

**Inclusive capitalism and bottom of the pyramid approaches to development:
The case of information and communication technologies fostering 'inclusion'
in developing countries**

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Contents

List of figures	iii
List of tables	iv
List of acronyms	v
Acknowledgements.....	vi
Thesis abstract	vii
Chapter 1: Introduction	1
Chapter 2: Gender Differences in ICT Access and Use in Five Developing Countries.....	81
Chapter 3: Case Studies of Telecenters Fostering Inclusion through ICTs in Bangladesh	112
Chapter 4: Bottom of the pyramid approach to development: Analyzing the case of GrameenPhone Limited	143
Chapter 5: Conclusion	183
Annex 1: Verbal Consent Form- User Survey (IPAI study)	202
Annex 2: Response from Office of Research Ethics and Integrity, University of Ottawa	204

List of figures

1.1: The world economic pyramid

1.2: Dimensions of inclusion and links with Social inclusion

2.1: Percentage of respondents who use various information sources for daily information and communication

2.2: Gender differences in digital inclusion by country

3: Dimensions of inclusion within inclusive capitalism and ICTs for development.

4.1: The number of VPOs and GrameenPhone profit, 2001-2006

4.2: Perception of impact by CIC users

List of tables

- 1: Focus of the studies, methodological approach and data sources
- 2.1: Final sample of survey respondents selected for analysis
- 2.2: Human development and ICT indicators in survey countries
- 2.3: Proportion of men and women seeking various types of information in public access ICT venues
- 2.4: Gender differences in the components of individual digital inclusion
- 2.5: Various social and demographic characteristics by gender
- 2.6: Pearson correlation of digital inclusion and socio-demographic characteristics
- 2.7: Predicting digital inclusion: linear multiple regression
- 4.1: Selected socioeconomic and ICT indicators of CIC users
- 4.2: Type of information sought at CICs
- 4.3: Summary of VPP and CIC against assessment criteria of development agent and inclusion
- 4.4: Role of different stakeholders in the VPP

List of acronyms

BOP: Bottom of the Pyramid

CIC: Community Information Centres

CSR: Corporate Social Responsibility

ICTs: Information and Communication Technologies

ICT4D: Information and Communication Technologies for Development

IMF: International Monetary Fund

IPAI: Global Impact Study of Public Access to Information & Communication Technologies

MDG: Millennium Development Goals

MNC: Multinational Corporation

NGO: Non-Governmental Organization

OECD: Organization for Economic Cooperation and Development

ODA: Overseas Development Assistance

PPP: Public Private Partnerships

RIC: Rural Information Centre

SAP: Structural Adjustment Programs

SDG: Sustainable Development Goals

UNDP: United Nations Development Programme

UNCTAD: United Nations Conference on Trade and Development

UISC: Union Information Service Centre

VPO: Village Phone Operator

VPP: Village Phone Program

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Thesis abstract

With the increasingly salient role of business in development, the bottom of the pyramid (BOP) approach is sparking great interest in multinational corporations, donor agencies, and academic circles. The BOP proposition holds that profit-generating enterprise-based ventures – typically led by multinational corporations – can reduce poverty and improve the standard of living by offering goods and services to the poor or integrating them in the value chain. BOP as a development strategy is predicated on the “inclusion” of the poor into market to enable them to reap the benefits of greater wealth and prosperity. This thesis critically investigates to what extent BOP interventions contribute to the social inclusion of marginalized groups in developing countries like Bangladesh. The thesis analyzes the case of public access information and communication technologies (ICTs) venues such as telecentres. Such venues provide access to ICTs such as Internet that enable people to access, use and share information and knowledge at an unprecedented level, offering great potential for socio-economic development.

Overall, the thesis reveals the limitations in the BOP approach in contributing to inclusion, by showing the contradictions between the economic logic of business and the social imperative of inclusion. Through focusing on a broader view of inclusion, the findings highlight the complex relationship between digital inclusion and social inclusion in developing countries. In particular, the thesis problematizes the notion of “inclusive business”, which, by aiming to integrate the poor as consumers and women as entrepreneurs, serves the purpose of extending the reach of business. Thus inclusive business is rather different from a view of inclusion towards meaningfully contributing to one’s social and economic advancement.

The thesis also argues that the various dimensions of inclusion are highly contingent on the business strategies and motivations of corporations as well as meso-level organizational formations. The analysis of corporate strategies uncovers how revenue making considerations are driving BOP interventions at the cost of accountability towards their stakeholders. By interrogating some of the issues silent in the discussions on business and development, such as inequality and exclusion, the work provides a counter narrative to the BOP discourse, raising questions about the uncritical repositioning of business as a development agent.

Chapter 1: Introduction

“The real source of market promise is not the wealthy few in the developing world, or even the emerging middle-income consumers: It is the billions of aspiring poor who are joining the market economy for the first time.”

- C.K. Prahalad and S. Hart (2002, p.1)

Introducing the thesis topic and purpose

Amidst rising global inequality and social marginalization, there are increasing calls for changes in the global economic order, and the capitalist system more specifically, to make it more fair and sustainable. It is against this backdrop that the notion of inclusive capitalism has emerged, with the premise that capitalism works best if it does not leave most of the people behind (Coalition for Inclusive Capitalism, 2015; Carney & Freeland, 2014; Carney, 2014). The need for approaches and priorities initiated from the “bottom-up” that would take into account the needs of the most vulnerable populations had also been emphasized in the context of developing countries. Policy prescriptions formulated in response to criticisms of neoliberal development policies have percolated down from the international financial institutions such as World Bank to the developing country governments, heralding a shift away from the singular focus on economic growth to include poverty reduction as a development goal (Ruckert, 2006; Porter & Craig, 2004).

Beyond donor policies, the responses to the pressures for making capitalism more “inclusive” emphasize the engagement of a wider range of development actors, including governments, civil society and businesses. Among these, the business perspective—calling for its greater role in development—has been especially prominent. In this view, businesses should not just be concerned with profit or “the bottom line”, but rather take a broader view of their role in society, and take that role into account in their overall purposes and the products and services they offer.

One concrete articulation of the wider role of business in development is the bottom of the pyramid (BOP) approach (Prahalad & Hart, 2002; Prahalad, 2005).¹ A role for business in development has traditionally been viewed as indirect—generally engaging in various economic activities in developing countries, driving innovation, and creating wealth. The BOP reorients the focus of business as a “development agent”, consciously striving to deliver, and moreover, be accountable for, developmental outcomes (Blowfield & Dolan, 2014). A BOP venture, therefore, is a revenue generating enterprise that either sells goods to, or sources products from those at the base of the pyramid in a way that ostensibly helps to improve the standard of living of the poor (Prahalad & Hammond, 2002; Prahalad & Hart, 2002).

A key feature of the BOP proposition is the emphasis on the integration or “inclusion” of people in the economy as consumers or producers so that they are able to benefit from greater wealth generated in the capitalism system. In the BOP framework, then, an appropriately formulated business strategy or intervention can simultaneously be a sound development strategy that can promote inclusion of the poor, ostensibly as consumers who have access to life-improving products or as distributors or sellers directly included in the business value chain. From that perspective, development is not a by-product of business operations, but rather an integral part of the business model. The concept of inclusion, then, is central in the BOP proposition, where the role of business is to ensure and facilitate inclusion of the poor. This is how BOP interventions, according to its proponents, can help to ensure that capitalism functions in inclusive manner for all.

¹ The thesis adopts the definition of business as “a conceptual category that embraces any organisation engaging in commerce and trade” (Blowfield & Dolan, 2014, p.24). While this definition is admittedly very broad, a specific focus of BOP is the multinational corporations, which will be the focus of the thesis as well.

The influence of BOP concept can be clearly seen in the business world. From the perspective of multinational companies (MNCs), BOP provided an intellectual mantra and further fueled a growing interest in tapping into potential markets of developing countries. For many MNCs, the most hard-fought battles to gain market share are happening, not in North America or Europe, but in Asia and Africa. For example, developing country markets or “emerging markets” contributed to 34% and 53% respectively of the total revenues consumer goods giants Procter & Gamble and Unilever in 2010, and trends indicate it is here that the battle for profits will continue to take place (Economist, 2012; also see Gunther, 2014).

The BOP idea also had considerable traction in the international donor community. UNDP, for example, believes that MNCs, working within a market-oriented business ecosystem, can contribute to both economic growth and empowerment of poor people by providing them with services and consumer products, increasing choices and reducing prices (UNDP, 2004, p.8). UNDP report ‘Brokering Inclusive Business Models’ calls for the inclusion of the poor into a company’s supply chains as employees, producers and business owners and the development of affordable goods and services needed by the poor so that “.. human and business development [can] go hand in hand” (UNDP, 2010, p.7).

Research question

As the notion of BOP gains momentum in practice, its implications for development and for developing countries remains largely unexplored. To date, the BOP approach has been framed mostly from management and marketing perspectives, without adequate critical examination of the development dimensions and outcomes, as well as the roles of various actors.

In particular, it remains to be seen how BOP interventions can potentially benefit the poor, create more employment opportunities and increase the access to a greater choice of products and services. With such a great expectations and proclaimed potential, a comprehensive understanding of the nuances and complexities of the BOP approach of development is essential.

BOP approaches also elicit some broader questions relevant to the discussions of inclusive capitalism. In the context of BOP interventions in the information and communication technologies for development, Amartya Sen posed the question: “When do for-profit business initiatives work out very well—and rather automatically—for the benefit of the public at large?” (Sen, 2010, p.1). Similarly, “how does inclusive capitalism address the competing logics of development imperatives and business realities? What happens when you attempt to marry private interests with the public good?” McFalls (2007, p. 86). What are the roles and implications for other development actors such as the state and the civil society in the broader scheme of business-led development strategy?

The emergence of BOP also raises questions about the extent to which the notion of inclusion in BOP signifies the emergence of a neoliberal project of an inclusive orientation; one that is part of an effort to make the neoliberal project and its core principles of privatization, liberalization, and deregulation truly hegemonic (Ruckert, 2006, p.38). Can this push for more inclusive forms of development be interpreted as merely a response to the growing criticisms resulting from dysfunctional financial system, abuse of corporate power and corruption? Or is it a true alternative to the mainstream economic order, and, if so, what are some of the developmental imperatives through which inclusive capitalism should be evaluated? These questions are highly relevant in the contemporary development context where business has a significant clout in shaping development policies and platforms.

This thesis critically investigates how BOP interventions contribute to the social inclusion of marginalized groups in developing countries, taking Bangladesh as a case. It focuses on the domain of information and communication technologies (ICT) for development. Innovations in technology and communication are seen as critical in realizing the goals of market-driven poverty reduction efforts within the BOP literature. For example, the objective of the e-Choupal initiative by Indian conglomerate ITC Limited was to create a network of computers connected to the Internet that provide information on products and services to rural farmers in India to increase productivity and raise incomes (Prahalad, 2005). The ICT domain is particularly relevant as the focus of the study as leading multinational corporations in the ICT sector such as Hewlett Packard have embraced the BOP concept, undertaking a number of initiatives across the developing world (McFalls, 2007; Schwittay, 2008).

In this thesis, I focus specifically on the public access ICT venues in developing country contexts, which are appropriate in terms of examining the idea of inclusion. Public access ICT venues like telecentres, which offer internet and other ICT-enabled development services to the general public, have great potential to “include” many in the emerging network society in the global South. These issues are analyzed in developing countries, with a specific focus in Bangladesh—a hotbed of social and economic innovation for development. By zeroing in on the public access ICTs, the thesis explores the perceived roles of private business, the state, and civil society actors in the context of a changing development landscape in Bangladesh.

The thesis draws from sociology and development studies to analyze the key notions being investigated, notably the “social” dimension of inclusion (and exclusion) (De Haan, 1998; Sen, 2000). The capabilities framework of Sen (1999) and the human development approach (Haq, 1995; Sen, 1999) was a normative analytical theme throughout. This approach is suitable

given that the potential of ICTs to contribute to human and social development is highly dependent on how individuals are able to take advantage of their capabilities and the underlying economic and social conditions. Such a perspective helps to reveal issues of social inequality and highlight the difference in the way individuals vary in terms benefitting from BOP led approaches to socioeconomic development. A particular emphasis in the thesis is on how BOP interventions have different implications on the basis of gender. A critical analysis of the processes of how BOP interventions contribute to improving people's economic and social well-being helps to uncover the complex relationship between business growth and social inclusion.

Thesis statement

In this thesis, I argue that the extent to which BOP interventions “include” marginalized groups, such as women, so that they are able to advance their social and economic well-being, is dependent on their relative social position as well as businesses' underlying corporate goals and approaches. By problematizing the notion of “inclusive business” that aims to integrate the poor as consumers and women as entrepreneurs, I show how the BOP approach serves the purpose of extending the reach of business. The thesis reveals the limitations in the BOP approach in contributing to inclusion by showing the contradictions between the economic logic of business and the social imperative of inclusion.

The rise of inclusive capitalism and BOP

Changing landscape of development

While discourses of development are multi-faceted and change over time, for a number of reasons contemporary discourses on development are particularly compelling. One of the most important development outcomes in recent history is the unprecedented progress in poverty reduction in developing countries. High and sustained growth across most of the developing world have helped nearly half a billion people escape \$1.25-a-day poverty between 2005 and 2010 and the number of countries classified as low-income has fallen by two-fifths, from 66 to 40 (Gertz & Chandy, 2011, p.1). Yet, developing countries are facing a number of economic, social and environmental challenges that are complex and interlinked. At the same time, the global poverty landscape is changing. The distribution of global poverty has shifted from countries officially classified by the World Bank as low-income countries towards countries recently classified as middle-income countries (Sumner, 2013).

Another pattern that is quite significant, and disconcerting, is the rising levels of inequality. On average—taking population size into account—income inequality has increased by 11 percent in developing countries between 1990 and 2010 (UNDP, 2014, p.3). The rising inequality is especially troubling given that steady economic growth in developing countries has outpaced that of industrialized countries from 2000-2010 (OECD, 2010). For instance, in sub-Saharan Africa, despite steady economic growth in the last two decades, the rate of reduction of poverty has been low due to high levels of inequality (World Bank, 2013).

Within this changing development landscape, one persistent challenge that has been striking is the economic and social marginalization of many citizens across the developing world. The Arab Spring, for example, began with protests against youth unemployment in Tunisia (International Labour Organization, 2011). Growing inequalities and rising unemployment are compromising both economic development and social stability. In such a scenario, fostering economic growth and competitiveness remain crucial, but equally important are creating jobs and ensuring social and political stability.

Overall, increasing wealth and economic growth across the globe on one hand, and increased vulnerability and insecurity on the other, pose some critical questions about existing economic and social order and their impact on citizens and communities. Many in the international community have responded by questioning the dominant economic paradigms (Harding, 2009). In such a view, an outcome of contemporary capitalism – which puts too much emphasis on profit-making while social and environmental considerations take a backseat—is that the majority of the people are not able to benefit from increased wealth and prosperity.

The global political economy in the last few decades has been dominated by neoliberal economic ideologies and structures, heralding the rise of the neoliberal approach to international development. The belief in free market economy formed the core policies of international financial institutions, such as, World Bank and IMF since the 1980s, which came to be known as the Washington consensus. A key part of the consensus was structural adjustment programs (SAP) which were designed to limit the role of the state by privatizing state-owned enterprises, reducing social welfare and services and promoting foreign investment and exports. SAP and its associated policies, however, were widely criticized due to their results. In particular, critics highlighted the failure of the trickle-down economic policies to benefit the poor, and, wherein

the situation was exacerbated by little public sector protection for vulnerable groups as household resources declined (Cornia, Jolly, & Stewart, 1987).

The discontent with these policies led to the emergence of the post-Washington consensus, which had a much softer stance on the limited role of state and expressed a greater concern for equity and redistribution (World Bank, 1997). The World Bank expanded its focus, where an emphasis on market-led growth was accompanied by poverty reduction strategies and good governance, gender empowerment and environmental issues (Craig & Porter, 2006; Porter & Craig, 2004). In the period from 1990-2005, the shift saw the emergence of inclusive liberalism- which was “market-oriented, but also [involved] many aspects of ‘positive’ liberalism of ‘empowerment and market enablement’” (Craig & Porter, 2006, p.12). Critics argue that this reformulation did not represent a real deviation from market-focused neoliberal approach in which empowerment and sustainability continue to be framed in economic terms and was still narrow in its political and social scope (Ruckert, 2006). The post-Washington Consensus, therefore, was still predicated on the view of the indispensability of liberal capitalism. While the consensus recognized the need for a balance between the market and the state and a greater role for civil society, it kept faith in big business investments in developing countries for economic growth and private sector development (Fine, Lapavitsas & Pincus, 2001; Martinussen, 1998).

The emergence of inclusive capitalism

It is against this context described above that the notion of inclusive capitalism emerged, with a call for changes in the capitalist system to make it more inclusive (Coalition for Inclusive Capitalism, 2015). Stuart Hart (2010, p.16), one of main proponents of inclusive capitalism and the BOP proposition, argued, “by creating a new, more inclusive brand of capitalism, one that

incorporates previously excluded voices, concerns, and interests, the business sector could become the catalyst for a truly sustainable form of global development-- and prosper in the process.”

Inclusive capitalism is predicated on the centrality of markets and informed by some of the core values of neoliberalism such as competition, efficiency and self-governance. At the same time, it is also premised on an ideology of inclusion, seeking to democratize access to markets, extending opportunities to access finance capital, earned income and affordable products to those who have been excluded from the productive opportunities afforded through integration into the global economy (Blowfield & Dolan, 2014). Inclusive capitalism can therefore be seen as a convergence of two seemingly opposing perspectives. On the one hand, there is a general consensus on the indispensable role of market mechanisms and an emphasis on policies to integrate developing countries into the global economic system. On the other hand, there is a concomitant concern for equity and greater representation of marginalized groups like poor women in the development efforts.

A growing number of prominent global leaders appear to be inspired by the concept of inclusive capitalism, including former US President Bill Clinton, Microsoft founder Bill Gates, and Bank of England Governor Mike Carney (Coalition for Inclusive Capitalism, 2015). Even the World Economic Forum, which is closely associated with some of the world's wealthiest people and which has been playing a central role in driving the globalization agenda in recent times, has joined the call for reforming market capitalism. Citing economic inequality, societal polarization and environmental dangers as the top three trends shaping global development in its 2017 report, the Forum notes: “The combination of economic inequality and political

polarization threatens to amplify global risks, fraying the social solidarity on which the legitimacy of our economic and political systems rests” (World Economic Forum, 2017, p.13).

The opportunities and complexities of creating inclusive capitalism in developing countries are only beginning to be understood. Nevertheless there appears to be some emerging consensus on the approaches as well as the actors who should lead in the efforts to reach the goals of inclusive economic development. For the most part, the proposed approaches put faith in two distinct institutional domains of development. First is social economy organizations like “social business”, social enterprises, non-governmental organizations (NGOs), cooperatives, charities, etc., and, second, businesses—which includes the local and multinational private sector firms, small and medium enterprises, etc. These domains however not only overlap in complex ways but also, crucially, interacts with the state, for example through public- private partnerships. Nevertheless, a common thread in these approaches is the preeminence of market-based approaches with concomitant concerns for equity and inclusion.

Emergence of business approaches in social economy

Social economy organizations use market mechanisms to pursue explicit social objectives, primarily based on the notion of social reciprocity. Increasingly, these organizations are focusing less on the social reciprocity and adopting more “business-like” approaches that harness the benefits of the market. Two relatively new formations of social economy – social enterprises and NGOs that are increasingly engaged in income generation and service provision, have positioned themselves as viable alternatives to traditional forms of business to solve entrenched socioeconomic problems facing developing countries.

Social enterprises aptly demonstrate this shift towards greater business orientation. Defined as business ventures created for a social purpose, social enterprises seek to mitigate/reduce a social problem or a market failure and generate social value, while operating like a private sector entity. While social enterprise encapsulates a vast array of hybrid nonprofit-business organizations, from cooperatives and enterprising charities, to socially-oriented businesses, it is the entrepreneurial business community that has been the most vocal in establishing the related discourse (Hackett, 2011). The founder of Grameen Bank in Bangladesh Dr. Muhammad Yunus introduced the concept of “social business” which he argued can contribute to a socially conscious global economic system (Yunus, 2008). Distinct from traditional business or charity, a social business would be more independent financially and able to balance economic, social and environmental goals. Yunus advocated a broader interpretation of capitalism so that it facilitates entrepreneurial activities and enterprises flourish while seeking to maximize social returns.

Another discernible shift in the last two decades is that an increasing number of developmental NGOs in the South - established for specific social purpose(s) and generally using a charity model of development -- are moving towards a model of revenue-generating business ventures (Banks & Hulme, 2012). The primary factor contributing to this trend is the growing pressure to improve effectiveness and sustainability in the context of reduced funding from traditional sources, such as, donor organizations. Against this backdrop of financial constraints, resource mobilization from additional sources is critical for NGOs. It forces them to prioritize their role as service providers. To be sure, NGOs who offer micro-credit services have always been at the forefront of recovering their costs, treating their beneficiaries more as “clients” than members.

Some analysts argue that the ability and willingness to generate income ought not to be seen in terms of a lack of financial sustainability, but rather as a feature of social entrepreneurship (Dees, 1998). The entry into income-generating activities is more about a risk-taking mindset, without being limited to the resources currently in hand and galvanizing collective action toward a transformational goal. Others perceive balancing NGO's social and economic goals problematic and even contradictory. One fundamental concern is the extent to which NGOs introduce profit-generating activities and whether they interfere with their traditional missions to work. The fear is that in the process of resource generation and diversification, the goal of social transformation might be lost. Fowler (2000, p.80) argues that many NGOs are concentrating on resource sustainability at the cost of two dimensions: enduring impact (NGOs' contribution to society) and organization viability (their ability to act on their own terms). Studies have highlighted how the original missions of many NGOs—for example poverty alleviation—have been sidelined in the pursuit of creating profit-making business enterprises, and in fact have changed the mindset from being guided by a set of core social values (Banks, Hulme & Edwards, 2015). Broadly, financial and regulatory constraints may have led many NGOs to prioritize their role as service providers at the expense of civil society functions i.e. grassroots orientation and democracy.

A greater role of business in development

Traditionally, the key role of business has been the provision of goods and services, and developmental expectations placed on businesses from the broader society was limited. Almost a half a century ago, Milton Friedman stated that the social responsibility of business is to increase

its profits (Friedman, 1970). In this view, corporations should only focus on managerial and strategic decisions with the aim for profit maximization for creating shareholder value.

Over the last few decades, this shareholder-centric view of the corporation has been gradually overtaken by a stakeholder model, where the corporations in their operations consider a wider group of constituencies, or stakeholders, beyond only investors and shareholders. Eminent management scholars Michael Porter and Mark Kramer (2011) argue that business and societal interests are not mutually exclusive. They argue what's good for society is good for business, therefore, business has a vested interest in addressing society's challenges. This call is a fundamental shift in the way businesses view themselves as linked to and interdependent with society; as such aligning the interests of business and society is a natural goal (Carney & Freeland, 2014). In the contemporary context, and in a somewhat ironic way, the alternative to the neoliberal approach to development is not a lesser role for private sector or business in development, but rather an even greater one.

In the few decades since Friedman's proclamation, the global economic landscape has also changed enormously, resulting in the growing role and salience of business and the private sector. Profound changes in the global economic system during the last few decades meant that multinational corporations (MNCs) are one of the key actors in the new global production system characterized by increasing transnational flows. MNCs have become the primary sources of capital in developing countries. In 2009, foreign direct investment in developing countries was \$507 billion, compared to ODA flow of \$95 billion (UNCTAD, 2011, p. 21). UNCTAD estimates that MNCs worldwide, in their operations, both at home and abroad, generated a value of, approximately \$16 trillion in 2010, accounting for more than a quarter of global gross domestic product (UNCTAD, 2011, p. 24). Importantly, as mentioned above, a key shift in

corporate strategies that are driving this growth is the idea that firms need to expand their reach to fast-growing emerging economies.

While there is now an increasing consensus that the goals of business need to be related to social welfare and consumer well-being, there is little agreement on how this greater role and engagement of business in development should play out in practice. Since the early 1990s, discourses on business and development have been dominated by the notion of corporate social responsibility (CSR).² Development scholars, however, have argued that generally it is the business case of CSR—the view that a concern for wider implications of business on society is good for bottom-line—that has significantly influenced the interpretation and practice of CSR in developing countries (Blowfield, 2005). The outcome is that management mindsets and business investors’ prerogatives have been emphasized often at the exclusion of other legitimate demands of corporations. Moreover, the voluntary nature of CSR has led to a situation in which corporations focus mainly on compliance, with a stress on risk management and “do no harm” attitudes and practices.

The emphasis on philanthropy or voluntary nature of CSR has also come under critical scrutiny, from development and business scholars alike. Pointing to the fact that CSR activities are often divorced from a corporation’s core line of business, Michael Porter argued that CSR initiatives are “too unfocused, too shotgun, too many supporting someone's pet project with no

² Blowfield & Frynas (2005, p.503) propose a broad definition of CSR: “an umbrella term for a variety of theories and practices all of which recognize the following: (a) that companies have a responsibility for their impact on society and the natural environment, sometimes beyond legal compliance and the liability of individuals; (b) that companies have a responsibility for the behaviour of others with whom they do business (e.g. within supply chains); and that (c) business needs to manage its relationship with wider society, whether for reasons of commercial viability, or to add value to society.”

real connection to the business” (cited in Economist, 2008, p.6). CSR goals and practices could be interpreted as a response to criticisms against poor corporate ethics and greed.

The turn of the century was a pivotal point for the emergence of the earliest articulations of how business should be *in the business of development*, i.e. the emergence of what has come to be known as the bottom of the pyramid (BOP) approach. This shift in perspective is based on the idea that business need to consider development as a core strategy issue, rather than a matter of corporate philanthropy. The BOP proposition was gaining momentum gradually but quite widely. In December 2004, World Resources Institute organized a conference on “Eradicating Poverty through Profit: Making Business Work for the Poor”, bringing together diverse stakeholders like the United Nations, the World Bank, NGOs, governments, and multinational corporations. An increasing number of business platforms and donor publications articulated the role for business in development, including the World Business Council for Sustainable Development and multi-stakeholder platforms like United Nations Global Compact whose mandate is the development, implementation and disclosure of responsible and sustainable corporate policies and practices (United Nations, 2014).

The development actors –states, donors, NGOs –have also taken note of and/or contributed intellectually to the shift in viewing businesses as marginal players in development to a central one-- increasingly adapting their thinking on integrating the business world into their strategies. A prominent example is UNDP. In a key publication that articulates its position on this issue, UNDP (2004) states that MNCs working within a market-oriented business ecosystem can contribute to both economic growth and empowerment of poor people by providing them with services and consumer products, increasing choices and reducing prices. UNDP’s ‘Growing Inclusive Markets’ initiative aims to work with businesses to enable the development of more

inclusive business models that will help to create new opportunities and better lives for many of the world's poor (UNDP, 2008). At the 2016 G-20 Summit, the 'Global Platform on Inclusive Business' was launched to provide support to policymakers and accelerate the adoption of inclusive business policies and programs globally (World Bank, 2016).

