doubt on Prahalad's BOP model that the MNEs can well serve the BOP market through the low-price, high volume, low-margin model, Simanis (2012) argues the model could work well if two conditions were met: "One, the company can leverage an existing infrastructure that serves wealthier customers to offer a product or service to poor consumers; and two, the consumers already know how to buy and use the offering."

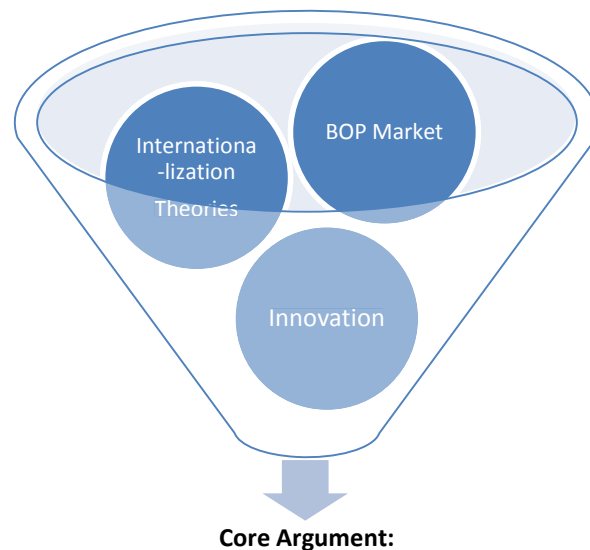
Furthermore, innovation is studied as BOP markets and BOP consumers' phenomena. While studying innovations in emerging markets, there are considerable theoretical explanations about different innovations implemented by EMNEs in serving BOP consumers in their home market and abroad, such as frugal innovation (coined by Carlos Ghosn in 2006), disruptive innovation (introduced by Clayton Christensen in 1995), and others. Different than sustaining innovation

mostly adopted by MNEs from developed economies, this study looks at two types of innovations that are well serving the BOP consumers in developing markets. Those two innovations are frugal and disruptive innovations. The theoretical explanations suggest that innovations coming out of emerging markets vary in many ways compared to the developed markets. On their study of strategic innovation in the BOP market, Anderson & Markides (2006) find that strategic innovation in developing markets differs from developed markets in three significant ways:

“First, strategic innovation in the developing world is not so much concerned about discovering new Whos; second, in developing markets, the goal is not so much to discover new benefits for the product, but to offer or adapt products that might well have been created in the West to consumers that are significantly poorer and culturally different; third, the goal is frequently to develop appropriate distribution channels when none exist or are very underdeveloped, and to create demand for a product or service when existing demand is absent or nascent” (p.1).

Thus, when an adopted innovation model fits a particular emerging/developing economy, it is also appropriate as a model for other similar economies. As a majority of BOP population lives in the emerging and developing markets, the markets could be a resourceful environment to study BOP markets’ product needs and BOP consumers’ particular demand. The core argument of the paper is shown in figure 2.1, which shows us that the three factors are integrated together to provide a competitive advantage for EMNEs. Thus, arguing that EMNEs’ are successfully serving the BOP consumers in their home base and other markets with similar market structure as their home base through their innovation appropriate to the BOP market and BOP consumers’ demand.

Figure 2.1



Core Argument:

EMNEs are serving the BOP consumers in their home base and other economies with similar market structure through their innovation appropriate to the BOP market and BOP consumers' demand.

The following sections will present the theories underlying the factors shown in the graph above as well as their interaction.

2.2 Innovation Theories

Joseph Schumpeter identified innovation as a key element of a business. Unlike Marx who saw labor as defined in Reier (2000) “as the fundamental unit of economic value and the proletariat as the key agent of change, Schumpeter saw the entrepreneur as the cornerstone of capitalism.” Scholars like Prahalad, Hart, Christensen, and Hammond who are currently at the forefront of the ideas have introduced the ideas of innovation, BOP consumers, and BOP markets. They are the strong supporters of BOP elevation through entrepreneurial activities. The scholars' visions of serving underserved consumers with entrepreneurial activities align with Schumpeter's. Ebeling (2016) writes that

“Schumpeter introduces the idea of "the entrepreneur" who breaks out of the routines of existing methods and forms of production with radical innovations in the types of goods produced, the methods with which they are produced, the organizational structures within which enterprises are arranged, and cost-efficiencies through which goods are brought to the market” (p.1).

Reier (2000) informs that Schumpeter attributed those instabilities to the principle of "creative destruction," – “a process in which new technologies, new kinds of products, new methods of production and new means of distribution make old ones obsolete”. Existing firms are challenged whether to quickly alter to a new environment or fail. Looking at the innovations in the BOP market, Schumpeter's principle of creative destruction may fit some extent. New kinds of products in the market that may well serve consumers' purpose and needs would make old products or way of doing things obsolete. For instance, a homemade water purification process was widely used, before a low-cost water purifier was available in the market. Once BOP consumers started to use a new low-cost water purifier and followed by a mass adaptation of the product, therefore, making the old ways of serving consumers obsolete. Examining Christensen's disruptive innovation theory parallels with Schumpeter's principle of creative destruction. In the beginning, the innovation serves the consumers who were underserved and later as the innovation progresses, the innovation disrupts the market, challenging existing companies quickly adapt to a new environment or fail.

Disruptive innovation theory has been able to have some influence in the modern business world and beyond. However, as stated by the Economist (2010) the theory has faced some strong criticism from scholars. Danneels (2004) argues against disruptive innovation stating, “disruptive technological innovation and identified several issues that require further and deeper

exploration.” One of these issues is the actual definition of disruptive innovation. King & Baatartogtokh (2015) caution that despite the theory's widespread use and appeal, its essential validity and generalizability have seldom been tested in the academic literature. Markides (2006) informs that Christensen's disruptive innovations are not similar, they have different phenomenon because they create different kinds of markets, pose radically different challenges for established firms, and have radically different implications for managers. Lepore (2014) criticizes that disruptive innovation is a theory about why businesses fail because it does not explain the change.

Christensen's study on innovation thoughtfully looks at Schumpeter's theory for guidance. Christensen and Schumpeter's ideas on firms' innovation advantage differ, where Schumpeter argues that large firms have an innovative advantage because of their market monopolistic power and Christensen argues that new entrants have an advantage over incumbents because innovation and disruption have come from entrants. However, considering Christensen's thoughts on market destruction, it can be analyzed that Christensen recognizes Schumpeter's work on creative destruction, and primarily focuses on the mechanism behind creative destruction, which he argues is disruptive innovation. In explaining entrepreneurial leadership from a Christian worldview, Goossen & Stevens (2013) write that an entrepreneur is one who creates a new venture and gathers the necessary resources to pursue the opportunity and shares Schumpeter views that entrepreneurship as a process of "creative destruction" in which innovation products continually displace old ones. Schumpeter's ideas on creative destruction align Christensen's views that new entrants in the market continue to grow and later challenge incumbents even destroying them.

There has not been a long history of firms noticing the benefits of serving the BOP segment. Prahalad (2002) was first to note that the MNEs can serve BOP market profitably. Importantly, any scholars in literature did not note on serving the BOP consumers through innovation when looking back at the period of Schumpeter. Rather, innovation was seen as a strong driving force behind capitalism's entrepreneurial activities. "Schumpeter's theory sets forth the idea that the vital force behind capitalism is innovation and the entrepreneur willing to introduce it" (Reier, 2000).

Explaining on creative destruction, Schumpeter (1934) describe creative destruction as a process in which the old ways of doing things are endogenously destroyed and replaced by new ways of doing things. Considering Schumpeter's principle in regards to BOP consumers, before using a newly innovated product, the consumers were using a traditional method or an old product to fulfill their tasks. Once the BOP consumers accept the newly innovated products, such as water purifier, fridge, or low-cost mobile phone, the traditional method or an old product to fulfill their tasks would be outdated. That means an old method or a product would be taken over by a new method or a newly innovated product. Thus, the creative destruction principle may also fit in the BOP market environment.

Importantly, Schumpeter's perspective on the importance of innovation in economic change holds strong when looking at present: firms are noticing the benefits of serving the BOP consumers with their appropriate innovation. Product innovation for BOP consumers not only satisfies their needs but also brings them into consumerism. "Schumpeter identified innovation as the critical dimension of economic change" (Pol & Carroll, 2006). Pol & Carroll (2006) further state, "economic change revolves around innovation, entrepreneurial activities and

market power. Innovation-originated market power could provide better results than the invisible hand & price competition.”

Examining the existing economic conditions in developing economies, innovations stemming thereof strongly relate to the demand and conditions of local markets. Hosper (2005) shows that innovation does not just occur, but always has its basis in the preexisting economic structure. South Asia, the region with a large BOP population has a strong preexisting economic structure for low cost innovation. London (2016) informs that looking at one of the poverty-afflicted markets where innovation and BOP theories are more applicable, it is South Asia where the region faces a huge poverty reduction challenge, and local innovation is transferring the BOP landscape. India as being a foreground for innovations like frugal and disruptive, the various environments of the market including economic, cultural, social, and geographical demand innovations. Further, analyzing the economic conditions of the majority of the Indian population suggest over 60 percent of Indians falls under the BOP segment. The Gandhian philosophy of self-reliance and simplicity is strongly aligned with the Indian culture. The region has harsh geographical terrain, Himalayan extremes in the north, desert in the North West, the jungle in the North East and dry lands in many other parts of India. This particular social, economic, and geographic environment demands customization of innovative products when standardization of product does not meet the need of BOP consumers living in different geographical regions. When such a diverse BOP segment exists, the right innovations are vital to meet the product demand of the BOP consumers including product prices, quality, and others. Hauser et al. (2006) state that innovation is responsible for raising the quality and reducing the prices of products and services that have dramatically improved consumers' lives. Evaluating different

product innovations within emerging markets, their research find that some innovation models are significantly noteworthy.

2.2.1 Frugal Innovation

Radjou et al. (2011) inform that Carlos Ghosn, Chairman and CEO of the Renault-Nissan Alliance, coined the term "frugal engineering" in 2006. In explaining that Carlos Ghosn's admiration of Indian engineers' frugal innovation ability, Radjou et al. (2011) further state, "Indian engineers' ability to innovate cost-effectively and quickly under severe resource constraints." "Under Ghosn's leadership, Renault-Nissan has proactively embraced frugal engineering and become one of the world's leading producers of both electric cars as well as low-cost vehicles" (Radjou et al., 2011). Considering the new lead markets in developing economies, Tiwari and Herstatt (2012) state, "developing economies are emerging from all walks of life and are better suited for "frugal" or "constraint-based" innovations." "Money is in short supply for the bottom-of-the-pyramid customers, so companies need to employ frugal innovation if their products are to offer the right value proposition" (Mukerjee, 2012). Karl Moore (2011) writes, "The innovation seems to be a prime directive at almost any firm I run into, regardless of industry." How is this accomplished? The answer is to no longer waste money to get more rather implementing frugal innovation: Jugaad. Radjou et al. (2011) describe Jugaad is a Hindi word that loosely translates as "the gutsy art of overcoming harsh constraints by improvising an effective solution using limited resources." Tiwari and Herstatt (2012) define frugal innovation as new and significant improved products (both goods and services), processes, or marketing and organization methods. Frugal innovations characteristics include minimize the use of material and financial resources, and frugal innovation objective is to reduce the product cost with an acceptable quality product. Studies suggest that one of the most important factors of frugal

innovation is lower cost; however, other important elements are also captured by frugal innovation include quality, usefulness, multipurpose and so on. Tiwari and Herstatt (2012) describe that such innovations (frugal) are characterized by high affordability, robustness, and "good enough" quality in a volume-driven market. "Frugal innovation results in great value: no-frills, good quality, functional products that are also affordable to the customer with modest means" (Karl Moore, 2011). Ronald Berger's (2015) study has associated frugal product innovation with six key attributes: function, robust, user-friendly, growing, affordability, and local.

EMNEs with their frugal innovation can serve BOP consumers who rarely exist in the mainstream consumers segment. Today, consumers can afford good enough quality products with their limited disposable income that meets the consumers' basic needs. Christensen and Raynor (2003) state that frugal innovation allowed firms to reach a broader consumer base, the segments of the consumers that the firms had never accessed before, which is due to the product innovation at a lower cost. Bhatti (2012) suggests that the emerging nations are approaching innovation in a different way that addresses contextual factors, constraints, and local demands. Prahalad and Mashelkar (2010) inform that emerging countries innovation strategies are typically different from traditional innovation development strategies and utilize frugal engineering.

Today, one of the major emerging markets, India, is increasingly becoming a center for frugal innovation even though the market possesses many challenges; some challenges include institutional voids and a large BOP segment. Bhatti (2012) argues that constraint and challenges in the emerging markets have to do with the social dynamics of a vast number of populations living close to poverty. Explaining the challenging factors for business environment and

strengths of emerging market firms, Khanna and Palepu (2006) show that despite institutional voids, emerging market entrepreneurs and firms are producing innovations which are resolving their local needs, and at the same time profiting to the extent that they can expand to neighboring developing nations and even beyond to developed markets. The Indian EMNEs serving BOP consumers in their home market and the neighboring markets demonstrate that the EMNEs are resolving the needs of BOP consumers beyond their home economy.

Beside the EMNEs, individual citizens in EMs are also mindful of frugal innovation. The Indian Academic Professor Anil Gupta is an important voice of the frugal innovation movement in India. McNicoll (2014) states that Professor Anil Gupta is at the forefront of the frugal innovation movement. For the last 20 years, has been traveling across India in search of local inventors whose creativity has had a positive impact on rural poverty. Emerging market multinational companies are rising to the forefront with unique capabilities like frugal innovation, market sensing, political capabilities, relational learning, and acquisition capability” (Malik & Aggarwal, 2012). Explaining that BOP populations holds great potentials for businesses and businesses should consequently implement the strategies of frugal innovation with new approaches to serve the BOP consumers, Banerjee and Leirner (2012) inform that frugal innovation starts in developing countries by asking the questions like “How can we do more with less, while serving the basic needs of the BOP consumers?” The decisions are often good quality and functional products that are affordable even to consumers of modest means. Tiwari and Herstatt (2011, 2012) provide some prominent examples of innovations emanating from India with a considerable market chance in the international arena that include one of the world's cheapest refrigerator, "ChotuKool," a battery-run small-size refrigerator by Godrej & Boyce. This shows us that Indian EMNEs are dealing with issues extant in their home markets

and similar markets abroad through product innovations that better serves the majority of underserved consumers.

2.2.2 Disruptive Innovation

Clayton Christensen, one of the leading global experts on innovation, coined disruptive innovation in 1995. In explaining disruptive innovation, Christensen et al. (2015) mention, “many leaders of small, entrepreneurial companies praise it as their guiding star; so do many executives at large, well-established organizations, including Intel, Southern New Hampshire University, and Salesforce.com”. Christensen et al. (2015) further shares that over twenty years, the theory (disruptive innovation) has evolved and improved in response to people who have used it. Christensen's approach to disruptive innovation is that the innovation is designed to serve a new set of consumers: low-end footholds and new-market footholds. BOP consumers are underserved and ignored by MNEs in serving the segment, so the theory well serves in explaining BOP consumers’ needs fulfilled through innovation. Citing Christensen, Raynor & McDonald (2015) explain on low-end footholds and new-market footholds that incumbents typically try to provide their most profitable and demanding customers with ever-improving products and services, and pay less attention to less-demanding customers. Disrupters create a market where none of the markets existed and disrupters find a way to turn non-consumers into consumers. Considering Christensen's point of view on disruptive innovation, the innovation evolves very slowly, and then it reaches a point where it impacts the present industry. In the beginning, products and services are not as good as the existing products and services. Once they gain traction, they overtake the existing ones. Ultimately, disruptive innovation could be a threat for large MNEs. MNEs from developed economies focus on sustaining innovation,

upgrading, upscaling or re-innovating the existing products for their higher paying customers, often ignoring large customers' base who wants simplified and low cost solutions.

Christensen's views of the large MNEs' innovation process is that MNEs are comfortable with their existing business model, when a new technology comes into the market, they don't implement this new business model because the new technology could cut off their new business model; therefore, they avoid the new business model, even insulating themselves from new product innovation, on the contrary, Schumpeter (1942) believes that large firms have a critical advantage with respect to innovation.

Examining all the different stages of disruptive innovation is beyond the scope of this study because the innovation process in the later stages targets and serves beyond the BOP market segment. During the later stage, consumers at the upper end of the economic ladder start adopting the new entrants' offerings. In explaining the process, Christensen et al. (2015) state that new entrants move towards upmarket, serving the needs of those incumbents' mainstream consumers while preserving the advantages that drove entrants' early success. When mainstream customers start adopting the entrants' offerings in volume, disruption has occurred. Christensen's (2015) explains that disruption as an innovation begins on the fringe of established markets and eventually comes to dominate mainstream markets. On the other hand, innovations that enter at the high end of the market, like Tesla Motor, simply do not fit on the definition of disruptive innovation. Moreover, if we try to force fit them then we lose what the concepts of disruptive innovation can explain. This explains that BOP market is suitable for the early stage of disruptive innovation. In fact, during the early stage of product innovation, the product criteria consist of low price and quality. Supporting Christensen's view of disruptive product innovation, Markedes (2012) adds that an inexpensive product or one that targets new consumers, does not

mean it is disruptive; for a product to be disruptive it must start out as inferior regarding customers' expectation, but superior in price. "The base of the pyramid may offer a unique opportunity to incubate disruptive technologies" (Christensen et al., 2001) and (Hart and Christensen, 2002). Scott Anthony (2009) in Harvard Business Review explains that disruptive innovators transform markets and creates new ones by playing the innovation game in a fundamentally different way. The innovation enhances the participation of the consumers that did not exist in the previous market. Serving the BOP market is challenging, but significantly rewarding. Christensen & Hart (2001) show that companies can generate growth and satisfy social and environmental stakeholders through a "great leap" to the base of the economic pyramid, where 4 billion people aspire to join the market economy for the first time. A simple, good enough innovation can well serve the BOP consumers. Most of the innovations for the BOP market in EMs are not highly advanced, but very innovative in the sense of product affordability, simplicity, portability, energy efficiency and so on; for instance, Swachh water purifier, ChotuKool refrigerator, and Micromax phone. Arguing that all disruptive innovation cannot be similar, Christensen et al. (2001) suggest that many disruptive innovations are not advanced technologies, but rather they are combinations of existing technologies applied to nascent or emergent value networks (business or consumers).

In recent years, India has been at the forefront in adopting disruptive innovations in serving its large BOP consumers. As the majority of Indian populations are low income who are highly cost conscious, the product targeted towards lower-end markets strongly fits the Indian BOP market demand. Tiwari and Herstatt (2012) inform that India is thought to possess strong competencies for disruptive innovations. Kaushik (2014) provides disruptive innovation examples in India and further explains that Indian companies and brands have become and will

have to become more flexible in adopting a disruptive innovation mindset to reach out to the vast and growing cost-conscious lower-end markets. This informs us that the MNEs from the developed economies who rely on sustaining innovation in serving their existing consumers may lack to perform the BOP segment with disruptive innovation. Christensen et al. (2015) suggest that empirical findings show, “incumbents outperformed entrants in a sustaining innovation context but underperformed in a disruptive innovation context.” Therefore, we can assume that EMNEs who are at the forefront serving BOP consumers with their disruptive innovation in their home market and similar markets abroad are in a better position serving the BOP markets.

2.3 Internationalization Theories

Lecraw (1977); Wells (1983); Ramamurti & Singh (2009); and Guillen & Garcia-Canal (2009) state that internationalization of EMNEs is not a recent phenomenon. A growing body of literature has looked at the phenomenal growth of EMNEs in the past 30 years. Thus far, the primary focus of research has been on MNEs from developed economies. Peng and Luo (2000) argue that the studies predominant focus has been on developed market MNEs’ internationalization with relatively little knowledge about EMNEs’ internationalization. Looking at EMNEs internationalization motivation, it ranges from accessing raw materials (Deng, 2004), escaping home regulatory constraints at their home markets, acquiring knowledge (Deng, 2004), legitimacy (Deeds et. al., 2004), and accessing larger markets. However, EMNEs internationalization into other similar markets with successful innovative products to serve the BOP consumers similar to their home market is a growing phenomenon. Zeng & Williamson (2007); Williamson & Zeng (2008) inform that firms in emerging markets have successful innovative practices in their local markets. “Innovation developed in and for emerging market exhibits an advantage which differs from innovation developed in advanced markets, that is, it’s

capability to meet the multiple demands of a wide cross-section of society” (Qiu & Fan, 2013). In explaining EMNEs internationalization process, even though several internationalization theories exist, the dissertation implements two important internationalization theories: Uppsala Internationalization Framework and Country Similarity Theory. Importantly, both theories look at firms’ internationalization in foreign markets that are similar to the firms’ home market.

2.3.1 Uppsala Internationalization Framework

The Uppsala internationalization framework coined by Johanson & Vahlne (1977, 2009) looks at firms’ gradual internationalization involvements. In the beginning, firms gain experience from their home market, and once firms have exploited their home market opportunity then they will look into other similar foreign markets at proximity: geographically, economically and culturally. International expansion of the firms will be incremental, higher commitments of the firms depend on greater knowledge about the entry market. Sim’s (2012) study on internationalization of Asian MNEs informs that the Uppsala model has received general empirical support Welch & Lounsbury (1986); Davidson (1980), (1983); and Erramilli et al. (1999) and its largely intuitive nature and evolutionary learning perspective lends itself to being an attractive explanatory model.

“The Uppsala model explains the characteristics of the internationalization process of a firm” (Johanson & Vahlne, 2009). At the early stage, internationalization of firms starts through export, then at the later stage through direct investment (FDI). According to Johanson and Wiedersheim-Paul (1975), internationalization of firms comprises several stages: Export through an independent agent, a sales subsidiary abroad, then finally building a production plant abroad. Regarding psychic distance, in the early stage, the firms enter into foreign markets that are closer (culture, language, business practice, education, etc.) and later into markets at a greater psychic

distance. In their earlier studies, Beckerman (1956) and Linnemann (1966), used the term, psychic distance, but later scholars like Johanson & Vahlne brought it into light. Daniels & Bracker (1989) view that at early stages of internationalization firms expand into culturally familiar countries and, therefore, experience lower degrees of operational complexity and higher firm performance. For internationalization to occur, two important aspects are important: market knowledge and market commitment, Johanson & Vahlne (1997) suggest that market knowledge and market commitment are assumed to affect decisions regarding the commitment of resources to foreign markets and the way current activities are performed. In their study, the scholars look from the aspect of developed markets' MNEs, however, looking from EMNEs standpoint, the developing economies market structure resembles EMNEs' home market. This would allow EMNEs to strengthen their market knowledge and commitment when internationalizing to other markets similar to their home market. The Indian EMNEs psychic distance decreases when considering the Indian EMNEs level of internationalization to other markets in the South Asia region, which are similar to their home market. The percentage of India's products imported by other regional economies in the region, presented in figure 1.2, and a growing presence of Indian EMNEs serving the markets in the region explains us the phenomena.

In explaining different market entry approaches, Whitelock (2002) informs that the key features of the Uppsala model are well-known and quotes Johanson & Vahlen (1990), "firms develop their activities abroad over time and in an incremental fashion, based on their knowledge development; and that this development is explained by the concept of psychic distance, with firms expanding first into markets which were psychically close, and into more "distant" markets as their knowledge developed".

In recent years, internationalization of EMNEs has been a growing phenomenon and receiving increasing attention in the field of international business. Much of the studies on MNEs internationalization were limited to the MNEs from a developed market. Gaur & Kumar (2010) argue that the internationalization of EMNEs is different from that of firms from developed economies, and existing internationalization theories are insufficient to fully explain this new phenomenon. Due to the lack of existing theories on emerging market firms, it has been necessary to adapt the theories and frameworks applicable to developed market in the context of emerging market. In studying growth and innovation between developed and developing countries, Schneider (2005) connotes “when the sample is split between developed and developing countries, the results suggest that the dynamics of innovation and growth differ across these two groups of countries. Market size and infrastructure are the dominant factors in explaining innovation in developing countries, while high-technology imports, human capital, and R&D expenditures appear to have a stronger impact on developed countries.”

In studying the internationalization pattern of EMNEs, Kanungo (2009) suggests that EMNEs investments were largely concentrated in the developing countries till the late 1980s and Wells (1983) informs that EMNEs involve providing appropriate technology and executing other unique ‘third world’ characteristics of their planning and operations. Furthermore, in explaining EMNEs contribution in strengthening South-South cooperation, Kanungo (2009) shows that in the objective of emphasizing collective self-reliance at the South-South policy dialogues, host developing countries favored EMNEs over MNEs of the developed countries. In the context of South Asia, India's trade volume with its neighboring economies presents us the understanding of India's trade relationship in the region. India's trade figure (export) in the SAARC region is presented in fig 1.2.

Analyzing the risk associated with internationalization of firms, the risk factors included unfamiliar with the foreign culture, business operating environment, infrastructure, legal system, and political risk. Especially, looking at the issues existing in emerging markets, Ciravegna et al. (2014) inform, “emerging markets already account for the vast majority of the world's population and land mass, but emerging markets continue to be affected by poverty, inequality, and infrastructural deficiencies.” Zaheer (1995) informs that firms doing business abroad face costs. On the other hand, Nordstrom (1990) states that the world has become much more homogeneous and that consequently, psychic distance has decreased. In the context of risk, Uppsala Model looks at the stage-based model of firms' internationalization process. Thus, Psychic distance should largely decrease when considering the internationalization of firms within BOP economies than between developed and BOP economies.

As theorists in explaining Uppsala model particularly examined from developed market MNEs' viewpoint, Turnbull (1987) rejects the determinism inherent in stage-based models and argues against the notion that all firms, regardless of industry type, country context, or other variables, must inevitably follow a fixed route to become international. In their work, on the criticisms of other scholars on the conventional models of internationalization, Lopez et al. (2009) state, “The Uppsala model is not the only possible way to describe the firm internationalization processes.” Therefore, other internationalization theory like country similarity would be worth examining.

2.3.2 Country Similarity Theory

Swedish economist, Staffan Burenstam Linder, coined the Country Similarity Theory in 1961. Linder (1961) writes that the more similar the demand structures of the two countries the more intensive the trade between these two countries. The country similarity theory examines on how economies are most likely to engage in bilateral trade looking at a pattern of international trade

between economies, then suggesting that economies that have a higher degree of similarities, such as income, saving habits, culture, language, communication systems, and others, are most likely to engage in bilateral trade. Markusen (2013) connoted that Linder's hypothesis with respect to the relationship between per-capita income and trade patterns contribute valuable insight in contemporary economic studies. "Performance benefits can derive from cultural and market similarities across countries in the same region" (Rugman, 2005). Often, emerging markets have many similar market characteristics as developing markets; thus, the products developed by emerging markets' firms for their home market can also well serve consumers in developing markets. In their study, McPherson et al. (2001) state that the Linder's theory demonstrates to be a useful tool in determining the trade patterns among developing economies, yet McPherson et. al. (2001) caution that studies have not generated conclusive results for all the countries analyzed. In determining the importance of the theory, Krugman (1980) connotes that the Linder theorem remains credible in providing the general pattern of international trade.

Since emerging market firms are serving their home market from their births, EMNEs experience and understanding of their local markets, home country regulations, and other related businesses environment and their consumers' condition are stronger. This could enhance EMNEs performance in their home market and a higher prospect of achieving success in other BOP markets because of country similarity. Khanna and Palepu (2006) looking at the distinctive nature of the EMs, explain that firm-specific advantage is derived from optimizing products and production processes for the distinctive conditions of the home market – that is, serving low-income consumers in countries with underdeveloped 'hard' and 'soft' infrastructure. Looking at India, as Indian firms serving their BOP consumers make products for their local BOP consumers, based upon their low-income consumer's product affordability strengths and other

factors in mind, products build for their home market by Indian firms would fit in other similar economies based upon country similarity factors. In comparing affordability of water purifier by Tata Chemicals with other western brands, the Western MNEs' product may have a higher quality and price, Tata's water purifier's price and quality fits on the income of people from Sri Lanka, Nepal, Bangladesh and Bhutan and serves well fulfilling the basic needs of BOP consumers.

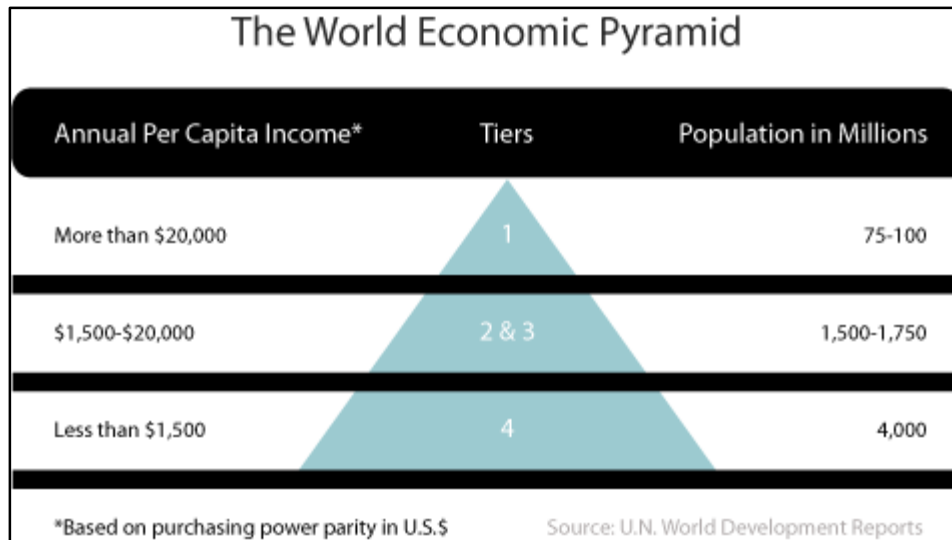
In relating to Linder's observation to BOP markets, the EMNEs serving BOP consumers in their home market and similar markets beyond, they are more likely to engage in trade as their per capita incomes, saving habits, culture, language and market structures are similar.

2.4 Base of the Pyramid Theory

Franklin D. Roosevelt first implied the term, the bottom of the pyramid (aka), during the time of great depression in 1932. The president used the term addressing to uplift the economic difficulties of the citizens at the lower economic ladder. CK Prahalad introduced the Bottom of the Pyramid in 1999, in his book titled, "Strategies for the Bottom of the Pyramid: Creating Sustainable Development". However, the term gained popularity in recent years when Prahalad and Hammond (2002) published an article, "Serving the World's Poor, Profitably", in Harvard Business Review. Prahalad and Hart (2002) also highlighted the term in their BOP studies. Augustine (2008) states that despite the fact that this seminal piece broke ground for the BOP movement, the idea did not gain speed until the Harvard Business Review picked it up in 2002. In explaining successful business models for BOP markets and unlocking the potential at BOP, Dansk Industri (2007) states that there are tremendous benefits for firms serving the underserved and less competitive BOP markets and the best way to meet the needs of the poor is a profit driven market-based approach. Prahalad and some scholars well understand the spending power

of an untapped poorest socio-economic group of over four billion people. Prahalad & Hammond (2010) connote that 65% of the world's population earns less than \$2,000 each year—that is 4 billion people. Despite the vastness of this market, it remains largely untapped by multinational companies. However, this does not translate that BOP consumers have no money. Even though the consumers' individual income is low, their aggregate buying power is substantial. Prahalad & Hammond (2002) suggest that while BOP consumers' incomes are low, the aggregated buying power of a whole community can be commercially significant. Anderson & Markides (2007) observe that the dynamics of growth at the base of the economic pyramid in emerging markets have significant opportunities to unlock value. The World Resource Institute (2007) reports, “the 4 billion people at the BOP hold incomes below \$3,000 in local purchasing power; they are living in relative poverty. Their incomes in current U.S. dollars are less than \$3.35 a day in Brazil, \$2.11 in China, \$1.89 in Ghana, and \$1.56 in India.” The BOP constitutes a \$5 trillion global consumer market, a substantial purchasing power when the BOP consumers' income added together. Prahalad (2005) provides a conceptual framework of BOP population of four billion, who earn less than \$1500 a year through the economic pyramid structure. Similarly, U.N. world Development Reports (n.d.) presents a figure consistent to Prahalad's that 4 billion people at the bottom of the pyramid earn less than \$1500 a year per capita based on purchasing power parity in U.S dollar (see figure 2.2).

Figure 2.2



Hart and Christenson (2002); Prahalad (2005) connote that rural markets and especially the BOP markets can be hotbeds of innovation. Petrick and Juntiwassarakij (2011) also consider that emerging markets are becoming hotbeds of innovation in areas ranging from healthcare to water to transportation. No doubt, there is a higher level of needs existed in BOP markets, which can be served through innovations. Petrick and Juntiwassarakij (2011) state that innovation happens where need meets opportunity. Innovations like frugal and disruptive serving BOP consumers are coming from the emerging markets. Tiwari and Herstatt (2012) inform that scholars like Hart and Christensen (2002), Prahalad (2005, 2012), and Ahlstrom (2010) have demonstrated the business potential of products conceptualized to cater to the specific needs of non-affluent sections of the society in developing economies.

Looking at the BOP market, when consumers have a limited disposable income, they have to pay higher prices for their goods and services. Studies suggest that BOP consumers pay much higher prices for their products and services than the consumers at the upper tiers of the pyramid. Prahalad & Hammond (2002) in their study of an urban slum in different parts of the world find that as a direct consequence of the lack of competitively and efficiently provided services, the

poor live in very high-cost sub-economies. The handbook prepared by Danish Industries International Business Development, working with the bottom of the pyramid (2007) explains that numerous studies have shown that poor pay multiples of the prices of basic goods compared to consumers at the top of the pyramid. Due to BOP consumers' limited disposable income, the consumers are unable to purchase their needed products in bulk; they end up buying in small packages, so they pay more. In addition, a lack of competitiveness and inefficient services in the BOP market, as noted by Prahalad and Hammond (2002), are also important reasons for BOP consumers to pay more for their products than non-BOP consumers.

When the MNEs from developed economies with plenty of resources and greater market access are discouraged by lower profit and are often focused on sustaining innovation efforts, EMNEs need to step up to fill a gap with innovative BOP products in the BOP market segment. This suggests us that in the absence of MNEs from developed markets, innovations from EMNEs are instrumental for serving BOP consumers in their home market and other similar markets. According to Christensen (1997), large Western MNEs have strong profit motives. Consequently, they focus on doing better by enhancing complexity, quality, the attractiveness of existing products and services, which Christensen terms as a sustaining innovation. In explaining Danish exporters taking their business models when they go abroad, the handbook, working with the bottom of the pyramid (2007) shows that Danish business model may work fine when their products and services are targeted at consumers in other high-income markets, but for other emerging or low-markets, this business model carries less potential. In explaining the Western MNEs product innovation strategy - new products with more advanced features at premium prices - Mukerjee (2012) points out that in emerging markets, where their products must appeal to the millions who don't have millions, companies will need to master the art of

frugal innovation. In the condition, when EMNEs are growingly recognizing the benefits of serving the BOP, and at the same time, their innovations are instrumental for serving BOP consumers in their home market and other similar markets. Dolan (2012), recalling Prahalad and Hart (2005), state, “BOP model seeks to marry a corporate logic of profit maximization with development aspirations for poverty reduction and well-being by serving ‘poor’ consumers with much-needed products and services and by opening up employment opportunities for ‘micro-entrepreneurs’.” Prahalad and Hart (2002) BOP model suggest that the BOP markets can be served by MNEs profitably. However, the theory needs to be extended to clarify the role of appropriate innovations in serving the BOP consumers. Appropriate innovation models have to be successfully implemented by firms in serving BOP consumer segment, because if an innovation model does not serve the BOP consumers, the model may not produce useful solutions.

The BOP theory has not escaped criticisms from scholars like Karnani. Beside the BOP market issues including the lack of market competitiveness, services efficiency, hard and soft infrastructures, scholars have pointed that BOP consumers' market participation and product purchase decision making is poor. Karnani (2009) criticizes that purchasing decision of the BOP stating that poor people are irrational economic participants; they are less informed and therefore face huge consequence when they make poor purchasing decisions. Karnani's criticism may be logical in 2009, but in recent years, the advent of technology has empowered the BOP consumers in many ways including access to product information and their product purchase decision at large. Wladawsky-Berger (2015) connotes businesses' interest in serving the poor, which historically was ignored, given the challenges involved in reaching geographically marginalized communities with limited purchasing power; however, in recent years, the digital economy

enabled driving down costs and creating the potential to unleash new market opportunities for serving low-income customers.

3. PROPOSITION

A growing number of EMNEs are serving BOP consumers in their home market and abroad with innovations appropriate to BOP consumers' needs and BOP market demand. Exploring at the BOP market conditions, EMNEs are in a better position in dealing with institutional voids in BOP markets. In explaining emerging market conditions, Khanna & Palepu (2005) state, "firms had to operate with unreliable power, congested ports and roads, corrupt bureaucracies, political and regulatory uncertainties, weak educational institutions, and a range of other "institutional voids"." EMNEs serve their local BOP consumers from their birth, which has strengthened the EMNEs understanding of their local market condition, and the consumers demand better. "EMNEs also enjoyed an advantage relative to foreign firms in their ability to function effectively in the difficult conditions of emerging markets, where both the 'hard' and 'soft' infrastructures were underdeveloped" (Ramamurti, 2009). Looking at India, the home of the largest BOP consumers in the world, Indian EMNEs are well serving their home market and other regional markets' with a similar market structure with their products. In examining the Indian and Chinese economic and political influence in South Asia, Anderson and Ayres (2015) brief that India enjoys substantial regional influence across South Asia because of its size, comparative economic might, and historical and cultural relevance to the region. It is important to recognize that the BOP economies in South Asia are well positioned in close geographical proximity to India with similar hard and soft infrastructure and culture. Therefore, in the case of Indian EMNEs, once Indian EMNEs build their strong presence serving BOP consumers in their home market, they could function and expand fairly well to these similar markets in the region than the Western MNEs.

In contrast, some BOP studies examine the challenges possessed by the BOP market. Landrum (2007) present other scholars' criticisms on the BOP market size (Crabtree, 2006, 2007; Hopkins, 2005; Jenkins, 2005; Karnani, 2006a, 2006b), whether MNCs are suited to serve the BOP markets (Jenkins, 2005; Karnani, 2006a, 2006b) and also explain that there have been few challenges to the assumptions and suggestions put forth in C.K. Prahalad's work. In Harvard Business Review, Karamchandani, Kubzansky & Lalwani (2011) write that multinationals often find that their prices are too high for this population, and their usual supply chains, production methods, and delivery systems present formidable hindrances to slashing costs. Some scholars have also pointed out that serving to BOP customers lack significant economies of scale as customers are dispersed. Aneel (2007) argued:

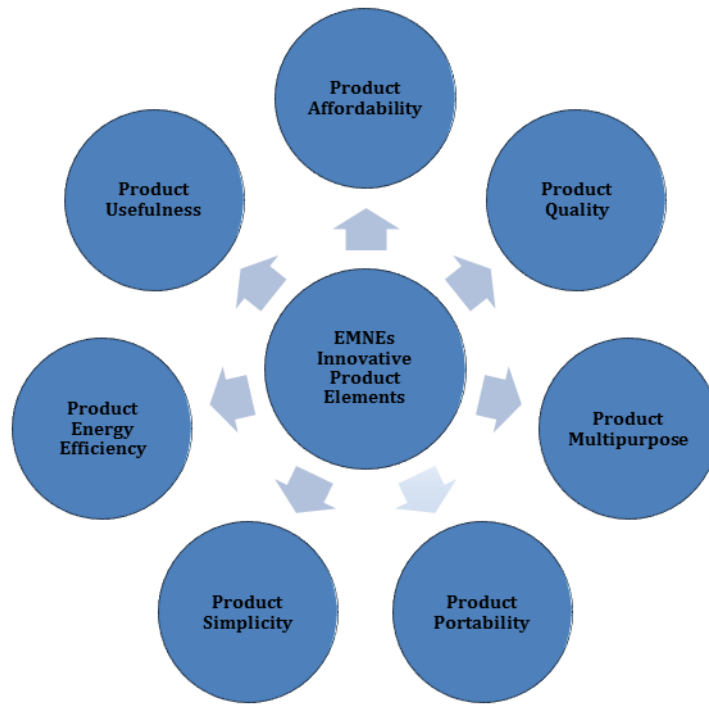
“Markets for selling to the poor usually do not involve significant economies of scale. Markets of the rural poor are often geographically and culturally fragmented; this combined with weak infrastructure makes it hard to exploit scale economies. Products sold to the poor are often less complex, reducing the scale economies in technology and operations. As examples, bicycles are less scale-intensive than motorcycles; fans are less scale-intensive than air-conditioners; unprocessed food is less scale-intensive than processed food.”

If a private company is motivated not by economic profits, but by social responsibility, then, of course, there are many opportunities for marketing to the poor (Aneel, 2007). London & Hart (2004) argue that although an increasing number of firms are exploring economic opportunities at the base of the pyramid, there is little in the way of theory or research in the area of IB that provides clear guidance on how to pursue these emerging markets.

At the present, the importance of serving BOP consumers is growing as firms are increasingly exploring economic opportunities at the BOP. London & Hart (2004) suggest a substantial gap in existing literature is still apparent, although an increasing number of firms are exploring the economic opportunities at the base of the pyramid, there is little in the way of theory or research in the area of IB that provides clear guidance on how to pursue these emerging markets. This research highlights three factors: innovations, BOP, and internationalization, in understanding EMNEs' position to serve the BOP consumers in the home markets and the similar markets abroad.

Based upon the number of elements captured by the framework in this research, the position of EMNEs shall be reflected in serving the BOP consumers in their home market and other similar markets abroad. Importantly, simply an innovation of a BOP product is not a solution but the product has to meet BOP consumers' demands and needs. Guardian (2015) informs that the likelihood of success when entering a BOP market is not only innovating and creating business models but also generating the dynamics necessary to deal with the complexities of the BOP segment. In dealing with the complexities of the BOP segment, EMNEs should take advantage based on their product affordability, product quality, product multi-purpose, and so on. It is important to note that an innovative BOP product does not require capturing all the elements in the framework. Greater the innovative product elements being captured by BOP products in fulfilling the consumers' needs and demands, higher the chances that products serve the BOP consumers. EMNEs' product innovation framework has been categorized into seven elements: product affordability, product quality, product multi-purpose, product portability, product simplicity, product energy efficiency and product usefulness.

Figure 3.1



Source: Researcher of the Study

The figure 3.1 presents EMNEs' innovative BOP product elements. The elements in the framework are critical when building products for EMNEs in serving BOP consumers in their home market and similar markets abroad.

3.1 Research Propositions

Proposition I:

Product affordability is an important element of EMNEs' innovative products for BOP consumers in their home market and similar markets abroad.

Proposition II:

Product quality is an important element of EMNEs' innovative products for BOP consumers in their home market and similar markets abroad.

Proposition III:

Product multipurpose is an important element of EMNEs' innovative products for BOP consumers in their home market and similar markets abroad.

Proposition IV:

Product simplicity is an important element of EMNEs' innovative products for BOP consumers in their home market and similar markets abroad.

Proposition V:

Product portability is an important element of EMNEs' innovative products for BOP consumers in their home market and similar markets abroad.

Proposition VI:

Product energy efficiency is an important element of EMNEs' innovative products for BOP consumers in their home market and similar markets abroad.

Proposition VII:

Product usefulness is an important element of EMNEs' innovative products for BOP consumers in their home market and similar markets abroad.

4. RESEARCH METHODOLOGY

The study primarily uses qualitative methods and descriptive statistics techniques. The methods include a conceptual framework, case studies, survey and a descriptive statistics technique (factor rating method). The multiple qualitative methods in the study seek to better understand and explore the phenomenon that is internationalization of EMNEs and their innovations appropriate to BOP market and BOP consumers' demand. In studying qualitative research approaches in the international business field, Doz (2011) defines qualitative research as "qualitative analysis (such as narratives and conceptual development) of qualitative data (such as semi-structured interview data, qualitative case studies, ethnographic studies, and so on)." Creswell (2014) states that "the historic origin for qualitative research comes from anthropology, sociology, the humanities, and evaluation." Furthermore, in selecting different research approaches, Creswell (2014) shares the usefulness of qualitative approach when the researcher does not know the important variables to examine. In a similar perspective, Morse (1991) also informs that qualitative approach is useful when the subject is new, the subject has never been considered with a certain sample of the group of people, and existing theories are not to the design or research group. According to Mack et al. (2005), "Qualitative methods are also effective in identifying intangible factors, such as social norms, socioeconomic status, gender roles, ethnicity, and religion, whose role in the research issue may not be readily apparent." Garcia & Gluesing (2013) deliver that in applying to study the change in international business contexts, qualitative research can be very relevant and useful in the development and testing of new methods. Doz (2011) points that qualitative research could help to identify and assess new phenomenon that EMNEs provide, and they are worthy of academic research. The current study

particularly fits on implementing qualitative and descriptive methods. The reasons behind include, first, unavailable of large quantitative data on the subject matter to run quantitative models. Second, the methods implemented in the present study well explains the phenomenon of how well EMNEs are serving consumers at the base of the economic pyramid. Third, the collected data from the field could be interpreted in a meaningful way by implementing the existing method in the present study.

The current study implements three qualitative case studies in exploring EMNEs internationalization in BOP markets with innovative products that are suitable to BOP markets. In identifying the key elements for designing and implementing qualitative case study research, Baxter and Jack (2008) inform that the qualitative case study is an approach of studying a phenomenon that is explored through multiple lenses. Creswell (2014) suggests that case studies are a design of inquiry found in many fields, especially evaluation and a researcher develops an in-depth analysis of a case. Baxter and Jack (2008) further explain that a multiple or collective case study will allow the researcher to analyze within each setting and across settings. Yin (2003, 2009) states that doing case study research would be the preferred method, compared to the others, in situations when (1) the main research questions are “how” and “why” questions; (2) a researcher has little or no control over behavioral events, and (3) the focus of study is a contemporary (as opposed to entirely historical) phenomenon. The case study in the dissertation study tries to answer questions on how EMNEs are serving BOP consumers in their home market and similar markets abroad. Why are BOP product elements crucial to the BOP consumers in making their product purchase decision? In studying multiple case studies, Yin (2003) informs, “a multiple case study enables the researcher to explore differences within and between cases.” Farquhar (2012) adds that case study research is suitable for answering questions that start with

how, who and why. However, Farquhar (2012) cautions that the limitation of studying a small number of cases limits to extend a research to other situations in survey research.

Another method implemented in the dissertation study includes a field survey. Visser et al. (n.d.) in their study on survey research mention that every method of scientific inquiry is subject to limitations; therefore, choosing among different research “methods inherently involves trade-offs, the inevitability of such limitations has led many methodologists to advocate the use of multiple methods.” In addressing the issue, my research implemented multiple methods beside case study and framework.

In the study, the conceptual framework identified the phenomenon, elements of innovative BOP products, and basis for studying them. Jabareen’s (2009) study of building conceptual method defines a conceptual framework as “a network, or “a plane,” of interlinked concepts that together provide a comprehensive understanding of a phenomenon or phenomena.” Emphasizing conceptual method in qualitative study, Mishler (1990) emphasizes that the ultimate aim of the qualitative study by describing and explaining a pattern of associations performed with a set of conceptually specified categories. The framework connects, simplifies and refines different qualitative methods implemented in the study including case study, survey, and quantitative model. Jabareen (2009) further informs the benefits of the conceptual framework, which are its flexibility, capacity for modification, and emphasis on understanding. Magher (2016) suggests that conceptual frameworks can be presented in a way that makes most sense of a work, such as visual in nature that allows the reader of the framework to understand the flow of the research.

This study implements a survey in BOP markets in studying BOP market demands, and the consumers’ importance and satisfaction on innovative products offered in their local markets.

Sreejesh et al. (2014) study on business research process explains survey as, “a survey is a research technique, which is used to gather information from a sample of respondents by employing a questionnaire. Surveys are normally carried out to obtain primary data.” Visser et al. (n.d.) suggest that surveys offer the opportunity to execute studies with various designs, where each of the design can be suitable for addressing particular research questions. Visser et al. (n.d.) further inform that studying a representative sample through field research is relatively easy and surprisingly practical than doing research in a lab. In studying the logic of survey, Jansen (2010) distinguishes survey methods, “the qualitative survey studies the diversity of a topic within a given population; the statistical survey studies the numerical distribution of the characteristics of a topic in a population.”

In this study, a simple quantitative method, factor rating, was applied in learning the importance of the innovative product elements among BOP consumers and the elements captured by each innovative product in the survey and case studies. As a researcher, I believed that choosing both methods would help to overcome the limitations posed by implementing just one type of method. Through the factor rating method, it will be studied the importance of BOP products to consumers prior to the purchase of the product and consumers’ satisfaction after using the BOP product. Also, the implemented method would allow studying whether EMNEs products were largely serving BOP consumers than MNEs. Also, it also allowed understanding BOP consumers’ satisfaction towards the products that they were offered.

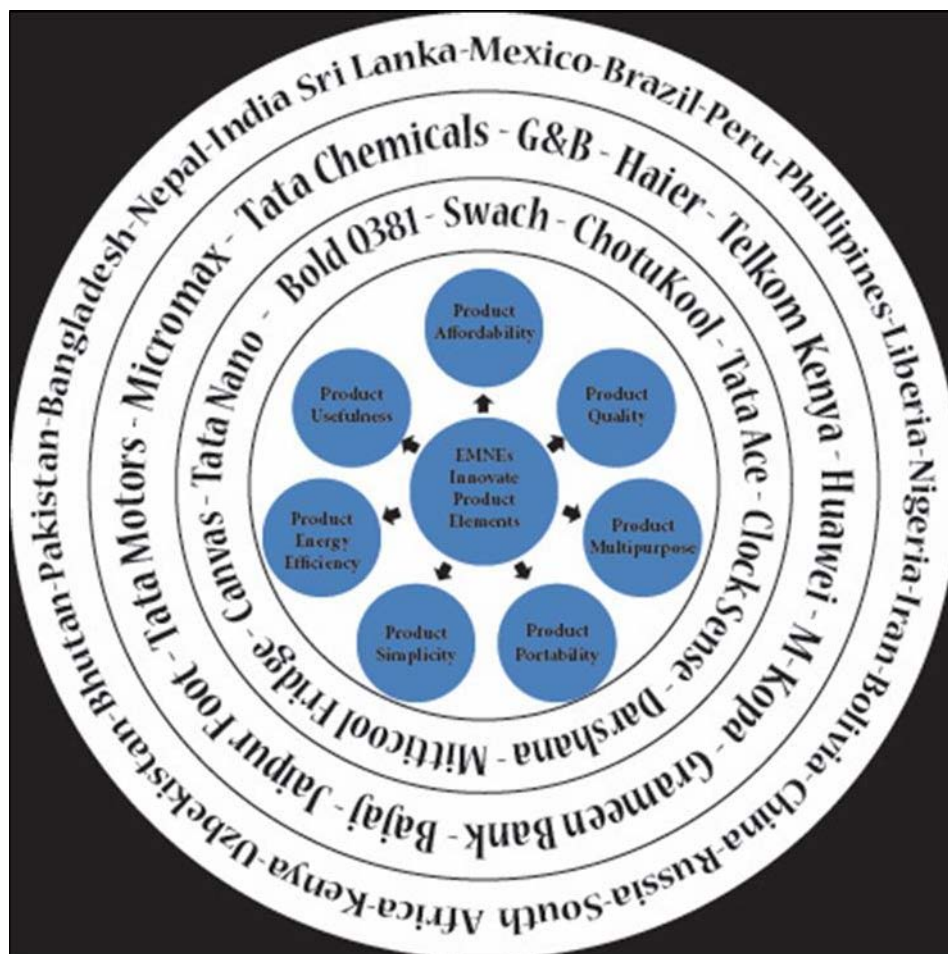
4.1 Conceptual Framework: Innovative Product Elements

The conceptual framework is an integral part of the study. The framework is used as a guide in the study along with preparing a survey questionnaire to collect data from the BOP markets. In

recognizing the importance of the conceptual framework, MacInnis (2011) informs that the conceptual framework serves as a link between the literature review, methodology, and result. The conceptual framework (see figure 4.1) captured EMNEs' innovative product elements. The elements captured by EMNEs' innovative products that suit BOP consumers' needs shall reflect EMNEs' strengths in serving the consumers in their home market and other similar markets abroad.