Overall, the discourse on business and development has been gradually shifting from CSR to BOP. Compared with CSR approaches, the integration of development issues in the strategic considerations, where development is not a by-product but rather an integral part of the business model, has a much greater potential to bring wider development impact that reach more people and regions as in the case of BOP approach (Prahalad, 2005). The crucial elements here are the potential for creative business approaches that can transform poverty into economic opportunities in the underserved markets of developing countries. In sum, while CSR approaches were mostly defensive responses to criticisms of environmental abuses, poor labour practices, under the rubric of inclusive capitalism, "offensive" opportunities meant businesses looking to enhance their reputation by tackling various development challenges (Blowfield & Dolan, 2014, p.25). This offensive approach of business sees business not only as a stakeholder in development but also as a development agent (Blowfield & Dolan, 2014).

The outcome is that arguably more than ever in history, businesses are now considered central players in the global endeavours of fighting poverty, stimulating development and addressing an array of social, economic and ecological challenges. The changing views of Microsoft founder Bill Gates is a good example of the radical shift in thinking with regard to business' role in development. In 2000, Gates, rejecting a business approach to alleviating poverty, said "poor people don't need computers"; but in 2008 Gates was at the forefront of the call for a more inclusive capitalism that would have a twin mission: making profits and also

improving lives for those who don't fully benefit from market forces (cited in Hammond, 2008). This shift is particularly compelling at a juncture when business world has been coming under severe criticism and public resentment across the world for abuse of power, corruption, and malpractices (Sanders, 2015).

In summary, while the continued disillusionment with the neoliberal prescription for development has led to growing debate about alternative approaches to development, we see the emergence of “alternatives” that are not fundamentally different, but are narrowly defined. These alternatives, rather than representing a radical shift in the system, are more focused on tweaking the capitalist system to include social and developmental dimensions such as a greater concern for equity, participation and inclusion. This begs the question whether a real alternative is possible as neoliberal hegemony co-opts alternative approaches (Kothari & Minogue, 2002). This skepticism towards alternatives has further been spurred on, in part, by the inability of the left to move beyond the weaknesses of Marxist and dependency paradigms (Kiely, 1995). As a result, the most vocal proponents of the alternative approaches are business schools and major donor organizations such as the UNDP, which call for a greater role of business within a liberal capitalist framework.

BOP and development

Essentially, BOP is an economic term referring to the poorest socio-economic group. There is no common threshold to categorize who are the BOP population. For Prahalad & Hart (2002, p.2), original proponents of the BOP concept, this group is “the 4 billion people in Tier 4, at the bottom of the pyramid. Their annual per capita income — based on purchasing power parity in U.S. dollars — is less than \$1,500, the minimum considered necessary to sustain a

decent life” (Figure 1). According to another estimate, BOP populations live on less than \$2.50 a day, which, at 2005 purchasing power parity, means BOP constituted more than 3 billion people or nearly half of the global population (Shah, 2013). Regardless of the metric taken, the main idea is BOP represents the lowest socioeconomic category based on income and wealth.

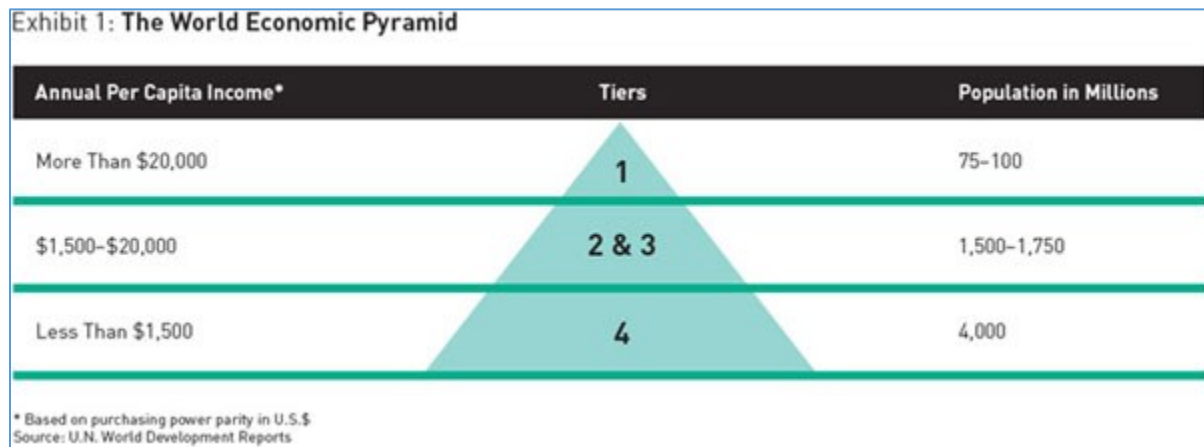


Figure 1: The world economic pyramid; Source: Prahalad & Hart (2002, p.4)

While the description above provides a demographic profile of those living at the BOP, it is the business strategy that forms the core idea behind the concept. The original proponents of the BOP concept argue that bottom of the pyramid is a viable and profitable market for business (Prahalad, 2005; Prahalad and Hammond, 2002; Hart, 2010). The focus is particularly on developing country markets, which have been ignored by businesses due to the perceived lack of purchasing power of the poor, dominance of informal economy, lack of property rights, and difficulties of reach via conventional distribution, credit, and communications. By challenging some dominant marketing assumptions, the proponents argue that businesses can focus on selling products and services at low-cost, and large scale to generate a new revenue stream. The argument follows that “when MNCs provide basic goods and services that reduce costs to the

poor and help improve their standard of living – while generating an acceptable return on investment – the results benefit everyone” (Prahalad and Hammond, 2002 p.6).

The central argument of BOP is that the private sector, notably MNCs, in pursuing its core business objectives, can bring development benefits for the poor (Prahalad, 2005; Hart, 2010). In the BOP framework, there is no contradiction between delivering high returns to investors and addressing society's most pressing unmet needs. In what he terms the “great trade-off illusion”, Stuart Hart rejects the idea that companies inevitably forfeit profits to deliver social good (Hart, 2010, p.6). It is this articulation of development benefit that leads BOP proponents to propagate the promise of “win-win” opportunities of social and economic returns, where poverty eradication is reconcilable with a profit-maximizing objective within an enterprise-based market system.

The BOP puts a lot of emphasis on poverty reduction with the integration of the poor in the market as the primary mechanism for reducing poverty: “the poor cannot participate in the global market economy, even though they constitute the majority of the population” (Prahalad & Hart, 2002, p.2). Instead of viewing the BOP population as the “poor”, the corporations need to see them as value-conscious consumers and creative entrepreneurs. BOP proponents also give a lot of emphasis on the purchasing power and conscious decision-making ability of the BOP consumers, which they argue, have been incorrectly ignored by the MNCs (Prahalad, 2005). According to Prahalad (2005, p.99), “when the poor at the BOP are treated as consumers, they can reap the benefits of respect, choice, and self-esteem and have an opportunity to climb out of the poverty trap.” At the same time, this means “a 10 to 200 times advantage (compared to cost structures that are oriented to the top of the pyramid markets) is possible if [corporations]

innovate from BOP up” (Prahalad, 2005, p. 9). Therefore, the onus is on corporations to offer new products and services in an accessible and affordable way for that those living in the BOP.

Key process of poverty reduction is related to business innovation and ingenuity: the improvement of lives of the poor in envisaged through better quality of products and lower prices. The lack of access to markets for essential goods and services means that the poor tend to pay more for the same products than more affluent, what is known as the poverty penalty (Prahalad & Hammond, 2002). Prahalad argues that corporations must also create the “capacity to consume” by following the “core principles of affordability, access and availability” (Prahalad, 2005, p.16). The emphasis here lies on facilitating consumption of goods and services. An example is single-served sachets of soaps and shampoos introduced by consumer product giant Unilever’s Indian subsidiary Hindustan Lever Limited, which through the innovation of creating “single-serve” gained a 60% share of the soap market while consumers were able to access the product for improving hygiene (Prahalad, 2005, p.237).

In addition to product offerings, BOP also sources products from the poor (Prahalad & Hammond, 2002; Prahalad & Hart, 2002). According to Prahalad (2005, p.2), “Market development at the BOP will also create millions of new entrepreneurs at the grass roots level—from women working as distributors and entrepreneurs to village-level micro enterprises.” In fact, the BOP approach sees entrepreneurship as a pillar for inclusive growth in the developing countries: “entrepreneurship on a massive scale is the key” (Prahalad, 2005, p.2). As an example, Hindustan Lever selected entrepreneurial women from villages and trained them to become distributors, within its network in hard-to-reach locales. Therefore, serving the BOP consumers through market, it is argued, will also create local entrepreneurs. These two orientations of BOP

– selling products/services and engaging the poor as entrepreneurs have been termed “BOP as consumer” and “BOP as producer,” respectively (Rangan et al., 2007).

Critical analysis of BOP

As alluded to in the discussions above, the main thrust for a greater role of business in development, including undertaking BOP ventures to tackle social and environmental problems in developing world, came from management and marketing scholars. Therefore, not surprisingly, most of the scholarly attention on BOP has come from business studies (see Kolk, Rivera-Santos & Rufin, 2014). In this section, I critically analyze some of the core elements of the BOP approach by reviewing relevant literature.

The issue of who constitutes the poor in the BOP - which has been based on separating population segments according to purchasing power has also been a subject of much debate. Critics have raised doubts about the purchasing power of the poor as they struggle to make ends meet just to survive with very limited disposable income. For example, Seelos & Mair (2007) argue that giving the BOP the opportunity to buy more does not reflect their ability to afford more.

A more fundamental problem has been an uncritical view of greater choice or “agency” of poor consumers, without adequate understanding of how and why people consume and to what end (Duflo & Banerjee, Jackman, 2011; Karnani, 2007a; Karnani, 2009). Many have pointed out the bias towards consumption in BOP approach and that to make a long-term positive impact in their lives, it is necessary to engage the poor as the producer, rather than passive consumers (Karnani, 2007a; Jackman, 2011; Ilahiane & Sherry, 2012). More

importantly, how serving the poor is going to solve poverty is unclear when the benefit for the poor is primarily construed in terms of choice exercised through more product offerings.

Economic and social value created when businesses invest in the productive capacity of the poor is greater than what may be achieved by merely selling goods and services to the poor (Marwaha et al, 2007).

It is also important to scrutinize the type of products in question—owning a mobile phone may be more empowering than using a skin-whitening cream (Garrette & Karnani, 2010).

Encouraging consumption of certain products with negative side effects (e.g. tobacco, or skin “whitening” cream) raises ethical concerns as inclusion of the poor in their consumption is actually harmful to their health. Lack of consumer education and awareness, highly probable at the BOP, may also contribute to inappropriate use of certain products, especially products that are technology-intensive. Therefore, products and services must be analyzed in terms of the types of social value they generate. This will not only require a closer scrutiny of these products and services but also the processes required to attain the value and who are able to get the value as consumers, entrepreneurs, or producers.

The assumption of the poor in the BOP framework as being inherently entrepreneurial is equally problematic. A key focus of attention in the BOP is women. In essentializing and valorizing women’s (and poor’s) skills and abilities as entrepreneurial, BOP concept co-opts some aspects of the discourse of individual empowerment and freedom and places the risk of failure solely with the individual (Dolan, 2012). In somewhat similar vein, an emerging “development strategy” of the major multilateral and bilateral donors in partnership with corporations (Nike, Goldman Sachs, etc) is the ‘girl effect’ -- the idea that investment in the

skills and labour of young women is the key to stimulating economic growth and reducing poverty in the global South (Hickel, 2014).

In their study of mobile phone adoption among low-income skilled and semi-skilled laborers in Morocco, Ilahiane & Sherry (2012) show how entrepreneurship requires considerable amount of agency—in particular, agency with regard to the creation and activation of networks for the creation of value. There is increasing evidence that poor women entrepreneurs need coordinated support on a variety of different fronts if they are to transform subsistence businesses into sustainable livelihoods (Buvinic & Furst-Nichols, 2014). Research from Bangladesh, often held as a beacon of women’s economic empowerment throughout the developing world, shows the importance of input like access to credit but also significant role of asset-specific skills training, longer-term commitment and follow-up (Bandiera et al, 2013).

It is however, the focus on BOP as a consumer that is proposed as the way forward for poverty reduction and broader social transformation. According to Prahalad (2005, p.100),

“As BOP consumers get an opportunity to participate in and benefit from the choices of products and services made available through market mechanisms, at accompanying social and economic transformation can be very rapid. The reason for this is that BOP consumers are very entrepreneurial and can easily imagine ways in which they can use their newly found access to information, choice, and infrastructure.”

From this perspective, the products and services contain value which is judged by economically rational consumers as a ratio of product quality to price. According to Simanis & Hart (2009, p.80), “Products and services are the vehicles that aggregate value generated across a company’s network of operations (its value chain) in order to make it available to society. Value is released and experienced when customers consume these end products.”

More recent articulations of BOP, called the “second generation” or “next generation” BOP, retain the original arguments, but shifts the emphasis from a consumption-based understanding of poverty reduction to one that is ostensibly based on local needs and aspirations and builds a closer connection with the community. Instead of viewing the poor as consumers or producers in the value chain, the second generation BOP urges us to see them as “partners” engaged in the co-creation of entirely new businesses that generate mutual value (London, 2009). Here the paradigm shifts from “selling to the poor” to “business co-venturing” and engaging with the wider community to ensure that “business model is culturally-appropriate” (Simanis & Hart, 2008, p.3).

The new generation of BOP thus stresses the need for corporations to partner with local agencies and NGOs as well as fringe stakeholders, providing essential knowledge, skills, and experience (Simanis & Hart, 2009). Here, the “capacity to consume” is replaced by co-creation and mutual or shared value. This version of BOP strategy “requires an embedded process of co-invention and business co-creation that brings corporations into close, personal business partnership with BoP communities” (Simanis & Hart, 2008, p.2). According to Simanis & Hart (2008, p.3), “By mutual value, we mean that each stage of the process, not simply the new business, creates value for all partners in terms important to each.” In other words, the greater the value created for those living at the BOP, the greater the value created for the venture.³ Simanis & Hart (2009, p.80) term such new BOP partnerships as “transactional stakeholder engagement”, where a company’s external stakeholders are engaged for the purpose of accessing knowledge,

³ Porter and Kramer (2011) popularized a concept similar to mutual value in business studies: “shared value”. For them, shared value is created wherein corporations can generate economic value by tapping into unmet needs of the market while at the same time producing societal value by addressing social problems. To create shared value, companies need to reconceive products and markets, redefine productivity in the value chain, and build supportive industry clusters at the company’s locations. Creating shared value then is more about understanding where the value chain touches important social issues and monetizing these points of intersection.

resources and capabilities that lie outside of the company and that can enable it to create better, faster and cheaper customer solutions.

By putting the emphasis on the local and the community, the BOP invokes ideals central to alternative development opposed to top-down state or donor-driven development models criticized by scholars as being irrelevant to the needs and concerns of the poor (Edwards, 1989). Yet, it is not clear how the process of co-creation through BOP ventures can respond to the needs of the poor. The new version of BOP appears to have an instrumental view of the concepts of participation, seeing it as a functional need to obtain local knowledge and insight, obtain information on the local context and secure legitimacy.

The need for collaboration and partnerships emphasized within the BOP literature to harness the symbiotic relationship between business and various private sector and social economy organizations like NGOs, and cooperatives, requires a closer examination. In particular, collaboration with NGOs, which are arguably better equipped with the understanding of the conditions and needs at BOP and in providing community access for co-creation due to their long community level presence, can particularly be effective for business in reaching deep into BOP markets. This normative view of partnerships needs to be questioned as partnerships can mask unequal relationships and power imbalances (McFalls, 2007).

At a broader level, the BOP proposition puts absolute faith in business to address development problems while expressing skepticism about the role of state. As Simanis & Hart (2008, p.1) claim, “Ironically, where governments have faltered, corporations have increasingly stepped up to the plate to tackle thorny global challenges ranging from climate change to poverty”. Although the BOP proposition implicitly recognizes the need for a balance between the market and the state, the envisioned role of the state is circumscribed. UNDP echoes this

view, maintaining that governments need to create an enabling environment for a competitive private sector to develop, including strong rule of law and a level playing field for all (UNDP, 2004).

This view of a reduced role for the government with BOP, while not surprising, is problematic. This is particularly so if development is understood not only in economic terms but also as well-being and empowerment. The responsibility to fulfill some of the functions that can contribute to such goals lies with the government such as universal literacy and primary education, public health and sanitation (Karnani, 2007a). With the gradual erosion of notions of public goods being ostensibly taken over by commercial interests, the BOP approach raises critical questions about the blurring of public-private divide in service provision.

BOP proponents also argue that a key shift in BOP thinking and practice is from top-down planning by states or foreign NGOs to a greater focus on bottom-up global market forces. This view sidesteps the traditional opposition between top-down technocratic development policy and bottom-up community activism and as a reconciliation between neoliberal capitalism and the interests of the poorest people in the world (Mazzarella, 2010).

Critics, however, have raised doubts about the extent to which BOP is anti-thesis to the trickle-down economics that responds to the needs of the local communities and marginalized populations in a sustainable manner (Schwittay, 2011, Karnani, 2007a). Presenting a case of public-private partnership in South Africa to provide ICT services, McFalls (2007) shows that the private company in question (Hewlett-Packard) reverted to top-down implementation methods with an expectation of quick returns, ultimately handing down social development responsibilities to the local government authorities. Another study of BOP initiative, ITC e-choupal – which links with rural farmers in India via the Internet for procurement of agricultural

products—found that it was not an inclusive model as the location of the facilities were concentrated in larger and more prosperous villages and in some cases, set up in houses where lower castes cannot enter (Gurumurthy, 2010, p. 59).

This line of critique sees BOP as a manifestation of business strategy and innovation to sell products and services in under-served markets, amounting to exploitation of the poor in developing countries. By viewing poverty as lack of consumption due to market failure, BOP tends to emphasize market-based solutions to extend services to the poor. With a narrow focus on the market, the emphasis of BOP automatically turns to corporate economic and financial returns and less on the historical, political, and sociocultural structures of poverty on the inequalities of power that leads to social and political exclusion (Banks & Hulme, 2014). These issues reveal the inherent contradictions of introducing BOP schemes where the goals of profit and quick returns is not always complemented with a broader longer-term development objectives (Schwittay, 2011; McFalls, 2007).

Assessing BOP interventions

Perhaps the most important gap in the BOP literature is the inadequate discussion and understanding of the ways of evaluating or assessing the developmental impact or implications of BOP initiatives. While this gap can be partly attributable to the difficulties in evaluating the social value of business initiatives in the BOP, it is nevertheless significant, considering the claim of the BOP concept about poverty reduction. As McFalls (2007, p.95), argues, “...if inclusive capitalism seeks to be considered *a development model*, then agreement must be reached on how to evaluate its performance...” (emphasis added).

A general characteristic of the BOP literature is that ideological debates on the role of businesses, particularly of MNCs, continue to command center stage and theories about how business can help address the needs of the poor are presented largely as stories about what the businesses have done. A majority of the literature supportive of BOP continues to focus on traditional economic indicators such as the amount of money invested and the quantity of products distributed to assess 'success'. Overall, it is evident from the business studies literature that the value for corporations has been the key focus with the emphasis put on business strategy. Importantly, the emphasis on these issues has come at the cost of inadequate attention to the needs of the poor and their contextual realities (Paton & Halme, 2007). With the developmental or societal dimension either underemphasized or not well-articulated, BOP literature has tended to sidestep questions around how well MNC activities have translated into concrete development outcomes such as human development and well-being.

If we take Prahalad's seminal book on BOP (2005) as a case, we see that the selection of the case studies to illustrate the win-win proposition for MNCs and the consumers is fraught with inconsistencies. Critics have pointed out that some of the cases are actually examples of non-for-profit entities which have undertaken commercial activities for sustainability or linking its beneficiaries to the market (Walsh, Kress, & Beyerchen, 2005). Perhaps more importantly, in most of the cases highlighted by Prahalad, the target population are not actually poor and do not show how poverty has actually been reduced (Karnani, 2007a).

The gap in assessment criteria is especially noticeable in combining the institutional level analysis, i.e. understanding and evaluating the intended objectives and motivations behind BOP interventions by corporations with impact on individuals or intended beneficiaries. One exception is a useful framework proposed by Blowfield & Dolan (2014) that outlines the criteria

against which BOP interventions should be judged in terms of corporate goals *and* development, irrespective of the profit motivation (see Chapter 4).

Critical theoretical exploration of inclusion

Despite considerable debates and discussions on the validity and relevance of the BOP approach by proponents and critics alike, there has been very little analysis of its foundational ideas, concepts and themes (exceptionally, see Chatterjee, 2014). In general, the critical literature does not go in-depth into critiquing the underlying theoretical assumptions of BOP. Couched in the discourse of inclusive capitalism, BOP perspectives bring issues of inclusion at the forefront. Yet, theoretical advances on the notion of “inclusion” — as a key developmental dimension within BOP— has been limited. There is a conspicuous absence of detail and insight into what inclusion entails, beyond the perceived benefits of easier and affordable access to products and services. This limitation has resulted in a gap in knowledge, not only in terms of capturing the possible ways inclusion can be conceptualized but also in identifying alternative analytical avenues to define inclusion.

The concept of inclusion has evolved from being used primarily to frame specific social policies in some European countries (for example in France, to address long-term unemployment in 1970s and 1980s) to gaining increasing traction in development thought towards the late 1990s. Inclusion has evolved from a focus on poverty alone towards an understanding on the causes and consequences of social (dis)advantage such as capability, deprivation, human rights, and social participation (De Haan, 1998; Levitas, 1996; Sen, 2000). As such, the concept of inclusion is strongly rooted in sociology. As a sociological lens of inclusion considers facets of

social inequality, social integration, social stratification, and social mobility, it is immediately apparent that the concept of inclusion needs to be thought in terms of “social” inclusion, and, that inclusion needs to be discussed alongside exclusion (Allman, 2013; Sen, 2000; Schuurman, 1993).⁴ In short, social inclusion and exclusion are *socio-economic* concepts that are used to describe the idea of social (dis)advantage. Two inter-related and overlapping features of inclusion are important in the discussions of inclusive capitalism and BOP.

Inclusion as a process

Firstly, inclusion (and exclusion) focuses on *the processes or mechanisms and the institutions* that include/exclude people. De Haan, for example, argues that the concept of social exclusion “takes us away from seeing deprivation in terms of individual attributes, and focuses on the societal mechanisms, institutions and actors that cause deprivation” (1998, p.15). From that perspective, inclusion and exclusion are about relative deprivation and are context-specific: “notions of what exclusion means depend on what form of inclusion is deemed to be important in specific societies or by specific groups” (De Haan, 1998, p.17). Therefore, social exclusion is a dynamic concept—as a construct largely based on specific conditions and settings and changes over time.

The other corollary is that inclusion needs to be investigated both in terms of structural factors and individual life experiences (Mervyn, Simon & Allen, 2014). Here micro-processes of inclusion and exclusion must be analyzed in terms of broader social and economic structures.

⁴ Some analysts argue that social inclusion and social exclusion should not be seen in terms of a simple conceptual opposition of ‘inclusion’ or ‘exclusion’ or an included/excluded dichotomy (Du Toit, 2004). While I generally agree with this argument, I take the view that in the instances of comparison between socioeconomic groups, such a dichotomy could be useful. In this thesis, I tend to agree more with De Haan’s (1994, p.17) interpretation of the concepts in terms of context-specificity.

Inclusion then goes beyond static descriptions of situations of deprivation, and focuses on the causes and mechanisms that lead to these circumstances.

The BOP emphasis on the agency of the poor needs to be unpacked in light of this interpretation of inclusion. A particular tendency in the BOP discourse is to equate agency with utility maximization, or more specifically, to assume that the poor are maximizing their utility preferences and that these preferences are congruent with their self-interest. One strand of economic sociology, however, questions such interpretations which assumes the rational, self-interested behavior is not affected by social factors. For example, Granovetter (1985) argued that economic action and exchanges are closely embedded in networks of interpersonal relations and of interactions, and the building of trust among people. By critiquing the view that the way individuals take decisions and act are controlled by the market and takes place outside and independently of social context, Granovetter argues that economic activity is closely embedded in society and culture.

A similar approach has been forwarded by Long (1990), who proposes an actor-oriented view of individual action. This view recognizes the central role played by human action and consciousness but also stresses the interplay and mutual determination of individual and societal factors and relationships. A key idea from this perspective is that different social forms develop under the same or similar structural circumstances and such differences reflect variations in the ways in which actors attempt to come to grips with cognitively, emotionally, organizationally with the situations they face.

The issues about inclusion as a process highlight how specificities of culture and context mediate and transform individual actions and outcomes. One important strand of such outcome that has been stressed in development thought is the enhancement of individual capabilities, or

human development (Sen, 1999; Stewart, 2013). Human development is broadly defined as the process of expanding people's freedoms and opportunities and improving their well-being, such as health (Haq, 1995). Human development cannot be assessed by focusing on individuals alone -- critical aspects of society, the state, social norms, formal and informal institutions that affect individuals need to be analyzed. Here, the emphasis is on structural inequality and recursive nature of relationship between structure and agency that results in the variability in the level of individual participation (Cooke & Kothari, 2001). Such broader aspects are the essential inputs or means to achieve virtually every significant capability or important dimension of human development; they affect the choices people make and influence individuals' relative position and consequently their access to market, their access to politically granted benefits and the political economy of policy choices (Stewart, 2013).

On the other hand, the attention on individual, in particular, renders structural inequalities as acceptable and deflects an understanding of how these processes and institutions create deprivation and marginalization. The problem with such a conceptualization of inclusion, that focuses attention on the individual (or a group) behavior or entrepreneurial traits and lifestyle, is that, certain individuals or groups may be deemed as undeserving, therefore justifying their exclusion (Atkinson, 2000). Yet, it is very likely that BOP propositions advocate for integration into the very system that causes marginalization. Similarly, a view of poverty being a result of market failure would tend to emphasize market-based solutions to extend services to the poor and not focus on the inequalities of power that leads to social and political exclusion (Banks & Hulme, 2015).

In the more recent BOP thinking, ideas of co-creation, participation and community engagement are forwarded as unproblematic and harmonious. Such perspectives prioritize the

local, viewing it as homogenous communities, and/or, sidesteps complex issues of non-participation, subordination based on gender and class (Mohan & Stokke, 2000). The important issue is meaningful participation as well as the factors that inhibit such participation. This view recognizes that participation is negotiated and mediated within households and communities and shaped by prevailing social norms and structures (Cleaver, 2001).