Figure 4.1

Framework: EMNEs Innovative Product Elements



Source: Researcher of the Study

The figure 4.1 captures the importance of the BOP product elements as EMNEs are serving BOP consumers with their innovative products in their home market and similar BOP markets abroad. In serving BOP market, EMNEs need to craft innovation around the innovative BOP product elements. EMNEs are moderated by the BOP market. In figure 4.1, the outer circle represents the BOP economies that EMNEs exist. The second outer circle represents EMNEs that are serving BOP consumers in their home market and similar markets abroad. The third outer circle represents some of the EMNEs' BOP products that are serving BOP consumers. Finally, the figure in the inner circle represents the core of EMNEs' innovative product strategy. The seven elements of the EMNEs' product innovation framework are examined based on the fact that due to country similarity if a BOP product well serves in one BOP market, the product could also serve BOP consumers in other similar markets.

Product Affordability

Based on the fact that country similarity under product affordability, if an innovative product is affordable to a BOP market, the product could also be affordable to the BOP consumers in other similar BOP markets. As an emerging market firm builds a product for its home country BOP segment, depend on BOP consumers' product affordability strength, the product would also be affordable to other similar economies based upon country similarity factors. Let us examine, Godrej & Boyce's refrigerator if it fits on the income of BOP consumers of India and other similar economies compared to a refrigerator manufactured by other MNEs (Western's & Japanese). Western firms may have a higher quality and price, but Godrej & Boyce's refrigerator serves well based upon price factor and fulfilling its consumers' basic needs. Anderson & Markides (2007) mention that perhaps the biggest hurdle that companies must overcome is ensuring that products and services are affordable. Generally, consumers are price

sensitive, and especially BOP consumers with limited disposable income and low purchasing power are highly sensitive to price factor. Anderson & Markides (2007) mention, “two-thirds of Indian villagers are in the lowest-income category, making them acutely sensitive to price. They spend more than two-thirds of their income on food and must pay for products such as soaps, scents, shampoos, and telecommunications services with whatever funds are left over.” With a limited disposable income, BOP consumers highly price sensitive. Therefore, a price of products dictates the level of the products’ consumption. Ramamurti & Singh (2009) share, “one common firm specific advantage of many EMNEs is their ability to adapt imported technology to develop products suited to the special needs of local customers – for instance, by making products cheaper and more affordable”. Product affordability is an important element that BOP consumers demand, but other product elements are not less important. Prahalad (2011) shares that the focus on affordability alone cannot create a BOP success story. Guardian (2015) mentions that for BOP consumers a cheap product or service may not be enough of an incentive to make a purchase decision; BOP consumers should also feel that they are getting the best quality for their money.

Product Quality

Based on the fact that country similarity under product quality, if an innovative product quality is acceptable to a BOP market, the product quality could also be acceptable to the BOP consumers in other similar markets. Prahalad & Hart (2002) inform that BOP consumers are value buyers and expect a great quality product at prices they can afford. When a product manufactured by EMNEs for their local consumers, there is often the absence of after-sales service to their consumers, a product merely has to have acceptable quality. As we know, BOP consumers in many BOP markets geographically dispersed, and many live in harsh environments.

Understanding BOP consumers living environment, when EMNEs build quality products for their home consumers, the product could equally be acceptable to other BOP markets' consumers. It is important to note that product quality cannot be compromised when building BOP products as the product should be able to stand rough and difficult conditions. Ramamurti & Singh (2009) write that making products that were rugged and easy to maintain in the harsher conditions found in emerging markets, such as poor-quality infrastructure or the absence of after-sales services is important for success. In serving their consumers, EMNEs often have to look to enhance their product quality so it suits the local environment of its consumers by maintaining lower costs. Different from developed markets' MNEs whose focus is more on the enhancement of their product quality through increasing their product price, the emerging markets MNEs have to focus on serving BOP consumers who are price sensitive, without falling behind in the quality of their products. Products built for upper tiers of the pyramid can be maintained with better quality because when needed, quality maintenance costs can be passed to their consumers by increasing product price. EMNEs serving BOP consumers, however, do not have the ability to share their maintenance cost to their limited income BOP consumers. For this reason, EMNEs have to be innovative to maintain their product quality along with maintaining product affordability. In explaining the needs and aspirations of BOP consumers, the BOP Innovation Center (2014) informs that BOP customers will not necessarily settle for stripped-down versions of mainstream products and their products have to be designed and existing ones redesigned, taking into account the local context and specific characteristics.

Product Multi-purpose

Based on the fact that country similarity under product multipurpose, if an innovative product multi-purpose functions well support a BOP market, the product multi-purpose could well

support the BOP consumers in other similar markets. Product multi-purpose is highly attractive to BOP consumers because it enhances the usage of purchased products. Looking at a low-cost smartphone from Indian EMNEs, the product well captures product multi-purpose from the framework. In 2016, Indian firm Ringing Bells launched the world's cheapest smartphone, according to BBC (2016) Ringing Bells, the manufacturer, said their Freedom 251 phone would cost just 251 rupees (\$3.67; £2.56), and there was a huge demand in the first hours of sale. The phone features included 8 GB storage, camera, torch light, a dual SIM card and 3 G network. Having an important feature like a flashlight on the phone, when a power outage is often an issue in many rural areas of developing and emerging economies, BOP consumers would find such feature attractive and helpful. Having a camera feature on their phone, when BOP consumers cannot afford to buy a camera, the camera feature on their phone would allow fulfilling their need of a camera. Similarly, having a dual SIM Card feature on the phone would allow BOP consumers to have a luxury of choosing a strong network when making phone calls. Comparing this product with iPhone, iPhone is not only beyond the reach of BOP consumers but also lacks an important feature like a dual SIM card function. Therefore, looking at a phone like Ringing Bells, if the phone well serves the BOP consumers in India, the phone could well serve BOP consumers in the region and beyond based on country similarity characteristics.

Product Simplicity

Based on the fact that country similarity under product simplicity, if an innovative product simplicity well served to a BOP market, the product simplicity could apply to the BOP consumers in other similar markets. In fact, product simplicity might be a less important factor for the consumers at the top tier of the economic pyramid when buying a product, as most of the consumers in this segment are literate, sophisticated and have a higher disposable income, but

product simplicity is the must when serving BOP consumers. Different from Western MNEs, EMNEs building their products have to design keeping in mind a majority of consumers who are in the lower tier of the pyramid who is less sophisticated. To enhance products usage by its BOP consumers, Tata Chemicals made the product design simple and easy to use. Building refrigerator with only 20 parts, oppose to 200 parts in standard fridges, Godrej and Boyce achieved the product simplicity in its product. Also, product simplicity is equally important while serving the elderly population, children, and disadvantaged groups. EMNEs are increasingly manufacturing products with simplicity in mind in serving their consumers from all walks of life.

Particularly in serving a large number of less educated and less sophisticated consumers in BOP markets, product simplicity is crucial. As a matter of fact, BOP consumers often share similar characteristics, when BOP products are built in serving one BOP market with simplicity in mind, the products could well serve BOP consumers in other similar markets.

Product Portability

Based on the fact that country similarity under product portability, if an innovative product portability well served to a BOP market, the product portability could apply to the BOP consumers in other similar markets. Product portability can be achieved through a simple and lightweight product design. The product portability is also an important entity for BOP consumers. As we know, still in many rural parts of emerging and developing economies, difficulties of proper, reliable transportation services exist. BOP consumers who cannot afford private transportation services have to walk miles to reach their homes when public transportation services lack. In addition, the product portability would allow the product to be

easily shared among friends and family, when many could not easily afford, sharing the product would enhance its usage and value. Nogami et al. (2014) explain that the fact that the product is small allows the sharing among family and neighbors and product lightweight which provides portability to the product for BOP consumers, which can be a determining factor of buying the product or not, due to transportation difficulties. For instance, product portability could enhance consumers' mobility. Unreliable public transportation and limited access to goods and services in rural areas are likely in most of the BOP markets. In addition, BOP consumers in various BOP markets cannot afford private transportation services. Therefore, when an innovative product is built by EMNEs with portability in mind for the EMNEs' home market, the product could also well serve BOP consumers in other similar markets.

Product Energy Efficiency

Based on the fact that country similarity under product energy efficiency, if an innovative product energy efficiency well served to a BOP market, the product energy efficiency could apply to the BOP consumers in other similar markets. Today, energy is becoming one of the pressing issues in any country's economic agenda. Cheung et al. (2010) report, "India, a rapidly emerging economy with the world's second largest population, is facing a surging energy demand." Especially in developing and emerging economies with their limited resources, energy cost is a very sensitive matter. On top of that, many emerging and developing, economies still have an acute shortage of electricity. Taking an example of India, electricity is one of the most pressing issues like in many other developing economies. Many Indians in rural areas have to experience the shortage of electricity on a daily basis. Therefore, people in these economies highly demand product energy efficiency. In addressing the issue, Cheung et al. (2010) state, "a growing number of Indian companies see a market opportunity in providing rural BOP

households with access to alternative cooking and electricity solutions and consequently are developing clean energy products and services for this market.” For instance, making ChotuKool refrigerator energy efficient with its ability to run on battery power and stay cool for hours even when there existed a temporary electric shortage, therefore, making the product attractive to its consumers. Different from EMNEs, MNEs from the developed economies could have prioritized energy-efficient products, but often that occurs to win the hearts and minds of those MNEs’ consumers as they commercialized their products as energy efficient, eco-friendly go-green and so on. However, for EMNEs, product energy efficiency is necessary when they consider their country factor. Acknowledging the fact of an overall acute energy shortage in BOP markets, and a limited disposable income of overall BOP consumers, when EMNEs successfully build products for their home based BOP consumers, the products could also serve the BOP consumers in similar markets.

Product Usefulness

Based on the fact that country similarity under product usefulness, if an innovative product usefulness well served to a BOP market, the product usefulness could be applicable to BOP consumers in other similar markets. In building a useful product, it requires a deep understanding of targeted consumers and its behavior, because how good a product is, if it lacks to serve a purpose, it may lead to product failures. “A major factor of success is product usefulness, which is the capacity to bring practical advantages to users” (Aubin et al., 2012). A chance of failure rises when a product is not useful. Actually, creating a useful product is a daunting task because although firms end up building the product that is easy to use, simple, affordable, energy efficient and scalable, if the product lacks usefulness then the product would be less desirable among its consumers. Therefore, we can assume that product acceptance or

rejection by consumers is highly depended upon product usefulness. Looking at Tata's water purifier, water is basic needs, and most of all clean water is in much demand in the country like India where due to a lack of clean drinking water, waterborne diseases affect millions of peoples' health every year. Therefore, the product usefulness is strong. Similarly, Godrej and Boyce's refrigerator, the product usefulness is exhibited when people in rural India can keep their vegetables, medicine and other food items fresh for an extended period. Otherwise, many of the daily items and medicine of BOP consumers would have gone wasted, in absence of refrigerator, when BOP consumers cannot afford to waste their resources. Recognizing the importance of product usefulness, as stated earlier that how great a product is, if it lacks usefulness to BOP consumers, the product will not serve the consumers. Indian EMNEs build Tata Swach and ChotuKool in serving the firms' home based BOP consumers. Due to the importance of the products' usefulness along with other elements in the framework, eventually, the products are serving other BOP markets in the region and beyond. This explains us that when EMNEs build products for their home market's BOP consumers with the importance of product usefulness in their mind, the product could also serve BOP consumers in other similar markets.

4.2 Case Studies

The qualitative analyses with three case studies explore how Indian EMNEs innovative products are successfully serving BOP segment in South Asia. EMNEs' product innovation for BOP markets, which is different from Western MNEs, allows the EMNEs to successfully serve the large BOP segment. Guardian (2015) mentions, "serving a low-income market segment requires an entrepreneurial spirit and managerial willingness to innovate." Tata Chemicals, Godrej & Boyce, and Micromax are serving the BOP consumers with their innovations. Since their births, all three firms are serving their home based consumers, therefore, the firms are not only well

aware of their local BOP landscape but also have good knowledge of local culture, geography, economy, and institution. In addition, EMNEs have to regularly deal with their local governments' policies and regulations, including dealing with existed voids: business loopholes, bribery, and difficult rules for obtaining permits and business formation authorization since their inception. As firms build their strength doing business in their home markets' challenging environments over an extended period, the firms should have built their ability to perform well even when institutional voids existed. "The weak institutions in emerging economies forced local companies to be innovative in circumventing institutional voids" (Khanna & Palepu, 2006). In explaining EMNE's ability to deal with a range of institutional voids, Ramamurti (2009) shares that local firms were more likely to possess this firm specific advantage (FSA) compared to foreign firms, and EMNEs were able to transfer this FSA in varying degrees to emerging markets. In designing their products, EMNEs often collaboratively work with their end users. Prahalad (2011) informs that the poor are also used to a highly collaborative design process. The three Indian EMNEs chosen for case studies are some of the trailblazers in their respective industries that are successfully serving the BOP consumers in their home country and beyond with their innovative products.

4.2.1 Tata Chemicals: Swachh Water Purifier

4.2.1.1 Company's Overview

Tata Chemicals, the company, founded in 1939 in Mithapur, Gujarat, is an Indian EMNE headquartered in Mumbai, India. The company has a strong footprint in the global market and business environment with its presence in both developed and emerging/developing economies. According to the company's main Website (2016), the Tata Chemicals is India's market leader,

in the branded and iodized salt segment as well as in urea and phosphate fertilizers. Today, Tata Chemicals is fostering domestic innovation in serving people from all occupations and takes strong pride in its innovative, low-cost, product like Swachh water purifier, which provides affordable, safe drinking water to the public, especially the BOP consumers. Bhatti (n.d.) informs that Tata Chemicals created water filters that cost less than 50% of traditional filters. The company's website informs that the product has also been successful in serving a large segment of rural consumers in India, along with its increasing presence and significant operation in Asia and Africa.

4.2.1.2 Tata's Innovative BOP Product

The Swachh water purifier possesses many product features from the innovative BOP product elements framework. According to the company's main page, the product costs less than \$15, which is in a product purchase range of BOP consumers, and the purifier cartridge has the longest lifespan in the category. Therefore, the purifier's cartridge does not have to be changed often, which makes the product **affordable**. The lightweight of water purifier enhances **portability**. This would allow BOP consumers living in the rural areas, where most of the people in the emerging/developing markets still live, to have an access to the product. Because, even in the areas where there is no access to transportation, the portability of the product would allow the consumers to carry the product to their home for usage. There is an acute shortage of electricity in many parts of emerging and developing economies. The water purifier, Swachh, does not require energy to run, consequently, the BOP consumers could benefit from zero **energy cost**. Swachh water purifier has a simple design. As a result, the product is easy to clean and assemble which provides product **simplicity**. In addition to that making, the product's simple design would allow the BOP consumers to fix the product by themselves or at a lower

cost when the product needs maintenance. The design of Swachh water purifier with non-scratch materials enhances the product **quality**. As BOP consumers have limited disposable income, they cannot afford to buy the same product multiple times when the product's lifespan is short. In many BOP markets, there is often a lack of clean drinking water. Swachh water purifier has achieved product **usefulness** by meeting the US EPA (The United States Environmental Protection Agency) guidelines for bacteria and virus removal; thus, providing safe drinking water to consumers without using any chemicals. Swachh water purifier enhances product **acceptability** by providing the product that is essential in BOP consumers' daily lives. Often, the consumers have been a victim of water-borne diseases due to the unsafe drinking water that they have to consume regularly. Having access to water purifier has prevented the BOP segment from different water-borne diseases.

4.2.2 Godrej & Boyce: ChotuKool Refrigerator

4.2.2.1 Company's Overview

Godrej and Boyce is an Indian EMNE founded in 1897. Today the firm is serving its consumers from all walks of life including underprivileged BOP Consumers in India and abroad. Prahalad (2009) mentions that there are notable examples of BOP innovation from global corporations from emerging market companies that have broken through in global markets. The product of Godrej and Boyce that this study will look at in the case study is a ChotuKool refrigerator. ChotuKool strongly meets many of the product elements from the innovative BOP product framework. Jaynath and Balram (2012) informs that Chotukool is portable, energy efficient, affordable, easy to maintain because of a simplicity in nature with just 20 parts, and addresses the needs of the rural population. Eyring et al. (2011) Inform that Chotukool is portable, reliable

in power cuts and affordable. In explaining on reaching consumers at BOP, a sizable market through innovation, in Euromonitor, Boumphrey (2014) blogs:

“An example of one of the most well-rounded and thought out approaches is from Godrej and Boyce in India. The company has launched what has been fêted as the world’s cheapest refrigerator. It retails for US\$69 and was designed to target poor, rural consumers. In a country with 854 million rural inhabitants, this market is huge. The ChotuKool refrigerator looks from the outside like a box, consumes half the electricity of a standard refrigerator, and, importantly in a country which suffers power outages, it also stays cool for hours with no power, due to its superior insulation. It was designed with input from village women and is linked to microfinance organizations, which means families can purchase it on credit.”

4.2.2.2 Godrej & Boyce’s Innovative BOP Product

ChotuKool refrigerator possesses many features from the innovative product elements’ framework. ChotuKool is one of the cheapest refrigerators in the world. The product costs less than \$70, the amount is in the range of BOP consumers’ income. This makes the product **affordable**. The fridge weighs 7.8 kg, which provides **portability**. This will allow people living in the rural areas to have access to the product. As most of the people in the emerging and developing markets still live in rural areas where a lack of proper transportation services exists, the lightweight of the product benefits the consumers. Even when there is a temporary electric shortage, ChotuKool could still function. In addition, the product uses much lesser energy in comparison to other regular refrigerators; therefore, allowing its users to obtain benefits from using the product due to **energy saving**. ChotuKool is solar enabled and can run on batteries,

which enhances the choices of power supply upon its consumers need and demand. Also, ChotuKool is heavily insulated, so contents inside the refrigerator stay cool for hours even when there is an absence of power supply; therefore, helping to keep items in the refrigerator fresh. ChotuKool also has lesser parts than a standard refrigerator, which provides **simplicity**. Therefore, making the product simple in design would make it easy to maintain and fix the product at low cost when it breaks. The product **usefulness** has been exhibited as the BOP consumers were able to keep their vegetables, medicine and other food items fresh for a longer span of time. Otherwise, many of those items would have been wasted; BOP consumers cannot afford to waste their resources. Product **acceptability** gotten enhanced as ChotuKool was co-designed with village women who were among its targeted users. Co-designing the refrigerator with the end user would allow better fulfilling the product demand of users.

4.2.3 Micromax Low-cost Smartphones

4.2.3.1 Company's Overview

Micromax is an Indian EMNE headquarter in Gurgaon, India. The company, founded in 2000, is currently the tenth largest consumer electronics firm in the world. The company entered into mobile phone business in 2008. Today, the company is the second largest smartphone maker in India. Micromax has operations in emerging and developing markets. The company's website (2016) informs that the company has sales presence across India and global presence in Russia and SAARC markets. In recent years, the world has noticed higher growth in the mobile phone market. Informing about the rise of the cheap smartphone in both rich and poor economies, The Economist (2014) states that cheap smartphones are making inroads, and people buying their first smartphones today, perhaps to replace a basic handset, care less about the brand and more

about price than the richer, keener types of a few years ago. Asia Pacific (2015) reports that accelerating growth in smartphone adoption includes many factors, but key contributing to this development is the growth of supply from local smartphone manufacturers, including Micromax in India. Micromax is well aware of its local market its home consumers' demand, which is often lower in cost, good enough quality, and meeting basic needs. Importantly, still, there is a huge market for mobile connectivity in the region. Examining the global connectivity index report (2014), the data suggests that GSMA mobile connectivity in South Asia is low, below 40 percent. Sri Lanka with the highest index score of 48.7 and Afghanistan with the lowest score of 22.4. As a growing number of BOP consumers are having access to smartphones, it has created more opportunities for the consumer segment in accessing to digital and communication world. The Bill & Melinda Gates Foundation (2016) informs that the global revolution in mobile communications is creating opportunities to connect BOP households to affordable and reliable financial tools through mobile phones, kiosks, and other digital interfaces. In fact, still, a majority of BOP consumers live in the rural parts of developing and emerging markets. Investigating the buying behavior of rural and urban consumers in one of the states of India, Bihar, Jha (2013) explains that India is the fastest growing telecommunications market and the second largest in the world with more than 755 million subscribers of which a huge chunk of this growth is contributed by rural markets. The study looks at affordable smartphones from the company to BOP consumers. Jha (2013) writes that targeting rural Indian consumers, Micromax has focused on providing value for money, more features at fewer price phones. In his study, Jha (2013) presents the result of his survey report of Bihar's rural population on the factors influencing their purchase decision of mobile phones. The most important factors that influence consumers making a purchase decision ranked according to consumers' preferences: feature,

price, user-friendly, brand, quality and after sales service. Similar to Jha's (2013) study, Debasish & Mallick (2015) study in one of the states in the southern part of India finds that rural consumers put price and features on their top importance over quality, brand, and function. Lee and Feick (2001) suggest that customer satisfaction is important because it contributes positively to customer retention. Micromax's Website (2016) informs that Micromax X1i, the first handset to be launched priced INR 1250 (\$20), was the thirty-day battery back-up which made it extremely attractive to electricity-deprived rural consumers and frequent travelers. The company successfully targeted BOP consumers with attractive features and economically priced.

4.2.3.2 Micromax's Innovative BOP Product

Micromax low-cost smartphones possess many features from the innovative product elements framework. The phones are one of the cheapest in the world and successfully serving BOP consumers in South Asia and beyond. The price of Micromax smartphones like Bold Q381 and Canvas Spark 2 Plus cost around Indian RS 3200 (under \$45.00). Even though the price seems to be higher to BOP consumers based upon their income level, still the price is cheaper comparing to other smartphones sold globally. This makes the product **affordable**. The product's 5 inches screen size including camera, LED flash light, micro USB port, dual SIMM and other features in compact size provides **portability**. Furthermore, portability is enhanced as the consumers can use the device in accessing the Internet and even running some small application instead of desktop and laptop computers. The product with Li-Ion 200 MAH battery allows running for hours as other standard smartphones, so the price is not compromised with the product's battery life. So the consumers have achieved benefits from using the product due to **energy saving**. With friendly touchscreen and choice of multiple languages in providing access to different features in the phone, enhance **simplicity**. The simplicity likely increases the

consumers' interaction with the product. Importantly, making a product simple in design would make it easy to maintain and fix the product at a lower cost when it breaks. The product **usefulness** has been exhibited, as BOP consumers were able to use the product for various purposes: phone conversation, Internet access, pictures, torch light, and so on. Product **multitasking** got enhanced as the product is meeting the necessity of the consumers that include low-cost communication gadget with necessary features that meet the consumers' daily needs. As the phone has multiple features including large storage capacity of 8 GB storage, camera, torch light, a dual SIM card and 3 G network, Bluetooth 4.0, micro USB 2.0 port, micro SD card for extension and others it enhances multipurpose. When having an important feature like a flashlight on the phone, when a power outage is often an issue in many rural areas of developing and emerging economies, BOP consumers would find such feature attractive and helpful. Similarly, having a camera feature on their phone, when BOP consumers cannot afford to buy a camera, the camera feature on their phone would allow fulfilling their need of a camera. Similarly, having dual SIM Card feature on the phone would allow BOP consumers to have a luxury of choosing a strong network when making phone calls. The phone captures **energy efficiency** through its ability to run for 30 hours on one charge. Especially, comparing this product with other phones for consumers in other economic segments, the product provides more bang for the buck.

4.2.4 Summary

All three innovative products from Indian EMNEs have captured most of the elements from the innovative product framework. The study suggests that more the BOP elements are captured by a BOP product, better the product serves BOP consumers' demand. At the present, based upon the elements being captured by the products, all three products are successfully serving BOP

consumers in BOP markets. The next section examines the ability to leverage BOP products that are well serving a BOP market into other similar markets. The findings of the survey study performed in the BOP markets, South Asia, would help to strengthen the validity of the assumptions.