It is evident that the BOP approach takes the notion of participation and turns it on its head by emphasizing the participation of outside actors like MNCs, social enterprises, etc.: what has been termed as external participation (London, 2009). For long, development scholars have raised concerns about development processes that are externally driven and mediated. As Cooke & Kothari (2001) argue, external participation may represent a form of tyranny if decision-making powers remains externally controlled and if there are inequality of distribution and struggle for power between and within social groups. The inclusion of local community groups, therefore, could be only one of the necessary ways for MNCs to understand and leverage existing social strengths in these business environments. From this perspective, bottom up development model proposed in BOP is in fact a top-down externally driven approach.

Overall, a sociological perspective of inclusion (or exclusion) emphasizes inequality and distribution of power, wherein material and socio-cultural factors facilitate or hinder inclusion (Labonte, 2004). Such analysis of inclusion highlights the socioeconomic processes of capability deprivation, such as, exclusion from labour market or healthcare, gender-based discrimination, exclusion from political engagement, and so on (Sen, 2000; Du Toit, 2004).

Mutli-dimensional (relational) understanding of inclusion

The second feature of inclusion relates to the multi-dimensional character of deprivation. The core idea that informs such a view is derived from Amartya Sen's capabilities perspective, predicated on broader conception of poverty as not just as a lack of income, but also as a lack of capabilities that people value (Sen, 1999). This perspective underscores the complex relationships between income and well-being. For example, an increase in income does not necessarily lead to better health, which may depend on a host of other individual and contextual factors. One of Sen's central arguments is that, unlike capabilities, income is only instrumental for achieving another end, it is not an end in itself. Sen also talks about constitutive and instrumental dimensions of exclusion (Sen, 2000, pp.12-14). For example, being malnourished is an important deprivation in itself (constitutive dimension of exclusion), but it can also cause exclusion from the labor market, i.e. - instrumentally a cause of capability deprivation.

In the BOP framework, the singular focus on poverty, therefore, sidesteps the multi-dimensional nature of deprivation, such as vulnerability, entitlement, and human development. The recognition that poor usually suffer from multiple disadvantages related to, for example, precariousness of work, income, gender or ethnicity, is an important omission in the BOP proposition because this relational understanding of inclusion is critical in better understanding the relationship between social and economic inclusion. A capabilities perspective also points to how choices are influenced by lack of education, lack of information, and other economic, cultural and social deprivations.

In his critique of economic utilitarianism, Sen (1999) urges us to look beyond expressed preferences and focus on people's capabilities to choose the lives they have reason to value. While Sen focuses directly on the issue of human agency or capability, his views are predicated

on how individuals have differences in their capacity and ability to access resources and therefore have divergent experiences of wellbeing. In this view, having freedom is not just having access to primary goods, but having the ability and resources to achieve well-being.

Seen from the perspective of freedom and capabilities, it is not enough to assess market mechanism in terms of jobs and incomes generated, but also the freedom of market transaction (Sen, 1999, p.112). While the results of market mechanisms are of paramount importance, “the loss of freedom in the absence of employment choice and in the tyrannical form of work can itself be a major deprivation” (Sen, 1999, p.113). According to Sen (1999, p.63),

“The deprived people tend to come to terms with their deprivation because of the sheer necessity of survival, and they may, as a result, lack the courage to demand any radical change, and may even adjust their desires and expectations to what they unambitiously see as feasible. The mental metric of pleasure or desire is just too malleable to be a firm guide to deprivation and disadvantage.”

In the discussions of BOP and inclusion, it is especially relevant to highlight how exclusion and inclusion relate to the access to public goods and services and participation for certain marginalized groups. This is because individuals and groups not only experience inequality in distribution of goods and services, but also lack the options, choices and opportunities needed to access these resources (Zheng & Walsham, 2008). The case of women is particularly illustrative, as it relates to gender equity in consideration of the unique aspects of women’s lives. These include unequal sharing of unpaid work that constrain women’s life choices as well as the non-economic bases of discrimination that affect women, such as, lack of autonomy in decision-making about their lives, in the household and outside in the community (Fukuda-Parr, 2003).

These issues illustrate how in the inclusive capitalism and the BOP approach, women's participation in market activities are emphasized, without taking into account the gender bias in the allocation of resources, access to services, and opportunities in developing countries (Kabeer, 2012). While women can actively participate in market activities, they carry out a disproportionate amount of domestic labour and are more likely to be engaged in the informal sector. Kabeer & Humphrey (1991), highlighting the contradictions of neoliberal approach to women's participation in the economy, argue that while neo-liberalism favours women's entry to market, the greater reproductive burden has to be borne by women as the state reduces expenditure in health, education and social services. Therefore, a narrow view of employment and production needs to be replaced with a wider concept of productive contribution. This is especially important in terms of consumption or income, as there are considerable inequalities between women and men in control over resources (Kabeer, 2012).

Another important contribution in the analysis of excluded socioeconomic groups is Sen's (2000) distinction between active and passive exclusion. Active exclusion is the result of a deliberate policy to exclude certain people from opportunities. On the other hand, passive exclusion occurs when there is no deliberate attempt to exclude and deprivation is the unintended consequences of social processes such as when an economic policy negatively affects certain groups in society such as women, racial and ethnic minorities. Importantly, such an understanding of exclusion also helps to uncover the consequences of inclusion that are not always desirable. As BOP businesses expand and incorporate a broader range of products into a distribution channel, they may either crowd out local small-scale producers (Dolan, Johnstone-Louis & Scott, 2012). As Labonte (2004, p.118) argues, "...every example of contemporary

social exclusion based on gendered or racialized difference will also have a material and class-based component, with some people deriving benefit from it”.

The discussions of the two features of inclusion inform the world view of development adopted in the thesis. More specifically, the thesis espouses the perspective of development put forward by the proponents of human development, who argued that poverty is multi-dimensional and that in addition to income, other dimensions such as health and education ought to be at the centre of all development interventions (Haq, 1995). Development, then, is understood as the attainment of human-oriented goals which consider poverty and distribution of wealth as well as other measures of well-being and how that might be achieved. Human development is concerned with inequalities in the opportunities and predicaments of individuals. It also focuses on agency --people’s ability to make choices and shape their life courses.

Given this world view, the micro-level of analysis of the thesis is concerned with the experiences of the individual within a broader social context. From this perspective, the goal of inclusion is the ability of people to meaningfully participate in the everyday life of the society, in economic, political and social spheres to enhance their relative wellbeing. This conception of inclusion, it is argued here, is crucial in better understanding the relationship between social and economic dimensions of inclusion.

The case for ICTs for development

Technology is spreading to developing countries faster than it has ever done anywhere (World Bank, 2008). New technologies, however, often fail to achieve widespread diffusion, so their benefits do not become more widely available. This is not the case with new information and communication technologies (ICT) such as Internet and mobile phones, which experienced

exponential growth over the last two decades. As knowledge and human capital are emerging as an important factor of global economic production and innovation, new ICTs enable people to access, use and share information and knowledge at an unprecedented level and offer great potential for socio-economic development. ICTs are increasingly being promoted to bridge the digital divide and bring sustainable development in the developing countries.

The ICT led development model or “ICT4D” (information and communication technologies for development) has great potential for both business and development. According to a study published in 2007 by the World Resources Institute, the total BOP household ICT market in Africa, Asia, Eastern Europe and Latin America and the Caribbean was worth \$51.4 billion (Hammond et al, 2007, p.44). The study found that very poor families invest a significant amount of money in ICTs, most notably on mobile phones. In fact, the strongest growth in the mobile industry is now coming from the BOP markets (Anderson 2006). For example, mobile phone ownership in most African countries has been increasing since 2007-2008 and have crossed the 40% adoption threshold – a critical mass in voice networks believed to trigger the network effects associated with economic growth (Research ICT Africa, 2012). More importantly, ICTs are reaching the poor living at the bottom of the pyramid. A survey of seven countries in south and southeast Asia revealed that around 90% of the poor had used a phone in the last three months (Samarajiva, 2012).

The onset of rapid expansion of ICTs, along with the widespread interest in how ICTs can be harnessed for development purposes dates back to roughly the beginning of the twenty-first century. It was at this time that ICT4D gradually became established in the policy agenda of donors, governments, civil society organizations, and private sector actors. This wave of interest in ICT4D had two salient features (Avgerou & Madon, 2005). First, it was generally understood

that the diffusion of ICTs and the concomitant benefits would require a market-based liberal context. Here, the assumption of a global free market socio-economic context—where the private sector is the main driver of innovation and entrepreneurship—was deemed as a key factor. Indeed, the ICT4D domain is generally more sympathetic to market-led initiatives compared to state-led ones, strongly encouraging financial solvency within a growth focused environment (Kuriyan, Ray & Toyama, 2008).

A key factor in the exponential growth of ICTs in developing countries is the reforms in the telecommunications sectors which attracted significant private investments. In Africa, for example, the telecommunications reforms encompassed the privatization of the state-owned service providers, with an emphasis placed on opening the African market to investments from international firms (Lavery, 2011). Attracted by the sizable market at the BOP, global tech giant like Vodafone, Cisco, Microsoft, and Nokia view their expansion into developing countries or “emerging markets” as increasingly important to their future growth (Economist, 2014).

A second feature of ICT4D is how new ICTs, given their particular traits and advantages, can facilitate the “inclusion” of large numbers of the population in developing countries. Here, a specific focus is on how ICTs provide knowledge, information and facilitate greater participation of people in economic, political and social domains (Mansell & Wehn, 1998).

These two features of ICTs fit nicely into the BOP approach, which came into the development discourse and practice at about the same time that ICT4D rose to prominence as a key tool of poverty alleviation (Ray & Kuriyan, 2012). There was significant interest in the BOP approach in the ICT community from the outset. Proponents included major donor organizations and multi-stakeholder platforms led mostly by developed countries. The 2001 report of the Digital Opportunity Task Force of G8 countries called for a strategic compact for a win-win

multi-stakeholder approach emphasizing business models and partnerships with the business sector (Accenture, Markle Foundation, & UNDP, 2001). World Bank had been advocating for public-private partnerships in ICT ventures using broadband and mobile phones that can help create and sustain new opportunities for economic development (World Bank, 2009). A key focus here was on the greater supply of ICTs products and services to markets that were considered hard to reach, in the expectation that this would contribute to greater wealth and well-being. In sum, the ICT4D domain exemplify a growing consensus among development donors and practitioners that private sector, particularly large multinational corporations, or other enterprise-based models like social enterprises, or public private partnerships, can serve the world's poor efficiently through high-quality, low-cost products and ICT-enabled services (De Carvalho et al, 2012).

Critics of the BOP-led model of ICT4D, however, emphasize the complex linkages between ICTs and development and point out the inherent tensions of simultaneous goals of making profit and achieving development results. While access to ICTs has increased steadily in developing countries, so have concerns about equating connectivity with development (Wilson, 2004). This concern relates to the overemphasis on the diffusion of ICTs i.e. the provision of products and services with the neglect of the demand side dimension of how and why individuals use ICTs (Wade, 2000, pp. 449-50). The other related critique is that ICT4D interventions and research have been dominated by economic measurements, limiting a broader conceptualization of development (Kleine, 2010).

Others point to how corporate goals of creating products for the BOP are highly dependent on the profitability in the market, which in some cases, undermine corporations' stated commitments to development issues (Schwittay, 2012; Kuriyan, Ray, & Toyama, 2008). More

severe critics view BOP approaches as top-down models of ICT diffusions and as “technology boosterism and cyber utopianism” and ultimately a tool for Northern private sector firms seeking new markets for their goods (Pieterse, 2010, p.166). For Parayil (2005), knowledge-based economy is integral to “informational capitalism” which is biased towards firms and businesses who get increasing returns while excluding the majority of people. For some, the market-centred approach embraced in BOP compromises alternative approaches based on community appropriation, collaboration, rights and citizenship (Gurumurthy, 2010, p 62).

Regardless of the critiques, there is an increasing consensus in the BOP discourse that a number of features make ICTs for development particularly hospitable to the BOP approach and inclusive capitalism more broadly (Garrette & Karnani, 2010; Prahalad, 2005). According to Prahalad, BOP consumers accept advanced technologies readily and that one of the key features of the BOP market is that it is connected and networked (Prahalad, 2005, pp. 14-15). More substantially, ICTs provide knowledge and information to those with limited physical and/or financial access to these resources, by saving time and money for travel and bringing efficiencies to information and economic transactions. Similarly, BOP residents can use ICTs productively to enable and facilitate economic well-being and serve as tools for poverty alleviation and promote human capital through acquisition of knowledge.

A critical factor here is making the technologies available at lower prices, so that connectivity and associated services are extended to “include” greater numbers of people. This is important at both macro and micro levels. At the macro-level, economic impacts of ICTs occur due to the “network effects” and externalities that require minimum adoption thresholds or a critical mass of penetration (Dutta, Geiger & Lanvin, 2015). It is, however, at the individual level, the benefits of ICTs can be widespread by enabling those in poor communities to improve

their livelihoods and potentially lifting themselves out of poverty. Overall, the outcome of the widespread interest in BOP in the ICT sector was that: “By the turn of the millennium, corporations and other private actors in ICTs had joined the poverty alleviation “business”— not as a by-product of their operations, but as an explicit part of it” (Ray & Kuriyan, 2012, p.iii).

Inclusion in the context of ICTs

As the thesis focuses specifically on the concept of inclusion, this section synthesizes relevant ICT4D literature and proposes various ways inclusion can be perceived in the context of ICT-enabled BOP interventions. In a context of widespread diffusion of ICTs in the developing world, it is important not only to better understand how ICTs can potentially “include” people to reap its benefits, but also to reflect on how individuals or groups may be “excluded”, resulting in further marginalization.

Inclusion as consumers

Inclusion as consumers is primarily about owning ICT products and/or using specific services (Jackman, 2011). A key focus here is on incorporating the under-served and the poor into the market economy to facilitate access to goods and services, extending opportunities to access finance capital and other productive resources. Inclusion as consumers is intricately tied to corporate ingenuity i.e. corporations creating innovative and inclusive business models and becoming indigenous in regions where they operate. In the domain of ICTs, MNCs have adopted such models to make new products and services more accessible and affordable to better meet the needs and demands of low-income consumers. Being included as a consumer means using a

product or service that could potentially be beneficial to the consumer. Although some critics point out that consumption of goods and services as a narrow view of inclusion (Karnani, 2007a; Jackman, 2011), it nevertheless encapsulates the potential value generated from such consumption.

The widespread diffusion of mobile phones illustrates how low-income consumers have benefited from accessing telecommunication services uniquely tailored to meet their needs and at a lower cost (Anderson, 2006). The option of small, frequent payments, like prepaid mobile plans, rather than demanding high up-front fees, provided affordable options for many low-income consumers in developing countries. It has also been argued that mobile internet may serve as an antidote to social exclusion, because of access to digitized contents as well as opportunities for information exchange of ubiquity, affordability and ease of use (Chigona et al, 2009).

The variety of services, offered to consumers, has increased significantly. In 2007, Safaricom, an affiliate of Vodafone and Kenya's largest mobile operator, launched the mobile phone money transfer application M-PESA which had the dual goals of deepening financial access by facilitating the transfer of funds (e.g. remittances from relatives, salary deposit, etc.) for the poor and being a self-sustaining commercial product (Kuriyan, Nafus & Mainwaring, 2012). Another example is Facebook Zero service undertaken by the social media giant Facebook, which, in collaboration with mobile phone-based internet providers, offers free access to a basic version of Facebook. While the benefit to consumers is not yet fully understood, Facebook Zero played a very important role in Facebook's expansion in Africa (Mims, 2012). Another tech giant Google launched Project Loon with the idea of providing internet access to the 5 billion population who do not have access to the Internet.

Inclusion as entrepreneurs

The entrepreneurial dimension has been a prominent feature in the ICT4D domain where new business models allow local entrepreneurs to earn better incomes by selling ICT products and services within the MNC value chains. Inclusion as entrepreneurs means being part of the corporate value chains as franchisees, suppliers, sales agents, or distributors. This dimension of inclusion is one of the core win-win arguments in BOP thesis: providing new opportunities for entrepreneurs while being profitable from a business perspective. Business linkages that promote entrepreneurship help create new jobs and wealth at the local level, enhance skills and capacity, enhance purchasing power, and generally stimulate economic activity, while also helping corporations catalyze innovation, reduce costs, and further unlock potentially vast new markets. Inclusion as entrepreneurs is different from downstream benefits of ICT that contribute to economic benefits to entrepreneurs who use ICTs to improve livelihoods/income or business output.

A central focus of here is employment and income-generating opportunities for marginalized and vulnerable groups, such as women (Dolan, 2012). Prahalad (2005) cites the example of Village Phone Program in Bangladesh which provided rural women with earning opportunities through selling mobile phone services (see Chapter 4). Similar efforts have been documented in other contexts. One prominent example is the Akshaya project – a public-private partnership in India which deploys cyber kiosks equipped with one or more Internet-enabled computers and are owned and run by independent entrepreneurs (Kuriyan, Ray & Toyama, 2008).

Digital inclusion

Digital inclusion refers broadly to the access and the ability to use ICTs. In the contemporary context where connectivity, notably to the Internet, is considered as an effective and efficient means to greater prosperity, digital inclusion is arguably more relevant than ever before. A focus on connectivity for marginalized populations is implicit in the concept of digital inclusion because as access to ICTs increases in developing countries, unequal appropriation of ICT opportunities possibly excludes many economically and socially, thereby, increasing the risk of further marginalization. As technologies continue to change rapidly, there is no common understanding on the extent of the “digital divide” and whether in fact the divide is growing or narrowing. It is only recently that the risks posed by higher levels of technology adoption for certain groups are being understood (Cushman & McLean, 2008; Warren, 2007). Digital inclusion, therefore, is relative term that needs to be assessed in a given context. Moreover, changes over time based on the availability or lack thereof of technologies as well as the ability to use those technologies by individuals help define/ characterize digital inclusion.

Certain features of digital inclusion make the concept analytically much stronger than the concept of digital divide, particularly in terms of more accurately capturing the phenomenon of ICT gaps (Parsons & Hick, 2008). First, digital inclusion is not just about access to ICTs but the effective use of ICTs. It is about having ‘ICT capability’ -- the necessary skills to use the ICT in question, as well as the knowledge about when and how to use it, and the confidence to do so (Faulkner & Lie, 2007). Helsper (2008) highlights four components of digital inclusion: use, access, skills and attitudes. An integral aspect of ICT use or non-use is that of individual agency and choice: “Above and beyond having the necessary access to resources, digital inclusion is therefore predicated on the ability to make an informed choice when and when not to make use of ICTs” (Selwyn & Facer, 2007, p.14).

Therefore, digital inclusion is more than just the acquisition of information resources; the everyday social relations that are built and maintained using ICTs are also important (Bure, 2006). Digital inclusion thus shifts the focus away from the aspirations of the corporations and designers and the methods of adoption to the ways in which technologies are, or are not, integrated into daily life for the achievement of personally constructed projects of users (Cushman & McLean, 2008). A somewhat similar concept is effective use— the capacity and opportunity to successfully integrate ICTs into the accomplishment of self or collaboratively identified goals (Gurstein, 2003). The idea of digital inclusion/exclusion has been applied to conceptual as well as empirical investigations, such as, LAN (Local Area Network) houses in Brazil (Lemos & Martini, 2010) and public access ICTs in Brazil, Chile, Ghana, Bangladesh and Philippines (Chapter 2).

Social inclusion through ICTs

While the three dimensions above describe the ways BOP innovations and processes can contribute to inclusion of people, they do not concretely demonstrate how such inclusion can translate into development outcomes, defined primarily as human development in this thesis. Drawing on theoretical discussions on inclusion, I argue that the three dimensions of inclusion – inclusion as consumers, inclusion as entrepreneurs and digital inclusion can be causally linked to the idea of “social inclusion”. Social inclusion (and exclusion) refer to the extent to which individuals, families, and communities are able to fully participate in society and control their own destinies, taking into account a variety of factors related to economic resources, employment, health, education, housing, recreation, culture, and civic engagement (Warschauer, 2002; Warschauer, 2003). Social inclusion sees inclusion as a process and puts the emphasis on effective integration of ICTs for development and transformational potential of ICTs.

Social inclusion through ICTs, then, is about utilizing ICT as a catalyst for development, incorporating economic, political and human development dimensions. For example, access to market information for farmers and small business owners can help them to make more informed business decisions that can result in tangible economic benefits in various developing country contexts (Donner, 2006). Similar transformative potential of ICTs has been noted in health and education (Elder, et al 2013; Rashid & Elder, 2009). Newer ICTs, like mobile phones, has significant potential of improving educational outcomes (Valk, Rashid & Elder, 2011). Reviews of mobile health (m-health) interventions demonstrate the potential to address access, coverage, and equity gaps in health in developing countries and low-resource settings (Beratarrechea et al, 2013). In this view, ICTs work as a transformative tool, mediating economic, social, and political opportunities.

Finally, citizen's participation in the political processes has been a salient outcome of ICT-mediated social media platforms, e.g. the role of social media in the Arab Spring revolution. Similarly, social inclusion also relates to the non-instrumental dimension facilitated by ICTs, such as, maintenance of social networks. While use of ICTs may not lead to economic benefits, or better outcome in terms of saving time or money, the sense of empowerment and inclusion that result from such activities are significant. As technologies become more open and collaborative, the resulting network-enabled social behavior is increasingly becoming a prominent feature of a networked society (Thompson, 2008). Furthermore, viewed an 'architecture of participation', ICTs, notably Internet, provide the opportunity for generating, mediating and moderating for bloggers, and mashers, and wiki-writers and offer a particular paradigm of social life (Thompson, 2008; Heeks, 2009).

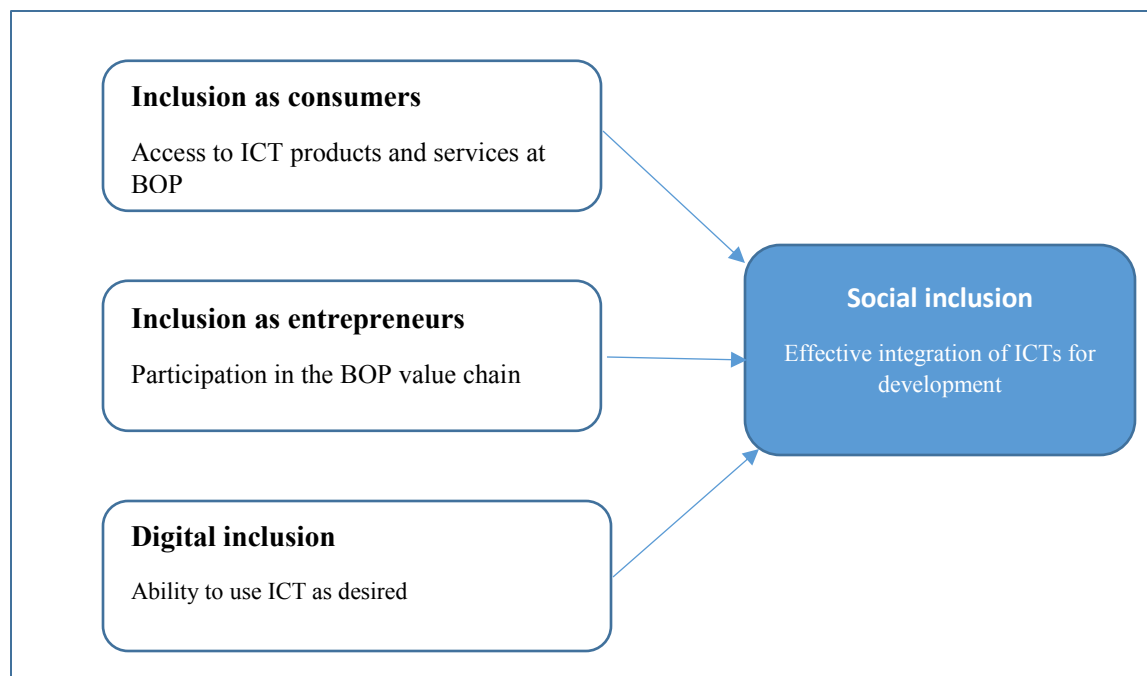


Figure 2: Dimensions of inclusion and links with Social inclusion

Figure 2 provides a normative framework of the dimensions of inclusion within a BOP-driven ICT4D landscape, summarizing the various ways ICT4D initiatives and programs can promote inclusion. The following section critically explores the issues that mediate the links between the dimensions of inclusion and social inclusion through ICTs.

Linkages between various forms of inclusion

The BOP concept puts significant emphasis on consumption, which is clearly evident in the ICT sector. While innovations like mobile prepaid services have indeed made it possible for low-income groups to access mobile, beyond calling and texting, the uptake of mobile-based applications and services at the BOP has been low (infoDev, 2013). One of the reasons for this is illiteracy – including lack of technical literacy, awareness as well as locally appropriate applications and solutions.

Furthermore, the absence of a clear developmental outcome is a major concern. Facebook Zero or Free Basic, which provides limited access to the Internet through a small number of websites and services, is an example of provision of rudimentary services to poor mobile phone users without an apparent social/developmental dimension. While Facebook claims that Free Basics is stepping-stone to the Internet for those who are otherwise without access, some analysts terms it as purely a marketing strategy (Galpaya, 2017). The idea behind Free Basic's "limited service" also raised ethical concerns about net-neutrality, the notion that all data and content in the Internet should be equally accessible. Following widespread public pressure, the Indian government resisted Facebook's plan to introduce Free Basics in the country, stating that everyone- regardless to their economic status, should have equal access to internet and the idea offering only a few sites to poor didn't follow the open nature of the Internet (Mukerjee, 2016).

BOP approach's defined categories of "consumers," "the poor," and "citizens," who more often than not are treated as near homogeneous, is problematic. Such analysis overlooks critical differences in position, power, behavior, and incentives within these categories, or the relations between low-income people and the state or private sector. Research on mobile M-PESA-- often regarded as an exemplary model of both profitable and developmentally desirable BOP business model – has shown how "the consumer" label applied to a broad cross-section of people in Kenya revealed anxieties within society, aspirations to be middle-class, and a desire to not be perceived or labeled as poor (Kuriyan, Nafus, & Mainwaring, 2012).

Overall, the impetus behind inclusion as consumers is largely driven by business innovations and strategic considerations as well as an enabling regulatory framework that promote products and services to low-income groups. The focus on lowering cost and offering

“basic” functionality in many BOP initiatives makes the link between inclusion as consumer and social inclusion tenuous. While the focus of consumption may make business sense, there is little conceptual and empirical justification for assuming that provision and consumption of products and services will necessarily lead to positive development outcome (Jackman, 2011; Karnani, 2007a).

While the effective use of ICTs, i.e. digital inclusion, can contribute to social and human developmental benefits, it would be misleading to assume an automatic association between the two. Just as digital inclusion is dependent upon a host of individual, contextual, and ICT-related factors, social inclusion through ICTs that require effective integration into development domains will need to take into account the social processes, mechanisms and institutions that may exclude people (Bure, 2006). Therefore, it is important to conceptually link the macro-level processes with micro-level theorizations of inclusion, that is- how the development of unique ICT products, networks and services contribute to micro-level human development approaches at the BOP.

Furthermore, social inclusion is dependent on individuals having adequate access to meaningful and relevant content and services. A particular application or service may require info-mediation, an informational intermediary to translate or adapt the service according to individual capability and needs. In a study comparing villages in Kerala and Andhra Pradesh states in India, Thomas & Parayil (2008) discovered better capabilities to use ICTs and convert information to useful knowledge in Kerala, attributing this to the more equitable socio-economic environment there. Verdegem (2011) highlights the tenuous links between digital and social inclusion in exploring the case of social media. On the one hand, social media can be an enabler of self-organization and self-help processes to transform weak ties across the online and offline

worlds into effective collective structures of engagement and participation. On the other hand, social media can potentially create new forms of digital and social exclusion for already vulnerable groups and people unable to take advantage from it. Therefore, we need to pay attention to not only how social disadvantage may lead to digital exclusion but also to the influence of social and institutional processes on digital exclusion – an extended form of “digital vicious cycle” (Warren, 2007, p.374). It can, therefore, be argued that social exclusion leads to digital exclusion, however, digital inclusion does not necessarily lead to social inclusion.

At the same time, inclusion and exclusion should not be seen as dichotomous, given the possible gradations in between. Rather than being fully included or excluded, marginalized groups may occupy an in-between position with the potential of movement in either direction (Beck, Madon & Sahay, 2004). An example of this middle or “in-between” group is the “information have-less” – a social, economic, and political category for millions of rural-to-urban migrants and laid-off workers in China who use inexpensive ICT services, such as, Internet cafés, prepaid phone cards, and cheap mobile phones to enhance their livelihoods (Cartier, Castells & Qiu, 2005).

Equally important is the need for digital inclusion to be considered highly context specific- given not just the significant variations in access to ICTs across regions, countries or neighborhoods, but also variations in socioeconomic conditions between or among populations and communities. Digital divide is about social access to digital technologies. If these social processes are not taken into account, digital inclusion projects may exclude the least-advantaged groups in the communities that they aim to serve and thus ironically produce a local form of digital divide within these communities (Madon et al, 2009).

Finally, different forms of inclusion, while desirable for the most part, does not always lead to positive outcomes. This is termed unfavourable inclusion or adverse incorporation (Du Toit, 2004). Some evidence of the individual processes of unfavourable inclusion have been documented in case studies of corporative-led ICT4D BOP initiatives (Schwittay, 2012; Schwittay, 2008; McFalls, 2007). Other studies point out the downside of the dependence created by certain technologies, not just for those using them but also other members of the community. Gurusurthy (2010) argues that ITC e-choupal BOP initiative created corporate dependency of local agriculture by monopolizing the local agriculture ecology, locking in a large number of farmers and crowding out small and marginal land-holding farmers. Pieterse (2010) highlights the One Laptop per Child program as an example technology lock-in, creating technology dependency in both hardware and software.

Bangladesh in context

This section provides an overview of Bangladesh- the main focus of the thesis and its development trajectory. It specifically highlights the political economic context of development, policies and strategies of inclusion and empowerment by various actors including government, non-government organizations and the private sector.

In the years following independence in 1971, Bangladesh's vulnerability to famine, military coups and natural disasters earned it the label "test case of development", or even more derogatory term of "basket case" by former US secretary of state Henry Kissinger. Since then, Bangladesh has made significant progress on various economic and social indicators. Bangladesh has been categorized as one of the "Next Eleven" (N-11) countries by Goldman Sachs, with high potential to become among the world's largest economies in the 21st century. In

2014, Bangladesh reached low middle income country status and its vision is to reach the middle income status by 2021. While the early sense of desperation is arguably no longer relevant, Bangladesh's current context certainly presents a "development puzzle".

Political economy of pro-market reforms

From the outset, successive governments' stated their commitment to the goals of achieving equitable economic development and promoting vulnerable population's well-being. These goals were enshrined in the country's constitution and subsequently reflected in the numerous official policy documents, such as successive five-year plans. While both military and civilian governments sought to garner the moral authority to pursue these welfare goals, the implementation of these policies and programs had to contend with governance dysfunction characterized by political instability and corruption (Mahmud & Mahmud, 2014; Centre for Governance Studies, 2006). The transition to democracy in the in early 1990s- considered a watershed event for democracy in Bangladesh – did little to improve the lives of the majority of the poor.

The governance failure had two broad dimensions. First the political one -- fragile nature of democratic institutions such as lack of transparency and leadership in major political parties, a dysfunctional parliament, and politics based on identity and confrontation. The second dimension was bureaucratic, but with a political imprint; the government machinery is generally considered to be weak and also mired in partisanship and patronage (Habib & Huque, 2001; Rashid, 2014). Therefore, while democratic reforms has opened up spaces for more participatory politics in the last two decades, core public institutions and services which are supposed to be neutral have become partisan.

On the economic front, the agrarian economy were characterized by the slow and stagnant industrial growth, and a high level of dependence on foreign aid in the first decade since independence (Sobhan, 1981). Subsequently the economy of Bangladesh experienced significant structural change, as part of the reforms under the structural adjustment programs sweeping the developing world around the 1980s. Big public enterprises were dismantled; large mills were replaced by export processing zones, shopping malls, and real estate and export-oriented garment factories became the mainstay of manufacturing (Muhammad, 2015). In the last two decades, Bangladesh experienced steady economic growth despite sustained political instability. Annual GDP growth in the period 2006-2015 has been around 6% and poverty rate has come down from 57% in 1991 and 49% in 2000 to 31% in 2010 (World Bank, 2017). Two contributing factors for the economic growth is the success of the labor-intensive, export-based garments industry, and the boost to earnings and human capital provided by labor migration and inward remittances.

Critics raise doubts whether the economic growth achieved during the two decades translated into broad-based inclusive outcomes for most citizens. Most notably, inequality in income and consumption among households increased or remained stable in the last three decades (Adnan, 2014, p.143). In rural Bangladesh, one of the main causes of widening income inequality in the period 2000-2010 was the unequalizing effects of remittance from overseas migrant workers—one of the major sources of growth (Osmani & Sen, 2011).

The contemporary context exemplifies the continuation of the neoliberal pathway. The economic reforms undertaken through SAP such as liberalization and privatization policies undertaken by various governments continued to negatively affect the poorer segments of the population (Adnan, 2014, p.143). The government's recent five-year (2010-15) plan is pushing a marketization strategy with strong emphasis on public-private partnerships in critical sectors like

energy (Government of Bangladesh, 2015). In the donor and the NGO community there is a broad consensus on the primacy of the market-based solutions to development within a pro-private sector agenda (Neusiedl, 2016).

The outcomes of the pro-market reforms have been mixed by most accounts. Some critics have argued that pro-market reforms were intended neither to stabilize the economy nor to meet broader development challenges but rather served various regimes' intention to build political coalitions with traders and industrialists (Quadir, 2000). Privatization of state-owned enterprises did not lead either to commercial success or improved labour conditions. What resulted from the transfer of public funds to private hands was the emergence of 'family capitalism'- shareholder control by family with negligible accountability and transparency (Uddin, 2005, p.173).

The inflow of foreign direct investment to Bangladesh, while showing an increasing trend in telecommunications, banking, textiles and gas and petroleum sectors, has been quite low in the period of 1990-2010 due to the poor regulatory environment and infrastructure (UNCTAD, 2013).⁵ Exports, promoted under liberalization policies, was the other major source of economic growth besides remittances, particularly, the ready-made garments industry. While the garments sector is one of the largest creator of jobs, notably for women, there are critical questions about poor labour standards and rights – as the 2013 factory (Rana Plaza) collapse, which resulted in hundreds of worker deaths, demonstrates.

Progress in human development- the Bangladesh paradox

On the social and human development fronts, Bangladesh's progress has been impressive. The country has made extraordinary improvements in almost every indicator of

⁵ While the low levels of FDI may have a negative effect in terms of provision of capital and employment, there is also a need to acknowledge the tenuous link between FDI and human development (Reiter & Steensma, 2010).

human welfare in the last twenty years, moving to medium human development category in 2014 (UNDP, 2015). There were steady decline in birth rate, improvement in education and health indicators. In looking for the underlying factors of that success, the role of public policy and expansion of government services were central amidst, somewhat paradoxically, sustained political instability and poor governance (Centre for Governance Studies, 2006). Although spending on education and health as a percentage of GDP still remains low compared to other developing countries, these indicators have been showing upward trends (Asadullah, Savoia & Mahmud 2014). The government has generally been more responsive to citizen demands of education and safety nets, which have been made political priorities.

The inclusion of NGOs within a broader development strategy was instrumental to the social progress achieved (Asadullah, Savoia & Mahmud 2014). For example, good performance in the health sector can be attributed to a pluralistic health system that had many stakeholders pursuing women-centred, gender-equity-oriented, highly focused health programmes and where government and NGOs pioneered many innovations that have been scaled up nationally (Chowdhury et al, 2013).

Bangladesh's progress does not seemingly fit nicely into the typical trajectory of human and social development. Amartya Sen (1999) distinguishes between two pathways: first, income-mediated pathway is characterized by improvements in social indicators that can be traced back to rapid- and broad-based economic growth, and second, support-led pathway which is based on high public spending on welfare programs. The rate of economic growth in Bangladesh, while rising significantly since 1990, has hovered around 6 percent or below. On the other hand, spending on education and healthcare (2.0% and 1.0%, respectively, of GDP in 2012) is below the average for low-income countries (World Bank, n.d).

The role of NGOs in the impressive recent record of human development and in the broader landscape of development in Bangladesh needs to be critically analyzed. Bangladesh indeed is blessed with a vibrant NGO sector - having more NGOs per capita than any other developing countries. The role of NGOs in the country's development and empowerment of marginalized groups, like women, is undeniable (Centre for Governance Studies, 2006). NGOs have taken up the space created by lack of effective public intervention and programs in the rural areas in health, education and local industries other than agriculture. In some cases, NGO involvement was part of the state strategy to outsource core developmental services like health and education.

While Bangladesh's social development can surely be attributed to the success of innovative, low-cost solutions such as microfinance programs that target women and massive social mobilization campaigns, some argue that NGOs have gradually abandoned social mobilizing and collective action strategies for a narrower focus on service delivery and microcredit provision (Kabeer, 2009). It is somewhat telling that over ninety percent of the NGOs in Bangladesh now include microfinance in their activities (Gauri & Galef, Cited in Hackett, 2010, p.219). In fact, Bangladesh offers a compelling context for the emergence of new organizational and institutional innovations of social economy. NGOs - increasingly concerned with sustainability – have created for-profit commercial enterprises and businesses that are, for the most part, disconnected with their original mission. Social businesses and enterprises have emerged a viable alternative to state and/or traditional NGOs focused on social and political empowerment. At the forefront of the social enterprise movement this is the Grameen family of enterprises, which are of particular relevance to this thesis, as will be described below.

One of the main concerns of the shift in the NGO sector and the emergence of social enterprises is the risk of commercial ventures being at odds with achieving broader social goals. There are real trade-offs between pro-poor orientation and commercial ventures if NGOs are unable to strongly articulate their social missions of advocacy and social development (Rashid, 2010). Foremost critics of NGOs, such as Muhammad (2015), argue that organizations like Grameen Bank had never been an alternative to the World Bank-pushed neoliberal economic model; rather, it was born and brought up as a necessary supplement to it.

Overall, the broader context of development in Bangladesh was characterized by the convergence in thinking amongst key development actors around pro-market reforms to spur economic growth and the preeminence of the non-state actors as the solution to development problems. Against this backdrop, it is debatable whether the necessary conditions for inclusive business models driven by private sector through investment were present.

Methodology

The objective of the thesis is to investigate the extent to which BOP approaches in ICTs foster inclusion, focusing on public access ICT venues in Bangladesh and other developing countries. Public access ICT venues are facilities that have substantial and usually visible ICT presences such as telecentres, cyber cafes, libraries (Sey et al, 2013). Due to purportedly lower costs of ICTs, such venues, especially telecentres, are important elements of the broader ecology of information and communication resources available in many developing countries.

Concerns of sustainability of government and donor funded public access ICTs venues have led to a steady emergence of for-profit and social enterprise based models of telecentres in developing countries (Liyanage, 2009). In Bangladesh, there has been a significant uptake of

enterprise-based telecentre initiatives undertaken by the private sector (including multinational corporations), non-governmental organizations and public-private partnerships (Roldan & Due, 2008). These factors, along with the broader political economy issues that shape the outcomes of inclusive social development discussed above, make Bangladesh a suitable context to analyze BOP approaches in the telecentre domain.

Throughout my research, I attempted to analyze the notion of inclusion, as a core developmental dimension of the BOP approach. On the basis of the theoretical discussions on inclusion rooted in sociology as well as a conceptual model of inclusion in ICTs developed (Figure 2), I argue that it is more useful to assess inclusion taking into account its multidimensional and processual nature. Such a perspective enables us to see inclusion as a causal process towards effective integration of ICTs, which can, in turn, translate into capability enhancing elements of inclusion, such as, better health or educational outcomes. At the same time, various forms of inclusion were assessed in terms of individual as well as broader social and contextual factors. This allows for the systematic assessment of impact of BOP interventions on particular socioeconomic groups to uncover differences and disparities based on socioeconomic divides.

A specific analytical and empirical focus of the thesis was gender, be it in analyzing the differences in the ways ICTs are appropriated by men and women via public access ICT venues in various countries, or, in exploring outcomes of specific BOP interventions for men and women. Issues and indicators of gender are especially relevant to analyzing how sociocultural and institutional approaches affect human development. Furthermore, given the particular attention on women as an ostensible benefit of BOP interventions (both as consumer and entrepreneur), it is important to thoroughly explore the dynamics of women's inclusion.

The thesis analyzes data sets from two surveys of the Global Impact Study of Public Access to Information & Communication Technologies (IPAI) from 2007–2012. The study aimed at generating evidence about the character and impacts of public access to information and communication technologies (ICTs) (Sey, et al, 2013; Sey, et al, 2015). With a focus on libraries, telecenters, and cybercafés, the study investigated impact in a number of areas, including communications & leisure, culture & language, education, employment & income, governance, and health. The two surveys used in the thesis, the Venue survey and the User survey, were conducted in Bangladesh, Brazil, Chile, Ghana and Philippines (Survey Working Group, 2012). In the Venue survey, approximately 250 venue operators were surveyed in around 250 randomly selected public access locations in each of the five countries. The target population included all venues in the country, both urban and rural. Given that the primary purpose of the Venue survey was to investigate venue characteristics (though a secondary aim was to understand respondent demographics), multiple operators were allowed to provide information for a single interview.

In the User survey, a total of approximately 1,000 users, over the age of 12, were surveyed in approximately 250 randomly selected public access locations throughout each country (the goal was to sample four users per venue). Users were selected from each of the venue with an attempt to capture an equal number of males and females. The sample was also dispersed disaggregated both by day of the week and time of day (morning, afternoon, evening/night). Age was not a stratification variable. The sampling approach was to select every *n*th person observed using a computer in the venue. All surveys were face to face and researcher administered.

The analysis of the two surveys of the IPAI study permitted a close examination and scrutiny of telecentre initiatives and implications for inclusion in the specific context of

Bangladesh. By combining the various ICT indicators in the User Survey, a digital inclusion index was developed, which was then compared across various socioeconomic dimensions, notably by gender. The analyses of digital inclusion in the five countries not only provided a deeper understanding of the factors that influence inclusion (or exclusion), but also a comparative perspective into the gender dimensions of ICT4D interventions in the countries under study.

As emphasized above, the extent to which BOP interventions contribute to inclusion depends on the institutional and organizational factors, underpinned by specific corporate motivations and implementation strategies. By investigating the rhetoric and the realities of inclusion it is possible to draw out the synergies or contradictions between economic and social goals in BOP interventions. To address this dimension, I undertake an in-depth case analysis of GrameenPhone Limited — a multinational mobile telecommunications firm with joint ownership of Telenor AS of Norway and Grameen Bank of Bangladesh. Ostensibly motivated by BOP ethos and principles, GrameenPhone introduced two interventions (Village Phone Program and Community Information Centres) that are aligned with its core business, while having the explicit objective of providing access to ICTs for the poor in the rural Bangladesh. The case study combines a review of existing studies as well as an analysis of IPAI survey data for analyzing the Community Information Centre initiative.

Yin (2003, pp.13-14) defines case study as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident”. As this thesis is fundamentally concerned with “context”, multiple sources of evidence are used together in an iterative process of theoretical analysis that is grounded in empirical evidence. In particular, the case draws from the normative

criteria of BOP as a development agent by Blowfield & Dolan (2014) to evaluate BOP interventions in relation to inclusion outcomes.

The thesis adopts the “article” model, consisting of three separate academic research papers. Although the three papers are “free standing”, the issues covered are inter-related, both in terms of research themes as well as geographical focus, and therefore function as an integrated whole. Each of the paper contains a detailed methodology section and discusses the methodological limitations. Table 1 provides a summary of the three empirical studies undertaken in the thesis.

Table 1: Focus of the studies, methodological approach and data sources

Focus of the study	Analytical and methodological approach	Data sources
Impact of socioeconomic factors on digital inclusion	Comparative gender analysis in public access to ICTs- Bangladesh, Brazil, Chile Ghana, Philippines	IPAI survey data
Analysis of use and impact of for users and entrepreneurs	Comparative analysis of public access telecentres initiated by a multination corporation (GrameenPhone), social enterprise (D.Net) and public-private partnership	IPAI survey data
Analysis of GrameenPhone Limited	BOP as a development agent and types of inclusion; case analyses of two GrameenPhone programs: Village Phone Program and Community Information Centres	Secondary literature and IPAI survey data

Ethics

The thesis used data from the IPAI study. All raw survey data sets and related documentation like questionnaires, protocols and coding materials are publicly available through Attribution-Non Commercial-ShareAlike 2.5 Generic License (CC BY-NC-SA 2.5). The License permits the user to copy and redistribute the material in any medium or format as well as to adapt (remix, transform, and build upon) the material.

The data is available to anyone who creates an account in the University of Washington web library <http://www.globalimpactstudy.org/2012/07/user-survey-data-released/>. There was no cost attached to creating an account. TASCHA obtained informed consent form from all the survey respondents, including information on subsequent use of the data in all the languages covered in the study. The consent form is attached as an Annex 1.

The Office of Research Ethics and Integrity at University of Ottawa was contacted regarding the necessary approval process to use the data mentioned above. The Office confirmed that the research project falls under Article 2.2 of the Tri-Council Policy Statement and that it, therefore, was not necessary to obtain ethics approval in order to use the data for research purposes. The email from the Office dated 11 May 2015 is provided in Annex 2.

Thesis outline

Chapter 2 (paper 1) Digital Inclusion and Social Inequality: Gender Differences in ICT Access and Use in Five Developing Countries

The diffusion of new information and communication technologies (ICTs) like computers and Internet provides great opportunities for the well-being of people in developing countries. Does this promise hold true for marginalized socioeconomic groups such as women? This article explores gender differences in ICT provision in Bangladesh, Brazil, Chile, Ghana, and the Philippines, analyzing survey data with around 5,000 respondents who use public access ICT venues. In analyzing the gender differences, we used the concept of digital inclusion—measured by various characteristics like skills, user attitude, and other related factors of two ICTs: computer and Internet. The findings show that women in Bangladesh are more likely to suffer from digital exclusion compared to the other countries. In exploring the factors for digital

inclusion we found tertiary education and the ability to use ICTs at home significant. The findings further support the argument that digital inclusion needs to be seen in terms of the unique information needs of various socioeconomic groups and in specific social contexts.

Chapter 3 (paper 2): Inclusive Capitalism and Development: Case Studies of Telecenters Fostering Inclusion through ICTs in Bangladesh

Lack of sustainable approaches for public access venues such as telecenters has led to the emergence of several entrepreneurial and market-driven telecenter models in developing countries that are driven by multinational corporations, governments, and social enterprises. This trend falls under the rubric of inclusive capitalism, which argues that in the contemporary socioeconomic context, private investment and entrepreneurial activities are crucial for economic growth and job creation in developing countries. In this article, I undertake three case studies of telecenters in Bangladesh: a private-sector enterprise, developed and operated by a multinational corporation, a social enterprise, and a public-private partnership. The case studies combine a review of organizational documents and an analysis of survey data. While a common feature of all three cases is the reliance on market mechanisms to provide affordable ICT services to the poor, the findings highlight how the initiatives approach the issue of inclusion differently. This article illustrates the convergence in thinking among various institutional domains of development about the indispensability of inclusive capitalism approaches to bring about socioeconomic development through ICTs.

Chapter 4 (Article 3) Bottom of the pyramid approach to Bangladesh: The case of GrameenPhone in Bangladesh

The paper investigates two BOP initiatives of GrameenPhone Limited- the largest mobile phone operator in Bangladesh. GrameenPhone introduced two initiatives – the Village Phone

Program and Community Information Centres- to deliver various information and communication technology (ICT) services to the rural poor. Both the programs were core business activities of GrameenPhone and had an explicit focus on serving the poor, thereby providing a suitable case to analyze BOP model in practice. The case uncovers some tensions between business strategy and the developmental goals evident in the two programs. More specifically, the paper raises about the extent to which GrameenPhone can be portrayed as a BOP development agent.

Chapter 5 (Conclusion)

This chapter summarizes the main conclusions of the thesis. The thesis reveals the limitations in the BOP approach in contributing to inclusion, by showing the contradictions between the economic logic of business and the social imperative of inclusion. By focusing on a broader view of inclusion, the findings highlight the complex relationship between digital inclusion and social inclusion in developing countries. In particular, the thesis problematizes the notion of inclusive business model predicated on profit-making initiatives, which is different from a broader conceptualization of inclusion that emphasizes improvement of well-being. The thesis also argues that the various dimensions of inclusion are highly contingent on the business strategies and motivations of corporations as well as meso-level organizational formations. The analysis of corporate strategies uncovers how revenue making objectives are driving BOP interventions at the cost of accountability towards stakeholders.

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Chapter 2: Gender Differences in ICT Access and Use in Five Developing Countries

“Not all the world's population will enjoy the gadgety world of the future to the full. A larger portion than today will be deprived and although they may be better off, materially, than today, they will be further behind when compared with the advanced portions of the world. They will have moved backward, relatively.”

- Isaac Asimov (1964)

Digital Inclusion and Social Inequality: Gender Differences in ICT Access and Use in Five Developing Countries

Abstract

The diffusion of new information and communication technologies (ICTs) like computers and Internet provides great opportunities for the well-being of people in developing countries. Does this promise hold true for marginalized socioeconomic groups such as women? This article explores gender differences in ICT provision in Bangladesh, Brazil, Chile, Ghana, and the Philippines, analyzing survey data with around 5,000 respondents who use public access ICT venues. In analyzing the gender differences we used the concept of digital inclusion—measured by various characteristics like skills, user attitude, and other related factors of two ICTs: computer and Internet. The findings show that women in Bangladesh are more likely to suffer from digital exclusion compared to the other countries. In exploring the factors for digital inclusion we found tertiary education and the ability to use ICTs at home significant. The findings further support, the argument, that the issue of digital inclusion needs to be seen in terms of the unique information needs of various socioeconomic groups and in specific social contexts.

Introduction

In the last decade, developing countries have experienced a surge in the provision of new ICTs such as computers and internet. The number of Internet users in developing countries has doubled in 5 years, from 974 million in 2009 to 1.9 billion in 2014, a penetration rate of around 30 percent (ITU, 2014, p. 5). These numbers increasingly lend support to the argument that few communities are left untouched by the “information society” (Broadband Commission, 2013).

The diffusion of ICTs provides great opportunities for the well-being of many in developing countries. These technologies, particularly the Internet, allow people to communicate, seek necessary information, learn, and find employment opportunities. Research on ICTs for development or “ICT4D” initiatives across the developing world has demonstrated the positive role of ICTs in health, education, and governance (Elder, Emdon, Fuchs, & Petrazzini, 2013). Others have argued that ICTs facilitate a more “inclusive public sphere” by enabling the aged, the disabled, and the discriminated to communicate, to network, and to reach policymakers (Gurumurthy, 2006, p. 34). Public access ICT venues such as telecentres, cybercafés, and libraries offer important opportunities for accessing these technologies.

As digital technologies become more and more ubiquitous and important in everyday lives of people in developing countries, those unable to take advantage of the provision of ICT services risk becoming increasingly excluded from the benefits they provide. ICT statistics typically used in numerous reports and policy papers, justifying additional investments and interventions mask important nuances about access and inclusion. For example, ICT penetration rates say very little about regional diversity within countries and communities and it is still unclear how socioeconomically marginalized groups are included in this process of development through ICTs.

This issue is particularly relevant for women. Development scholars have been focusing on the “gender digital divide”—a concept that underscores how in developing world women lag behind men in accessing and using ICTs (Hafkin & Huyer, 2007; Huyer & Carr, 2002). In this article, we shift the focus to “digital inclusion” to analyze the gender differences in ICT provision (computer and internet) in five countries: Bangladesh, Brazil, Chile, Ghana, and the Philippines. Digital inclusion shifts the focus from merely access to incorporating other measures

like ICT skills, levels of use, attitudes, etc. Survey data with a sample size of 5,000 were analyzed. The findings show that in Bangladesh women are more likely to suffer from digital exclusion compared to other countries. In exploring the various factors that either facilitate or hinder abilities to access and meaningfully use ICTs, education, and the ability to use ICTs at home were found to be important. Efforts to reduce the disadvantages women face in the information society must take into account existing socioeconomic inequality. We also find important differences in the way men and women use and benefit from ICTs, thereby, suggesting that ICT programs and interventions could benefit from a gender-sensitive lens in design and implementation.

The article is organized as follows. The next section provides a brief overview of the literature on intersections between gender and ICTs, specifically, from the perspective of social inequality. It is followed by the data and methods section. Here, we also introduce the concept of “digital inclusion” that incorporates a broader understanding of ICT access and use. The next section focuses on patterns of overall communication, measures of digital inclusion, and the social determinants of digital inclusion. It concludes with a brief summary of the results and some broader reflections on research and policy, focusing on gender and ICTs.