4.3 Survey

I supplemented my qualitative studies: case studies and the conceptual framework with a field survey. The survey conducted with BOP consumers in South Asia is a source of primary data. Primarily, the researcher performed the data collection, thus, the source of data is primary. In the study, the participants are selected based upon their income in their respective country. Prahalad's description on BOP population income level and United Nations World Development Reports (2006) BOP income bracket is used to identify the BOP population in the economic ladder. According to Prahalad (2002), BOP population is identified as a group of the population who makes the US \$1500 or less a year. Due to the differences in exchange rate among economies in South Asia, the local currencies' market exchange rate to the US dollar of each participant country's currency is converted into the US \$1500 to identify BOP population in their respective markets.

The survey questionnaire was originally prepared in English by the researcher of this study and then translated into multiple languages including Nepalese, Hindi, Bengali, Assamese, and Sinhala through the help of local bilingual academics. The survey respondents were given the option of answering the survey in their local language or English. Providing the survey questions simple and in the BOP consumers' local languages would allow the consumers to a better response to the survey because this would enhance the consumers' understanding of the

survey questionnaire. Also, when there is an absence of a local translator in the field, the respondents can still respond well when the survey questionnaire is simple and in respondents' local language. Having a language translator in the field may be helpful during the survey; however, not having a language translator would also allow receiving responses directly from the consumers, so the information would not likely get lost in translation.

Along with the survey questionnaire, a description of BOP product elements on table 4.1 is also handed over to survey staffs and the respondents. This allowed enhancing the clarity of the elements' meaning while performing the survey when the respondents find it difficult to understand.

Table: 4.1

<u>Descriptions of the BOP Product Elements</u>	
Product Affordability	A product price is reasonable for low-income consumers. A product price is within a comfortable purchasing range of a low-income consumer.
Product Quality	A product has to have a good enough quality or acceptable quality to low income consumers.
Product Multipurpose	A product has to have multiple functions. This would allow a low-income consumer not to purchase many different products to perform each task. For instance, multipurpose of mobile phone means it can be used as a torch light, radio, access to online, text message and so on.
Product Portability:	A product portability is enhanced when a product is light weight, easy to carry, and easily transportable.
Product Simplicity	A product is simple to use by low income consumers. As low income consumers are often less educated so product simplicity would allow them to use the product without difficulties.
Product Energy Efficiency	A product consumes less electricity to function or does not even require any electricity at all. (For example, Swach Water Purifier doesn't require any electricity to function)

Product Usefulness	A product is more practical in low-income consumers' lives, or the product well serves the low-income consumers' purpose. For instance, water purifier is a highly essential product to low income consumers because often they face a significant drinking water issue in their everyday lives. Having a clean drinking water is important to the low-income consumers so that they will prevent themselves from waterborne diseases.
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Source: The Researcher of the Study

In the study, considering the international research ethical guidelines and following SNHU international research criteria, appropriate measures were taken into consideration. As this study does not involve in any human or animal testing, minimal psychological and social risks are expected. The primary focus of the study would be to conduct the research in an appropriate BOP market environment in South Asia. The two important factors that needed to be considered include responders' age factor (19 years old and over) and income (\$1500 and under) equivalent to the BOP consumers' local market currency. Maximum fairness in the data collection is highly prioritized. So, one of the careful measures taken into consideration includes having respondents' name, age, yearly income, contact number, and nationality as an optional on the top of the handed survey. Being mindful of protecting the responders' information privacy, the survey handouts would be collected and kept in sealed envelopes and the parties have helped in this surveying would be informed to maintain the privacy at their best. Based upon the pilot testing of the questionnaire, the designated time to fill individual questionnaire by respondents is expected to be 10 minutes.

During the survey, the respondents are handed over one-page questionnaire. The survey holds identical questions in the same order. In explaining the advantage of quantitative methods including survey, Mack et al. (2005) inform that with quantitative methods such as surveys, "researchers ask all participants identical questions in the same order. The response categories

from which participants may choose are “closed-ended” or fixed. The advantage of this inflexibility is that it allows for meaningful comparison of responses across participants and study sites.” The questionnaire first allows its respondents to choose a product that they use from three given products: refrigerator, water purifier, and mobile phone. By not specifying a specific brand or model of the products in the questionnaire, it enhances data collection flexibility. If a product brand or model is stated, the survey would be limited and further discriminated in data collection. BOP consumers might not use similar products and their products’ use might vary in shape, size, and brands. When a respondent use more than one product listed on the survey questionnaire, the respondent would be requested to fill a separate sheet for each product.

The main questions are constructed on the measurement of a five-point Likert scale. The Likert scale is extensively used approach in research that employs survey questionnaire. Sreedhar (2016) connotes that Likert Scale is the most widely used approach to scaling responses in survey research when questionnaires are used. The question 1 in the survey asks the respondents to consider the level of importance on each element of a BOP product, prior to the purchase of the product. The range of product element is between 1 and 5, one being not important and five being very important. The result of the question will reflect the importance of the product elements to the respondents prior to the purchase of the product.

Similarly, the question 2 asks the respondent to rate product elements of the innovative BOP product that the respondents had stated. The respondents will rate the importance of product element between 1 and 5, where one being not satisfied and five being very satisfied. The question 2 reflects the level of BOP consumers’ satisfaction using the product that they had stated in the questionnaire. The difference between question 1 and 2 is product importance vs.

product satisfaction. Product importance relates to prior to the purchase of product and satisfaction after the purchase of a product that the respondents have stated.

Question 3 asks the respondents for any additional products elements that they find important but that are not listed on the previous questions of the questionnaire. Often, the BOP consumers are in the best position to answer whether the products existing in their local market are serving their needs. If an existing product is not serving their needs, they can identify additional elements in a product that would better serve them. Therefore, question number 3 has been an open-ended question to learn if the consumers could share any additional elements that are not stated in the questionnaire.

Question 4 asks the respondents on their overall level of satisfaction with the product that they are using (which they had stated in the beginning of the questionnaire). The range of product satisfaction is between 1 and 5, one being highly dissatisfied and five being highly satisfied. This question reflects the overall satisfaction of the respondents toward the product that they have bought.

Question 5 asks respondents if they are not using any of the stated products on the question. The question is related to case studies in the dissertation. As the case studies contain three products from Indian EMNEs, if the respondents are not using any of the products from the questionnaire, they can choose the reasons from a list stated below the question. The question would allow us to understand the reasons why the respondents do not use the EMNEs' product by ranging the choices from a product quality to unavailability of the product in the respondents' local markets. The question would also inform whether all the BOP consumers have equal access to the innovative BOP products in their local markets.

The survey data would enhance our understanding of how important is each innovative BOP product element to BOP consumers in their respective market and South Asia region as a whole. Finally, considering the days that will be spent in South Asia, which will be 24 days, the goal is to perform at least 2000 surveys. Even though priority for data collection is equally given to all the South Asian economies, considering the limitation of time spend in the research, size of the region, security factors, and the field research being self-financed, only five economies: India, Bangladesh, Nepal, Sri-Lanka, and Bhutan are chosen for the study.

4.3.1 Survey Question

Survey Questionnaire

This survey sheet should be filled for each individual product that you use. If you are using multiple products, please fill a separate survey sheet for each product. Please name the product that you use.

Products: ☐ Refrigerator _____ ☐ Water purifier _____ ☐ Mobile Phone _____

Please rate the questionnaires below with a circle:

1. In purchasing the product that you chose above, what elements did you consider in product purchase decision? Please rate each element individually from not important (1) to very important (5) in your decision to buy the product.

<u>Elements</u>	<u>Not Important</u>	<u>Slightly Important</u>	<u>Somewhat Important</u>	<u>Important</u>	<u>Very Important</u>
Affordability	1	2	3	4	5
Quality	1	2	3	4	5
Multipurpose	1	2	3	4	5
Simplicity	1	2	3	4	5
Energy Efficiency	1	2	3	4	5
Portability	1	2	3	4	5
Usefulness	1	2	3	4	5

2. Rate the product that you have bought, from not at all satisfied to very satisfied, on each of the elements given below. Please rate each element between not satisfied (1) and very satisfied (5).

<u>Elements</u>	<u>Not Satisfied</u>	<u>Slightly Satisfied</u>	<u>Somewhat Satisfied</u>	<u>Satisfied</u>	<u>Very Satisfied</u>
Affordability	1	2	3	4	5
Quality	1	2	3	4	5
Multipurpose	1	2	3	4	5
Simplicity	1	2	3	4	5
Energy Efficiency	1	2	3	4	5
Portability	1	2	3	4	5
Usefulness	1	2	3	4	5

3. For the product you bought, is there any other elements that you consider important besides the listed above?

4. Overall, how satisfied are you using the product you bought? (Rate: 1 – 5)

Highly Dissatisfied Dissatisfied Neutral Satisfied Highly Satisfied
 1 2 3 4 5

5. If you are not using ChotuKool Refrigerator (Goodrej& Boyce), Swach Water Purifier (Tata Chemical) or Mobile Phone (Micromax), why not? Please choose all the appropriate reasons below:

- ☐ Not available in our local market ☐ Expensive ☐ Other reasons.
☐ Does not meet my needs ☐ Low quality
☐ Other better options available in our local market ☐ Not Useful

Overall, the questionnaire is prepared in a simple language that BOP consumers will be able to understand the purpose of the questions clearly. In addition, the questions were translated into the respondents' native languages. This would allow the respondents had better understand the survey questions. The questions are framed around the BOP conceptual framework and products in understanding the BOP consumers' level of importance on the BOP product elements.

4.3.2 Descriptive Statistics: Factor Rating Method

This study distinguishes itself from prior studies in the field as the study is based on a region rather than an individual or a few BOP markets. The method would allow visualizing and interpreting the data collected from a field survey in a simple and meaningful way. First, the collected data from the survey will be codified and implemented into a descriptive statistics model: Factor rating method. The factor rating method allows an evaluation of the innovative products based on the products' weighted scores. The BOP products stated in the survey and case studies are successfully serving the consumers, as they are appropriate to BOP market and fulfilling BOP consumers' demand. The factor rating method would help us to analyze whether products from EMNEs are relatively important and satisfying the product needs of the BOP consumers. Furthermore, it can be analyzed whether EMNEs' products are meeting BOP consumers' demands. It is stated that low-cost products serve BOP consumers demand, as product affordability is a critical element to BOP consumers. The factor rating method can confirm whether product affordability is the most important element for BOP consumers in their product purchase decision. The method also explains the level of importance that BOP consumers have weighted in every element of BOP products. This will provide us significant information on what other elements in the BOP product innovative framework that are equally, less or more important than one specific or a few other elements.

The study performed in the field further shows the BOP consumers' satisfaction level in using their purchased product. The data will also allow us to analyze the consumers' overall satisfaction using the innovative product that they had purchased in the past. More importantly, the method will allow an analysis of the importance of BOP product elements from product, firm and country perspective.

4.5 Discussion on Methodology

The carefully selected qualitative methods: innovative product framework and case studies have provided some significant contributions in answering the research propositions. Furthermore, the survey was performed in the field between mid-January and early February 2017 has helped to strengthen the validity of the study. The data collected from the survey will be analyzed and a factor rating method is performed using the data collected from the field survey would contribute significantly in validating the study. The study will enhance our understanding whether EMNEs' innovative BOP products are well serving the consumers in South Asia. Different than prior studies in the BOP markets which were mostly limited on two to three methods, the current study implements broader measures including conceptual framework, case studies, field survey and statistical method which will supplement the previous findings and assumptions in the study.

5. RESEARCH FINDINGS & DISCUSSIONS

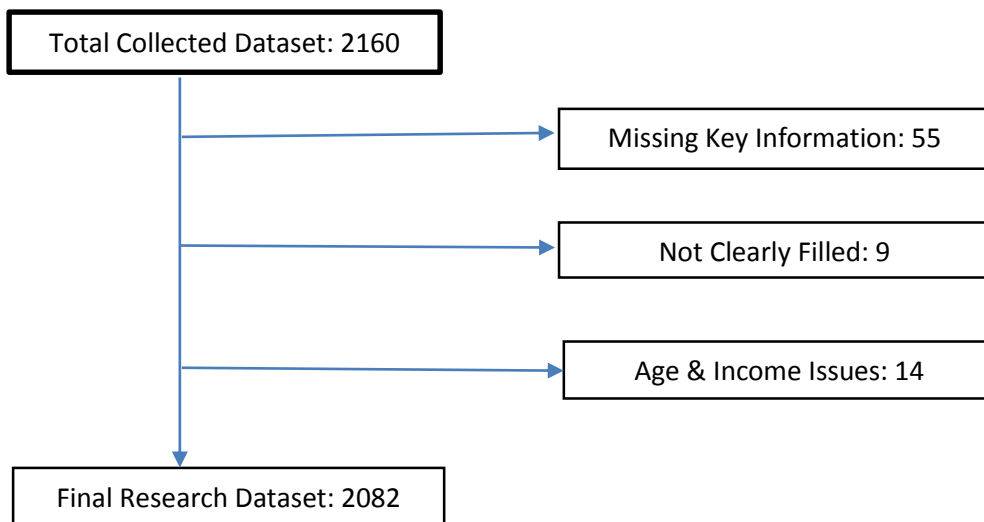
This section reports and discusses the findings of the study. The key findings in the study are evaluated from three different lenses (products, firms, and BOP markets) which are also arranged in a logical sequence. First, the data from the field survey is analyzed and discussed from products (refrigerator, water purifier, and mobile phone), firms (MNEs & EMNEs) and BOP markets (South Asia) perspectives. Then, a factor rating method is implemented in analyzing weighted scores based on product elements in studying the importance of the innovative BOP product elements to BOP consumers. Second, the conceptual framework of innovative BOP product elements is analyzed and reflected. The elements considered by the BOP consumers, other than in the framework are also evaluated. Third, the results of the case studies are tested around the BOP innovative product elements framework.

5.1 Survey Respondents Characteristics

The total number of survey data collected from the BOP consumers in South Asia was 2160. The BOP markets on the survey included India, Nepal, Bangladesh, Sri Lanka and Bhutan. Three BOP economies excluded from the survey were Afghanistan, Pakistan, and Maldives. The exclusion of the three BOP markets: Afghanistan, Pakistan, and Maldives, from the survey because, first, the timeframe designated for the survey in the region was limited, three weeks. Second, the exclusion of Afghanistan and Pakistan from the survey is due to internal security issues in these economies, which is also reported in Global Risk Report (2016). Third, the exclusion of Maldives from the survey was due to the long distance of the country from other BOP markets in the study and the country has a small population size in comparison to other

markets in the region. The respondents included in the survey were both male and female, above the age of 18 and wage earners. As illustrated in figure 5.1, the total working data set collected 2082, which was after examining and excluding the survey questionnaire with missing key information, lacking clarity on provided information and not meeting the age and income bracket as stated in the survey questionnaire. The total survey questionnaires with missing key information were 55. The missing key information refers to the questionnaires where most parts of the product elements were left without answering by the respondents. There were nine survey questionnaires that were not filled out clearly, which means the respondents' answers were or hard to read. On the other 14 survey questionnaires, respondents' age and income did not match the age and income criteria stated on the survey. The respondents under the age of 18 filled four of the questionnaires, and ten respondents stated that their income was above \$1500 per capita annually.

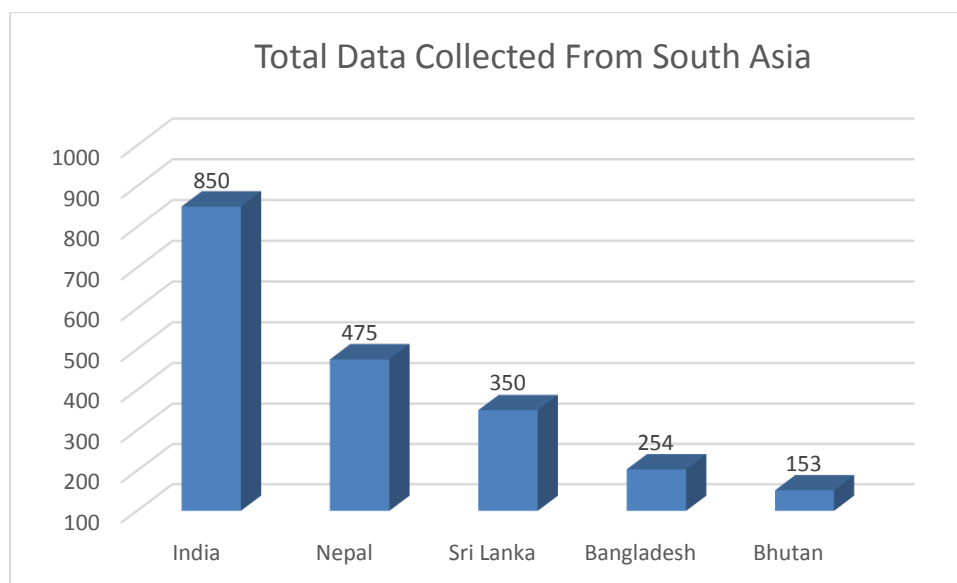
Figure 5.1



Source: Data Collected by Researcher

As shown in figure 5.2 out of total dataset, 850 data points were collected from India, 475 from Nepal, 350 from Sri Lanka, 254 from Bangladesh and 153 from Bhutan. Approximately 41 percent of the total data collected was from India, considering the country and population sizes in comparison to other South Asian economies. Considering Bhutan as a smaller nation with smaller population size, approximately 7 percent of the total data collected was from Bhutan.

Figure 5.2



Source: Data Collected by Researcher

The data collected from India was from five of its states: Uttar Pradesh, Maharashtra, Bihar, West Bengal, and Assam. The data collected from Nepal was mostly from Eastern and some from the central region of Nepal including Kathmandu. The data collected from Bhutan was from Southern Bhutan including Phuentsholing and Jongkhar. The data collected from Bangladesh was from Dhaka, Panchagarh and some villages close to the Indian state of West Bengal. The data collected from Sri Lanka included from Colombo and Negombo. The data

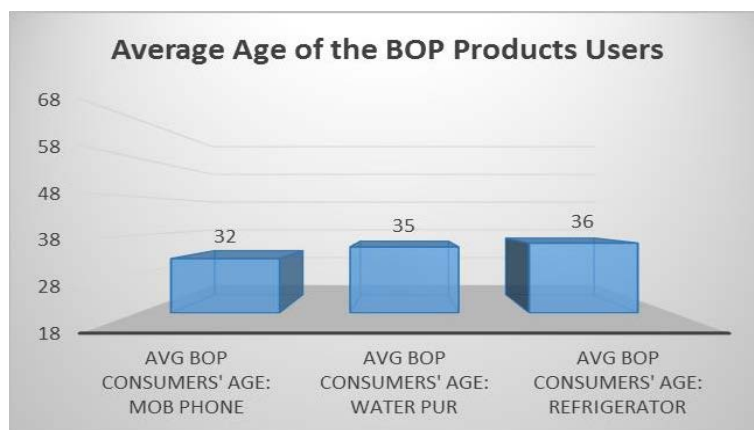
collected from all these BOP markets included both rural and urban areas. The findings of the field study have been reported as accurately as possible to avoid any personal biases.

5.2 Product Level Findings

This section presents the results of the findings and discusses the findings from a BOP product level. First, the study presents the average age of the consumers who use the products in the study. Second, the study examines the consumers' ratings on the importance of BOP products in testing the propositions. Third, a factor rating method is implemented to evaluate the products in the study that are relatively important to BOP consumers.

In examining demographic features of BOP consumers using the products in the study, figure 5.3 exhibits the average age of consumers using BOP products. The differences in the average consumers' age of the products' users in the BOP market are small (see figure 5.3). The average age of mobile phone users is 32; water purifier is 35 and refrigerator, it is 36.

Figure 5.3

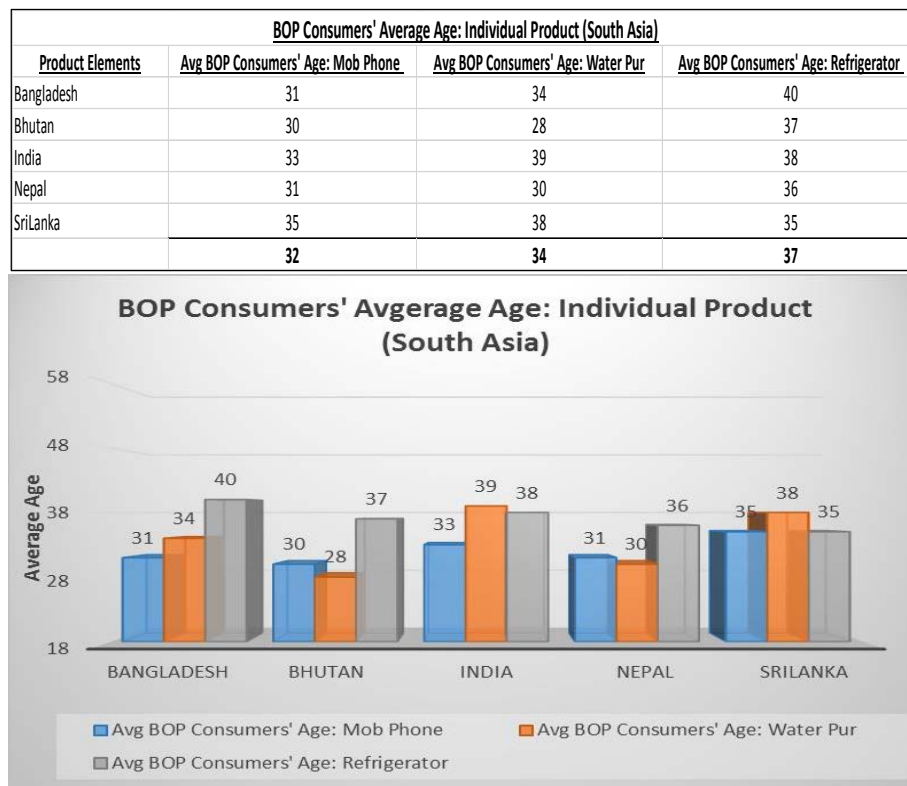


Source: Data Collected by Researcher

Each BOP market is examined in analyzing the average age of the consumers of the products in the study. Figure 5.4 exhibits the average age of the BOP consumers' in the individual BOP markets in the study. While in Bangladesh, the average age of the BOP consumers using mobile

phone was 31, water purifier 34 and refrigerator 40. In Bhutan, the average age of the BOP consumers using mobile phone was 30, water purifier 28 and refrigerator 37. In India, the average age of BOP consumers using mobile phone was 33, water purifier 39 and refrigerator 38. In Nepal, the average age of BOP consumers using mobile phone was 31, water purifier 30 and refrigerator 36. In Sri Lanka, the average age of BOP consumers using mobile phone was 35, water purifier 38 and refrigerator 35.

Figure 5.4



Source: Data Collected by Researcher

The data in figure 5.4 presents the average age of consumers using the products in the study. The average age of the consumers from India is the highest, mobile phone (33), water purifier (39) and refrigerator (38), and the lowest are Bhutan, mobile phone (30), water purifier (28) and refrigerator (37) and Nepal, mobile phone (31), water purifier (30) and refrigerator (36). In explaining the differences on the consumers' average age between India in contrast to Bhutan

and Nepal, India has been a center of innovative products for BOP consumers for a long before than other BOP markets in the region. Radjou et al. (2011) share India being a center of Jugaad (an Indian term for innovation). Bhutan and Nepal's BOP consumers are new participants in the BOP market, which obviously does explain that on average BOP consumers in these two economies are younger in comparison to India's BOP consumers.

5.2.1 Propositions Analyzed from Product Level

In testing the propositions of the study from a product level, the BOP consumers' importance on a product level is analyzed. The gathered data from the study highlights how the BOP consumers perceive the value of the products before making their product purchase decision. Importantly, for BOP consumers, any product purchase decision is an important one as they are spending their money from their limited savings when they have many necessary products requirements. Therefore, before buying a product, they seriously consider the product's elements/characteristics on weighing the product benefits.

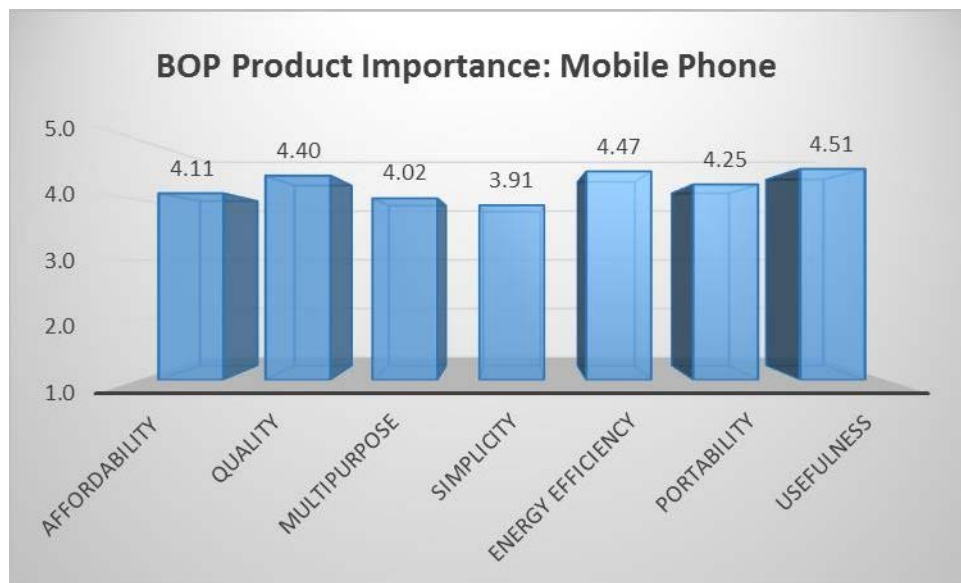
Table 5.1

BOP Product Importance: Mobile Ph - Water Pur - Refrigerator (South Asia)			
Product Elements	BOP Product Importance: Mob Ph	BOP Product Importance: Wat. Pur	Product Importance : Refrig
<i>Affordability</i>	4.11	4.19	4.21
<i>Quality</i>	4.40	4.67	4.48
<i>Multipurpose</i>	4.02	2.67	3.13
<i>Simplicity</i>	3.91	4.12	4.09
<i>Energy Efficiency</i>	4.47	4.58	4.50
<i>Portability</i>	4.25	3.96	3.46
<i>Usefulness</i>	4.51	4.79	4.65
	4.24	4.14	4.07

Source: Data Collected by Researcher

Table 5.1 exhibits that the BOP consumers' emphasis on products' elements. On average, among the three products, BOP consumers have placed a higher importance on affordability on refrigerator (4.21), quality on water purifier (4.67), multipurpose on mobile phone (4.02), simplicity on water purifier (4.12), energy efficiency on water (4.58), portability on mobile phone (4.25), and usefulness on water purifier (4.79). The differences in the importance of product elements slightly vary within a product and among the products. Mostly, the level of BOP product importance among BOP consumers ranged from important to very important in the five point Likert scale.

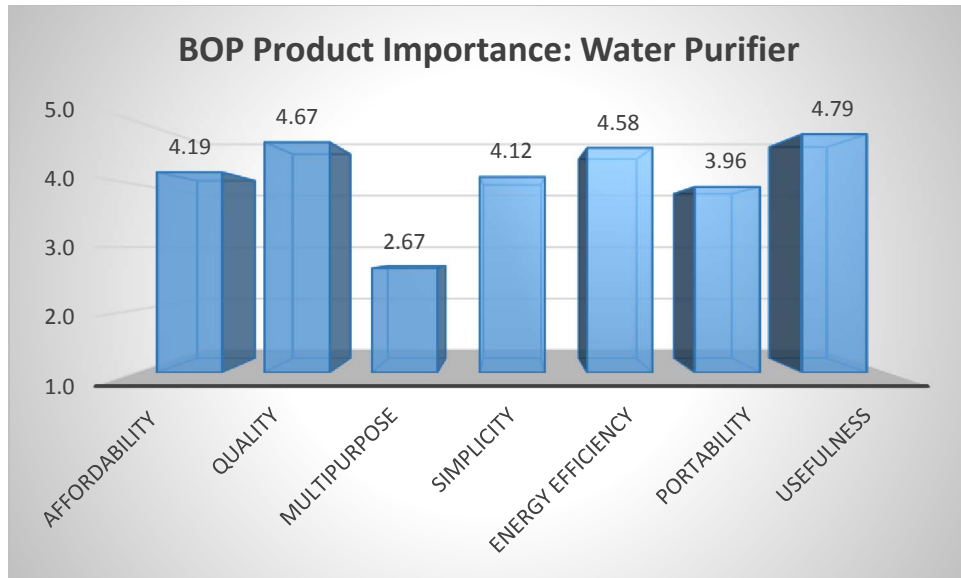
Figure 5.5



Source: Data Collected by Researcher

The figures 5.5 exhibits that BOP consumers' importance on mobile phone based on the elements captured by the products.

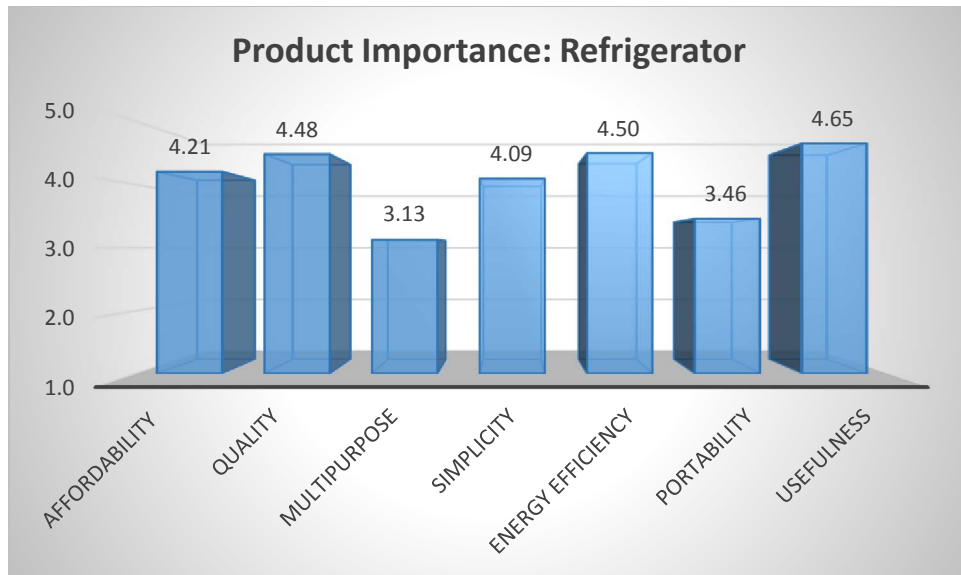
Figure 5.6



Source: Data Collected by Researcher

The figures 5.6 exhibits that BOP consumers' importance on water purifier based on the elements captured by the products.

Figure 5.7



Source: Data Collected by Researcher

Figure 5.7 exhibits BOP consumers' importance on refrigerator based on the elements captured by the products.

In testing the propositions, the study examines the consumers' importance on BOP product elements from the BOP product level.

The Proposition 1 suggests that product affordability is an important element of EMNEs innovative products for BOP consumers. Examining BOP consumers' importance on product affordability from product level: mobile phone (4.11), water purifier (4.19) and refrigerator (4.21) (see the figures 5.5-5.7). The current study finds that even though affordability is one of the important elements of the BOP product framework, the other innovative product elements in the study are also important in their own characteristics. Referencing the previous chapters, several studies support the importance of affordability in BOP products. Christensen and Raynor (2003) suggested that frugal innovation allowed firms to reach a broader consumer base, because of low cost product; Anderson & Markides (2007) firms must ensure products are affordable; Ramamurti & Singh (2009) specific advantage of EMNEs is their ability making product cheaper and more affordable; Karl Moore (2011); Joshi (2010) Indian firms solid records on making products affordable to BOP consumers; Eyring et. Al. (2011) on BOP product affordability and Debasish & Mallick (2015) price and features important over quality, brand, and function.

In figures 5.5-5.7, the different values of the element, product affordability, among the products inform that the element is very important to BOP consumers of refrigerator but slightly less important to the consumers of mobile phone and water purifier. The study provides an insight that having product affordability may not be overall priorities of BOP consumers' product purchase decision. As provided in Chapter 1, the study strongly supports Prahalad (2011) statements that affordability alone cannot create a BOP success story. The study emphasizes that

the importance of product affordability among BOP consumers differ based on the product that the consumers are willing to purchase. (See the figures (5.5-5.7).

The Proposition 2 suggests that product quality is an important element of EMNEs innovative products for BOP consumer. Examining BOP consumers' importance on product quality from product level: mobile phone (4.40), water purifier (4.67) and refrigerator (4.48) (see the figures 5.5-5.7). The current study finds that even though product quality is one of the important elements of the BOP product framework, the other innovative product elements are also important in their own characteristics based on BOP products.

As referenced in previous chapters, several studies support the proposition including Karl Moore (2011), Banerjee and Leirner (2012), Jha (2013), Ronald Berger (2015), and Debasish & Mallick (2015). This study's findings support Prahalad's argument put forward by the Economist (2010) on opportunity accessing BOP markets that are providing a quality product at an affordable cost, and Guardian (2015) product affordability alone cannot be enough of an incentive to make a purchase decision, but also quality for the money is important.

The study provides insight that having product quality at an affordable price may not always be the priority of the BOP consumers' product purchase decision. It is significant to note that this study shows that the importance of product affordability and quality among BOP consumers differ based upon the product the consumers are planning to purchase (see the figures 5.5-5.7). The different values of product quality among BOP products show that the element is very important to the consumers of refrigerator but relatively less important to the consumers of mobile phone and water purifier.

The Proposition 3 suggests that a product's multipurpose is an important element of EMNEs innovative products for BOP consumers. Examining BOP consumers' importance on product multipurpose from product level: mobile phone (4.02), water purifier (2.67) and refrigerator (3.13) (see the figures 5.5-5.7). The current study finds that product multipurpose is one of the important elements of the BOP product framework. The result is consistent with Berger's (2015) study where the author characterized the element as one of the six attributes of the frugal product. However, in the current study, there are other innovative product elements that are less or more important than the product multipurpose.

The study provides an insight that having a product multipurpose at an affordable price and quality may not always be the overall priority of the BOP consumers' product purchase decision. The study's findings suggest that – similar to product affordability and quality, the importance of product multipurpose among BOP consumers differ based on the product the consumers are planning to purchase (see Figures 5.5-5.7). The different values of product multipurpose among the products inform that the element is important to the consumers of mobile phone but slightly less important to the consumers of water purifier and refrigerator.

The Proposition 4 suggests that product simplicity is an important element of EMNEs innovative products for BOP consumers. Examining BOP consumers' importance on product simplicity from product level: mobile phone (3.91), water purifier (4.12) and refrigerator (4.09) (see the figures 5.5-5.7). The current study finds that even though product simplicity is one of the important elements of the BOP product framework, there are other innovative product elements that are less or more important than simplicity.

The study provides an insight that having a product consists of the element, simplicity, at an affordable price, quality and multipurpose may not be the overall priority of the BOP consumers'

product purchase decision. It is also important to note from the study that as the importance of product affordability, quality, and multipurpose differs, the importance of product simplicity among BOP consumers also differ based on BOP products that the consumers are planning to purchase (see the figures 5.5-5.7). The different values of product simplicity among BOP products in the study show that the element is very important to the consumers of water purifier but relatively less important to the consumers of mobile phone and refrigerator.

The Proposition 5 suggests that product energy efficiency is an important element of EMNEs innovative products for BOP consumers. Examining the BOP consumers' importance on product energy efficiency from product level: mobile phone (4.47), water purifier (4.58) and refrigerator (4.50) (see the figures 5.5-5.7). The study provides an insight that having affordability, quality, multipurpose and simplicity in BOP products may not be an overall priority of the BOP consumers' product purchase decision. The current study finds that product energy efficiency is one of the important elements of the BOP product framework. It is also important to note that there are other innovative product elements that are less or more important than energy efficiency. The study findings support Eyring et al. (2011) on BOP product energy efficiency, Jaynath & Balram (2012) statement on BOP product nature, such as portable, energy efficiency, affordable, and simple. However, the Jaynath & Balram's (2012) study lacks to note elements like quality and usefulness that are significant elements of BOP product nature.

It is also significant to note that the importance of product affordability, quality, multipurpose, simplicity, and energy efficiency differ among the BOP consumers based on the product that BOP consumers are planning to purchase (see the figures 5.7-5.7). The different values of product energy efficiency among BOP products inform that energy efficiency is very important

to the consumers of water purifier but relatively less important to the consumers of mobile phone and refrigerator.

The Proposition 6 suggests that product portability is an important element of EMNEs innovative products for BOP consumers. Examining BOP consumers' importance on product portability from product level: mobile phone (4.25), water purifier (3.96) and refrigerator (3.46) (see the figures 5.5-5.7), the current study finds that even though product portability is one of the important elements of the BOP product framework, there are other innovative product elements that are less or more important than the element, portability.

The study provides an insight that having a portable product at an affordable price, quality, multipurpose, simplicity, and energy efficiency may not always be overall priorities of the BOP consumers' product purchase decision. It is important to note from the study that the importance of product affordability, quality, multipurpose, simplicity, energy efficiency and portability among BOP consumers differ based upon the product they purchase (see the figures 5.5-5.7). The different values of product portability among the products inform that the element is important to the consumers of mobile phone but relatively less important to the consumers of water purifier and refrigerator.

The Proposition 7 suggests that product usefulness is an important element of EMNEs innovative products for BOP consumers. Examining BOP consumers' importance on product usefulness from product level: mobile phone (4.51), water purifier (4.79) and refrigerator (4.65) (see the table 5.5-5.7). The current study finds that product usefulness is one of the most important elements of the BOP product framework. Other innovative product elements are important but not equally as product usefulness. As referenced in previous chapters, several studies support the

proposition including Karl Moore (2011), Banerjee and Leirner (2012), Jha (2013), Ronald Berger (2015), and Debasish & Mallick (2015).

The study provides an insight that having product usefulness along with affordability, quality, multipurpose, simplicity, energy efficiency and portability may be overall priorities of the BOP consumers' product purchase decision. It is important to note from the study that the importance of product affordability, quality, multipurpose, simplicity, energy efficiency and portability among BOP consumers differ based upon products they purchased (see the figures 5.5-5.7). The different values of product usefulness among the products show that the element is important to the consumers of water purifier but slightly less important to the consumers of mobile phone and refrigerator.

5.2.2 Factor Rating Method: BOP Products

Factor rating method in the study allows analysis of products that are relatively important to the BOP consumers based on the strengths of the products' importance and satisfaction to the BOP consumers. The implemented method is significant to the study because when examining the weighted score result from the table 5.2, the differences in the score values of the three products is negligible. Implementing other statistical methods beside weighted score in analyzing the data from the survey may not provide a significantly different outcome.

Table 5.2

Weighted Score of BOP Products: Mobile Phone, Water Purifier and Refrigerator					
BOP Product Importance					
Product Elements	Mobile Phone	Water Purifier	Refrigerator	Finding AVG of the Survey	Total Weight
Affordability	4.11	4.19	4.21	4.17	0.14
Quality	4.40	4.67	4.48	4.52	0.16
Multipurpose	4.02	2.67	3.13	3.27	0.11
Simplicity	3.91	4.12	4.09	4.04	0.14
Energy Efficiency	4.47	4.58	4.50	4.52	0.16
Portability	4.25	3.96	3.46	3.89	0.13
Usefulness	4.51	4.79	4.65	4.65	0.16
				29.06	1
BOP Product Satisfaction					
	Prod. Sat. Mobile Phone	Prod. Sat. Water Purifier	Product Sat. Refrg.		
	3.74	4.21	3.86		
	3.85	3.91	4.17		
	3.74	2.24	3.03		
	3.95	4.47	4.09		
	3.60	3.88	3.99		
	4.17	3.84	3.38		
	4.29	4.53	4.36		
Finding Weighted Score					
	Mobile Phone	Water Purifier	Refrigerator		
Affordability	0.5371	Affordability	0.6033	Affordability	0.5533
Quality	0.5990	Quality	0.6078	Quality	0.6481
Multipurpose	0.4208	Multipurpose	0.2521	Multipurpose	0.3415
Simplicity	0.5487	Simplicity	0.6208	Simplicity	0.5691
Energy Efficiency	0.5596	Energy Efficiency	0.6036	Energy Efficiency	0.6196
Portability	0.5585	Portability	0.5136	Portability	0.4519
Usefulness	0.6873	Usefulness	0.7261	Usefulness	0.6982
	3.9111		3.9274		3.8817

Source: Data Collected by Researcher

Evaluation: Evaluating mobile phone, water purifier and refrigerator based upon the weighted scores, the highest average weighted score is of water purifier (3.9274) compared to mobile phone (3.9111) and refrigerator (3.8817). This explains to us that even though all the BOP products well serve the consumers, the highest score of water purifier (3.9274) tells us that the product is relatively more important to BOP consumers than mobile phone and refrigerator. The weighted score of mobile phone (3.9111) tells us that the product is relatively more important than refrigerator (3.8817) to the BOP consumers.

Based on the importance of BOP products, water purifier is relatively important to BOP consumers in five of the BOP markets in the study. The BOP markets in South Asia, like other

BOP markets outside the region have difficulties in accessing clean drinking water and often arises problems caused by water borne diseases. Importantly, water is a vital resource not only for physical wellness, but also for survival. For BOP consumers being physically healthy is critical when many of BOP jobs often involve manual labor. During my field observation in Nepal, I found that a majority of BOP segment in rural areas of the country rely on agriculture and in the city rely on less paying physically demanding manual labor. Not being able to go to work even for a day because of any health condition is a big loss for a BOP worker. Because, even a loss of workday could be a big earning loss, which BOP consumers cannot afford to lose. Therefore, a higher weighted score of water purifier than other products in the study appears to be acceptable and practical.

5.2.3 Discussion

From the product level, most of the propositions were significant based on the importance of BOP products in the study. In the case of mobile phone, all the propositions were significant, while in the case of water purifier besides multipurpose, all the propositions were significant and refrigerator all the propositions beside multipurpose and portability were significant. The data from the survey on the importance of product elements on an individual product in the study, on average product usefulness was rated among the highest of all three products (see Table 5.1). The element, usefulness, which scores on all three products shows that this factor is the most important element to BOP consumers in their product purchase decision. The study result challenges the previous studies by Ramamurti (2009), Prahalad (2011), and Markides (2012) that do not characterize usefulness as one of the important elements in serving BOP demands. The current study contradicts these findings, as the data is supported from the study performed in five

BOP markets. Other studies done in the field by prior scholars are often based on data collected from a third party, case analysis or the study performed in a single BOP market.

The finding of the current study suggests that the importance of product usefulness to the BOP consumers is above other elements in the study. The argument makes sense in a way that if a BOP product is affordable with good quality, portable, energy efficient and more, but if the product has limited usefulness to BOP consumers, the consumers would be less interested in buying the product. On the other hand, if a product captures limited elements from the BOP product framework, but it captures usefulness, the product could well serve the needs of the consumer segment. I observed the importance of usefulness to the BOP consumers in my field study in Nepal. On February 06, 2017, I found a water pump being used in a village called Marchania, in the Southeastern part of Nepal. The users of the water pump, predominantly BOP population, were not very satisfied with a quality and simplicity of the product, but the product usefulness was so high to the consumers because there was no access to government supplied water. As the product used by the consumers contained the most important element from the framework in the study, the BOP consumers were buying water pumps to serve their daily essential needs.

However, it is important to note that the study does not find other propositions far less important to BOP consumers beside the proposition 7. In comparison to the element usefulness, other elements in the survey study scored slightly less. Despite of that, the differences in average score of all the elements are not significant. Mostly, all the elements in 5 point Likert scale, scored above 4, which means all the elements were important to the consumers. Formulating the element usefulness in Prahalad's (2011) argument, "usefulness is necessary but not sufficient." Therefore, serving BOP product with the highest consideration in usefulness might not always

well serve the consumers' needs if other products' elements are less considered. In sum, considering other elements in serving BOP segment are also very important.

Another finding in the study exhibits that BOP consumers' age - consumers who are using the products in the study - is not significantly different. The differences in the age among the BOP consumers of different products vary. The average age of the consumers range between early and mid-30's (see figure 5.3). Interestingly, the average age difference among BOP consumers within BOP products' users and the consumers' age across the BOP markets in the study did not differ significantly. For instance, the average consumers' age of the BOP products' users across the region is (32), water purifier (34) and refrigerator (37) (see figure 5.3). While the average age of the consumers of the products across the BOP markets is Bangladesh (35), Bhutan (32), India (37), Nepal (32) and Sri Lanka (36). The findings exhibit that the average age of BOP consumers across BOP products and BOP markets are not significantly different.

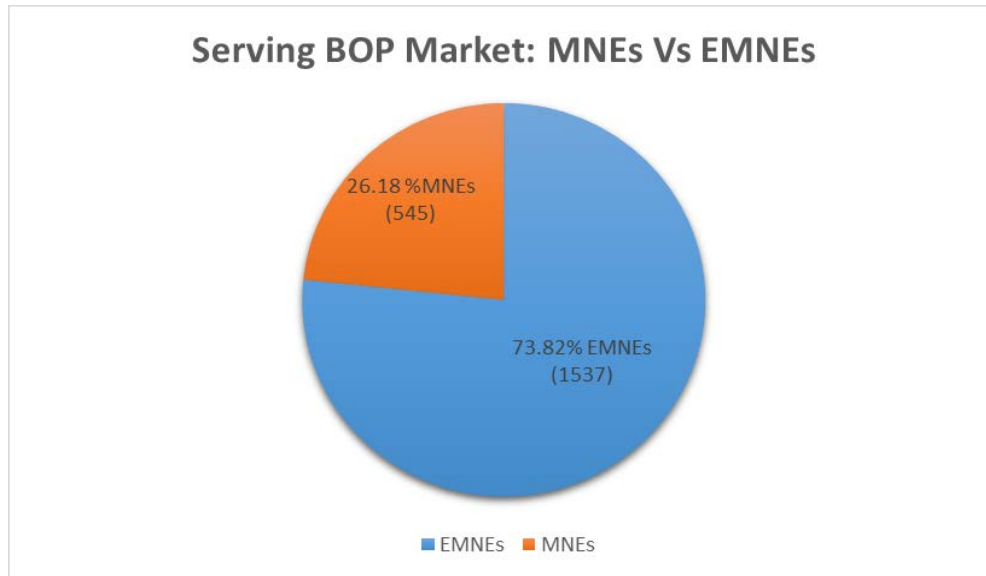
The current study differs from a prior study as the current study captures multiple products from a regional BOP markets while previous similar studies, Neuwirth (2011), Jha (2013), and Debashish & Mallick (2015) are limited to one BOP market, India. The study also has some similarity on the importance of elements with other studies. The current study also captured some of the important product elements of Jha's (2013) and Debashish & Mallick's (2015) studies. Both studies feature usefulness as one of the important elements in serving the BOP segment. Again, the higher average value of product usefulness in BOP markets captured by the current and other studies by Jha (2013), Debashish & Mallick (2015) explain that usefulness is an important element. It is important to note that as discussed in prior chapters, the usefulness of the product is a critical element for product innovation for BOP consumers.

Importantly, a lower value of the element, multipurpose, on a product element framework should not be considered the element as a lesser important one. The importance of the element varies based on the product, for instance, water purifier consumers compared to mobile phone users considered the product element, multipurpose, differently. This explains that a product does not need to capture all the elements in the propositions, and still, the product can be relatively important to BOP consumers. For instance, when examining overall weighted score of the products in the study, water purifier is relatively important to the BOP consumers in comparison to mobile phone. However, examining the elements of water purifier, product multipurpose was less important to the BOP consumers than other elements.

5.3 Firm Level Findings

The section examines the importance of BOP product elements from a firm level. First, the study analyzes the market size and age factor of the BOP consumers served by EMNEs as opposed to MNEs. Second, the study evaluates and discusses the BOP consumers' satisfaction on products served by EMNEs vs. MNEs in testing the propositions. Third, a factor rating method is implemented in studying whether EMNEs' products are relatively important to BOP consumers than MNEs' products.

Figure 5.8

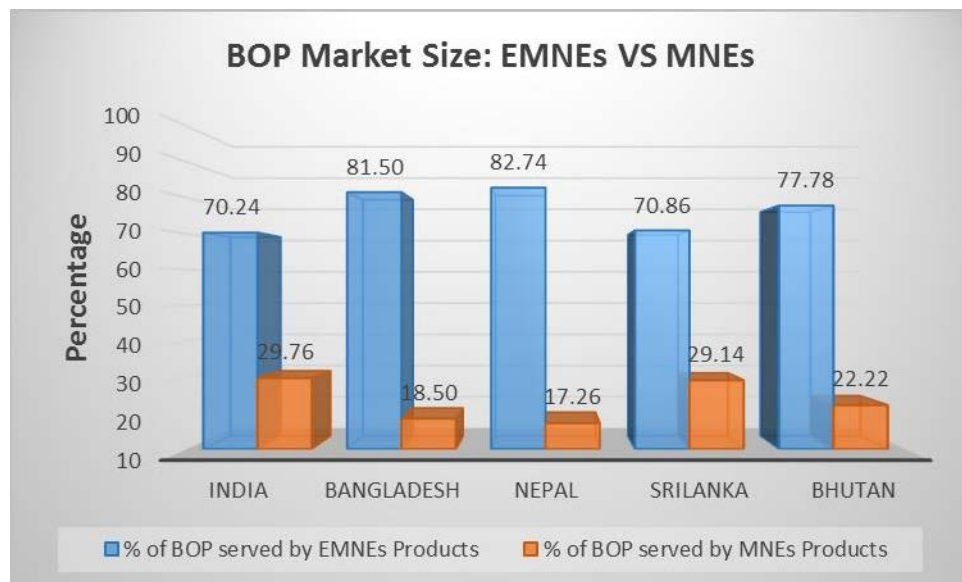


Source: Data Collected by Researcher

The survey data based on the three products that BOP consumers used, a majority of BOP consumers are largely served by EMNEs (73.82%) and a little over a quarter by MNEs (26.18%) (See figure 5.8). Examining from the regional level may not provide us a better understanding on the differences of market sizes of EMNEs oppose MNEs in individual BOP market in the study based on the three products. Therefore, peeling the regional data and looking through the lens of individual BOP market, the study looks at the data from individual market perspectives. In South Asia, a larger use of MNEs' BOP products was in India, which constitutes 29.76 % followed by Sri Lanka 29.14%, Bhutan 22.22%, Bangladesh 18.50% and Nepal 17.26%. Evaluating MNEs' market size in the region based on the products in the study, MNEs are still far behind than EMNEs in serving the BOP segment. The result is consistent with Prahalad & Hart (2002), and Simainis (2009) works. I observed in the BOP market that a handful of large MNEs like GE, Unilever, Nestle, and a few others have a strong presence; however, these MNEs' products were less targeted towards BOP consumers and more towards middle and top of the pyramid. My observation is consistent with the study by Paul (2008).