Social Inequality, Gender, and ICTs

Over the last two decades, there has been considerable enthusiasm in the international development community about the role of ICTs in socioeconomic development. Much of these interventions had supply-driven focus, that is, a greater emphasis on the technical and economic dimensions of ICT interventions and less on the actual needs and preferences of different socioeconomic groups (Heeks, 2009). This limitation is particularly problematic when it comes

to ICTs and gender. Perspectives from gender and development (also known as the “GAD” approach) argue that women’s status in society is deeply affected by their material conditions of life and by their position in the national, regional, and global economies (Connelly, Li, MacDonald, & Parpart, 2000, p. 62). This perspective also emphasizes the socially constructed differences between men and women and the challenges posed by the existing gender roles and relations, be it on the basis of divisions of labor or power relations.

For the most part, research on ICT4D including the digital divide discourse has not been discussed against the background of a general theory of social inequality (van Dijk, 2006, p. 232). More recently, a number of studies have underscored how the capacity to exploit the potential of ICTs as tools for empowerment is constrained by gender-based determinants, which particularly disadvantage women in all developing regions. In exploring the relationship between gender and ICTs in Ethiopia and Malawi, Geldof (2011) found that existing gender norms in terms of domestic responsibilities gave women less time to interact with ICTs. A study of gender dimensions of access to and use of ICTs across 11 African countries found that women’s lower economic status and educational attainment contributed to them not benefiting equally as men from ICT provision (Milek, Stork, & Gillwald, 2011).

In South Asian context, where traditional patriarchal norms are arguably more evident compared to other developing regions, women face additional barriers in accessing and using ICTs. There are, however, some variation across countries. One study found that the gender divide in terms of access to phones is nonexistent in the Philippines and Thailand but prominent in Pakistan and India and to a lesser extent in Sri Lanka (Zainudeen, Iqbal, & Samarajiva, 2010). In rural Pakistan, Siegmann (2009) found that the use of mobile phones by women is limited because the mobile sets are largely owned by male family members whose permission is often

required for use. In India, caste-based inequalities interact with gender divisions to influence how women benefit from ICTs. Sreekumar (2007) found, significantly, lower participation of women in cyber kiosks because of a host of factors including illiteracy and tribal customs and traditions. Another study of internet kiosks in rural Tamil Nadu revealed that structural factors such as time, location, and illiteracy as the main obstacles to ICT use (Best & Maier, 2007).

In Latin America, Hilbert (2011) found that the discrimination faced by women in society influences how they engage with ICTs. In fact, when set on equal footing in terms of employment and education women seem to embrace ICTs like mobile phones more enthusiastically than men. Similar conclusions were made by Galperin, Mariscal, and Barrantes (2014, p. 42), who found that use of high-speed Internet contributes to greater levels of income for men than women but only because men and women have different occupations and work in different industries.

This brief overview demonstrates that gender-based discrimination and stereotyping are important factors that contribute to the relatively lower levels of access and use of ICTs for women. Digital divide is, as Pieterse (2010, p. 167) argues, a social divide. A gender and development perspective, which is fundamentally based on social inequality, is therefore essential in understanding of the relationship between ICTs and gender.

Data and Method

This article uses survey data with a sample size of around 5,000 from “*The Global Impact Study of Public Access to Information & Communication Technologies*”, conducted by Information School at University of Washington during 2007–2012. The study aimed to generate evidence about the scale, character, and impacts of public access to ICTs (Sey et al., 2013, 2015).

More specifically, this article analyzes data from the “user survey” of the IPAI study, which included interviews of public access ICT users from three types of public access venues—libraries, telecenters, and cybercafes. The sample included five countries: Bangladesh, Brazil, Chile, Ghana, and the Philippines. In each country, a total of approximately 1,000 users were surveyed in approximately 250 randomly selected public access locations (Sey et al., 2013, p. 61). Users were sampled on the premises of public access venues, with around four users selected from each venue. These users were selected randomly: every n th person observed using a computer in the venue was included in the survey. The final selection of the sample for our analysis is given in Table 2.1.

Table 2.1: Final sample of survey respondents selected for analysis

Country	Bangladesh	Brazil	Chile	Ghana	Philippines	Total
Men	786	587	540	754	572	3,239
Women	218	373	455	246	466	1,758
Total	1,004	960	995	1,000	1,038	4,997 ⁶

The age cut off was set at 12 years of age to include teenage and adult users (Survey Working Group, 2012, p. 11). Age was not used as a stratification variable, so that the true age distribution emerges from the random selection. The survey included a number of individual socioeconomic as well as household characteristics such as income, education level, etc. While the main focus of this survey was the use of public access ICTs it included a host of variables that related to the overall communication patterns with a focus on key development domains, ICT access, skills, attitude, frequency, and breadth of use. Given the focus of this article, it is important to emphasize the limitation concerning the gender distribution in the user survey. An

⁶ Besides men and women, the survey had 11 cases in the “Other” category that included gay, lesbian, and transgender. Given the small sample size, this category was removed from analysis.

attempt to stratify the sample by equal number of men and women was mostly successful in Chile, Brazil, and the Philippines but proved difficult in Bangladesh and Ghana (Survey Working Group 2012, p. 11). This reflects, an overall pattern was that public access venues in those countries tend to be patronized a lot more by males than by females (Sey et al., 2013, p. 63). A second limitation is that while the user surveys included every region in Chile and Bangladesh they were administered only in key regions in Brazil, Ghana, and the Philippines for a variety of reasons and, therefore, results are applicable only to the regions covered by the survey (Sey et al. 2013, p. 63). The five countries in the survey are quite heterogeneous in terms of region, level of socioeconomic development as well as ICT indicators. Both the Latin American countries, Brazil and Chile, are significantly more developed and have better ICT indicators than Bangladesh and Ghana. The Philippines falls somewhere in between these two groups (see Table 2.2).

Table 2.2: Human development and ICT indicators in survey countries

	Bangladesh	Brazil	Chile	Ghana	Philippines
Human Development Index (HDI) rank (2014)	142	79	41	138	117
Gender Inequality Index rank (2013)	115	85	68	123	78
Households with a computer	4%	45%	51%	10%	15%
Households with internet access	3%	35%	39%	4%	15%

Source: The HDI and Gender Inequality data is from UNDP (<http://hdr.undp.org/en/data>) and ICT indicators are from Sey (2013, p.64)

Measurement and Analysis

As indicated earlier, research on gender and ICTs has for the most part centered on the concept of gender digital divide. Some scholars, however, have raised concerns about

technologically deterministic dimensions of the concept, that is, the overemphasis on the physical access to technologies. Having physical access to an ICT tool does not mean that one has the ability and opportunity to use it in a meaningful way. For this to happen, a complex array of factors encompassing physical, digital, human, and social resources and relationships where content and language, literacy and education, and community and institutional structures must all be taken into account (Warschauer, 2002). Furthermore, proposing a binary division between information “haves” and “have-nots” overlooks the gradation based on different degrees of access to information technology (Warschauer, 2002).

In this article, we argue that the concept of digital inclusion offers a more useful way to examine ICTs and gender. Defined broadly, digital inclusion refers to individual digital resources that influence digital (dis)engagement as determined by broader social factors (Helsper, 2008, p. 23). Two aspects make the concept both analytically and methodologically robust. First, digital inclusion is fundamentally concerned with addressing inequalities (Seale, 2009, p. 1). Rather than focusing solely on the gaps in technology access between the haves and the have-nots, digital inclusion takes a sociopolitical approach emphasizing the role of digital technology as a means to engage with a broader society (Jaeger, Bertot, Thompson, Katz, & Decoster, 2012, p. 6). Digital inclusion, then, is a more critical and less binary way of understanding how individuals belonging to various socioeconomic groups with unequal access to resources may be excluded because of existing social and economic inequalities. From this perspective, digital inclusion has more resonance with the concept of social inclusion; defined as the freedom to participate in the social, political, and economic activities of the society and to have control over one’s destiny by virtue of the choices and capabilities available (Parsons & Hick, 2008; Sen, 2000; Warschauer, 2002, 2003).

Second, digital inclusion focuses not just on levels of access to ICTs but also on the ability and opportunity to access, adapt, and create new knowledge using ICTs (Warschauer, 2003). From this perspective, motivation, knowledge, and skills become important factors that influence the ability to engage with this technology in the way that one wants. Ultimately, “access” hinges on social, economic, and political contexts that facilitate or limit the ways in which men and women can/cannot physically engage with the available technology.

In measuring digital inclusion selecting the appropriate ICT tools and indicators is a challenge. For the most part, the concept of digital inclusion has been conceptualized and operationalized in the context of the developed world, and hence the focus has been on high-speed Internet access (Helsper, 2008; Jaeger et al., 2012). In contrast, the level of access in developing countries is more modest, and therefore, measurement of digital inclusion needs to be context-specific. In this article, digital inclusion is measured by the two ICT tools mostly available in public access venues in the developing world: computers and Internet. Drawing mainly from Helsper (2008), we create a digital inclusion index based on five broad categories: skills, attitude, frequency of use, location of use, and breadth of use (see Annexure). As discussed above, having the ability or skill is critical for meaningful use of ICT. Attitude toward ICTs is an important dimension as some research shows that women may have more negative attitudes toward technology, broadly (for a discussion, see Hilbert, 2011). Frequency and breadth of use are pertinent indicators particularly, for socially marginalized groups who tend to “dip in and out” of technology use depending on their everyday circumstances (Anderson, 2005). Finally, location of use is an important factor that has an impact of quality of use (Helsper, 2008).

The index is limited by the data available. For example, the index does not include information on mobile phone ownership, which in the last decade experienced a significant growth in developing countries. Further, the index also does not include a measure for quality of access (Helsper, 2008). Finally, due to the variation of the definition of rural cross-country analysis of the urban rural areas are not possible (Sey et al., 2013, p. 137). However, given the specific focus on public access ICTs and the inclusion of a number of relevant indicators these limitations are not major.

Findings

Sources of Information and Purpose of Use

This section briefly explores the gender differences in sources of communication and purposes of ICT use overall communication patterns including non-ICT sources. Figure 2.1 shows the different tools used by men and women for daily information and communication. We find that although women rely less on computers and Internet they are more likely to use mobile phones compared to men.⁷ It is also noticeable that women are more frequent users of “old” ICTs: landlines, radio, and television as found in other studies (Milek, Stork, & Gillwald, 2011). One explanation for higher levels of use of broadcasting equipment such as TV and radio is that the permission for use from other household members, often male, may not be required (Seigmann, 2009, p. 17).

⁷ Country breakdowns show that except Bangladesh in all other four countries more women use mobile phones daily compared to men. The use of mobile phones is, presumably, mostly for voice calls and SMS: 58 percent of the public venue users reported that they never used Internet on a mobile phone (Sey et al., 2013, p. 87). The higher level of mobile phones use by women is, nevertheless, a significant finding as research has shown that mobile phones can be an effective tool for maintaining social networks and for well-being, more generally (Chib, Wilkin, & Hua, 2013).

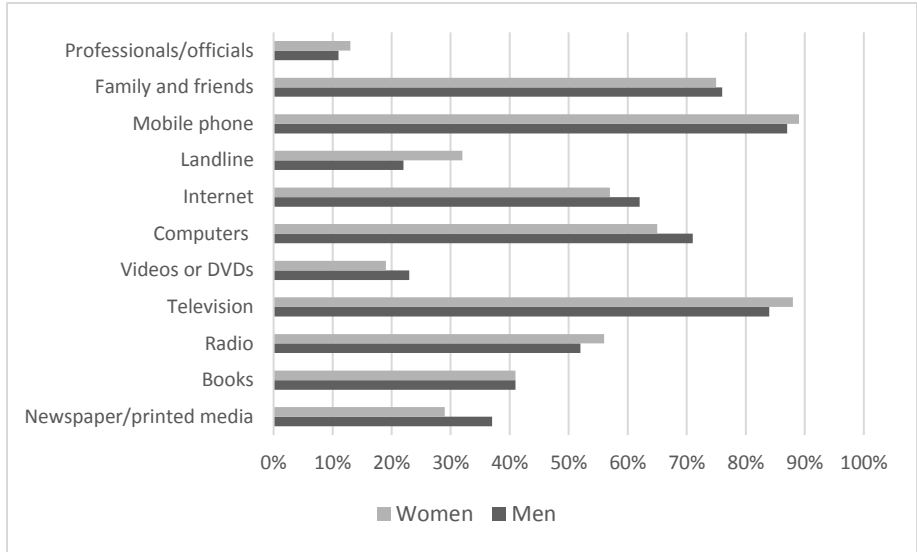


Figure 2.1 Percentage of Respondents Who Use Various Information Sources for Daily Information and Communication (Author’s own analysis)

Table 3.3 shows gender differences in seeking various types of information in public access ICT venues. Clearly, the most sought information by both men and women is education. Chi-square tests of association were conducted to assess whether there is an association between gender and seeking different types of information. We find, statistically, significant difference between men and women’s information seeking in three important areas: employment/business, education, and health. While men are more likely to seek information on jobs/business opportunities women tend to access information on education and health.

Table 3.3: Proportion of men and women seeking various types of information in public access ICT venues

Type of information sought		All (N=)	Bangladesh	Brazil	Chile	Ghana	Philippines
Employment and business opportunities	Men	38%***	65%***	33%	28%***	33%	24%
	Women	23%***	37%***	28%	15%***	32%	20%
Health	Men	9%***	6%**	7%	8%	9%	13%
	Women	14%***	23%**	10%	12%	13%	15%
Education	Men	54%***	35%	46%	43%**	61%	76%**
	Women	66%***	42%	47%	57%**	65%	85%**
Government services	Men	9%**	7%	11%	15%	6%	9%
	Women	13%**	13%	11%	17%	9%	11%
Local news	Men	14%	2%	21%**	24%	16%	12%
	Women	13%	5%	6%**	21%	9%	13%
International news	Men	16%	2%	15%	13%	31%**	15%
	Women	14%	1%	9%	14%	17%**	18%
Entertainment	Men	44%	22%**	40%	50%	52%*	55%
	Women	41%	8%**	31%	43%	40%*	52%

*p < .05, ** p< .01, ***p<.001

Measures of Digital Inclusion

In this section, we present the findings on the extent to which men and women are digitally included. Table 2.4 shows the various components of digital inclusion that was used to construct the digital inclusion index.

Table 2.4: Gender differences in the components of individual digital inclusion

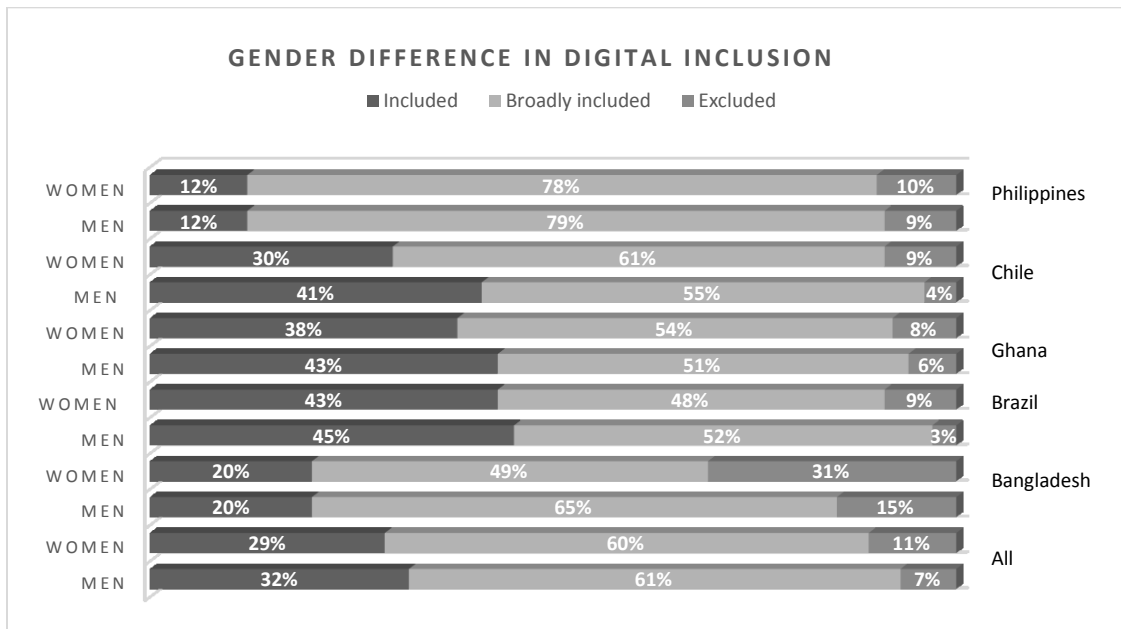
			All	Bangladesh	Brazil	Chile	Ghana	Philippines
ICT Skills	Good knowledge in using computers	Men	60%	44%	70%	72%	77%	39%
		Women	53%	25%	67%	68%	64%	36%
	Good knowledge in using internet	Men	65%	44%	78%	76%	80%	45%
		Women	61%	35%	77%	73%	68%	39%
Attitude	Agree using computers is enjoyable	Men	95%	97%	92%	92%	96%	96%
		Women	94%	94%	93%	91%	95%	96%
	Disagree internet is confusing	Men	79%	61%	86%	83%	83%	85%
		Women	74%	38%	77%	80%	77%	80%
Frequency of use	Use computer daily or almost daily	Men	70%	60%	80%	77%	66%	73%
		Women	64%	45%	75%	73%	50%	65%
	Use internet daily or almost daily	Men	62%	36%	78%	72%	61%	71%
		Women	57%	18%	71%	64%	40%	65%
Location of use	Use computer at home mostly	Men	25%	22%	28%	32%	31%	9%
		Women	23%	16%	31%	33%	24%	9%
	Use internet at home mostly	Men	13%	8%	27%	19%	9%	7%
		Women	16%	4%	30%	20%	11%	7%
Breadth of use	Tasks done on computer - high	Men	46%	23%	57%	67%	51%	42%
		Women	44%	14%	45%	60%	36%	46%
	Tasks done on internet – high	Men	32%	9%	43%	52%	32%	35%
		Women	33%	4%	45%	54%	18%	36%

When all the countries are considered there is no discernible difference between men and women in terms of various ICT indicators of use, attitude, and skill. In particular, gender differences in more “individual” ICT characteristics such as skills and are miniscule. A comparison among the countries, however, reveals significant gender differences across almost all the indicators in Bangladesh and Ghana. In Bangladesh 44 percent of the men have good knowledge in computers compared with 25 percent of the women. In Ghana, 77 percent and 80 percent of the men cited having good knowledge in using computers and Internet respectively, compared with 64 percent and 68 percent of the women.

In Bangladesh and Ghana there is a significant difference between men and women in frequency of computer and Internet use. 60 percent of men in Bangladesh use computers daily compared to 45 percent of women. The proportion of men using Internet daily (36 percent) is more than double the proportion of women (16 percent). Similarly in Ghana, 66 percent of men use computers daily compared to 50 percent of the women while only 40 percent of the women use Internet daily compared to 61 percent of the men. Best and Maier (2007, p. 152) found similarly lower level of use of Internet kiosks by women in India citing lack of time, interest, and illiteracy as the main factors for the infrequent use.

We then aggregated the indicators shown in Table 4 to create a digital inclusion index (see Annexure). The resulting index was then categorized into three levels of inclusion: included, broadly included, and excluded. Figure 2.2 presents the percentages of these three levels of digital inclusion and exclusion by gender in each country.

Figure 2.2: Gender differences in digital inclusion by country



An initial look at Figure 2.2 indicates that in all the five countries a majority of the survey respondents can be categorized as included digitally. This is not surprising given the selection bias, –that is, all the survey respondents went to public access ICT facilities, and therefore, are exposed to computer and Internet at a minimum level. What we are more interested in, however, is the difference between genders across the five countries. When considering all the countries together, women are more excluded than men although the difference is not big. A focus on specific countries reveals some clear divergences in gender digital inclusion in Bangladesh where more than 30 percent of the women are excluded and are twice as likely to be excluded compared to men.

Social Determinants of Digital Inclusion

Table 2.5 provides key socio-demographic variables of the respondents by gender. In Bangladesh, men who use public access ICTs are, significantly, more likely to be employed than women. There are fewer women employed in Brazil and Chile compared to men but the employment gap in these two countries is much smaller than Bangladesh. In Ghana and the Philippines there is greater equality in terms of employment status with the Philippines standing out with greater number of women being employed than men. A closer look at the data on employment characteristics reveals that the proportion of women with part-time work is greater than that of the men who have more full-time job or are self-employed. The top three sectors of work for men are: business services, education, and retail/wholesale while for women top three sectors are retail/wholesale, business services, and government.

Table 2.5: Various social and demographic characteristics by gender

		All	Bangladesh	Brazil	Chile	Ghana	Philippines
Employed (self, full-time and part-time)	Men	41%	44%	55%	44%	33%	29%
	Women	35%	24%	45%	35%	31%	36%
Tertiary education	Men	31%	43%	14%	15%	34%	43%
	Women	30%	29%	15%	18%	30%	56%
English proficiency fair, good or very good	Men	77%	91%	45%	49%	99%	90%
	Women	68%	83%	31%	42%	99%	93%
Age 34 or less	Men	90%	88%	90%	81%	92%	94%
	Women	88%	90%	91%	73%	95%	95%
Computer at home	Men	58%	39%	61%	77%	70%	45%
	Women	54%	25%	62%	75%	56%	40%
Internet connection at home	Men	28%	15%	41%	33%	28%	28%
	Women	27%	8%	41%	34%	21%	22%

Education, particularly literacy, has a direct impact on the ability to use computers and Internet. Table 2.5 gives gender differences in the highest level of formal education as well as English proficiency. With the exception of Bangladesh, men and women have similar education achievements measured in terms of tertiary education completed. In Bangladesh, 45 percent of the male respondents completed tertiary education compared to 29 percent of the women. The measure for English proficiency combines responses of fair, good, and very good. There is a high level proficiency in English among the respondents from Ghana and the Philippines and Bangladesh. The two Latin American countries Brazil and Chile show a much lower level of proficiency in English. Given that the use of computers and Internet is quite high in both of these countries it appears that lack of proficiency in English is not a major barrier.

Age interacts with ICT use in complex ways. Although the older one gets the more years of education and, possibly, income the younger generation is assumed to be more comfortable with the various ICTs than the older generation (Deen-Swarray, Gillwald, & Morell, 2012, p.

23). We find that the users of public access ICTs were overwhelmingly young. Around 90 percent of both men and women were aged 34 or less. Finally, the two ICT-related indicators at the household levels were explored. There is no major difference in the proportion of men and women who have computer and Internet at home. This is not the case, however, in Bangladesh where the number of women who come from households with computers and Internet is much smaller than the men.

A picture that emerges is that a majority of the women are digitally excluded in Bangladesh; they are also less educated and have lower income and fewer women have computers and Internet at home compared to men. To explore this issue more closely, we analyze the socioeconomic profile of the group that suffers from the most extreme digital exclusion: women in Bangladesh. We find that this group of digitally excluded women has significantly lower socioeconomic status compared to the rest of the surveyed men and women in all the countries (only 17 percent had income above poverty line, 23 percent are employed, 20 percent had tertiary education, 9 percent had computer at home while none had Internet connection at home).

While the findings indicate a clear association between digital inclusion and social factors, we are interested in better understanding the relative strengths and direction of the associations between them. We use Pearson correlation coefficient to analyze the relationship between digital inclusion and various socioeconomic characteristics including gender. Table 2.6 presents the results.

Table 2.6: Pearson correlation of digital inclusion and socio-demographic characteristics

Correlation of Digital inclusion and	All	Bangladesh	Brazil	Chile	Ghana	Philippines
Being a woman	-.06***	-.14**	-.07*	-.06**	-.15**	-.08**
Age	.00	-.09*	.06	-.25**	.18**	.09**
Income	.11**	.18***	.21***	.05	.13**	.14**
Household income	.15***	.42***	.28***	.34**	.03	.24**
Education	.15***	.45***	.20***	.23**	.31**	.19**
English proficiency	.19***	.49***	.26***	.30**	.29**	.28**
Computer at home	.48***	.56***	.41***	.45**	.42**	.32**
Internet connection at home	.44***	.51***	.43***	.47**	.42**	.31**

*p < .05, ** p< .01, ***p<.001

The correlation between gender and digital inclusion is negative but weak across all the countries, particularly in Brazil, Chile, and the Philippines. In line, with findings from other studies education and to a lesser extent income are positively correlated with digital inclusion (Deen-Swarray, Gillwald, & Morell, 2012; Hilbert, 2011). Higher level of formal education as well as better proficiency in English has moderately strong relationship with digital inclusion. The correlation is particularly strong in Bangladesh where women in the study sample have, significantly, lower levels of education. The correlation with personal income is weaker than expected. Household income has a stronger correlation with digital inclusion compared with individual income.

Two ICT-related indicators (computers and Internet at home) show a strong positive correlation with digital inclusion in all the countries. While this link between the availability of ICTs within the household and digital inclusion indicators such as frequency and breadth of use may be expected it also needs to be stressed that we are concerned here with “... active usage by a specific person as an indicator of access, not the plain existence of equipment in the household” (Hilbert, 2011, p. 482). Again, it is useful to take a closer look at the data from

Bangladesh where gender difference in digital inclusion is most pronounced. While 25 percent of the women have computers at home in Bangladesh, only 16 percent of them cite that home is the most frequent location where they use computers. It would appear that some women are not using available ICTs at home. In Pakistan, Seigmann (2009, p. 13) found similar results:

“The widest gender gaps in ICT utilisation exist in the area of computer equipment available at respondents’ homes: Whereas 80 per cent of males with a computer present in their household and all men who have internet access at home actually use these devices, this is the case only for 40 and 20 per cent of all related female respondents.”

In exploring the reasons why women are not using ICTs at home one possible explanation is the gendered role and responsibilities and household dynamics that play a role in women not being able to take advantage of ICTs (Geldof, 2011). Despite the challenges faced by women going outside to access the ICT services, as discussed above, in some contexts public access ICT venues are playing a significant complementary role in ensuring that women have alternative options to use computers and Internet (Sey et al.,2013). Nevertheless, the non-use of ICT at home is problematic because it deprives users from greater flexibility and learning opportunities (Helsper, 2008, p. 24).

Predicting Digital Inclusion

So far we have seen that a number of socioeconomic variables are correlated with digital inclusion. There is still a need to better understand if these relationships still hold true while controlling for various factors, including gender (Hilbert, 2011). A linear regression model was used to assess the strength of the relationship between digital inclusion and gender and other various socioeconomic factors allowing for a closer study of the key variables that can predict digital inclusion while controlling others. The dependent variable is the digital inclusion index

with values that are continuous, ranging from 7 to a maximum of 40, and is normally distributed. The following independent variables included: gender; age, divided into three groups (12–19, 20–34, and reference group 35 and over); education, divided into three groups (secondary and post-secondary, tertiary, and reference group is no or primary education); occupation categorized into three groups (employed full or part time or self-employed, student, and reference group included the retired, unemployed, and homemaker). In addition to the individual socioeconomic variables, the model also included two context variables: rural/urban and country. Given that the urban and rural areas are not comparable across the five countries this variable was included only in the country-specific models. Finally, the model included country dummies, with Bangladesh, that demonstrated the greatest gender difference in digital inclusion among the countries and has the lowest development and ICT indicator as the reference country.