The finding based on the products in the study exhibits that EMNEs are in the forefront serving BOP consumers with their innovative products. The finding thus supports Malik & Aggrawal (2012) argument. The figure (see figure 5.9) suggests that EMNEs are largely serving the markets with the highest in Nepal (82.74%), Bangladesh (81.50), Bhutan (77.78), Sri Lanka (70.86) and India (70.24). During my survey study in South Asia, I perceived that not only EMNEs' product availability in the BOP market was substantial, but also EMNEs' products were successfully serving the needs of the BOP markets in the region.

Figure 5.9



Source: Data Collected by Researcher

This study also exhibits a higher degree of interrelation in serving the BOP markets by EMNEs and MNEs. The figure shows that EMNEs products serving the BOP consumers are above 70 percent in all the BOP markets. The study's findings validate some of the previous studies discussed in chapter two of the current study: Burenstam (1961), Rugman (2006), Khanna and Palepu (2006), Kanungo (2009), Ramamurti (2009), and Malik & Aggrawal (2012). These

studies examine EMNEs' advantage serving similar markets, benefits EMNEs enjoyed serving similar markets as EMNEs' home market, EMNEs' innovation fit to serve BOP market condition, and EMNEs' better meet BOP market demands.

5.3.1 Propositions Analyzed from Firm Level

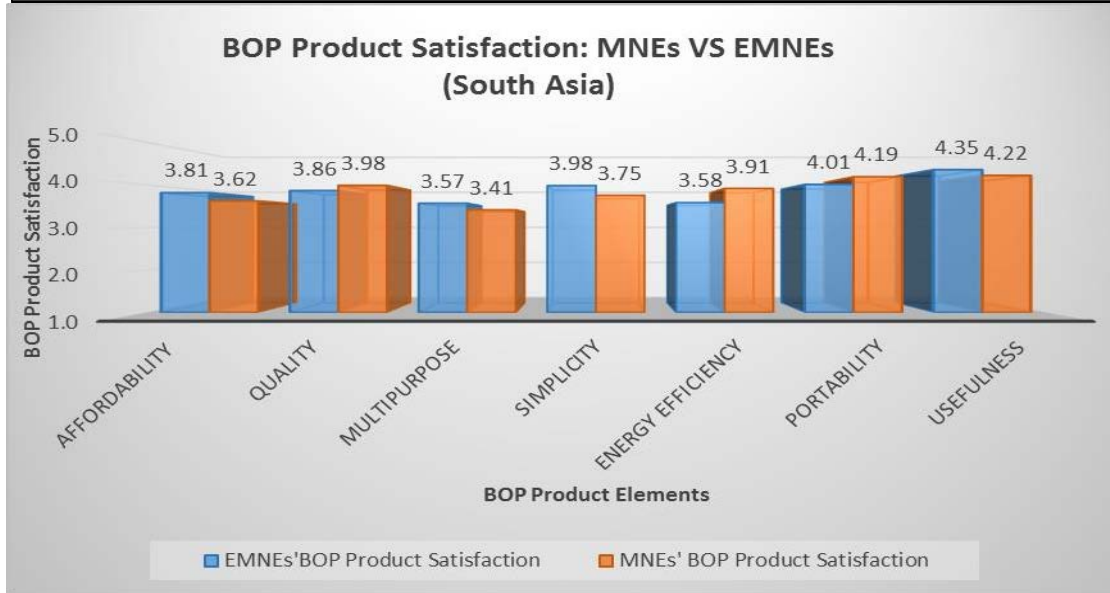
In testing the propositions of the study on a firm level, different from the product level, the BOP consumers' satisfaction on BOP products are analyzed. The data on BOP consumers' product satisfaction shows how satisfied BOP consumers are using the product of EMNEs as opposed to MNEs. The current study recognizes that product satisfaction of BOP consumers validates the propositions of the study.

The figure 5.10 exhibits the finding of the BOP consumers' product satisfaction on EMNEs' products in contrast to MNEs' products. In evaluating the importance of the product elements captured by EMNEs products, the four elements from my propositions: affordability (3.81), multipurpose (3.57), simplicity (3.98) and usefulness (4.35) are found to be strong characteristics of EMNEs products. The study elaborates that the four product elements are important for EMNEs in serving the BOP markets.

In testing the propositions at the firm level, the study examines EMNEs' product satisfaction serving the BOP consumers in opposition to MNEs.

Figure 5.10

BOP Product Satisfaction: MNEs VS EMNEs (South Asia)		
Product Elements	EMNEs' BOP Product Satisfaction	MNEs' BOP Product Satisfaction
Affordability	3.81	3.62
Quality	3.86	3.98
Multipurpose	3.57	3.41
Simplicity	3.98	3.75
Energy Efficiency	3.58	3.91
Portability	4.01	4.19
Usefulness	4.35	4.22
	3.8801	3.8691



Source: Data Collected by Researcher

The Proposition 1 suggests that product affordability is an important element of EMNEs innovative products for BOP consumers in their home market and similar market abroad. In identifying the BOP consumers' importance on EMNEs' product elements, the study looks at the average of BOP consumers' product satisfaction on EMNEs' products based on affordability. The data findings suggest that the BOP consumers' satisfaction on the BOP product element, affordability, is significant with an average of 3.81 (EMNEs') oppose to 3.62 (MNEs'), (see figure 5.10). Based on the Likert 5 point scale, the score of 3.81 suggests that the BOP consumers are more satisfied with affordability of EMNE's BOP products than MNEs' BOP products. Looking at EMNEs' competitive advantage serving BOP markets with product

affordability suggests that EMNEs are well able to build products that serve the needs of BOP consumers at an affordable price. The finding is consistent with the study of Prahalad & Hammond (2002), Ramamurti (2009) and Eyring et al. (2011). The finding strongly supported that affordability is an important element of EMNEs' innovative product for BOP consumers.

The Proposition 2 suggests that product quality is an important element of EMNEs' innovative products for BOP consumers in their home market and similar market abroad. In identifying BOP consumers' importance on EMNEs' product elements, the study looks at the average of EMNEs' product satisfaction based on quality. The data findings suggest that the BOP consumers' satisfaction on the BOP product element, quality, is significant with an average of 3.86 (EMNEs') opposed to 3.98 (MNEs'), (see figure 5.10). Based on the Likert 5 point scale, the score of 3.86 in the study suggests that the BOP consumers are satisfied with a quality of EMNEs' BOP products, but lesser than MNEs' BOP product. It is important to note that BOP consumers may not demand higher quality, but rather be satisfied with a good enough quality product, which supports Ramamurti (2009) arguments on BOP product quality, and Kumar & Puranam (2012) who used the term robustness for quality and consistency in a product that meets the consumers' local challenges by avoiding extra features in a product that doesn't serve its consumers' purpose well. The findings weakly supported that quality is an important element of EMNEs' innovative product for BOP consumers.

The Proposition 3 suggests that product multipurpose is an important element of EMNEs innovative products for BOP consumers in their home market and similar market abroad. In identifying BOP consumers' importance on EMNEs' product elements, the study looks at the average of EMNEs' product satisfaction based on multipurpose. The data finding suggests that BOP consumers' satisfaction on BOP product element, multipurpose, is significant with an

average of 3.57 (EMNEs), opposed to 3.41 (MNEs), (see figure 5.10). Based on the Likert 5 point scale, the score of 3.57 in the study suggests that the BOP consumers are somewhat satisfied with multipurpose of EMNEs' BOP products over MNEs' BOP products. Considering the BOP consumers' limited disposable income, it is important to note that the consumers often desire products that have multiple functions, therefore, the consumers do not have to buy several products to fulfill their several needs. When a product has several functions to fulfill multiple needs of BOP consumers, the product would obviously serve the consumers with less money. The finding supports that product multipurpose is another important element of EMNEs' innovative product for BOP consumers.

The Proposition 4 suggests that product simplicity is an important element of EMNEs innovative products for BOP consumers in their home market and similar market abroad. In identifying BOP consumers' importance on EMNEs' product elements, the study looks at the average of EMNEs' product satisfaction based on simplicity. The data findings suggest that BOP consumers' satisfaction on the product element, simplicity, is significant with an average of 3.98 (EMNEs), opposed to 3.75 (MNEs') (see figure 5.10). Based on the Likert 5 point scale, the score of 3.98 in the study suggests the BOP consumers are satisfied with product simplicity of EMNEs' BOP products over MNEs' BOP products. As discussed in the previous chapters, considering the BOP consumers' limited education level or in some situation illiterate - it is important to note that the consumers often desire products that are simple to use in fulfilling their needs. Kumar & Puranam (2012) use a term defeaturing for simplicity in avoiding extra features in a product that does not serve its consumers' purpose well. Examining the consumers' satisfaction on the product element, it shows that EMNEs are better than MNEs on the

importance of BOP demands on product simplicity. The findings strongly supports that product simplicity is an important element of EMNEs' innovative product for BOP consumers.

The Proposition 5 suggests that product energy efficiency is an important element of EMNEs innovative products for BOP consumers in their home market and similar market abroad. In identifying BOP consumers' importance on EMNEs' product elements, the study looks at the average of EMNEs' product satisfaction based on energy efficiency. The data findings suggest that BOP consumers' satisfaction on the product element, energy efficiency, is less significant with an average of 3.58 (EMNEs') opposed to 3.91(MNEs'), (see figure 5.10). Based on the Likert 5 point scale, the score of 3.58 in the study suggests that the BOP consumers are still somewhat satisfied with the element, but lesser than MNEs' product energy efficiency. It is important to note that with their limited disposable income, BOP consumers demand higher energy efficiency products. Relating to the current study, among three BOP products, the product that consumes higher energy is refrigerator (Chotukool), and limited BOP consumers own the product. However, Chotukool can operate for extended hours even when there is power outage, Eyring et al. (2011) examine Chotukool refrigerator's purpose is being reliable in power cuts, beside the product capturing portability and affordability. Examining the highest weighted score among the BOP products in the study; water purifier was relatively important to the BOP consumers. During the field study, I observed that a majority of water purifier from EMNEs in the BOP market did not require energy to run and mobile phone uses limited energy with ability to run at least a day with a full charge. Thus, the BOP consumers in the survey less prioritized the element, energy efficiency, in EMNEs' products. The finding weakly supports that the element, energy efficiency, is an important element of EMNEs' innovative product for BOP consumers.

The Proposition 6 suggests that product portability is an important element of EMNEs innovative products for BOP consumers in their home market and similar market abroad. In identifying BOP consumers' importance on EMNEs' product elements, the study looks at the average of EMNEs' product satisfaction based on portability. The data findings suggest that BOP consumers' satisfaction on the product element is significant with an average of 4.01 (EMNEs') opposed to 4.19 (MNEs), (see figure 5.10). Based on the Likert 5 point scale, the score of 4.01 in the study suggests that the BOP consumers are satisfied with product portability of EMNEs' BOP products, but lesser than MNEs' BOP products. In the BOP environment, I observed that water purifiers from EMNEs for the BOP consumers were not only highly affordable but also portable in serving BOP consumers' need. I also had several opportunities to get into BOP consumers' homes, which allowed me to observe the products that they were using in their daily lives. Many of BOP consumers were using products that were lighter and simpler. As I had stated previously, the highest weighted score among the BOP products in the study was water purifier (see Table 5.3), which was relatively important to the BOP consumers than other products. Looking specifically to the products in the study, the issues that could arise with portability in mobile phone is minimal. The available water purifier in the market is portable; therefore, the consumers did not prioritize EMNEs' products' portability higher as MNEs'. Different from Kumar & Puranam (2012) who highlighted product portability as one of the important pillars of BOP product innovation, the finding in the current study weakly support that product portability is an important element of EMNEs' innovative product for BOP consumers.

The Proposition 7 suggests that product usefulness is an important element of EMNEs innovative products for BOP consumers in their home market and similar market abroad. In identifying BOP consumers' importance on EMNEs' product elements, the study looks at the average of

EMNEs' product satisfaction based on usefulness. The data findings suggest that BOP consumers' satisfaction on the product element is significant with an average of 4.35, as opposed to MNEs with 4.22 (see figure 5.10). Based on the Likert 5 point scale, the score of 4.35 in the study suggests that the BOP consumers are satisfied with the element. It is important to note that usefulness is an important element to BOP consumers. When a product contains most of the elements in the framework besides usefulness, then the product would not serve the needs of BOP consumers. Examining the consumers' satisfaction on the product element, EMNEs' products are well able to capture the most important element of the framework in serving BOP consumers' product needs. The findings strongly support that product usefulness is an important element of EMNEs' innovative product for the BOP consumers.

5.3.2 Factor Rating: EMNEs vs. MNEs

The Factor rating method in this study allows presenting whether EMNEs' BOP products are relatively important to the BOP consumers as opposed to MNEs', based on the strengths of the product satisfaction to the consumers. The implemented method is significant to the study because – as the score from the table 5.3 shows - the differences in the score values of EMNEs (3.98) and MNEs (3.96) are not significant. Therefore, implementing other methods besides weighted score in analyzing the data from the survey may not provide a significantly different outcome.

Table 5.3

Weighted Score: EMNEs Vs MNEs				
Consumers' Product Importance				
Product Elements	MNEs	EMNEs	Finding AVG of the Survey	Total Weight
Affordability	4.13	4.12	4.13	0.14
Quality	4.44	4.43	4.43	0.15
Multipurpose	3.85	3.69	3.77	0.13
Simplicity	3.92	4.05	3.98	0.14
Energy Efficiency	4.49	4.49	4.49	0.15
Portability	4.12	4.21	4.16	0.14
Usefulness	4.58	4.49	4.53	0.15
			29.50	1
Consumers' Product Satisfaction				
	EMNEs	MNEs		
	3.76	3.81		
	3.98	3.87		
	3.41	4.01		
	4.10	4.25		
	3.91	3.59		
	4.19	4.01		
	4.28	4.35		
Finding Weighted Score				
	MNEs		EMNEs	
Affordability	0.5259	Affordability	0.5333	
Quality	0.5988	Quality	0.5812	
Multipurpose	0.4355	Multipurpose	0.5123	
Simplicity	0.5534	Simplicity	0.5740	
Energy Efficiency	0.5954	Energy Efficiency	0.5461	
Portability	0.5911	Portability	0.5660	
Usefulness	0.6577	Usefulness	0.6689	
	3.9578		3.9818	

Source: Data Collected by Researcher

Evaluation: Evaluating the BOP markets in South Asia based on the weighted scores of the elements of the product from EMNEs vs MNEs, the highest factor rating of EMNEs (3.9818) compared with MNEs (3.9578) explains to us that even though EMNEs and MNEs BOP products well serve the consumers segment in the region, EMNEs' products are relatively more important to the BOP consumers than MNEs. The study's results are consistent with Khanna & Palepu's (2006) arguments on the EMNEs' relative strength in serving in BOP markets, and Kanungo's (2009) on EMNEs concentration in the BOP markets.

5.3.3 Discussion

The findings of the study from the perspective of consumers' satisfaction on EMNEs products as opposed to MNEs' products support the proposition I: Product affordability is an important element of EMNEs' innovative product for BOP consumers in their home market and similar markets abroad. Proposition III: Product multipurpose is an important element of EMNEs' innovative products for BOP consumers in their home market and similar markets abroad. Proposition IV: Product simplicity is an important element of EMNEs' innovative products for BOP consumers in their home market and similar markets abroad. Proposition VII: Product usefulness is an important element of EMNEs' innovative products for BOP consumers in their home market and similar markets abroad. Other similar studies in BOP markets in South Asia presented a close result in some of the BOP product elements' aspects. Jha's (2013) study focuses on Bihar, one of the poor states of India, and the consumers in the study are largely concentrated in a rural area of the state. Jha's (2013) survey report on Bihar's rural population and on the factors influencing BOP purchase decision of mobile phones. The study finds that the most important factors that influence the consumers' purchase decision making as ranked according to the consumers' preferences: feature, price, user-friendly, brand, quality and after sales service. In contrary to the prior studies in the field on BOP market, the current study examines the propositions in the study based on BOP consumers' product satisfaction on EMNE's oppose to MNEs products.

Different from the current study, Jha's (2013) study captures six elements that the consumers valued. It is my understanding that some of the elements in Jha's study are similar to the current study, such as feature (usefulness), price (affordability), user-friendly (simplicity), and quality. The current study did not use the elements: brand and after sales service. After close observation

in the BOP market, I understood the needs of those missing elements from my framework. I further explained the importance of the two valuable elements later in my study. Jha's study does not capture portability, energy efficiency and multipurpose, which the current study validates. However, it is important to note that Jha's study well captured most of the elements beside multipurpose. Another study by Debasish & Mallick (2015) performed in a state in the Southern part of India finds that rural consumers put price and features on their top importance over quality, brand, and function. Understanding that some of the elements in Debasish & Mallick's study are similar to the current study, such as feature (usefulness) and price (affordability). The authors' study lacks to capture a few elements such as simplicity, energy efficiency and portability, which the current study validates. However, it is important to note that Debasish & Mallick's study well represent most of the elements in the current study that EMNEs' products are well positioned to serve BOP consumers. Differently than some prior studies, product brand is an important element that the current study's BOP product elements framework lacks to capture.

In their study, Kumar & Puranam (2012) outline pillars of frugal engineering. The authors' work captured a few important elements such as affordability, quality, and simplicity from the conceptual framework of the current study. Different from the current study, the authors highlight other elements including megascale production, service ecosystems, and others. Kumar & Puranam study lack to capture some important elements like usefulness, portability, multipurpose and energy efficiency. Also, the study suggests on megascale production in helping cutting production cost; however, the issue arises with customization of product is not addressed by the study. As BOP markets environment is different and often within BOP market consumers' product importance on a similar product vastly differs, in such a condition,

megascale production may not serve the purpose. The product manufacturing should meet the needs of BOP consumers' living in dissimilar environment.

It is important to note that the four elements of EMNEs' BOP products captured by this study are significant elements in defining as standard elements. EMNEs products are strengthened with these elements as opposed to MNEs. This is well explained by the market size (see figure 5.8 & 5.9) captured by EMNEs products which are based on the products in the current study.

The findings of the study provide details of BOP consumers' average age and the consumers' product satisfaction. This enhances the understanding of not only the average age of individual product users in each BOP markets and, discuss under product level but also the consumers' product satisfaction in each BOP market. EMNEs, MNEs, and other organizations that are interested in serving BOP markets and learning about BOP consumers' product purchase decision will be served by the findings of the study.

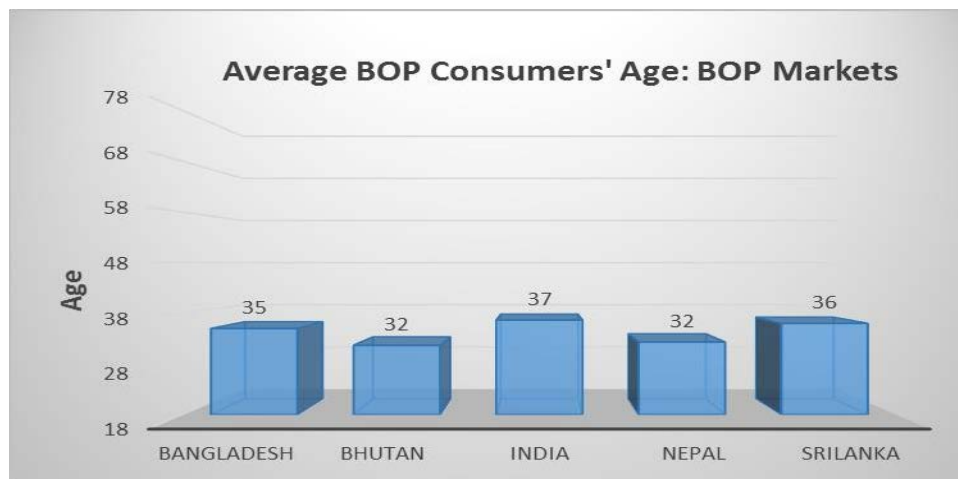
In their study in 2002, Prahalad and Hart expressed their views that MNEs are behind in serving BOP consumers and MNEs can profitably serve the BOP market with their products. Based on the authors' statement period, one can assume that MNEs were behind in serving the market segment or MNEs' presence in BOP market was limited. As I could not find the authors' supporting data on the size of MNEs presence in the BOP market, it is hard to compare if MNEs presence in the BOP market is limited today than in the past. Even though the current study presents MNEs vs. EMNEs market share in five BOP markets (see figure 5.9), it is difficult to compare. However, based on the data in this study, MNEs' market presence in BOP market is still limited, which is consistent with Prahalad & Hart's argument.

5.4 Country Level Findings

In the previous section, I explored EMNEs position as oppose to MNEs in serving BOP markets from a firm level. This section examines the importance of BOP product elements to BOP consumers from a country level. First, the study looks at BOP consumers' average age in understanding the BOP consumers' characteristics in the BOP market of the study. Second, BOP consumers' product importance on the BOP market is examined in testing the propositions. Third, a factor rating method is implemented in the study that allows analyzing whether the BOP products are important to a BOP market relatively to other BOP markets in South Asia.

In the study, figure 5.11 captures the average age of BOP consumers from the BOP markets. The average age of BOP consumers in BOP markets in South Asia is analyzed based on the data collected from the field. The finding exhibited that on average, the lowest average age of BOP consumers' is from Bhutan and Nepal, 32, and the highest from India, 37. The results from the findings explain that the average age of the BOP consumers in these BOP markets is not significant different. A gap between the highest and lowest in average age is five years.

Figure 5.11



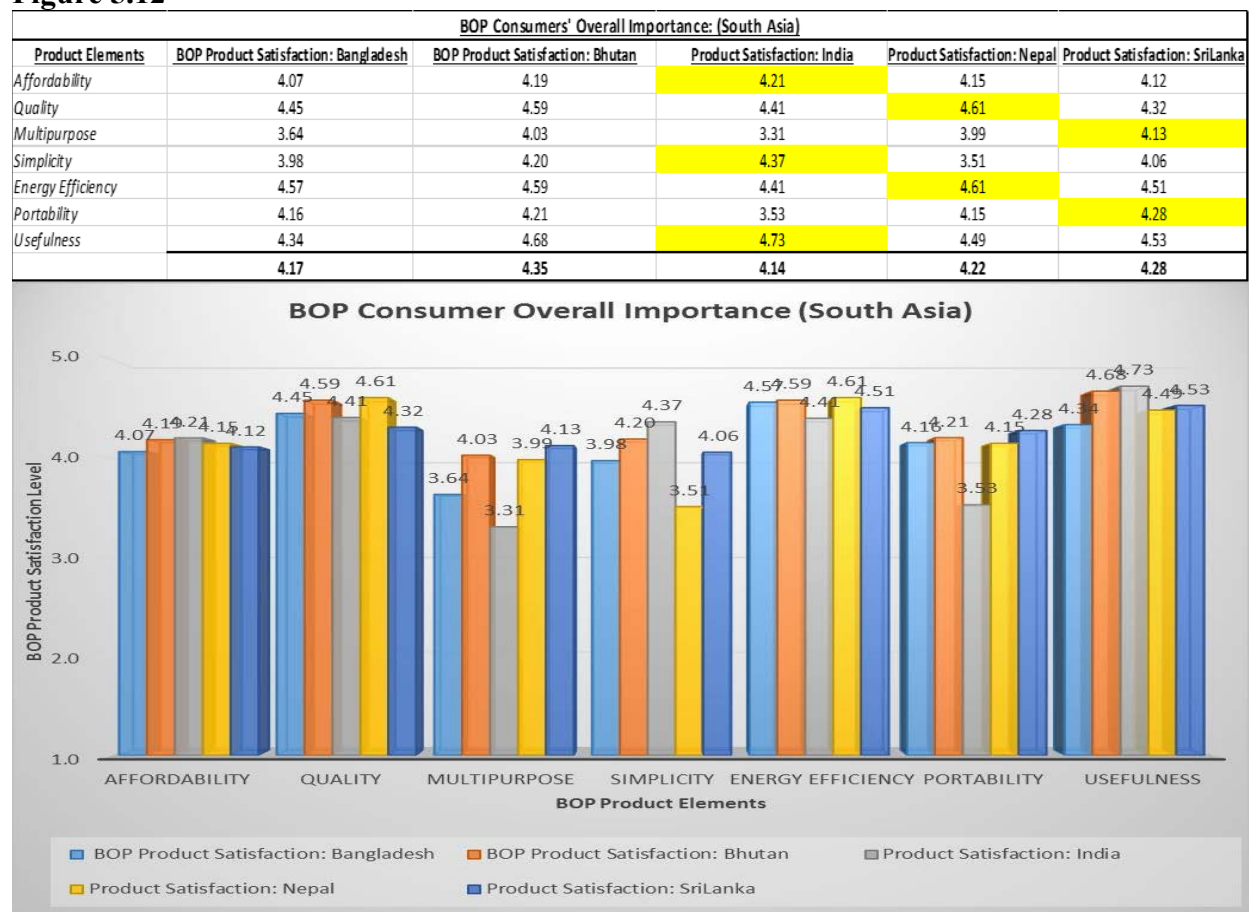
Source: Data Collected by Researcher

5.4.1 Propositions Analyzed from Country Level

In testing the propositions of the study from country level, the consumers' importance on the BOP product is analyzed. The data on BOP consumers' product importance analyzes how BOP consumers' value the product elements prior to purchasing a BOP product in their markets (see figure 5.12). The current study recognizes BOP consumers' importance on BOP products from the BOP markets in South Asia in analyzing the propositions in the study.

In testing the propositions, the study examines the consumers' importance on BOP product elements from country level.

Figure 5.12



Source: Data Collected by Researcher

The figure 5.12 exhibits the BOP consumers' importance on product elements during their product purchase decision. The data in the figure consists of all EMNEs' products in the study measured cumulatively.

The Proposition 1 suggests that product affordability is an important element of EMNEs' innovative products for BOP consumers in their home market and similar markets abroad. Examining BOP consumers' importance on product affordability from a country level, see figure 5.12, in the case of BOP consumers from Bangladesh, product element affordability is 4.07. Based on the Likert 5 point scale, the score of 4.07 in the study suggests that the element is important to BOP consumers prior to a product purchase. Bhutan's product element affordability is 4.19. Based on the Likert 5 point scale, the score of 4.19 in the study suggests that the element is important to BOP consumers prior to a product purchase. India's product element affordability is 4.21. Based on the Likert 5 point scale, the score of 4.21 in the study suggests that the element is important to BOP consumers prior to a product purchase. Nepal's product element affordability is 4.15. Based on the Likert 5 point scale, the score of 4.15 in the study suggests that the element is important to BOP consumers prior to a product purchase. Sri Lanka's product element affordability is 4.12. Based on the Likert 5 point scale, the score of 4.12 in the study suggests that the element is important to BOP consumers prior to a product purchase. The finding presents that even though the importance of product affordability slightly differ among the BOP markets, the proposition is significant to all the BOP markets in the study.

The Proposition 2 suggests that product quality is an important element of EMNEs innovative products for BOP consumers in their home market and similar market abroad. Now, examining BOP consumers' importance on product quality from country level, see figure 5.12, in the case of BOP consumers from Bangladesh, product element quality is 4.45. Based on the Likert 5

point scale, the score of 4.45 in the study suggests that the element is important to BOP consumers prior to a product purchase. Bhutan's product element quality is 4.59. Based on the Likert 5 point scale, the score of 4.59 in the study suggests that the element is important to BOP consumers prior to a product purchase. India's product element quality is 4.41. Based on the Likert 5 point scale, the score of 4.41 in the study suggests that the element is important to BOP consumers prior to a product purchase. Nepal's product element quality is 4.61. Based on the Likert 5 point scale, the score of 4.61 in the study suggests that the element is important to BOP consumers prior to a product purchase. Sri Lanka's product element quality is 4.32. Based on the Likert 5 point scale, the score of 4.32 explains that the element is important to BOP consumers prior to a product purchase. The finding presents that even though the importance of product quality slightly differ among the BOP markets, the proposition is significant to all the BOP markets in the study.

The Proposition 3 suggests that product multipurpose is an important element of EMNEs innovative products for BOP consumers in their home market and similar market abroad. Now, examining BOP consumers' importance on product multipurpose from country level, see figure 5.12, in the case of BOP consumers in Bangladesh, the multipurpose quality is 3.64. Based on the Likert 5 point scale, the score of 3.64 in the study suggests that the element is somewhat important to BOP consumers prior to a BOP product purchase. Bhutan's product element multipurpose is 4.03. Based on the Likert 5 point scale, the score of 4.03 in the study suggests that the element is important to BOP consumers prior to a product purchase. India's product element multipurpose is 3.31. Based on the Likert 5 point scale, the score of 3.31 in the study suggests that the element is somewhat important to BOP consumers prior to a product purchase. Nepal's product element multipurpose is 3.99. Based on the Likert 5 point scale, the score of

3.99 in the study suggests that the element is somewhat important to BOP consumers prior to a product purchase. Sri Lanka's product element multipurpose is 4.13. Based on the Likert 5 point scale, the score of 4.13 explains that the element is important to BOP consumers prior to a product purchase. The finding presents that the proposition is significant to Bhutan and Sri Lanka, while less significant to Bangladesh, India, and Nepal.

The Proposition 4 suggests that product simplicity is an important element of EMNEs innovative products for BOP consumers in their home market and similar market abroad. Now, examining BOP consumers' importance on product simplicity from country level, see figure 5.12, in the case of BOP consumers in Bangladesh, product element simplicity is 3.98. Based on the Likert 5 point scale, the score of 3.98 in the study suggests that the element is close to important to BOP consumers prior to a product purchase. Bhutan's product element simplicity is 4.20. Based on the Likert 5 point scale, the score of 4.20 in the study suggests that the element is important to BOP consumers prior to a product purchase. India's product element simplicity is 4.37. Based on the Likert 5 point scale, the score of 4.37 in the study suggests that the element is important to BOP consumers prior to a product purchase. Nepal's product element simplicity is 3.51. Based on the Likert 5 point scale, the score of 3.51 in the study suggests that the element is somewhat important to BOP consumers prior to a product purchase. Sri Lanka's product element simplicity is 4.06. Based on the Likert 5 point scale, the score of 4.06 in the study suggests that the element is important to BOP consumers prior to a product purchase. The finding presents that the proposition is significant to Bangladesh, Bhutan, India, and Sri Lanka, while less significant to Nepal.

The Proposition 5 suggests that product energy efficiency is an important element of EMNEs innovative products for BOP consumers in their home market and similar market abroad. Now,

examining BOP consumers' importance on product energy efficiency from country level, see figure 5.12, in the case of BOP consumers in Bangladesh, product element multipurpose is 4.57. Based on the Likert 5 point scale, the score of 4.57 in the study suggests that the element is important to BOP consumers prior to a product purchase. Bhutan's product element multipurpose is 4.59. Based on the Likert 5 point scale, the score of 4.59 in the study suggests that the element is important to BOP consumers prior to a product purchase. India's product element, energy efficiency, is 4.41. Based on the Likert 5 point scale, the score of 4.41 in the study suggests that the element is important to BOP consumers prior to a product purchase. Nepal's product element multipurpose is 4.61. Based on the Likert 5 point scale, the score of 4.61 in the study suggests that the element is important to BOP consumers prior to a product purchase. Sri Lanka's product element multipurpose is 4.51. Based on the Likert 5 point scale, the score of 4.51 in the study suggests that the element is important to BOP consumers prior to a product purchase. The finding presents that even though the importance of product energy efficiency slightly differ among the BOP markets, the proposition is significant to all the BOP markets in the study.

The Proposition 6 suggests that product portability is an important element of EMNEs innovative products for BOP consumers in their home market and similar market abroad. Now, examining BOP consumers' importance on product portability from country level, see figure 5.12, in the case of BOP consumers in Bangladesh, product element portability is 4.16. Based on the Likert 5 point scale, the score of 4.16 in the study suggests that the element is important to BOP consumers prior to a product purchase. Bhutan's product element, energy efficiency, is 4.21. Based on the Likert 5 point scale, the score of 4.21 in the study suggests that the element is important to BOP consumers prior to a product purchase. India's product element, energy

efficiency, is 3.53. Based on the Likert 5 point scale, the score of 3.53 in the study suggests that the element is somewhat important to BOP consumers prior to a product purchase. Nepal's product element, energy efficiency, is 4.15. Based on the Likert 5 point scale, the score of 4.15 in the study suggests that the element is important to BOP consumers prior to a product purchase. Sri Lanka's product element, energy efficiency, is 4.28. Based on the Likert 5 point scale, the score of 4.28 in the study suggests that the element is important to BOP consumers prior to a product purchase. The finding presents that the proposition is significant to Bangladesh, Bhutan, Nepal, and Sri Lanka, while less significant to India.

The Proposition 7 suggests that product usefulness is an important element of EMNEs innovative products for BOP consumers in their home market and similar market abroad. Now, examining BOP consumers' importance on product usefulness from country level, see figure 5.12, in the case of BOP consumers in Bangladesh, product element usefulness is 4.34. Based on the Likert 5 point scale, the score of 4.34 in the study suggests that the element is important to BOP consumers prior to a product purchase. Bhutan's product element usefulness is 4.68. Based on the Likert 5 point scale, the score of 4.68 in the study suggests that the element is important to BOP consumers prior to a product purchase. India's product element usefulness is 4.73. Based on the Likert 5 point scale, the score of 4.73 in the study suggests that the element is important to BOP consumers prior to a product purchase. Nepal's product element usefulness is 4.49. Based on the Likert 5 point scale, the score of 4.49 in the study suggests that the element is important to BOP consumers prior to a product purchase. Sri Lanka's product element usefulness is 4.53. Based on the Likert 5 point scale, the score of 4.53 in the study suggests that the element is important to BOP consumers prior to a product purchase. The finding presents that even though

the importance of product usefulness slightly differ among the BOP markets, the proposition is significant to all the BOP markets in the study.

5.4.2 Factor Rating Method: BOP Markets

Factor rating method in the study evaluates whether BOP products are relative important to BOP consumers in one BOP market compared to others on the strengths of products importance to BOP consumers in individual BOP market. The implemented method is significant to the study because when examining a weighted score from the table 5.4, the differences in the score values of five BOP markets in the study are negligible. Therefore, implementing other methods beside weighted score in analyzing the data from the survey may not provide a significant outcome.

Table 5.4

BOP Product Importance							
Product Elements	Prod. Imp. BD	Prod. Imp. But	Prod. Imp. Ind	Prod. Imp. Nep	Prod Imp. SriLanka	Finding AVG of the Survey	Total Weight
Affordability	4.12	4.19	4.21	4.17	4.29	4.20	0.15
Quality	4.42	4.67	4.41	4.60	4.67	4.55	0.16
Multipurpose	3.71	2.67	3.31	4.13	2.46	3.25	0.11
Simplicity	3.77	4.12	4.37	3.59	4.46	4.06	0.14
Energy Efficiency	4.43	4.58	4.41	4.61	4.54	4.51	0.16
Portability	4.07	3.96	3.53	4.25	2.63	3.69	0.13
Usefulness	4.42	4.79	4.73	4.49	4.88	4.66	0.16
	4.1339	4.1383	4.1382	4.2628	3.9883	28.93	1
BOP Product Satisfaction							
Product Elements	Prod. Sat. Bangladesh	Prod. Sat. Bhutan	Prod. Sat. India	Prod. Sat. Nepal	Prod. Sat. SriLanka		
Affordability	3.82	3.68	3.73	3.59	3.67		
Quality	3.87	3.77	4.15	3.69	4.08		
Multipurpose	3.37	3.76	2.98	3.73	3.00		
Simplicity	3.99	3.96	4.00	3.86	4.21		
Energy Efficiency	3.30	3.71	4.23	3.24	3.83		
Portability	3.90	4.12	3.33	4.06	2.79		
Usefulness	4.18	4.28	4.59	4.04	4.46		
	3.7762	3.8987	3.8601	3.7443	3.7202		
Finding Weighted Score							
Bangladesh		Bhutan		India		Nepal	
Affordability	0.5545	Affordability	0.5341	Affordability	0.5411	Affordability	0.5201
Quality	0.6092	Quality	0.5939	Quality	0.6538	Quality	0.5811
Multipurpose	0.3796	Multipurpose	0.4234	Multipurpose	0.3353	Multipurpose	0.4200
Simplicity	0.5598	Simplicity	0.5564	Simplicity	0.5615	Simplicity	0.5424
Energy Efficiency	0.5140	Energy Efficiency	0.5786	Energy Efficiency	0.6605	Energy Efficiency	0.5049
Portability	0.4974	Portability	0.5250	Portability	0.4250	Portability	0.5172
Usefulness	0.6739	Usefulness	0.6901	Usefulness	0.7398	Usefulness	0.6515
	3.7885		3.9015		3.9168		3.7372
							3.7753

Source: Data Collected by Researcher

Evaluation: Evaluating the BOP products among the BOP markets based upon the weighted scores, the highest weighted score of India (3.9168) compared with Bangladesh (3.7885), Bhutan (3.9015), Nepal (3.7372) and Sri Lanka (3.7753). This explains to us that even though the products in the BOP markets well serve BOP consumers, the highest score of India (3.9168) tells us that the BOP products are relatively important to the BOP consumers in India in comparison to other BOP markets in the study.

5.4.3 Discussion

In examining from the country level, based on the importance of BOP product elements, the propositions I, II, V, and VII (see chapter 3) were significant to all the BOP markets, while propositions III, IV, and VI (see chapter 3) were not significant to all BOP markets. Now, examining the BOP markets that all the propositions were significant included Bhutan and Sri Lanka. In figure 5.12, the different values of product elements among the BOP markets based on the products in the study inform that all the elements are somewhat important or important, based on five points Likert scale, to BOP consumers in all the markets. Even though the BOP consumers' product importance based on the elements differ in the BOP markets, product affordability, quality, energy efficiency and usefulness remain significant in all the BOP markets.

When examining the significance of each element based on the market, the findings suggest that the importance of elements like affordability, simplicity, and usefulness is highest among Indian BOP consumers. Similarly, the findings suggest that the importance of elements quality and energy efficiency is highest among Nepalese BOP consumers. In addition, the findings suggest that the importance of the elements, multipurpose and portability is highest among Sri Lankan BOP consumers. None of the elements are captured by Bhutan and Bangladesh. This does not mean that these two BOP markets' consumers do not prioritize the BOP product elements in

their products. Examining the differences in the BOP product elements' value of Bangladesh & Bhutan with other BOP markets in the study, the values are not significantly different. Therefore, a strong assumption cannot be build that one BOP market consumers' importance on elements is significantly different from other BOP markets in the current study.

The current study's findings contradict with Tasavori et al. (2014) where India is ignored by the Western MNEs and Soydan's (2014) argues that India is a challenging market for MNEs. Actually, based on my findings, India has the highest percentage of MNEs product availability in comparison to other BOP markets in the region (see figure 5.9). Even examining individual BOP market products, EMNEs' vs. MNEs', at least little over 20 % of the market is captured by MNEs products based on the three products in my study. This reflects that there is still a sizeable presence of MNEs in the BOP markets.

Findings in the study exhibit that BOP consumers' average age across the BOP markets in south Asia is not very significantly different. The consumers in Bhutan (32) and Nepal (32) were the youngest and India (37) was the oldest on average. As I had previously mentioned in the study, India being a center for product innovation for the BOP market a long before Nepal and Bhutan. As Indian consumers were using BOP products since many years, it is notable that Indian BOP consumers on average are older than new BOP markets like Nepal and Bhutan.

5.5 Findings and Discussions: Conceptual Framework

The conceptual framework in the study suggested that all the elements stated in the framework are important for EMNEs in building innovative products in serving BOP markets. BOP consumers find the elements in the framework are significant from both BOP product importance and satisfaction perspectives. Examining the BOP consumers' importance and satisfaction, some

EMNEs' elements are strongly supported than the others based on the products, firm, and country levels in the study. Among all the elements, the findings from all three levels suggest that usefulness is a significant element at all levels. Also, the conceptual framework was important in constructing the survey questionnaire.

5.5.1 BOP Considered Elements

In finding other elements beside the ones in the study, in the survey questionnaire, an open-ended question asked respondents if they find any other elements beside the ones stated on the survey questionnaire important to them. The elements that were considered by the BOP consumers were after-sales services, brand and product reliability. Respondents are keenly interested and strongly emphasized on product after-sales services of all the considered elements. Among 2082 respondents, 318 respondents suggested that after-sales services as an important element that needed to be considered, 154 respondents suggested product brand and 52 respondents suggested product reliability. I did not consider in adding the element, product reliability, in the study because product quality captured the essence of reliability in the study. I found that after-sales service and brand as two other elements that are considerably important to the framework.

5.5.1.1 *After-sales Service*

The BOP consumers strongly suggested the element, after-sales service. I observed in the BOP environment, different from the Western markets, the BOP consumers try to use a product they have as long as the product serves its purpose. Importantly, BOP consumers do not have the luxury to buy a new product if the existing one breaks. Thus, it is important to consider by the firms serving the BOP segment that the consumers have limited disposable income with much

needs. Therefore, firms have to be well aware of BOP consumers' product purchase demand and their needs' fulfillment, because BOP consumers are budget constrain and value seeking. The observation is consistent with Moore (2011), Tiwari & Herstatt (2012), Mukerjee (2012), Bhatti (2012) and Kumar & Puranam (2012) insights.

Another important observation that I have made in the BOP markets was their culture and religious factors related to product usage. I perceived that the consumers from all economic segments in South Asia are less acceptable to product wastage. When the consumers buy a product, they prefer to use the product as long as it could be serviceable. It is important to understand that for BOP consumers, it is not always about money, they are also concern of their social and environmental issues. For instance, the consumers have been using products that are locally made that well serve their needs for generations.

Providing after-sales service can be challenges to the companies due to of the poor infrastructure both hard and soft in BOP markets. However, companies considering the element would help to enhance BOP consumers' trust towards the companies. In the study of BOP market, Neuwirth (2011) states that after-sales service is an important element of building BOP consumer's trust in the company's brand. The study well relates the extension of brand to after-sales services. However, the study provides limited elements in product marketing in rural BOP markets.

5.5.1.2 Product Brand

Another important element considered by the BOP consumers was product brand. I observed in the BOP environment that the consumers' product adaption from different companies with their brand desire for the product was highly visible. For instance, Samsung products were widely used along with Indian brands like Micromax, Lava, Milton and others, and Chinese like

Huawei, Oppo, Lenovo and others in BOP markets in South Asia. On the foreign brand, Nokia was popular among MNEs brand on mobile phone, Whirlpool on refrigerator, and Aqua on water purifier. I learned that the consumers preferred to buy a product of a specific brand that they like over the others if the brand product well served their needs and demands.

My observation of brand awareness in BOP market was clearly visible. As Prahalad & Hart (2002) state that BOP consumers are brand-conscious and as for non-BOP consumers, aspirational brands are critical to BOP consumers. Even though less noted in the previous studies, I had numerous opportunities to discuss with BOP consumers regarding the product brand that they were using, during the later stage of my field study. After finding the importance of brand value as one of the consumers' recommended elements, I further discussed with BOP consumers on their importance on brand values. A sizeable number of BOP consumers suggested that along with the elements in my framework, the brand was another important element in their decision making while purchasing BOP products. I concluded from the study that if BOP consumers find their preferred brand product at a price they can afford, they would purchase the product. The findings support Prahalad (2004, 2012) identification on BOP market product brand value consciousness. Similarly, Neuwirth (2011), Jha (2013), and Debasish & Mallick (2015) studies of a BOP market found product brand as an important element for BOP consumers.

Regarding MNEs' product, in the field study, I found that Nokia mobile phone was popular among BOP consumers in the region. Looking at the sales figure of Nokia, several years ago the brand was number one in Indian mobile phone market. However, in the recently years, the brand sales largely declined. Tripathy & Virki (2012) in Reuters suggest that the fall in Nokia's sales due to the company being slow to react on popular technology. In the field study, I had an

opportunity to discuss with many Nokia users, past and present, and found that they still liked the brand, but the brand is not able to keep up adding new features like dual SIMM, when provided by other mobile brands. Another reason was due to the absence of after sales services of the brand; BOP consumers end up using mostly EMNEs' products.

5.6 Findings and Discussions: Case Studies

The case studies tested around the BOP innovative product elements show that the BOP innovative product elements were critical factors in BOP consumers' product acceptance. The case study evaluates that EMNEs are building products that serve the needs of BOP consumers in their home market and similar market abroad. Examining a variety of BOP products from EMNEs captured by the current study, it explains to us that not only EMNEs are largely serving the BOP segment but also EMNEs are serving the consumer segment with a variety of innovative BOP products.

Below Figure 5.13 exhibits the three specific products in understanding the elements captured by the individual product. Even though all the products in the study are serving the BOP consumers, mobile phone captured all the elements from the framework. While water purifier lacks to capture multipurpose, and refrigerator multipurpose and portability.

Figure 5.13

<u>Innovative Product Elements</u>	<u>Elements Captured by Swach</u>	<u>Elements Captured by ChotuKool</u>	<u>Elements Captured by Smartphones</u>
Product Affordability	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Product Quality	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Product Multipurpose	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Product Portability	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Product Simplicity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Product Energy Efficiency	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Product Usefulness	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Source: The Researcher of the Study

In the case study, I argued that a BOP product does not require capturing all the elements from the innovative framework to serve BOP consumers. The findings of the study support the argument. Water purifier doesn't capture all the elements from my conceptual framework (see figure 5.13), while mobile phone does. However, based on the average weighted score's result on the importance of the products to BOP consumers, water purifier was relatively important to BOP consumers than mobile phone and refrigerator (see Table 5.2). As I had stated earlier in this chapter that clean water is essential for healthy living, and BOP consumers often have an issue accessing clean drinking water whether in the city or rural areas and issue arising with water borne diseases, the importance of water purifier among BOP consumers is large. Therefore, water purifier is not only a commodity to perform tasks like refrigerator or mobile phone, but also a commodity to improve health and wellbeing where an access to clean drinking water is critical.

This study also shows that while EMNEs are largely serving the BOP market with their innovative products this may not necessarily hold true in the case of all EMNEs. My field observation evaluates that there are a sizeable number of EMNEs serving the BOP consumers, but at the same time, many EMNEs' presence is limited to a couple of BOP markets in the region. For instance, all three EMNEs in the case studies at a different capacity are serving the BOP segment. Analyzing the research case studies' products, Micromax mobile phone is available in all the BOP markets in the region, while Tata Swach water purifier availability is limited to certain BOP markets and Chotukool refrigerator is not even widely available within India, especially in the Northeast.

My findings contradict with Jaynath and Balram (2012) evaluation on Chotukool refrigerator. The scholars stated that Chotukool captures portability, energy efficiency, affordability and

simplicity, which addresses the needs of rural BOP population. During the field observation, I found that a limited number of BOP consumers using Chotukool in the area of my study within India. I rarely found rural BOP consumers using Chotukool in most part of India. Chotukool refrigerator was not available in North Eastern part of rural India and other BOP markets in the region. Importantly, Jaynath & Balram study lack to inform other important elements like quality and usefulness in regards to the product that the current study does. An insight into a limited availability of Chotukool could be due to the growing number of similar product choices available for BOP consumers from other EMNEs in the region. Based on my observation in the BOP markets that a significant number of EMNEs from outside India are successfully serving the markets, some of the major EMNEs included Samsung, LG, and Haier.

The findings in the study in regards to water purifier was that even though Tata Swach water purifier captures many product elements from the study, the product acceptance was limited in the region. The limited availability of Swach Water Purifier relates to that the product was new to BOP market in comparison to other cheaper water purifier like Milton. Milton was not only widely available and low cost, but also it was a popular brand within the BOP segment for years. The findings from the field study also exhibited that Milton's wider market presence was related to a well designing of the product that better suits in BOP environment, such as affordability, portability, simplicity, usefulness and so on.

My field study finding was that BOP markets are not homogeneous but widely segmented within and across the BOP markets, which is consistent with Prahalad's (2004) and London's (2007) studies. The products in the case studies when looked from different levels: product, firm and country, BOP consumers' product importance and satisfaction differ among the markets to some extent. However, the differences in product importance and satisfaction within same product

among different BOP markets did not widely vary, which means some level of homogeneous in BOP market did exist. This challenges London's argument that the BOP market is not a homogeneous market. However, London's argument is supported when looked through the differences in product importance and satisfaction within different products, among different BOP markets or within a market. For instance, the findings suggest that there is a high degree of similarity in terms of product importance and satisfaction, if looked at mobile phone, water purifier or refrigerator across the markets; however, differences existed in product importance and satisfaction based on BOP elements when BOP product varies.

The next section, Chapter 6, concludes the study. The findings of the study will be further discussed and evaluated. Future research and limitation will also be identified.

6. CONCLUSION

This dissertation study has concluded that innovative BOP product elements are crucial in serving BOP consumers. The data findings from the field survey, case studies, conceptual framework and descriptive method, are consistent with the proposals in the study. The study has examined the dynamics of innovative product elements in BOP markets. The propositions in the study are tested from product level, firm level, and country level. The results from the product level indicate that BOP consumers' importance on product elements vary within and among different BOP products in the study, as presented in table 5.1 and figures 5.5-5.7. For instance, the product element, multipurpose, might be a less important element to BOP consumers of refrigerator and water purifier, while the element could be more important to BOP consumers of mobile phone. Similarly, other elements are significant or less significant based on the BOP products in the study.

At the firm level, based on the data, the propositions I, III, IV, and VII are significant in terms of EMNEs' innovative products for BOP consumers in their home market and similar markets abroad (see figure 6.1). The important findings from the study include the market size of EMNEs' products vs. MNEs' products in the BOP markets in South Asia (see figures 5.8 and 5.9). Based on my BOP market observation and data findings, EMNEs products are widely used by BOP consumers. While in terms of importance and satisfaction of EMNEs versus MNEs' products, there is not any significant differences (see table 5.3). Even though a negligible difference exist on weighted scores of the elements of the product from EMNEs vs. MNEs, the highest factor rating of EMNEs compared to MNEs explains us that EMNEs' products are relatively important to BOP consumers than MNEs' products (see table 5.3). The study also

highlights on whether the four elements captured by EMNEs over MNEs are significant in serving BOP consumers in the region.

At the country level, based on the data, the propositions I, II, V and VII are significant to all the BOP markets in the study, while propositions III, IV and VI are less significant to all the BOP markets in the study (see figure 5.12 and figure 6.1). The country level results indicate that the significance of the propositions in the study did not largely vary among the BOP markets in the study. (See figure 6.1).