The results of the linear regression model in standardized or normalized beta coefficients along with significance levels are provided in Table 2.7. When all countries are included in the model the independent variables in the analysis are able to explain around 40 percent of all the variation in digital inclusion. If specific countries are considered, the models in Bangladesh (54 percent) and Chile (45 percent) are more robust compared to the other three countries.

Table 2.7: Predicting digital inclusion: linear multiple regression

Variables /standardized beta weights, sign (+ or -) and significance	All	Bangladesh	Brazil	Chile	Ghana	Philippines
Gender (women=0, men 1)	.06***	.09***	.05	.01	.12***	.04
Age 12-19	.25***	.13**	.29***	.36***	.04	-.02
Age 20-34	.29***	.18***	.31***	.32***	.15*	.09
Secondary and post-secondary education	.07***	.24**	-.01	.14***	.09*	.08
Tertiary education	.19***	.37***	.06	.16***	.19***	.22**
English proficiency (scale 1-4)	.21***	.21***	.13**	.12***	.18***	.21***
Computer at home (no=0, yes 1)	.24***	.26***	.17***	.26***	.24***	.18***
Internet connection at home (no=0, yes=1)	.22***	.28***	.26***	.28***	.27***	.17***
Student 1, otherwise=0	.08***	.14**	.02	.09*	.10**	-.02
Employed part and full time, and self-employed =1, otherwise=0	.09***	.13**	.16**	.06	.03	-.03
Rural=0, Urban=1	N/A	.06*	.02	.03	-.01	.00
Country dummies (reference =Bangladesh)	Significant (p<.001) and positive for all four countries; order in terms of strength: Brazil, Chile, Ghana and Philippines					
R squared	.41	.54	.29	.45	.37	.26

*p < .05, ** p< .01, ***p<.001

The results generally reinforce some of the previous bivariate findings and offer some additional insights. First, controlling for all other factors in the model, being a man is positively correlated with digital inclusion. This relationship, however, is weak overall and not statistically significant in Brazil, Chile, and the Philippines. In contrast, being a woman in Bangladesh and Ghana increases the probability of being digitally excluded. In other words, controlling for all other factors, the effect of gender is quite persistent in Bangladesh and Ghana. This finding supports Milek, Stork, and Gillwald (2011) who found significant gender effect for knowledge and use of Internet in 17 African countries (pp.132–133). Similarly, Zainudeen, Iqbal, and

Samarajiva (2010) found that gender differences were consistent across various income groups in five Asian countries.⁸

The regression results indicate that compared to the age group 35 and older, both the younger age groups are more likely to be digitally included, particularly in Brazil, Chile, and Bangladesh. Given that being older, significantly, reduces the chances of digital inclusion and that the survey respondents are generally young, there is a strong possibility that older individuals, particularly older women, are being left out of the information society, particularly, in contexts where technologies change rapidly.

Results also reveal that levels of education as well as proficiency in English are strong predictors of digital inclusion. The effect is particularly strong for those with tertiary education. The fact that the effect of tertiary education is the highest in Bangladesh indicates that high levels of education and human capital may be needed to overcome existing socioeconomic barriers that inhibit digital inclusion. Being a student has very little effect on digital inclusion that may mean that ICT-based learning are largely absent in educational institutions. This is somewhat surprising in the context of both Chile and Brazil where government policies have emphasized the provision of ICTs such as laptops as a means for both learning and social inclusion (Rashid, Camara, Ng, & Richero, 2013). Additionally, having computer and Internet connection at home are significant predictors of digital inclusion as seen in the bivariate correlation results. However, as discussed above, the availability of ICTs provision at home does mean actual use and this holds true for both men and women. Further research could look into the reasons for non-use.

⁸ This is in contrast with other research that showed education and income were instrumental in the gender difference that turned out in favor of women (Hilbert, 2011).

A rather surprising finding is that full-time employment is not a significant predictor of digital inclusion in contrast to other studies (Hilbert, 2011; Milek, Stork, & Gillwald, 2011, p. 137). This would indicate that like educational institutions employment settings are not the most effective venues for digital inclusion. This is plausible given that most of the occupations such as retail/sales do not require high levels of ICT skills. However, as the present study does not include in-depth exploration of the type of occupations these generalizations need to be made with caution. Nevertheless, we need to stress that having a job (part-time or fulltime) or being self-employed is not a strong predictor of digital inclusion compared to education. Being in a rural or urban location had no association with digital inclusion.

Finally, country dummy variables showed that compared to Brazil, Chile, Ghana, and the Philippines, being in Bangladesh increases the probability of being digitally excluded, controlling for all other variables considered in the regression model. One plausible explanation is that the level of digital inclusion would be a direct outcome of the overall levels of ICTs of a country (Zainudeen, Iqbal, & Samarajiva, 2010). This also appears to be evident in this study that Bangladesh and Ghana have much lower levels of ICT penetration (see Table 2).

Conclusion

The following conclusions can be drawn from the article. First, findings challenge a commonly held assumption in the discourse on technology and gender that compared to men women are more likely to be lacking in digital competencies. We find very little difference between men and women in terms of ICT skills with the exception of Bangladesh. The findings also do not support the assumption that women demonstrate more negative attitude toward ICT. A point to emphasize here is the diversity within women in terms of social advantage and digital

inclusion. This article highlighted important differences in the way women in Bangladesh, for example, are able to access ICTs compared with women in Chile. Similarly, women in Chile, Brazil, and Ghana have better ICT skills than women in Bangladesh and the Philippines. Critics have pointed out the tendency in many ICT4D research treating groups such as women or “the poor” as a homogenous group (Heeks, 2009). The fact is that there can be tremendous variation within the population of women in any given country with regard to age, ethnicity, education, skills, employment, income, and geography among other factors (Deen-Swarraj, Gillwald, & Morell, 2012; Helsper, 2008; Hilbert, 2011; UNCTAD, 2014; Zainudeen, Iqbal, & Samarajiva, 2010). Overall, this article supports the assumption that some of these categories—individually or in groups—are greater determinants of the relationship to ICT than gender. For example, we found that education was stronger determinant of ICT access and use than gender. In fact, the effect of education was particularly stronger in contexts where women face socioeconomic barriers such as Bangladesh. Therefore, the interactions between women and ICTs need to be analyzed as a dynamic process to draw out the intervening empowering (as well as disempowering) factors.

Second, the findings reinforce the fact that men and women have different needs and preferences in using ICTs. The use and non-use of ICTs, therefore, are “gendered.” For instance, the proportion of men who access information about jobs is greater than women; women are using public access ICTs to seek information about other important domains such as education and health. Women are much more frequent users of older ICTs like television, radio, and landline. A rather significant and encouraging finding is that women are using mobile phones more than men. Finally, we found that the preference for various ICT and non-ICT modes of communication varies significantly by country. The implication is that while striving for equality

in access and to reduce the “gender gap” is important, research and policy interventions need to move away from singular supply-side focus on providing ICT equipment to a more nuanced understanding of the use of ICTs by diverse user groups in meaningful ways. From this perspective, gender equality in ICTs need not strive for equality in numbers of men and women using various technologies but rather using them for purposes that fulfill specific individual motivations and needs.

Framing of gender equality in terms of distinct needs of men and women preclude concerns about how men and women have differential access to ICTs. In fact, we need to be careful that women’s disadvantage in terms of digital inclusion is not lost in the claim that men and women simply have different purpose and use of ICTs and any difference would, therefore, be justifiable. A third contention that the article makes is that differential access and use of ICTs needs to be analyzed in terms of broader questions of social inequality. We argue here that digital inclusion is important for the people under study, precisely, because of its strong association with social factors. Empirical findings show that in all the five countries of study women are less included than men, although the difference is pronounced only in Bangladesh. Statistical tests confirmed the correlations between social (dis)advantages and digital inclusion highlighting various country nuances of how digital exclusion is reinforced by social disadvantage. Being a woman, increases the possibility of being digitally excluded but overall the gender effect is not as strong as other socioeconomic factors, notably education.

In sum, the findings of the article support claims that digital inequalities mirror patterns of social inequalities (Pieterse, 2010). While this is a very important point to acknowledge there is a need to advance the ICT4D agenda where the focus shifts more on making use of existing capabilities of the majority of people for their unique needs and productive purposes. This article

has shown that women, in the five countries, have considerable skills and acceptance of technologies that can lead to greater gender equality in terms of ICT-enabled socioeconomic development. From this view, instead of overly focusing on ICTs (“the technology”) and seeing women as lacking the agency to bring positive changes in their lives through ICTs and imposing preexisting designs that people need to adapt to, focus should lie on specific resources, capacities, and demands of individuals (Heeks, 2009). As Faulkner and Lie (2007, p. 170) argue, “...there can never be a single ‘cure all’ strategy to improve gender inclusion in the information society—precisely because there is so much diversity and fluidity in both gender and ICTs.” Ensuring that ICT-driven innovations are amenable to the particular local socioeconomic, political, and cultural context should be the primary concern for policymakers.

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Annexure: Index of digital inclusion

	Variable	Scale
ICT Skills	How do you consider your skills and knowledge in using computers (Q2_6)	1=poor; 2=Fair; 3=Good; 4=Very good
	How do you consider your skills and knowledge in using the Internet (Q2_7)	1=poor; 2=Fair; 3=Good; 4=Very good
Attitude towards ICTs	Agree or disagree - Using computers is an enjoyable experience (Q2_15c)	1=Strongly disagree 2=somewhat disagree 3=somewhat agree 4=strongly agree <i>Recoded</i>
	Agree or Disagree that - Internet is confusing and hard to use (Q2_15a)	1=Strongly agree; 2=Somewhat agree 3=Somewhat disagree 4=Strongly disagree
Frequency of use	Appx how often do you use - Computers - for information and communication (Q2_12f)	0=Never; 1= a few times a year; 2=at least once a month 3=at least once a week 4=daily or almost daily <i>Recoded</i>
	Appx how often do you use - The Internet - for information and communication (Q2_12g)	0=Never; 1= a few times a year; 2=at least once a month 3=at least once a week 4=daily or almost daily <i>Recoded</i>
Access location	Where do you most often use computers Q4_1	0=no use 1=PAV, 2=Work/School, 3=friend/relative 4=home (<i>Recoded</i>)
	Where do you most often use the Internet Q4_2	0=no use 1=PAV, 2=Work/School, 3=friend/relative 4=home (<i>Recoded</i>)
Breadth of use	Tasks done on computer (CLPS Q2_13)	1=no task, 2=low, 3=medium, 4=high
	Tasks done on internet (CLPS Q2_14)	0=never used the internet, 1=no task, 2=low, 3=medium, 4=high
Total		Total range (7-40) 7-18; 19-28; 29-40

Chapter 3: Case Studies of Telecenters Fostering Inclusion through ICTs in Bangladesh

“Governments cannot do it alone. We need support from business communities, civil societies, philanthropists, and faith leaders, and we need coalitions, we need alliances, multistakeholder platforms. This is our business model, and we know that it works.”

Ban Ki Moon, UN Secretary General (2011)⁹

⁹ Remarks to Non-Governmental Organizations. 26 October 2011. Retrieved from <https://www.un.org/sg/en/content/sg/speeches/2011-10-26/remarks-non-governmental-organizations>.

Inclusive Capitalism and Development: Case Studies of Telecenters Fostering Inclusion through ICTs in Bangladesh

Abstract

Lack of sustainable approaches for public access venues such as telecenters has led to the emergence of several entrepreneurial and market-driven telecenter models in developing countries that are driven by multinational corporations, governments, and social enterprises. This trend falls under the rubric of inclusive capitalism, which argues that in the contemporary socioeconomic context, private investment and entrepreneurial activities are crucial for economic growth and job creation in developing countries. In this article, I undertake three case studies of telecenters in Bangladesh: a private-sector enterprise developed and operated by a multinational corporation, a social enterprise, and a public-private partnership. The case studies combine a review of organizational documents and an analysis of survey data. While a common feature of all three cases is the reliance on market mechanisms to provide affordable ICT services to the poor, the findings highlight how the initiatives approach the issue of inclusion differently. This article illustrates the convergence in thinking among various institutional domains of development about the indispensability of inclusive capitalism approaches to bring about socioeconomic development through ICTs.

Introduction

Since the turn of the century, developing countries have experienced a surge in the diffusion of new information and communication technologies (ICTs) such as computers, the Internet, and mobile phones.¹⁰ Yet the pace and reach of this diffusion have been uneven across

¹⁰ Data from the International Telecommunication Union (ITU) indicate that from 2005 to 2015, the percentage of households with a computer has doubled (from 15% to 33%), and the percentage of households with Internet access

the developing world. Many people still lack access to the Internet despite the significant rise of mobile phone penetration over the last decade. In a context of widespread connectivity, those without access to ICTs risk exclusion from the benefits of the information society, leading to further marginalization. In such contexts, public access venues—that offer Internet and computers as well as other, related services to the general public—are still pertinent (Sey, Coward, Bar, Sciadas, Rothschild, & Koepke, 2015; Zainudeen, Perera, & Galpaya, 2013). For example, in many developing countries, telecenters make an important contribution to local socioeconomic development by providing low-cost local access to information and knowledge services. Despite their promise, however, many telecenter programs—mostly funded through international donor agencies—are unsustainable (Best & Kumar, 2008; Liyanage, 2009). Against this backdrop, several new telecenter models have emerged in developing countries based on entrepreneurial and market-driven strategies. Unlike donor-driven approaches, the new set of strategies are driven by multinational corporations (MNCs), governments, and social enterprises. In a way, these models have emerged from the three main “institutional domains of development landscape”: market, state, and civil society (Banks & Hulme, 2014, p. 181).

While state, market, and civil society are not homogenous categories and often interact in complex ways, one of the most interesting shifts in recent thinking is the convergence of these actors around the need for a greater balance between the indispensability of market forces and the equitable distribution of services and benefits (Pieterse, 2010; Porter & Craig, 2004). One term that has been used to capture this convergence is *inclusive capitalism*. Proponents of inclusive capitalism argue that in the contemporary socioeconomic context, private investment and entrepreneurial activities are crucial for economic growth and job creation in developing

has quadrupled (from 8% to 34%). Growth of mobile phones has been particularly dramatic: In the last 10 years the mobile subscription rate rose from 23% to 92% (ITU, 2015).

countries (Prahalad & Hammond, 2002). Closely associated with inclusive capitalism are the bottom-of-the pyramid (BOP) approaches, which call for MNCs to creatively offer products and services to poor and marginalized peoples and, in doing so, contribute to socioeconomic development. While BOP approaches and business models are informed by the values of neoliberalism (competition, efficiency, self-governance), they are also premised on an ideology of inclusion (Blowfield & Dolan, 2014). Telecenters have been a focus of various social enterprise models that look for a balance between economic goals and social goals. Finally, governments, after sitting on the sidelines for years, are showing a greater interest in undertaking market-driven ICT for development (ICT4D) interventions that provide affordable services to citizens in a sustainable manner.

The multiplicity of actors initiating these telecenters poses interesting questions about developmental objectives and the various mechanisms and processes adopted to achieve these goals. Development, as is well known, is a contested notion, and variations in institutional definitions of development can lead to different strategies for deployment and implementation of ICT4D projects in different contexts (Avgerou, 2010; Kuriyan & Bussell, 2007).

To shed light on how institutional definitions of *development* influence the design and implementation of development-oriented interventions, in this article I analyze three types of telecenters in Bangladesh: a private sector enterprise developed and operated by an MNC, a social enterprise, and a public-private partnership. In focusing on the main motivations for creating telecenters in each of the cases, I draw out the differences in the ways each intervention works in practice and the perceived impacts on users. These are discussed in terms of how the different actors conceptualize development and the way these perceptions are viewed. As issues of equity have become cornerstones of development discourse and (ostensibly) of practice over

the last two decades, I pay particular attention to the concept of *inclusion*—as a key element of development featured in all three institutional domains of a market-driven development landscape.

Bangladesh provides an intriguing context for exploring these questions. Beginning around 2005, the country experienced a rapid growth in ICTs, facilitated by market liberalization that encouraged significant private investment. The telecommunication sector as a whole is the largest recipient of foreign direct investment in the period 2005–2011 (UNCTAD, 2013). At the same time, there was a consensus among various stakeholders, namely civil society, government, and donors, that ICTs can play an important role in development. In 2010, the Bangladesh government announced the vision of “Digital Bangladesh,” whose objective was socioeconomic transformation enabled by ICTs. Many NGOs have been working on ICT-based services for improving health, education, and livelihoods. Overall, the ICTs attracted considerable interest from all sectors, arguably creating the necessary conditions for ICT-enabled development.

This article is structured as follows: The next section introduces the concept of inclusive capitalism, highlighting the convergence of market, state, and civil society actors from the ICT4D field. The concept of inclusion is elaborated further in the domains of ICT4D. The section following outlines the methodological approach of this article and describes the data sources. I then undertake three case studies, with information on the goals, scope, and perceived impacts of telecenter initiatives of MNCs, social enterprises, and public-private partnerships. In the concluding section I elaborate on some emerging reflections from the conceptual discussions and the case studies.

Inclusive Capitalism and Development: The Case of ICT4D

Rising levels of inequality among and within nations have put the scrutiny squarely on conventional capitalism, particularly in circumstances that expose commercial and corporate mismanagement and an obsession with profits. A key concern relates to how capitalism often leads to social exclusion for the world's poor (Byrne, 2005). It is against this backdrop that the notion of inclusive capitalism has emerged, with a call for a market-oriented economic agenda that offers greater economic opportunities for those living in poverty.

One of the earliest expositions of inclusive capitalism posits that large corporations can improve the conditions of the world's poor by promoting commercial activity, employment opportunities, access to credit, and wealth creation (Prahalad, 2005; Prahalad & Hammond, 2002).¹¹ The proposition argues for a fundamental shift in the way the world's approximately 4 billion poor living at the bottom of the economic pyramid in the developing and emerging countries are viewed, recognizing them as "resilient and creative entrepreneurs and value-conscious consumers" (Prahalad, 2005, p. 1) who could be the engine of the next round of global trade and prosperity. A key premise of the BOP thesis is that the poor suffer from inadequate access to markets; therefore, there is a need to integrate them into the global economy through new models of financial inclusion, consumption, and entrepreneurship.

Debates on inclusive capitalism and development have centered on the faith put in business to generate prosperity and be a legitimate development agent (Blowfield & Dolan, 2014). Under the BOP thesis, the tension between corporate emphasis on addressing social challenges and a drive for profits is mitigated by the proposition that both can be achieved

¹¹ There are many views on the notion of inclusive capitalism. See, for example, the Coalition for Inclusive Capitalism website (<http://www.inc-cap.com/>) and Carney (2014).

simultaneously. The mantra of “doing well by doing good” is nested in an emerging discourse on applying commercial business principles to social problems. International development institutions such as the United Nations Development Programme (UNDP, 2008) advocate for strategies for the simultaneous pursuit of revenues and social impact. Development institutions have urged a host of private actors to create more inclusive business models around the globe that will help create opportunities and improve the lives of many of the world’s poor. The influence of the notion of inclusive capitalism saw BOP approaches seeping into the discourse and practices of state and civil society in addition to private-sector initiatives. In fact, the ecosystem of wealth creation to build the necessary conditions for inclusive capitalism comprises a broad range of actors, including businesses, governments, NGOs, social enterprises, etc., as well as organizational forms such as new business models, partnerships, modes of finance, and development assistance (Prahalad, 2005).

The Case for ICTs for Development

Knowledge has emerged as an important factor in global economic production and innovation. New ICTs such as the Internet and mobile phones enable people to access, use, and share information and knowledge at an unprecedented level. They also offer great potential for socioeconomic development, be it in education, health, or livelihood opportunities. According to Prahalad (2005), BOP consumers accept advanced technologies readily, and one of the key features of the BOP market is that it is connected and networked. These factors make ICTs for development particularly hospitable for inclusive capitalism. By the turn of the millennium, corporations and other private actors in ICTs had joined the poverty alleviation “business”—not

as a byproduct of their operations, but as an explicit part of it (Ray & Kuriyan, 2012). The following literature review illustrates the point.

Many MNCs have undertaken initiatives that combine the goals of economic returns with community impact as part their core operations. Hewlett Packard's (HP) Mogalakwena HP i-community project in South Africa was designed as a sustainable business model that uses ICTs to create breakthrough models to improve literacy, job creation, income, and access to government, education, and healthcare services while realizing for HP both brand and business value (McFalls, 2007). In 2007, Safaricom, an affiliate of Vodafone and Kenya's largest mobile operator, launched the mobile phone money transfer application called M-PESA, which had the dual goals of deepening financial access by facilitating funds transfers (e.g., remittances from relatives, salaries, etc.) for the poor and being a self-sustaining commercial product (Kuriyan, Nafus, & Mainwaring, 2012).

There has also been a surge of interest in market-based ICT4D models from the nonprofit and governmental sectors, increasingly drawn by community demand and perceived economic benefits. A common modality of governmental interventions in ICT4D has been the public-private partnership, motivated by the need to leverage and combine skills and resources from several organizations to achieve shared goals. The Indian government initiated "common services centers" to offer e-government and other services in rural areas, a prime example of such partnerships, where costs are shared between the government and private enterprise. Importantly, private enterprises encompass a wide range of actors, including small-scale entrepreneurs and MNCs. One of the most widely analyzed telecenter projects through a public-private partnership in India, the Akshaya project, was a partnership between the Kerala state government and private entrepreneurs to provide ICT services such as e-government services,

online exams, and agricultural information through e-centers connected to a wireless Internet infrastructure (Kuriyan & Ray, 2009; Kuriyan, Ray, & Toyama, 2008). The Kerala state played a pivotal role, providing subsidies for the development of these telecenters and recruiting local entrepreneurs to run the centers, who rebranded themselves as capable of upholding business management principles and practices (Kuriyan & Ray, 2009).

The *social enterprise model*—applying commercial strategies to address social problems and market failures—also fits nicely under the rubric of inclusive capitalism. Specific to the ICT4D domain, many telecenters in developing countries have adopted a social enterprise or social outsourcing business model to offer ICT goods or services (Gurumurthy, 2010; Heeks & Arun, 2010). Several NGO-led initiatives, frequently with donor funding, created several small-scale telecenter programs, often on a pilot basis and with an explicit social/developmental focus. For example, the main aim of the village knowledge centers of the MSSRF (MS Swaminathan Research Foundation) in India is to empower largely unskilled, resource-poor rural farming and fishing communities to make better choices and achieve greater control of their own development through skills and capacity building for improved livelihoods, with an emphasis on community participation and promotion of access for women and those belonging to scheduled castes).

This brief exposition highlights the diversity of approaches among government, civil society, and private initiatives, reflecting a complex array of stakeholders and implementing partners with significant bearings on the operations, and management of telecenters and the types of services offered (Mukerji, 2008). Although this section broadly lays out some of the broad features of inclusive capitalism, with examples from ICTs for development that embrace its

ethos, there is a need to look more closely at the concept of inclusion as a core developmental element of inclusive capitalism.

Inclusion and ICTs

The concept of inclusion (and exclusion) transcends socioeconomic, cultural, and legal dimensions as well as local and national contexts. Debates on inclusion have evolved from a focus on poverty alone toward an understanding of the causes and consequences of social (dis)advantages such as capability, deprivation, human rights, and social participation (Levitas, 1996; Sen, 2000). An important feature of inclusion is that it is possible to investigate it both in terms of structural factors and individual life experiences (Mervyn, Simon, & Allen, 2014).

In analyzing the intersection of inclusive capitalism and ICTs, I propose two overlapping dimensions of inclusion in this article. The first dimension relates to the concepts of digital inclusion and social inclusion and the links between them. Rooted in the belief that connectivity, notably to the Internet, is the most effective and efficient way to gain greater prosperity, *digital inclusion* refers to the access and ability to use ICTs, with an explicit focus on marginalized populations.

Against the backdrop of increasing connectivity, ICT practitioners are moving their focus from access to use of services. The concept of social inclusion, which emphasizes the effective integration of ICT4D purposes, captures the transformational potential of ICTs (Warschauer, 2002). Here, the main concerns relate to how ICTs can promote human development—health, education, political participation, and economic well-being— seeking to foster opportunities for the poor to increase material wealth. While the link between digital and social inclusion is highly

relational in that digital inclusion is expected to lead to social inclusion (Sen, 2000), this link is often tenuous, owing to a host of individual and contextual socioeconomic factors (Bure, 2005).

The second dimension of inclusion relates to the integration of consumers and/or entrepreneurs into the BOP value chain. Inclusion at the consumer level is primarily about making ICT products and services more affordable and accessible, which in turn can facilitate additional benefits. While consumption of goods and services appears to be a narrow view of inclusion (Ilahiane & Sherry, 2012; Jackman, 2011), it nevertheless incorporates the potential benefits from such consumption, i.e., both digital and social inclusion. Examples include mobile remittances, employment information, and improved learning and healthcare.

Inclusive capitalism also highlights the productive opportunities afforded through integration into the global economy.¹² Here, new business models allow local entrepreneurs to earn better incomes by selling ICT products and services within value a chain of MNCs or other partnerships. A key focus here are employment and income-generating opportunities for marginalized and vulnerable groups, such as women (Dolan, 2012).

There is some overlap between digital inclusion and inclusion as a consumer in that both are concerned with access and consumption of ICT products and services. However, there is a nuanced difference between the two in light of their broader meanings: Digital inclusion is not only about physical access to an ICT product, but also the ability to use it (Rashid, 2016). Inclusion as a consumer involves an understanding of how and why people consume (Jackman, 2011). The combination of the two dimensions described above is presented visually in Figure 3.

¹² According to Prahalad, “entrepreneurship on a massive scale is the key” (2005, p. 2) to overcoming barriers to doing business, unlocking the potential of emerging markets. He argues that market development at the BOP will create millions of new entrepreneurs at the grassroots level—from women working as distributors and entrepreneurs to village-level microenterprises.