Figure 6.1

Propositions Significant or Less Significant: Product, Firm & Country Level										
Propositions	Product Level			Firm Level		Country Level				
	Mobile Ph	Water Pur	Refrigerator	EMNEs	MNEs	Bangladesh	Bhutan	India	Nepal	Sri Lanka
<i>Proposition I - "Affordability"</i>	Significant	Significant	Significant	Significant	Less Significant	Significant	Significant	Significant	Significant	Significant
<i>Proposition II - "Quality"</i>	Significant	Significant	Significant	Less Significant	Significant	Significant	Significant	Significant	Significant	Significant
<i>Proposition III- "Multipurpose"</i>	Significant	Less Significant	Less Significant	Significant	Less Significant	Less Significant	Significant	Less Significant	Less Significant	Significant
<i>Proposition IV- "Simplicity"</i>	Significant	Significant	Significant	Significant	Less Significant	Less Significant	Significant	Significant	Less Significant	Significant
<i>Proposition V- "Energy-Effi"</i>	Significant	Significant	Significant	Less Significant	Significant	Significant	Significant	Significant	Significant	Significant
<i>Proposition VI- "Portability"</i>	Significant	Significant	Less Significant	Less Significant	Significant	Significant	Significant	Less Significant	Significant	Significant
<i>Proposition VII- "Usefulness"</i>	Significant	Significant	Significant	Significant	Less Significant	Significant	Significant	Significant	Significant	Significant

Source: The Researcher of the Study

Note: Figure 6.1 exhibits the significance of the propositions at product, firm and country levels.

As addressed by Drazin & Schoonhoven (1996), Hammond & et. al (2007), Cuervo-Cazurra (2012), Bandeir-De-Mello & et. al. (2015) and London (2016) there is a growing importance of the field study being performed on EMNEs' internationalization and BOP markets; my study well serves the purpose. As the research being performed in the BOP environment and captured through the lens of BOP product importance and satisfaction, the present study is fortified. The survey is conducted in South Asia, the region with the highest concentration of BOP consumers in the world. The region highly demands the innovative product in fulfilling BOP needs, also

acknowledged by London (2016), therefore, the present study adds a significant contribution to the literature in the field.

The first chapter of the present study shows that there is insufficient scholarly work on product innovation in serving BOP consumers. Scholars in BOP studies are debating on appropriate strategy in serving BOP consumers with products that suit their needs also highlighted by Stucchi (2013). Scholars such as Karnani, Arora & Romijin, Khan and others caution on MNEs' ability to serve the segment profitably as proposed by Prahalad & Hart. Based on designed survey findings and BOP market observation, I support the arguments of Prahalad & Hart (2002) that MNEs could profitably serve BOP segment. The study finds that MNEs' products are not widely serving BOP segment as compared to EMNEs, but MNEs products are existed in BOP markets. Based upon this understanding, I argue that firms' main objective is profit, if MNEs were not earning profits in the BOP markets; the MNEs would not still be serving BOP consumers with their products. In the BOP market, I found that MNEs' BOP products were largely available in urban areas, but limited in rural areas.

This study explores the importance of BOP product elements, suggests that BOP product elements differ based on BOP products, and also ranks the BOP product elements based on the elements' importance to BOP consumers. Based on the ranking of the elements at all the levels, the element, usefulness, often ranked the highest of all elements in my study, followed by other elements (see figure 6.2).

Figure 6.2

Ranking of BOP Product Elements: Product, Firm & Country Level										
Propositions	Product Level			Firm Level		Country Level				
	Mobile Ph	Water Pur	Refrigerator	EMNEs	MNEs	Bangladesh	Bhutan	India	Nepal	SriLanka
<i>Affordability</i>	4.11	4.19	4.21	4.13	4.12	4.07	4.19	4.21	4.15	4.12
<i>Quality</i>	4.40	4.67	4.48	4.44	4.43	4.45	4.59	4.41	4.61	4.32
<i>Multipurpose</i>	4.02	2.67	3.13	3.85	3.69	3.64	4.03	3.31	3.99	4.13
<i>Simplicity</i>	3.91	4.12	4.09	3.91	4.05	3.98	4.20	4.37	3.51	4.06
<i>Energy-Efficiency</i>	4.47	4.58	4.50	4.48	4.49	4.57	4.59	4.41	4.61	4.51
<i>Portability</i>	4.25	3.96	3.46	4.12	4.21	4.16	4.21	3.53	4.15	4.28
<i>Usefulness</i>	4.51	4.79	4.65	4.58	4.49	4.34	4.68	4.73	4.49	4.53

Source: The Researcher of the Study

Note: Figure 6.2 exhibits the importance of the element, usefulness, at all levels.

6.1 Future Research Recommendation

It took Prahalad and Hart over 65 years to bring the BOP concept into the light, in 1999; since then, other scholars have worked to extend the concepts further. However, the available BOP, innovation for BOP market and EMNEs in BOP market literature are still limited; therefore, a further research work in the field is demanded, also acknowledge by London & Hart (2004) and London (2016).

I recommend future researchers to study EMNEs' internationalization and BOP product innovation in other regions in the world. This would allow examining the existing differences, including BOP consumers' product importance and satisfaction, market growth and size, BOP consumers' product tastes, etc., among different BOP markets or between regions. Future researchers could test the conceptual framework of the current study with additional elements in evaluating the significance of the current study.

The observation from my field survey in the BOP market shows that BOP product preferences do not extremely differ between BOP markets, and within a BOP market; however, BOP product elements preference vary not only within a large BOP market like India but also within a small BOP market like Nepal. In Nepal, BOP product elements' preferences largely vary among the

people living in the North and South of the country. In sum, the study suggests that BOP markets are not homogenous in terms of BOP product elements. Future researchers could further look into BOP product customization based on the consumers' preferences on BOP product elements. This allows better serving the product needs of overall BOP segment.

6.2 Study Limitation

Like every research, this study comes with some limitations. I have provided much effort to strengthen the study by not only implementing some case studies, and a conceptual framework for evaluating the innovative BOP product, but also collecting data in the BOP environment in South Asia. Then, tested the data collected from the survey using a descriptive statistical method. However, I still believe that much work could be done to exploit a full potential of learning on BOP consumers' demands and developing products that better serve their needs.

Limitation 1: Regional Study

The study concentrates on one region, South Asia. Even though the region has a biggest BOP population in the world, implementing a similar study in other regions may provide different results. Actually, considering the existed differences on cultural, geographical, climate and other factors among BOP markets, the findings in one BOP regional markets may be harder to translate into other BOP regions.

Limitation 2: BOP Market

Due to research time limitation, and considering other factors, the regions' big economy, Pakistan, was excluded from the study. If a survey had been performed in Pakistan, the validity of the study would have been strengthened. Surveys performed in India were mostly

concentrated in the mid, north and eastern parts of India, with an expectation that there is a larger concentration of the BOP segment in that region of India. Survey performed in Southern and Western part of India would have captured larger and wider data set.

Limitation 3: Researcher Performed Survey

Studies have suggested that a researcher performed survey could result in some bias in the study. If there exist biases in my study, it would be without my knowledge, because I tried to perform the survey at the best of my knowledge and capacity.

Limitation 4: Methodology

The study uses limited methodologies for testing of survey data. Even though the data in the study demanded descriptive techniques, the results are not significantly different. In the future, other statistical methods could be explored in testing the findings of the study. Implementing other significant statistical techniques in the study could improve the quality of the result.

6.3 Reflection

Most importantly, without continuous support and encouragement from my dissertation committee, and my chair Dr. Samii, I will not be able to accomplish much in my dissertation work. I am very grateful to work under Dr. Samii, Dr. Dhakar, Dr. Ficici, and Dr. Nugent, who did not only enhance my creative, thoughtful ideas to grow on my dissertation study but also taught me how to extend my research beyond the classroom environment. After completing this study, I enhanced my knowledge and understanding towards innovative products and at the same time learn the critical factors that could supplement in serving the segment. Overall, my Ph.D. dissertation work was a great learning experience. I had a tremendous opportunity to gain a

wealth of knowledge in the areas of BOP consumers and market, low cost product innovations and internationalization of EMNEs in other similar markets. As my study took place in the BOP environment, this has not only helped strengthen my research work but also allowed me to experience the BOP market at first hand. Being present in the BOP environment and examining the innovative BOP products at first hand strongly reflected my existing knowledge in the area. I was also able to learn that a good research could translate assumptions into fact when proper methods were applied to the work.

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APPENDIX

The Challenges of a Field Survey in BOP markets based upon my experience

- Time Limitation: Limited timeframe in performing survey also limits a number of surveys being performed. I had three weeks to perform this survey.
- Expectation of BOP consumers: Often BOP consumers expected that the survey was performed by firms or from different governmental organizations including housing plan, census bureau, forestry department, agriculture department and others.
- Reward anticipation: Many BOP consumers expected that they would directly benefit from participating in the survey. Sometimes, knowing the absence of benefit from the survey disinterested them from participating in the survey.
- Survey time allocation for individual respondent: While performing a survey among low-income consumers, often it was important to allocate more time explaining the respondents on why the survey was necessary to perform.
- Knowing local BOP consumers: Without receiving help from locals, often it was difficult performing the survey in rural areas. The difficulties included not only language barrier, but also cultural, i.e. approaching to locals and explaining about the survey work.
- Linguists: BOP consumers living within a close geographic proximity could have different languages and cultures, so one cannot expect that all BOP consumers living in the same region would have many similarities. As a result, having someone who could speak a local language was important.
- Local leader permission: It was important to have a permission from a local leader in performing survey in rural areas. Locals trust grew when a research work was permitted from their local authority.
- Travel issues in rural areas: Travelling in rural BOP market was not easy. The transportation system was unreliable and inconsistent. Often, it was it was hard to find places to stay.
- BOP consumers are dispersed: BOP consumers were not concentrated in one geographic location. They were living in slumps in larger cities, in rural areas and remote regions. As BOP consumers were dispersed in a large geographic proximity, it required extensive travel to perform the survey.
- Direct assistance: Often, BOP consumers needed direct assistance to fill up

survey forms because many of them were less educated.

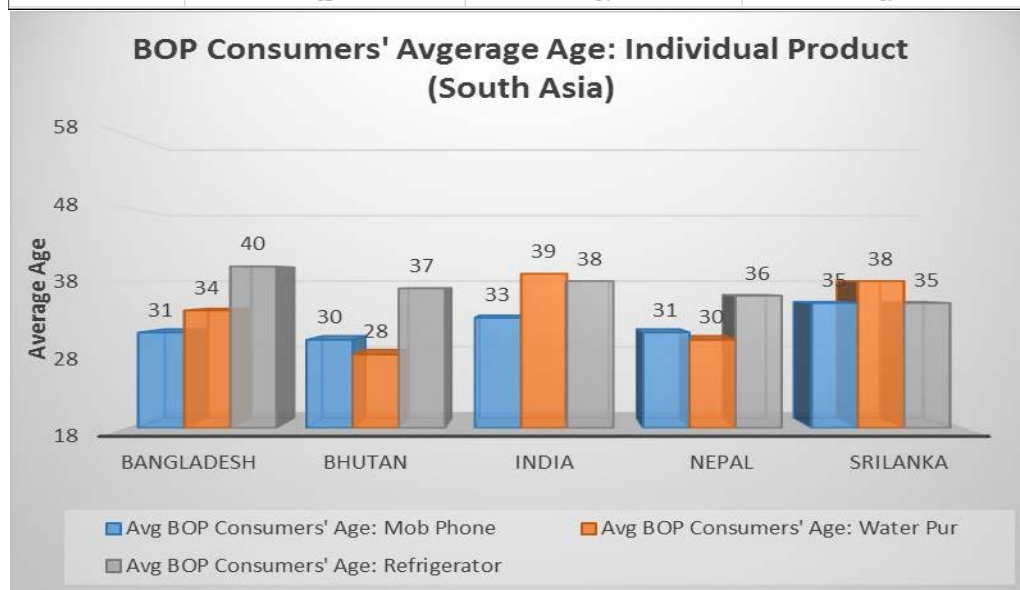
- **Mental preparation:** Taking into account unreliable transportation system, hard to find good lodging places, dealing with a different culture, environment, and other factors, it was necessary to be aware and be well prepared of such expected and unexpected situations not only physically but also mentally ahead of the trip.
- **Power outage:** In many some areas of BOP markets, there was an absence of electricity and even in the areas where electric power was existed, power outage was normal. Thus, having back up batteries for phone, laptops and other electronic gadgets were important.

Source: The Researcher of this Study

<u>Proposotions Accepted or Rejected Based on the Findings of the Study</u>										
	<u>Product Level</u>			<u>Firm Level</u>		<u>Country Level</u>				
<u>Product Elements</u>	<u>Mobile Ph</u>	<u>Water Pur</u>	<u>Refrigerator</u>	<u>EMNEs</u>	<u>MNEs</u>	<u>Bangladesh</u>	<u>Bhutan</u>	<u>India</u>	<u>Nepal</u>	<u>SriLanka</u>
<i>Affordability</i>			√	√				√		
<i>Quality</i>		√			√				√	
<i>Multipurpose</i>	√			√						√
<i>Simplicity</i>		√		√				√		
<i>Energy Efficiency</i>		√			√				√	
<i>Portability</i>	√				√					√
<i>Usefulness</i>		√		√				√		

Source: Based on the Data Collected by Researcher

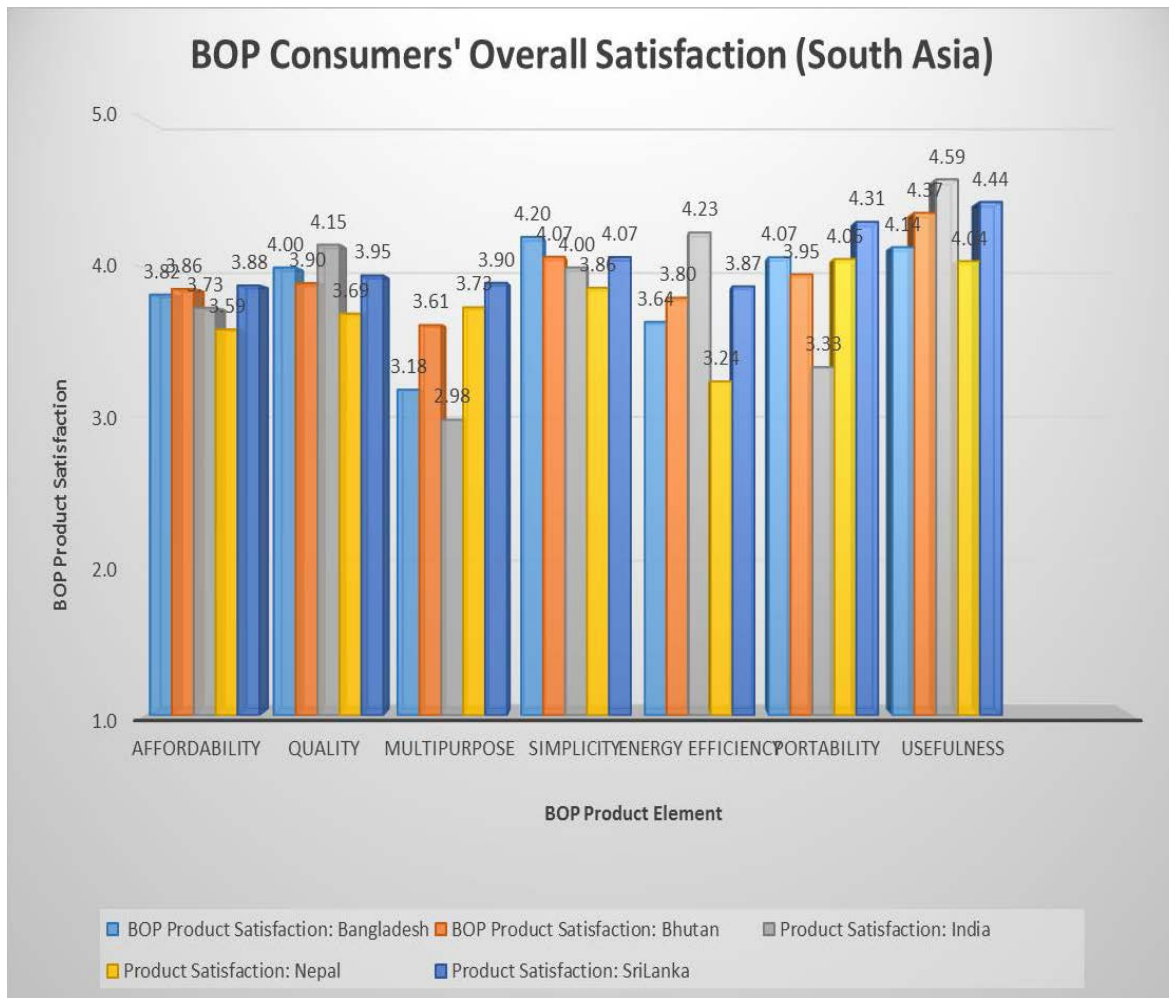
BOP Consumers' Average Age: Individual Product (South Asia)			
Product Elements	Avg BOP Consumers' Age: Mob Phone	Avg BOP Consumers' Age: Water Pur	Avg BOP Consumers' Age: Refrigerator
Bangladesh	31	34	40
Bhutan	30	28	37
India	33	39	38
Nepal	31	30	36
SriLanka	35	38	35
	32	34	37



Source: Data Collected by Researcher

BOP Product Satisfaction: Mobile Ph - Water Pur - Refrigerator (South Asia)			
Product Elements	BOP Product Satisfaction: Mob Ph	BOP Product Satisfaction: Wat. Pur	Product Satisfaction: Refrig
Affordability	3.74	4.21	3.86
Quality	3.85	3.91	4.17
Multipurpose	3.74	2.24	3.03
Simplicity	3.95	4.47	4.09
Energy Efficiency	3.60	3.88	3.99
Portability	4.17	3.84	3.38
Usefulness	4.29	4.53	4.36
	<u>3.91</u>	<u>3.87</u>	<u>3.84</u>

Source: Data Collected by Researcher



Source: Data Collected by Researcher

Weighted Score of BOP Markets Product: Mobile Phone (South Asia)												
Product Element	Prod. Imp. BD	Prod. Imp. But	Prod. Imp. Ind	Prod. Imp. Nep	Prod Imp. SriL	AVG of the Survey	Total Weight	Prod. Sat. Bangladesh	Prod. Sat. Bhutan	Prod. Sat. India	Prod. Sat. Nepal	Prod. Sat. Sri Lanka
Affordability	4.05	4.21	4.06	4.17	4.12	4.12	0.14	3.72	3.68	3.82	3.59	3.88
Quality	4.41	4.55	4.29	4.60	4.32	4.43	0.15	3.82	3.77	3.94	3.69	3.95
Multipurpose	3.92	4.17	3.92	4.13	4.13	4.05	0.14	3.68	3.76	3.68	3.73	3.90
Simplicity	3.67	4.21	4.06	3.59	4.06	3.92	0.13	3.88	3.96	3.96	3.86	4.07
Energy Efficiency	4.44	4.57	4.36	4.61	4.51	4.50	0.15	3.14	3.71	3.83	3.24	3.87
Portability	4.09	4.42	4.27	4.25	4.28	4.26	0.14	4.01	4.12	4.24	4.06	4.31
Usefulness	4.38	4.64	4.54	4.49	4.53	4.52	0.15	4.18	4.28	4.41	4.04	4.44
	4.14	4.40	4.22	4.26	4.28	29.81	1	3.7752	3.8987	3.9814	3.7443	4.0588
Finding Weighted Score: Mobile Phone												
	Bangladesh		Bhutan		India		Nepal		Sri Lanka			
Affordability	0.5145	Affordability	0.5092	Affordability	0.5285	Affordability	0.4958	Affordability	0.5366			
Quality	0.5681	Quality	0.5612	Quality	0.5854	Quality	0.5491	Quality	0.5872			
Multipurpose	0.5000	Multipurpose	0.5119	Multipurpose	0.5000	Multipurpose	0.5078	Multipurpose	0.5300			
Simplicity	0.5098	Simplicity	0.5211	Simplicity	0.5208	Simplicity	0.5080	Simplicity	0.5351			
Energy Efficiency	0.4743	Energy Efficiency	0.5599	Energy Efficiency	0.5775	Energy Efficiency	0.4886	Energy Efficiency	0.5847			
Portability	0.5734	Portability	0.5888	Portability	0.6063	Portability	0.5801	Portability	0.6157			
Usefulness	0.6336	Usefulness	0.6488	Usefulness	0.6681	Usefulness	0.6125	Usefulness	0.6726			
	3.7737		3.9009		3.9866		3.7419		4.0618		3.8930	
evaluation : I am evaluating South Asian BOP markets based upon the weighted scores of the product: mobile phone												
The highest factor rating of Sri Lanka (4.0618) compared with Bangladesh (3.7737), Bhutan (3.9009), India (3.9866) and Nepal (3.7419) explains us that even though the mobile phone well served the BOP consumers in the region, mobile phone is relatively important to the BOP consumers in Sri Lanka than the other BOP markets in the study.												
Source: Data Collected by Researcher												

Weighted Score of BOP Market Product: Water Purifier (South Asia)												
Product Element	Prod. Imp. BD	Prod. Imp. But	Prod. Imp. Ind	Prod. Imp. Nep	Prod Imp. SriL	AVG of the Survey	Total Weight	Prod. Sat. Bangladesh	Prod. Sat. Bhutan	Prod. Sat. India	Prod. Sat. Nepal	Prod. Sat. Sri Lanka
Affordability	4.29	4.05	4.18	4.05	4.09	4.13	0.14	4.18	4.32	4.18	4.24	3.87
Quality	4.65	4.84	4.60	4.86	4.34	4.66	0.16	3.97	4.00	4.01	3.81	3.97
Multipurpose	2.79	2.79	2.78	2.67	3.82	2.97	0.10	2.03	2.79	2.18	2.62	3.47
Simplicity	4.12	3.74	4.44	3.14	4.04	3.90	0.14	4.47	4.16	4.63	4.05	4.11
Energy Efficiency	4.32	4.74	4.58	4.62	4.39	4.53	0.16	3.74	3.63	3.91	3.62	3.89
Portability	3.85	3.84	4.04	3.57	4.15	3.89	0.14	3.68	3.58	3.90	3.67	4.09
Usefulness	4.71	4.74	4.82	4.71	4.60	4.72	0.16	4.26	4.32	4.73	4.29	4.47
	4.11	4.11	4.21	3.95	4.20	28.79	1	3.7605	3.8271	3.9349	3.7551	3.9819
Finding Weighted Score: Water Purifier												
	Bangladesh		Bhutan		India		Nepal		Sri Lanka			
Affordability	0.5995	Affordability	0.6195	Affordability	0.5997	Affordability	0.6084	Affordability	0.5561			
Quality	0.6422	Quality	0.6470	Quality	0.6488	Quality	0.6162	Quality	0.6424			
Multipurpose	0.2093	Multipurpose	0.2877	Multipurpose	0.2246	Multipurpose	0.2701	Multipurpose	0.3582			
Simplicity	0.6050	Simplicity	0.5627	Simplicity	0.6270	Simplicity	0.5477	Simplicity	0.5556			
Energy Efficiency	0.5876	Energy Efficiency	0.5713	Energy Efficiency	0.6153	Energy Efficiency	0.5693	Energy Efficiency	0.6117			
Portability	0.4969	Portability	0.4837	Portability	0.5271	Portability	0.4956	Portability	0.5522			
Usefulness	0.6984	Usefulness	0.7068	Usefulness	0.7751	Usefulness	0.7018	Usefulness	0.7328			
	3.8390		3.8787		4.0177		3.8092		4.0091			

<u>BOP Product Satisfaction: MNEs VS EMNEs Ranking (South Asia)</u>		
<u>Product Elements</u>	<u>EMNEs' BOP Product Satisfaction</u>	<u>MNEs' BOP Product Satisfaction</u>
<i>Affordability</i>	3.81 (5)	3.62 (6)
<i>Quality</i>	3.86 (4)	3.98 (3)
<i>Multipurpose</i>	3.56 (7)	3.40 (7)
<i>Simplicity</i>	3.97 (3)	3.75 (5)
<i>Energy Efficiency</i>	3.58 (6)	3.91 (4)
<i>Portability</i>	4.00(2)	4.19 (2)
<i>Usefulness</i>	4.35 (1)	4.22 (1)

Source: Data Collected by Researcher

<u>BOP Markets Consumers' Overall Satisfaction Rankings</u>					
<u>Product Elements</u>	<u>BOP Product Satisfaction: Bangladesh</u>	<u>BOP Product Satisfaction: Bhutan</u>	<u>Product Satisfaction: India</u>	<u>Product Satisfaction: Nepal</u>	<u>Product Satisfaction: Sri Lanka</u>
<i>Affordability</i>	3.81 (5)	3.85 (5)	3.73 (5)	3.58 (6)	3.88 (7)
<i>Quality</i>	4.00 (4)	3.89 (4)	4.15 (3)	3.69 (5)	3.94 (4)
<i>Multipurpose</i>	3.18 (7)	3.61 (7)	2.98 (7)	3.73 (4)	3.89 (5)
<i>Simplicity</i>	4.20 (1)	4.07 (2)	4.00 (4)	3.86 (3)	4.07 (3)
<i>Energy Efficiency</i>	3.63 (6)	3.79 (6)	4.23 (2)	3.23 (7)	3.87 (6)
<i>Portability</i>	4.07 (3)	3.95 (3)	3.33 (6)	4.05 (1)	4.31 (2)
<i>Usefulness</i>	4.13 (2)	4.36 (1)	4.59 (1)	4.04 (2)	4.43 (1).

Source: Data Collected by Researcher

BOP Consumers: South Asia



Meeting a village leader in Assam, India for his permission to perform surveys in his village.



Filling a survey questionnaire by a tribal villager in Assam, India



Villagers filling survey questionnaires in India



Performing survey in West Bengal, India



A Store Clerk filling a survey questionnaire in Bhutan



A salesperson filling a survey questionnaire in Sri Lanka



BOP consumers who participated in a survey in Nepal.