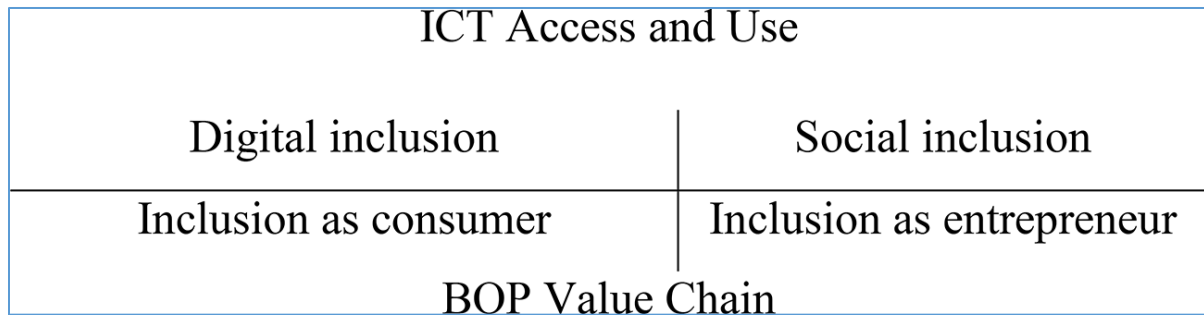


Figure 3: Dimensions of inclusion within inclusive capitalism and ICTs for development.

Data and Methods

To examine this phenomenon more closely, I use a mixed methods multiple case study approach in which I analyze the organizational structures and users’ perceptions of telecenter programs/initiatives of three entities in Bangladesh: a multinational telecommunications company (GrameenPhone Ltd), an NGO (Development Research Network, or D.Net), and a public-private partnership led by the Bangladesh government (union information service centers, or UISCs). The three cases were selected from telecenters initiated within the domains of the market, state, and civil society. While a multiple case study approach does not allow a direct comparison of the outcomes of various types of initiatives, it does allow us to gauge potential rudimentary differences and impacts.

The study includes two levels of analysis: the organizational aspects of each type of telecenter and the telecenter users. The case studies combine qualitative and quantitative data. A review of organizational documents is done to shed light on each program’s stated objectives, implementation approaches, and broader organizational strategies. The documents studied include program websites and manuals as well as available studies focusing on the three telecenter programs.

The document review is complemented by an analysis of survey data from the “Global Impact Study of Public Access to Information & Communication Technologies” (IPAI), 2007–2012.¹³ The IPAI study aimed to generate evidence about the scale, character, and impacts of public access to ICTs in 12 developing countries, including Bangladesh (Sey et al., 2013, 2015). Relevant data from two surveys covered in the IPAI study are analyzed: the venue survey, which investigated the operational and financial characteristics of the public access ICT venues, and the user survey, which collected information about patterns of ICT access and use, ICT skills, and perceived impacts on those who used telecenters.⁵ The IPAI user survey is based on random sampling, selecting every *n*th person found in the public access ICT venues. An attempt to stratify the sample by an equal number of men and women proved difficult in Bangladesh. The cut-off was set at 12 years of age so as to include teenage as well as adult users. Age was not used as a stratification variable so that the true age distribution emerged from random selection. The user survey included a number of individual socioeconomic and household characteristics such as income, education level, etc.

Of the 148 randomly selected telecenter venues in urban and rural Bangladesh in the IPAI venue survey, 82 belonged to the three entities of interest for this article. While the IPAI survey did not include a variable to categorize these telecenters as private, state, or civil society, it was possible to identify them from their names. For the purpose of this article, I selected only those users from the 82 relevant telecenters from the venue survey, which resulted in 355 users included in this analysis.

As indicated above, both the IPAI venue and user surveys in Bangladesh are based on random sampling and are nationally representative. However, the reliance on a subset of that data

¹³ The study was carried out by a research team led by the University of Washington and sponsored by the Bill and Melinda Gates Foundation and the International Development Research Centre.

from those surveys potentially biases the findings. In addition, selecting a subset of the data reduces the number of cases, which undermines the robustness of the findings. Of particular concern is the low number of cases of UISCs—the public-private partnership.¹⁴ The multiple case study approach adopted in this article that seeks to draw out broader patterns from each case and, where applicable, triangulate findings from quantitative analysis with other qualitative data sources offsets these limitations.

A Private Initiative: Community Information Centers—GrameenPhone Ltd.

In 2006, GrameenPhone Ltd., the largest mobile phone company in Bangladesh in terms of subscriber base, initiated the community information centers (CICs), whose vision is to “bring Internet and information based services to the unserved rural community” (cited in Sein, Ahmad, & Harindranath, 2008, p. 19). GrameenPhone is a joint venture between Telenor AS of Norway and Grameen Telecom, which is a subsidiary of the Grameen Bank, renowned worldwide for its microcredit projects. According to the Telenor website, CICs “are extending connectivity to those who have no alternative access to communication technologies and to those with little to spend on such services” (Telenor, 2013). From this perspective, CICs were conceived as a way to satisfy the information needs of poor rural communities at affordable rates. This developmental dimension, along with the fact that CIC operations are aligned with the core business of GrameenPhone, makes the CIC program a suitable case of MNC-led, bottom-of-the-pyramid intervention (Rahman, Amran, Ahmad, & Taghizadeh, 2014; Welle-Strand, 2008).

There are currently more than 500 CICs operating in 450 sub-districts of Bangladesh on a franchise model. CIC entrepreneurs are carefully selected by GrameenPhone based on the ability

¹⁴ When the IPAI survey was carried out around 2010, these telecenters were beginning to be rolled out.

to invest—with the total cost of establishing one CIC around US\$1,000 (Liyanage, 2009). The entrepreneurs selected by GrameenPhone invest in the location, while GrameenPhone provides the brand name, promotional materials, and capacity building of the entrepreneurs. A CIC consists of one or two computers, printers, digital camera, and web camera. The Internet service offered by CICs is provided by GrameenPhone’s mobile-based Enhanced Data Rates for Global Evolution, or EDGE, technology. The services offered by CICs include mobile and Internet communication; various government forms such as passports, birth registrations, agricultural information; and information related to local and foreign job search sites (Telenor, 2013). Some of the services are developed in collaboration with NGOs. One such notable service is the Fertilizer Recommendation Software (FRS), introduced through a partnership between Katalyst, an NGO, and GrameenPhone, which helps farmers select appropriate fertilizer for their crops (Gurstein, 2013). CICs also offer other GrameenPhone services such as mobile top-ups, which represent a large share of its revenues (Liyanage, 2009). However, GrameenPhone has concerns about the commercial sustainability of delivering FRS. Its impact as well as the impact of other services is unknown.

Survey Findings

The IPAI survey included 38 CIC venues and 175 users. The venue survey data indicate that in addition to Internet communication, the most common services include scanning, printing, and preparing documents. A variety of value-added services are offered, including job placement services and in-house training offered by 62% and 38% of CICs, respectively. While e-government services are one of the stated services for CICs, only one of the 38 CICs from the sample reports offering such services. Only six of the 38 CICs in the venue survey are located in rural areas. One plausible reason for choosing urban locations in which to set up CICs is that

rural areas may not be commercially sustainable. Nearly all the CICs in the sample are profitable. The venue survey also confirms that user and service fees are by far the top sources of operational funding for public access computing operation. In exploring the services that provide the most revenue, we found Internet browsing as the top source, followed by mobile phone–related services, including mobile set accessories sales and servicing and prepaid top-ups. Only three of 38 CICs had one female staff, while one CIC had two female staff.

I then explored the user survey to investigate the socioeconomic profile of CIC users. Four-fifths of the CIC users are men. A breakdown by age shows that the majority of respondents (around 60%) are between 20 and 34 years of age. Sixty-five percent of the users reported having an income. A look at the occupational status of the respondents reveals that 42% are students, followed by those with full- and part-time employment (31%) and self-employment (22%). Around half the users report income above the poverty line. CIC users are generally well-educated: 34% have post-secondary or vocational/trade schooling, while nearly 40% have tertiary education. This is well above the country’s level of education, but not entirely surprising, given that a sizable proportion of the users are students. A total 68% and 91% of the respondents lack a computer and Internet connection at home, respectively.

Nearly 70% of the respondents who use CICs seek information on employment and business opportunities. A much smaller percentage of the users look for information on other value-added services at a CIC (31% on education, 11% on health, only 2% on government services). The user survey also investigated the perceived impact of telecenter use on several dimensions. From the sample, I found that CIC users report the most positive impacts on accessing resources and education as well as time and money saved. While saving time and money is a well-documented outcome of using ICTs, what is noteworthy is the impact the users

perceive for human capital. More than 70% of the respondents point to a positive impact in terms of access to resources and skills, while nearly 60% indicate using CIC telecenters has had a positive impact on their education. Significantly fewer respondents report a positive impact on health and accessing government information and services, which is unsurprising, given that such services are not commonly offered in most of the sample CICs.

A Social Enterprise Initiative: Development Research Network (D.Net)

D.Net is a registered nonprofit NGO in Bangladesh that focuses on applied research in ICT4D, poverty alleviation, and human rights. On its website, D.Net identifies itself as “a non-profit Social Enterprise fostering innovations for empowerment of marginalized communities with special emphasis on women and children focusing on technology and access to information and knowledge.”¹⁵ Although D.Net depends on local and external donors for most of its funding, it increasingly applies the social enterprise ethos in its efforts to expand its revenue base and support its general operations. To that end, D.Net formed a separate commercial income generating subsidiary, Multimedia Content and Communications Ltd. (Liyana, 2009).

D.Net has a diverse range of telecenter initiatives (Hasan, 2008). Rural information centers (RICs) are conventional telecenters equipped with computers, camera, printer, and Internet access whose objective is to make livelihood information accessible to poor rural communities. RICs are hosted by a local NGO selected by D.Net. The NGO contributes to the logistics, set-up, and overall management, and D.Net provides some equipment, training, and access to digital content on livelihoods.

¹⁵ <http://dnet.org.bd/page/Generic/0/61/165>

A key design element of RICs is facilitating access to information and knowledge for marginalized populations through a *mobile lady*, or *info lady*, typically a female information worker with a cellphone connected to a help desk of experts on various livelihood topics (Raihan, 2007). Mobile ladies go door to door to reach remote rural communities and connect information seekers with RICs. Mobile ladies also connect customers to loved ones living abroad. They even perform tasks such as checking blood sugar levels and giving legal advice (Bouissou, 2013).

As part of its computer learning program, D.Net also introduced computer learning centers (CLCs) for secondary-level school students in Bangladesh's rural areas.⁹ Located at remote schools, each CLC contains four computers, a printer, an Internet connection, and a trained teacher for facilitation. Five hundred twelve teachers (20% female) were trained for CLC operations. The schools are responsible for providing the lab space and furniture; mobilizing the teachers, students, and community; and most important, managing the program. As of March 2015, 257 CLCs and 97 associate CLCs have been established in 56 districts.

Survey Findings

The IPAI surveys categorized mobile ladies, RICs, and CLCs separately. Given that mobile ladies have some unique characteristics and functions, they are analyzed separately in this article. The venue survey included 19 RICs, eight info ladies, and 10 CLCs. The user survey included 72 RIC users, 52 CLC users, and 32 individuals who received service from the info ladies.

Nearly all the telecenters in the venue survey are located in rural areas. Most RICs offer Internet access, printing, and document preparation for users, training, and job placement. While generally focusing on similar services, some info ladies also offer e-health services. Due to their

nature as learning centers in secondary schools, CLCs focus primarily on training. In looking for top sources of revenues for computing operations, I found that RICs and info ladies rely on both user fees and support from D.Net, while CLCs rely more heavily on D.Net grants. This is also revealed in replies to the question on whether the telecenters are profitable or breaking even. While most RICs reported a profit, around half the info ladies and fewer than half the CLCs did. For RICs, info ladies, and CLCs, training is the service that provides the most revenue. Info ladies also note video chat and Internet browsing as sources of income. More than half of all D.Net telecenters had one or two female staff (32% had one female staff and 24% had two female staff). Interestingly, while most info ladies are women, there are male info ladies as well.

Data from the user survey indicate that around two-fifths of the D.Net telecenter users are women. With a focus on secondary schools, 85% of CLC users are under age 19, while most RIC users are in their 20s and 30s. In terms of educational status, most CLC users report having a primary education, while most RIC users have a secondary education. While most CLC users are students, RIC users (including the info ladies) include both students and employed individuals, including self-employed and part- and full-time employees. An overwhelming majority of users do not have a computer at home, and a higher number lacked an Internet connection at home.

The type of information sought by most RIC and CLC users includes employment and business opportunities and education, respectively. Users seek a more diverse range of information from the info ladies, including education and health. Users of the different telecenter types report positive impacts in diverse domains. Most D.Net telecenter users report a positive impact on time and money savings. Around 60% of the D.Net telecenter users cite a positive impact on education. Similar to GrameenPhone's CICs discussed above, a small number of D.Net telecenter users report positive impacts in terms of accessing information and services

from local and central governments. Info ladies appear to be the only source of health information among all the telecenters in the case studies: Nearly two-fifths of the users report positive impacts on health, a higher proportion than other D.Net telecenter users as well as CIC and UISC¹⁶ users.

A Government Initiative: Union Information Service Centers (UISCs)

In 2010 the government of Bangladesh, with support from the United States Agency for International Development (USAID) and UNDP, set up 4,501 UISCs. Two government agencies involved in the UISC project are the Local Government Division of the Ministry of Local Government, Rural Development and Cooperatives and the Access to Information program under the Prime Minister's Office. The objective of UISCs is to address supply side and demand-side challenges associated with accessing public information and services (UNDP, 2012).

UISCs operate as a public-private partnership, with each UISC expected to be run by two entrepreneurs. By law, UISCs are required to be run by one male and one female entrepreneur. Around 9,000 entrepreneurs or employees are engaged in UISC operations. The entrepreneurs are self-employed; they are not paid employees of the Bangladesh government. UISCs provide three types of services: government services (e.g., birth registration, examination results), information services (e.g., health, agriculture), and commercial services (e.g. m-banking, life insurance, training, photocopying; Zainudeen et al., 2013). As all UISCs are co-located at Union Council Complex buildings (rural local government facilities), the UISCs are in rural areas.

Findings from existing studies shed further light into the operations of UISCs. A study by Zainudeen et al. (2013) found that UISC users were also seen to be more often from higher

¹⁶ ICT-enabled service outlets are located at Union Parishads, Bangladesh's lowest tier of local government.

income groups, suggesting that UISCs may not be reaching the poorest of the poor. This study also found that the proportion of women who use UISC services is lower than that of men. Of the total study sample, 60% of men have used a UISC compared to 35% of women. The study also found that UISCs play a significant role in providing government services. Although only 25% of poor UISC users have accessed citizen services, 71% said they had obtained information on government services through the UISC, either directly or through contacts made there (Zainudeen et al., 2013). The study suggests that UISCs seem to strike a good balance between operating independent of local government, yet connected to government.

Survey Findings

As both the venue and user surveys of the IPAI study have a low number of cases (seven UISCs and 28 users), related findings must be interpreted with caution. By design each UISC is supposed to have both a male and female entrepreneur; however, I found that none of the seven sampled had female staff. The two top revenue sources for UISCs are user fees and government support. There are no clear patterns in the types of services that generate the most income for UISCs, with training, Internet browsing, and ancillary services such as composing and printing being some of the offered services.

Around four-fifths of UISC users from the user survey sample were men. UISC users are generally young: 36% of the users are between 16 and 19 years old, while 25% are between ages 20 and 24. Fifty percent of the users have no income. A breakdown of users by employment indicates that most users are students. Around 40% have full- or part-time employment or are self-employed, while 10% are unemployed. More than 60% of users have post-secondary or

tertiary education. Only around 10% of the users have computers at home, and none have an Internet connection.

I then explored the extent to which the respondents sought information on several development domains, including job and business opportunities, health, education, and government services. Nearly 70% of UISC users look for government services, followed by 20% who search for information on employment and business opportunities. The rest look for educational opportunities. Finally, a look at the perceived impact of using UISCs indicates that four-fifths of users report a positive impact on accessing resources and skills, and more than half report positive outcomes on education. Only one-fifth of users point to a positive impact with regard to accessing information and services from local and central governments. It appears that, generally, users do not get the desired services as most users who go to a UISC look for government information and e-services.

Analysis and Conclusion

Rapidly emerging ICTs present us with a compelling need to analyze inclusive capitalism, the idea that stimulating entrepreneurship and broadening consumer markets can ensure greater social and economic benefits for vast numbers of poor and marginalized peoples. Yet empirical investigations on how market-oriented, inclusive, ICT-driven, development interventions bring prosperity for the poor are still limited (Ray & Kuriyan, 2012). Although this article only scratches the surface of these issues, it does provide some insights by drawing on the findings of the three case studies of telecenter initiatives from Bangladesh.

Perspectives on Inclusion

Although a common feature of all three case studies is the reliance on market mechanisms to provide affordable ICT services to the poor, the findings highlight how, in some contexts, the initiatives approach the issue of inclusion differently. Findings underscore the important role of public access models such as telecenters to ensure digital inclusion. Most of the sampled users across the three types of telecenters lack access to computers and an Internet connection in their home, suggesting that, for many, telecenters could be the only viable option for connectivity. While mobile-based Internet networks are expanding across the developing world, questions remain about their affordability and reach in specific contexts. One such context is rural Bangladesh. From that perspective, D.Net telecenters and UISCs that serve rural areas are crucial as around four-fifths of all types of public access venues in Bangladesh are located in urban centers (Sey et al., 2013). With some 4,500 union councils in the rural areas of Bangladesh, the colocation of UISCs ensures a wide geographical reach.

As discussed earlier, access to ICTs, while crucial, need not be the only defining parameter for inclusion. A broader meaning of *inclusion* would also incorporate the role of ICTs in promoting human development that is more in line with the notion of social inclusion (Warschauer, 2002). The findings indicate that a significant proportion of those frequenting telecenters are students and that the greatest contribution of ICTs is improving education, with around half the respondents reporting a positive impact on education. While a certain level of educational background is needed to take advantage of ICT tools and resources, the findings nevertheless reiterate the important role of targeted training approaches such as school-based computer learning centers (CLCs) in areas where access is difficult. In the case of CLCs, using the physical infrastructure in place to cater to the digital training needs of youth is an inclusive

design element. At the same time, the findings suggest that for those who are already better educated, it is more important to ensure access to ICTs than *infomediation*—a process that combines a set of technological resources and coaching to meet users’ information needs and communication capabilities (see Ramirez, Parthasarathy, & Gordon, 2013). Overall, this article underscores the important role of telecenters as venues of social inclusion that help foster human capital through new skills development and access to knowledge, be it for poor children or adults who still need education and professional training (de Carvalho, Feinberg, Klarsfeld, Lepicard, & Posthumus, 2012).

The telecenters operated by D.Net illustrate how digital and social inclusion can occur simultaneously by offering a variety of services beyond conventional telecenters such as info ladies and CLCs. The ability to offer more diverse services often necessitates a human intermediary of a certain educational attainment who acts as the interface between the technology and the end user, in ICT4D parlance, the *infomediaries*. By offering a variety of ICT-based and other services at the doorstep of rural communities (notably to women), info ladies are opening the doors to those who may otherwise be excluded from access. This encapsulates both digital and social meanings of inclusion by combining ICT access and knowledge brokering (Ramirez, Parthasarathy & Gordon, 2013). D.Net’s comparative advantage lies in having a research focus to inform the design and content of its programs.

Two other areas of social inclusion that show promise are income generation and e-governance. GrameenPhone’s CIC users come from more affluent backgrounds and report more positive impact on income, than D.Net and UISC users. While strong evidence exists on the link between connectivity and improving livelihoods (Adera, Waema, May, Mascarenhas, & Diga, 2014), the findings of this study point to an impact on gainful employment and income-

generating activities facilitated through ICTs will be greater for those able to harness their networks. The UISCs initiated through a public-private partnership model have the potential to promote social inclusion by providing a range of e-government services, the only type of telecenter that may be able to play a vital role in implementing important government programs such as online registration and application of Bangladeshi workers seeking employment abroad (Government of Bangladesh, 2013). There is a critical need for a closer empirical investigation to assess the use and impact of the services offered at UISCs.

The cases also reveal the integration of local entrepreneurs into the value chain as key agents of finance and service delivery, although to varying degrees and through varying mechanisms. CIC operations require a large economic investment by local entrepreneurs, and the return on investment is plausible by catering to more affluent users in urban and semi-urban areas. Another important characteristic of CICs is the service offered beyond the provision of computer and Internet use, notably mobile phone top-up services, a highly sought business opportunity to sell GrameenPhone's lucrative mobile phone services. While such service may not be the main mandate of CIC, it is nevertheless a major revenue-generating source.

D.Net telecenters focus on serving marginalized populations as target groups and on promoting entrepreneurship for women. The info lady program focuses on women both as entrepreneurs and as beneficiaries who may face difficulties in moving outside of their homes. By and large, D.Net is sticking to its grassroots base, offering innovative services to marginalized and unreached people. However, D.Net is increasingly drawn toward the ethos of social enterprise as the challenges of scaling up its activities for greater impact loom large, requiring a delicate balance between social mission and economic sustainability. While UISCs

are supposed to engage women entrepreneurs, to what extent this policy is implemented remains to be seen.

Market, State, and Civil Society: Toward a Division of Labor?

This article illustrates the convergence in thinking among various institutional domains of development over the indispensability of inclusive capitalism approaches to bring about socioeconomic development. Here, inclusive business or enterprise-based models are not only propagated by businesses, but also inform other approaches, including those undertaken by state and NGO actors. The three case studies of telecenters initiated by an MNC (GrameenPhone Ltd), a social enterprise (D.Net), and a public-private partnership (UISCs) undertaken by the state reflect this convergence. UISCs present a compelling case on the way governments are adapting to incorporate business approaches and principles, including rebranding themselves to appear more “businesslike” (Kuriyan & Ray, 2009). A UISC brochure—with the subtitle “Connecting the Bottom Millions”—reads more like a corporate slogan of a global telecommunications firm rather than a state-led program (Government of Bangladesh, 2014). Telecenters operated by D.Net—an NGO increasingly motivated by an ethos of social enterprise—highlight issues of scaling programs and organizational change, manifested in the delicate balancing act between providing affordable access to people and being commercially sustainable. Finally, GrameenPhone through its CICs illustrates how a growing number of commercial enterprises are taking development issues into consideration as part of their core operations (Blowfield & Dolan, 2014). By introducing innovative business models that aim to promote greater inclusion and entrepreneurship, corporations are going beyond corporate social responsibility to stake a claim as a legitimate actor in development.

A key emerging finding of this article is that the three types of telecenters originating from state, market, and civil society actors—in addition to having a difference in terms of modes of operation and of how inclusion is perceived—serve different socioeconomic groups. From that perspective, inclusive capitalism is not about market-vs.-state or whether markets are the only solution to the development problems; rather, inclusive capitalism is about how market-based approaches by various stakeholders such as businesses, governments, and other actors can contribute to social and economic development. It is then a matter of a division of labor by the three institutional domains (Martinussen, 1997). This perspective sees state, market, and civil society with the power to influence and set the agenda for development processes in particular contexts, bringing unique sets of capabilities and approaches. For countries such as Bangladesh, the multiplicity of approaches could mean more entrepreneurial and employment opportunities at the local level as well as a greater likelihood of leveraging ICTs for development for diverse segments of the population. The new forms of organizational alliances and partnerships required in the context of emerging market-based innovations and entrepreneurship are arguably the greatest strengths of the idea of inclusive capitalism.

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Chapter 4: Bottom of the pyramid approach to development: Analyzing the case of GrameenPhone Limited

“Moneymaking is an important part of humanity, but it is not the only part. Caring, concern, sharing, empathy – all of these aspects also must be considered when developing an economic framework that takes the whole person into account.”

Muhammad Yunus (2008)

Bottom of the pyramid approaches to development: Analysis of two initiatives GrameenPhone Limited in Bangladesh

Abstract

Businesses are increasingly viewed as key actors in development. Advocates of bottom of the pyramid (BOP) approach argue that corporations can simultaneously make profit and contribute to development goals, such as, poverty reduction. This paper investigates this claim using the case of GrameenPhone Limited, a mobile phone operator in Bangladesh, jointly owned by Norwegian multi-national corporation Telenor AS and Grameen Telecom of Bangladesh. I specifically analyze two initiatives of GrameenPhone: Village Phone Program and Community Information Centres. Both are designed to deliver various information and communication technology (ICT) services with an explicit focus on serving the poor, using public access venues. I use a combination of review of existing studies and analysis of survey data. The evidence highlights the strengths and limitations of BOP business models in terms of the dynamics of ICT-led development in Bangladesh.

Introduction

Recent perspectives on the role of business in development present some interesting paradoxes. On the one hand, there are growing expectations for businesses to play a greater role in development by going beyond the conventional notion of business as an institution that only makes profits and obeys laws. The “do-no-harm” approach, some argue, does not fully take advantage of corporate innovation and ingenuity as well financial and technological resources of corporations. On the other hand, businesses have been perceived as causing some of the worst social and environmental problems in developing countries, raising issues of trust, transparency

and accountability. In this view, the agenda of supporting globalization and trade with business as the central actor has come under greater scrutiny.

In the contemporary context, there appears to be an increasing consensus among business coalitions, donors, civil society organizations, and development practitioners on the need for greater engagement of businesses with development objectives, with new models of financial and other resources that focus on enterprise and venture-based approaches. One concept that has been particularly influential is the bottom of the pyramid (BOP) approach.

BOP calls for multinational companies to play a more pro-active and engaged role in development by offering products and services to the poor – those who live on less than a dollar a day (Prahalad, 2005; Prahalad & Hammond, 2002). Prahalad and other proponents of BOP approach claim that in contrast to traditional top-down approaches of the international financial institutions and state-led interventions that failed to bring benefits for the poor, BOP ventures are designed to be more inclusive, offering greater choice for products and services (inclusion as consumers) and integrating the poor in the value chains of business (inclusion as entrepreneurs). In this view, corporations can help address poverty through innovative business models and partnerships. BOP approach, then, is predicated on the notion of “win-win”, representing an opportunity for profits for corporations while improving the lives of the poor by integrating them into economic activities.

The BOP vision of business then transcends the moral opposition between market and society. The faith put into corporations in the BOP approach-- motivated by profit *and* social causes-- signifies a major shift from a defensive mode of business, such as corporate social responsibility mechanisms that focus on compliance to with laws and standards, to more ‘offensive’ responses whereby companies take on development challenges. The shift is also in

how business is viewed as a “development tool” - widely engaging in economic activity in developing countries to as “development agent” - consciously striving to deliver, and moreover be held to account for, developmental outcomes (Blowfield & Dolan, 2014).

While a growing number of corporations are adopting business strategies to introduce BOP ventures or initiatives, the idea generally remains unproven from a developmental perspective. There has been a tendency in studies to quickly claim success of BOP ventures based on evidence that is partial or incomplete. In fact, an assessment by Crabtree (2007) found that of the twelve BOP cases in Prahalad’s (2005) seminal book on BOP, only three had evidence of increased income for beneficiaries, a key criteria proposed in BOP. A more fundamental reason for the gap is the absence of assessment criteria, particularly in relation to development dimensions of BOP.

This paper aims to fill some of these gaps by undertaking the case of GrameenPhone Limited – a mobile phone operator in Bangladesh. GrameenPhone was created in 1997 as a joint venture enterprise between Telenor AS which owns 56% share, and Grameen Telecom, with 34% share. The remaining 10% is publicly held. Telenor is a Norwegian multinational telecommunications company. Grameen Telecom is a non-profit concern of Grameen Bank, renowned for its microfinance program.

GrameenPhone is a leader in the mobile phone market in Bangladesh. Out of the six mobile phone operating companies in Bangladesh that had a combined user base of 118 million people, GrameenPhone dominates the industry with 55 million customers (a 46% share) as of August 2016 (Bangladesh Telecommunication Regulatory Commission, 2016). In 2005, the company introduced the first mobile-phone based internet services in Bangladesh. In sum,

GrameenPhone is one of Bangladesh's strongest corporate performers and has been the country's highest corporate taxpayer in recent years (Financial Express, 2015).

In addition to being at the forefront of the business sector in Bangladesh, GrameenPhone is seen as a leader in the attempts to interact effectively and responsibly with the broader society and to contribute to Bangladesh's socioeconomic development. The company's association with the Grameen Bank puts it in a unique position to contribute to the dialogues of development in general. This is complemented by a combination of foreign ownership, local knowledge and competent management -- critical elements for corporate success as well as broad societal legitimacy (Welle-Strand, 2008). In April 2007, GrameenPhone was nominated as a CSR champion by multiple donor organizations in Bangladesh including UNDP and the Bangladesh Enterprise Institute (cited in Falkenberg & Falkenberg, 2009, p.366).¹⁷

GrameenPhone website states that "Our core strategy in this area is to be Bangladesh's partner in developing the country, particularly in its promise, as a United Nations Millennium Declaration signatory, to meet the eight targets known as the Millennium Development Goals by 2015". In one of its policy documents, GrameenPhone appears to espouse the win-win ethos of the BOP approach:

"Development is a journey, not a destination. Our work is not just about ensuring connectivity; it is about connecting with people and building relationships, based on trust, with our subscribers, business partners, employees, shareholders, as well as the wider community. We have always believed that good development is good business." (Emphasis added) (GrameenPhone, n.d.)

¹⁷ In the late 2010s GrameenPhone faced a number of challenges. Notably, the company was accused of violating telecommunication laws and there were concerns with the work of the suppliers building telecommunications towers for Telenor (use of child labour, poor working conditions, and environmental pollution). The response from GrameenPhone ostensibly included some disconnected philanthropic CSR efforts (Falkenberg & Falkenberg, 2009).

GrameenPhone's corporate views on development as well as its interventions that embrace the BOP ethos make it a suitable case to investigate the BOP proposition. In this paper, I specifically analyze two initiatives of GrameenPhone: Village Phone Program and Community Information Centres. Both the initiatives involve public access venues designed to deliver various information and communication technology (ICT) services with an explicit focus on serving the poor. I investigate how GrameenPhone has promoted social inclusion of consumers and entrepreneurs through these two initiatives and to what end. Through the case, I aim to make inferences about GrameenPhone's approach in terms of a broader role in development, following the ethos of BOP.

The paper is structured as follows. After this introduction, I discuss the evaluative and methodological approach taken to assess the two initiatives of GrameenPhone. I then undertake a deeper analysis of the two initiatives, assessing those in terms of the criteria and parameters developed. Finally, I discuss the emerging issues and contradictions of the two initiatives and the case of GrameenPhone as a proponent of BOP, more broadly.

Assessing bottom of the pyramid ventures

While there is a proliferation of BOP ventures, attempts to systematically assess these have been extremely limited. To date, BOP research has been dominated by management and business studies, with significantly fewer attempts to analyze the social, developmental and environmental dimensions and implications (Kolk, Rivera-Santos & Rufin, 2014). While the BOP literature has evolved towards increasingly sophisticated methods for assessment, there is still a gap in developing frameworks to assess its impact on people and communities.

In his seminal book on BOP, C.K Prahalad (2005) puts forwards the proposition that it is possible to create wealth and reduce poverty with for-profit business playing a central role by serving poor consumers and providing entrepreneurs with income-generating opportunities. Prahalad's argument, however, lacks an explanation of how exactly the BOP endeavours may lead to poverty reduction. In particular, the emphasis on ensuring a greater choice for consumption of goods and services made available by corporate innovation is unconvincing (Karnani, 2007).

The focus on creating entrepreneurial opportunities through BOP initiatives are more plausible as a developmental outcome, but it still falls short of a deeper understanding of how the poor may take advantage of these supposedly new enterprise-based opportunities. A fundamental problem is viewing the poor as a homogenous group with little understanding of their economic lives, the choices they face, and the challenges they meet (Banerjee & Duflo, 2007). The lacunae is symptomatic of the overall state in BOP research, where "...there is little energy invested in assessing developmental benefits [of BOP] so that even in a longstanding development agent initiative like fairtrade, impact for the poor and marginalized is only crudely assessed" (Blowfield, 2012, p. 422).

More recent articulations of BOP present the idea of creating mutual value which emphasizes that BOP interventions, at each stage of implementation, create value for all partners such as business, community, and so on (Simanis & Hart, 2008). A similar concept of shared value posits that the corporations, rather than merely pursuing profits, need to pursue social and environmental objectives including the well-being of people impacted in their operations (Porter & Kramer, 2011). The concepts of shared value or mutual value suggest that corporations need

to view themselves as socially embedded and to actively draw out potential for value creation for all stakeholders by satisfying unmet needs in the market.

While the idea of shared value can capture how some corporate interventions can bring benefits to the broader society, it does not define what the values are in specific contexts, and, more importantly, does not articulate the potential trade-offs between social and economic goals, i.e. the circumstances when the social and economic goals inevitably conflict (Crane et al, 2014). Empirical studies show that ventures that embraced the notion of shared-value ended up focusing either on financial or social value strategies over time, highlighting a company's real challenges in balancing social and economic goals (Pirson, 2012). Overall, the literature from business studies provides little insight into the ways to assess the developmental implications of BOP initiatives.

Increasingly, alternative evaluative frameworks rooted in development studies and sociology are being proposed to fill the gap in the assessment of BOP. Among these, one framework is based on the notion of fundamental capabilities inspired by the works of Amartya Sen (Crabtree, 2007; Ansari, Munir & Gregg, 2012). The capabilities perspective has a broader conception of poverty as not just as a lack of income, but also as a lack of capabilities that people value such as being literate and healthy (Sen, 1999). This approach underscores the complex relationships between income and well-being. For example, an increase in income necessarily does not lead to better health, which may depend on a host of individual and contextual factors. One of Sen's central arguments is that income is only instrumental for achieving another end, it is not an end in itself (unlike capabilities). Overall, the frameworks add significantly to the debate on assessing BOP interventions by complementing poverty and income based measurement with a broader range of issues related to well-being.

Despite these useful contributions in articulating more robust theoretical frameworks, few attempts have been made to empirically operationalize these to analyze the context underlying specific BOP ventures and their implications on lives of the poor. Importantly, the causal processes of specific interventions, the types of products and services and the socioeconomic and demographic characteristics of the beneficiaries may vary substantially by sectors or domains. Therefore, I argue that in evaluating the BOP interventions there is a need to develop measurements *specific to domains*, taking into account the unique ways BOP interventions can contribute to development.

In this paper, I propose a framework that combines two analytical dimensions. The first dimension is an analysis of strategic and developmental objectives behind BOP interventions. This dimension assesses the development implications of undertaking BOP initiatives to reveal the underlying premises of corporate goals and objectives. Blowfield and Dolan (2014, p.22) articulate this as “business as the development agent”. The second dimension relates to the process of inclusion in the ICTs, which is the object of GrameenPhone’s BOP interventions in developing public access ICTs. This dimension relates to a deeper understanding of how ICTs can contribute to “inclusion” –a core developmental element of the BOP approach.

Business as development agent

Businesses have different roles to play in social and economic progress in developing countries. A development agent role of business is one where the actions of the business are influenced by an awareness of development problems and solutions and where it proactively takes on development challenges that are not necessarily of the company’s own making. This stance is different from reactive or defensive approaches that seek to burnish reputations of

business, often subsumed under corporate social responsibility strategies. Similarly, businesses might make products available in poor countries as a development tool, but it is the development agent role that makes products suited to the needs of and accessible to poor segments of the population (Blowfield, 2012).

Overall, business as a development agent would require a more comprehensive analysis of what development issues are included and excluded. Here, I draw on the criteria developed by Blowfield & Dolan (2014), which can guide the discussions of how BOP interventions can be assessed at the corporate or programmatic level in terms of their expected contribution to development. The first criterion is the willingness to deploy assets (capital, or other resources) for activities with an expected, calculated development benefit, irrespective of a profit motive. In this criterion, a company's willingness to act out of self-interest does not negate the value of its development contribution. In a way, the idea of self-interest parallels the concept of shared value or mutual interest mentioned above.

The second criterion is pro-poor primacy, which means that in making an investment or formulating a BOP initiative, the company gives primacy to the benefits for the poor and otherwise marginalized populations. Pro-poor primacy is different from a *focus* on the poor; giving priority or primacy to the poor means, among other things, taking into account the needs of the poor in designing BOP interventions (Kandachar & Halme, 2006; Paton & Halme, 2007).

The third criterion is that BOP interventions consciously and accountably strive to address poverty and marginalization. Here, the corporation goes beyond providing opportunities that would seem to benefit the poor to *ensure that the poor benefit from these opportunities*. This means a deeper understanding of the nature of poverty and marginalization so that, for instance, marginalized groups such as women, or minorities are able to benefit from greater

economic and social opportunities. This criterion is also about accountability for its developmental outcomes just as it is for other core aspects of its business, such as financial performance.

Inclusion in the ICT domain

The BOP approach puts a lot emphasis on economic inclusion of the poor, mostly distinguished as inclusion as consumer and inclusion as entrepreneur. While this is a reasonable proposition, it fails to fully articulate the developmental implications of inclusion. The concept of inclusion has a broader meaning, evolving from a focus on poverty alone towards an understanding of the causes and consequences of social (dis)advantage such as capability, deprivation, human rights, and social participation (De Haan, 1998; Sen, 2000). Seen from this perspective, inclusion (and exclusion) focuses on processes, and on the mechanisms and institutions that exclude people. It takes us away from seeing deprivation in terms of individual attributes and focuses on the societal mechanisms, institutions and actors that cause deprivation (De Haan, 1998).

Moreover, just like capability, inclusion focuses on the multi-dimensional character of deprivation, recognizing that the poor usually suffer from multiple disadvantages related to, for example, precariousness of work, income, gender or ethnicity. Sen emphasizes relational features of deprivation which allows for a deeper understanding of both constitutive and instrumental dimensions of exclusion (Sen, 2000, pp.12-14). For example, being malnourished is an important deprivation in itself (constitutive dimension of exclusion), but it also can cause exclusion from the labor market, i.e. - instrumentally a cause of capability deprivation.

In the ICT domain, inclusion as a consumer is primarily about making ICT products and services more affordable and accessible. A key focus of inclusion as consumer is on incorporating the under-served and the poor into the market economy to facilitate access to goods and services and extending opportunities to access finance capital and other productive resources. For example, the option of small, frequent payments, like prepaid plans for mobile phones have benefited low-income consumers with low purchasing power (Anderson, 2006).

Inclusion as entrepreneurs refers to the integration into the corporate value chains as franchisees, suppliers, sales agents, or distributors. The entrepreneurial dimension has been a prominent example in the ICT4D domain where new business models allow local entrepreneurs to earn better incomes by selling ICT products and services (Dolan, Johnstone-Louis, & Scott, 2012). An example of inclusion of entrepreneurs is the Akshaya project, a public-private partnership in India that deploys cyber kiosks equipped with one or more Internet-enabled computers and are owned and run by independent entrepreneurs (Kuriyan, Ray & Toyama, 2008).

In this paper, I argue that while inclusion as consumer and/or entrepreneurs are important foundational elements, it is also necessary for these two dimensions to translate into concrete developmental outcomes. Here, I use the concept of social inclusion. Social inclusion (and exclusion) “refer[s] to the extent that individuals, families, and communities are able to fully participate in society and control their own destinies, taking into account a variety of factors related to economic resources, employment, health, education, housing, recreation, culture, and civic engagement” (Warschauer, 2002). Social inclusion views inclusion as a process and puts emphasis on effective integration of ICTs for development and transformational potential of ICTs.

Methodology

The Introduction of the paper presents an overview of GrameenPhone Limited, specifying the rationale for selecting it as a suitable case to study BOP and address the research questions. I undertake an in-depth investigation of two BOP initiatives undertaken by GrameenPhone: Village Phone Program (VPP) and Community Information Centres (CIC). Both the initiatives are part of core operations of GramenPhone as these focus on the company's telecommunications services and use its technical and management capabilities.

At the same time, a review of the program descriptions confirms their expected developmental outcomes, making these appropriate case studies to assess BOP ventures. Data and information mostly derive from annual reports, corporate and program websites, and other secondary sources. In the case of the CIC, findings from secondary sources are complemented with analysis of quantitative data. These data were obtained from two surveys of Global Impact Study of Public Access to Information & Communication Technologies (IPAI), which aimed at generating evidence on the character and impacts of public access to information and communication technologies (ICTs) in developing countries, including Bangladesh (Sey, et al, 2013). A subset of the data is gathered from surveys of CIC entrepreneurs and employees (n=38) and CIC users (n=175).

Village Phone Program

Initiated in 1997, the Village Phone Program (VPP) was a unique idea to provide telecommunications services in the rural areas of Bangladesh which historically had a low levels of access to ICT services. VPP was a partnership among three organizations: Grameen Bank (a

leading micro-finance institution in Bangladesh), Grameen Telecom (a sister organization of Grameen Bank), and GrameenPhone Ltd.

VPP was mainly managed by Grameen Telecom. Table 4.4 (in Annex) presents the respective roles played by the three main program stakeholders. As part of the program, Grameen Bank offered microcredit loan services to the entrepreneurs living in rural areas to purchase mobile phones for providing phone services to villagers using GrameenPhone's telecommunication networks. The entrepreneurs are the Village Phone Operators (VPOs) (also known as "phone ladies") – selected from Grameen Bank members' network, usually women. The amount of loan is the equivalent of US\$133. In the VPP business model, the VPOs obtain ownership of the mobile phone under the lease-financing program of the Bank. GrameenPhone provided all the necessary technical and network support that the women entrepreneurs required.

Each VPO with the phone is responsible for extending telecommunication services to the village people in adjoining areas, collecting call charges according to prescribed rates, and carrying out proper maintenance of the telephone set. The VPO's income is derived from the differences between the air-time charges paid by the customers and the billed amount required to be paid by the VPO, along with a flat charge for each incoming call.

The scheme began with just 50 phones in 1997 and by 2007 the number increased to 280,000¹⁸, and by 2014 there were nearly 700,000 active VPOs in 83,000 of the 87,000 villages in Bangladesh (Asian Development Bank, 2013a, p.51). The sale of phone services, or "airtime" allowed villagers to talk to their friends and family dispersed all over the world. The profit made from these services provided income of for the entrepreneurs while GrameenPhone also benefited as the entrepreneurs bought airtime from the company.

¹⁸ From the GrameenPhone website <http://www.grameenphone.com/>

Inclusion as consumers and entrepreneurs -- social inclusion

Available empirical studies were reviewed to gather evidence and assess the extent to which VPP contributed to inclusion as consumer and entrepreneur. A survey of 50 VPOs and 400 VPO users conducted in 2001 revealed that a majority of the VPOs (86%) and VPO users (84%) were non-poor (Bayes, 2001). Based on the numbers of calls made, men were more frequent users of the VPP services than women. Within the composite poor group, the extremely poor used phones mainly for economic purposes (making 33.9% of the total calls) and also made relatively more phone calls for health-related purposes than the non-poor group (17.8 and 10.3% respectively). The survey concluded that the services originating from telephones in villages are likely to deliver (even) more benefits to the poor than to the non-poor. For villagers in general, phones offered additional non-economic benefits such as improved law enforcement, more rapid and effective communications during disasters, stronger kinship bonding, etc. The VPOs earned an average net profit of \$6.00 per week, which represents about one-fifth to one-fourth of the total income of the sample households.

Another study by Aminuzzaman, Baldersheim, & Jamil (2003) showed a similar picture. Women represent only a small proportion of users. For the women who used VPP services, however, it was an important channel for maintaining contact with close relatives like husbands working in other cities or abroad. The most pronounced impacts on users were found with regard to a general reduction of transaction costs and uncertainty (reduced need for travel, quicker access to information, more choice). Overall, the strongest impacts of the VPP were in the areas of transport mobility and family relations.

Research findings show a mixed picture on the extent to which VPP contributed to inclusion in terms of entrepreneurship. First, VPP entrepreneurs were chosen from existing

Grameen Bank borrowers on the basis of good repayment records, spare time to run the business, an existing income generating business, and at least one literate family member (Alam, Yusuf & Coghill, 2009; Hossain & Beresford, 2012). Findings from empirical studies reveal that an overwhelming majority of the operators were non-poor. While a certain level of agency is expected, VPP arguably excluded the most marginalized section of the population. Secondly, there is no clear evidence in terms of women's social inclusion through entrepreneurship. While Bayes (2001) and Yusuf & Alam (2011) show perceptible and positive effects on the empowerment and social status of phone-leasing women and their households, the study by Aminuzzaman, Baldersheim & Jamil (2003) suggested that VPP had negligible impact on improving women's economic autonomy and as in many instances, a male relative of the operator managed the phone operations. The lack of control over credit or other productive resources is a broader concern in many micro-credit programs in the context of the patriarchal nature of rural society in Bangladesh, where opportunities for women to engage in income-generating activities are very limited.

A more recent study on VPP that included a survey of 102 VPOs and 306 VPO users provides insights into the evolution of the program (Asian Development Bank, 2013b, pp. 22-25). Among the most significant finding was that all of the VPOs in the survey were men. Moreover, only 9% of the respondents were members of Grameen Bank, while the other 91% used VPO user subscriptions issued to female relatives who are members of Grameen Bank. For the majority of these VPOs, the VPP accounted for between 10-30% of their household income. Almost 75% of the VPOs were able to start other businesses as a result of being a VPO; these businesses were mostly related to mobile telephone, such as mobile phone repair, recharge (Flexiload) business and sales of SIM cards, cell phone handsets and accessories.

The survey of VPP users revealed that 82% of the users were males, and 87% were literate. Most of the users come from households with low income (less than Taka 6,000/month).¹⁹ Almost all the users (97%) said they use the VPP to keep in touch with family and friends. Eighty-eight of the respondents (36%) also use the VPP service for business, specifically to check market prices for their products, call clients, and check prices of supplies. A vast majority of the respondents (92%) also said that the VPO call saves them a trip to the city, many of whom (53%) are more than 45 minutes away from the nearest one. Overall, the findings indicated positive social and economic benefits for the users.

Development agent

In this section, I assess VPP in terms of contributing to GrameenPhone's role as a development agent following the three criteria outlined by Blowfield & Dolan (2014): resources invested, pro-poor primacy and finally being accountable and striving for developmental outcomes.

The VPP highlights how GrameenPhone seized the opportunity to take advantage of a favourable technical, regulatory and market conditions as well as of mutually beneficial partnerships. On the technical front, GrameenPhone used an existing fiber-optic network for the internal communication of the national railway system, enabling it to acquire a key asset at a relatively low cost which significantly reduced investment risk. At the time, the regulatory mechanisms in the telecommunications sector in Bangladesh was only emerging which meant the company was able to get a license to operate mobile phones relatively quickly, gaining an early-mover advantage.

¹⁹ US\$ 75.00 in exchange rate in 4 April 2017.

The VPP provided GrameenPhone a suitable opportunity for integrating a vastly untapped potential rural market into the overall business model. Various estimates indicate that the program produced significant returns on GrameenPhone’s investment. During the expansion of VPP, GrameenPhone’s profit levels show a steady increase. My analysis shows the rise of GrameenPhone’s overall revenues in the period of 2001-2006, the period coinciding with the largest growth of VPOs (Figure 4.1).

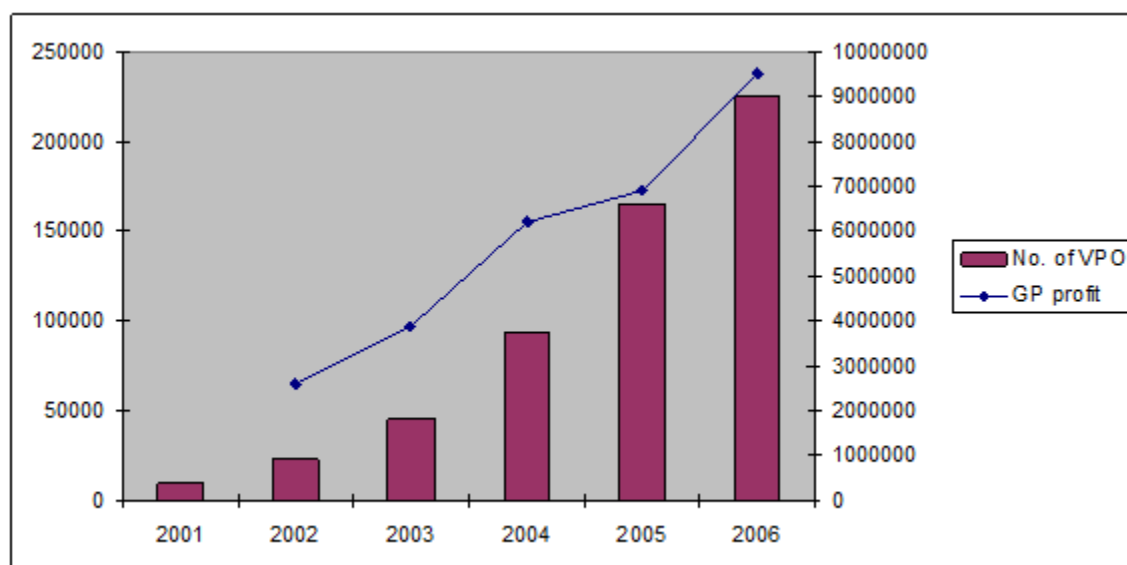


Figure 4.1: The number of VPOs and GrameenPhone revenues (In thousands of Taka), 2001-2006

(Source: GrameenPhone annual reports, various years)²⁰

In 2004, VPOs accounted for only 3.85% of the company’s subscriber base, but provided 15.5% of its total gross revenues (Knight-John, 2008). By the end of 2008, VPP covered 50,000 villages, reaching 61 of 64 districts, generating almost one fifth of Grameenphone’s revenue (Hossain & Beresford, 2012, p.461). By 2011, Grameenphone’s mobile services covered 100%

²⁰ Taka is the local currency. All figures are from GrameenPhone annual reports (various years). Profit in 2001 is not available.

of Bangladesh's districts, 90% of the land area, and 99% of the population (Asian Development Bank, 2013a). The rollout of mobile phones through village phone program arguably played a major role in GrameenPhone's endeavours to create a base for customers in the rural areas. It is against this backdrop that Boetigger, Toyama & Abed (2012, p.224) stated, "Depending on one's perspective, GrameenPhone was subsidizing the development agenda of Village Phone, or Village Phone was enabling a market expansion strategy for GrameenPhone."

The objective of the VPP program was to provide modern telecommunication services to people who had limited access to basic connectivity including landlines. Yet, the empirical evidence suggests that most of the VPP users and entrepreneurs were non-poor. While VPP was not as effective in addressing the unmet needs of the poor, it benefited from those who were "information-poor". The program was arguably successful in promoting inclusion for its users (consumers) in both social and economic dimensions. In particular, given Bangladesh's historical low penetration rate for telephones, the VPP played a crucial role in providing first time access to a telephone line for many. The shared access model adopted by the program took into account the economic limitations of many users through its pay-per-use system instead of locking them into phone ownership.

Finally, even though the evidence suggests very little impact for users in terms of instrumental benefits i.e. economic gain or in health or education, the program served an important non-instrumental "social" purpose in helping to maintain communication among family and friends. As one assessment of VPP stated, "While the program's [VPP] objective of providing economic opportunities for women proved unsustainable, at least it was able to achieve its other main objective of giving rural Bangladesh access to telephone services" (Asian Development Bank, 2013b, p.10).

For a number of factors, VPP falls short in terms of consciously and accountably striving to address poverty and marginalization. First and foremost, the program lacked a long-term sustainable developmental approach. During the inception of program in 1997 the number of people who did not own a phone was large enough to create a solid customer base; however, as mobile ownership increased rapidly the demand for shared phone services declined (Shaffer, 2007). With the increased availability of the telecommunications services in rural areas from 2005 onwards, the declining demand for the VPP services affected income-generation and livelihood for VPOs.

Therefore, it is ironic, albeit not surprising, that the booming mobile phone market, where GrameenPhone is a leading competitor, had been contributing to the decline of the VPP. More importantly, this decline had the worst impact for the VPO women entrepreneurs as their places have been taken over by men. While the program might suggest a development success at first glance, it is one that is partial because of the failure to lift incomes for women in a sustainable manner. There has been little follow-up on VPOs and their ability to translate their brief success into longer term capacity as non-Village Phone micro entrepreneurs (Boetigger, Toyama & Abed, 2012, p.227).

Based on existing evidence it is debatable whether VPP challenged the traditional gender roles and improved gender equity. It is likely that in its efforts to overcome sustainability challenges, VPP operations are choosing main business centres in rural areas as locations which may be screening out women entrepreneurs. Findings also indicate a common practice of women being the registered VPO while men actually managed the business (Asian Development Bank, 2013b). These findings raise doubts about the widespread claim of VPP contributing to economic empowerment of women.

Community Information Centres

In 2006, GrameenPhone initiated the Community Information Centres (CIC) program. CICs are designed as telecentres-- a shared access point that provide a number of ICT services such as internet connectivity. CICs use GrameenPhone's existing mobile technology platform, and are equipped with the minimum of a computer, an internet modem, a printer, a scanner, and a web cam. CIC follows a franchise model in which ownership and management responsibilities lies with a local entrepreneur. The two partners of the CIC initiative, Grameen Telecom Corporation and the Society for Economic and Basic Advancement (SEBA), are involved in the selection and training of entrepreneurs, and the distribution of kit and marketing materials. Local entrepreneurs are asked to invest in the location (rent), build-out costs, furniture, and equipment.

Grameenphone provides technical infrastructure and other logistical support, as well as the brand name (the logo, designer sign boards, and look and feel of the store), promotion materials (hanging poster, wall posters, pamphlets, and T-shirts), initial value-added services and capacity-building opportunities. Users pay a small fee to use the CIC's services. The entrepreneurs are expected to become self-sufficient and sustainable through this business model. The start-up cost for setting up a CIC is the equivalent of approximately US\$ 1,000-1,400. The entrepreneur provides GrameenPhone with a monthly payment of Taka 1,000 (approximately US\$12.0). According to an Asian Development Bank (2013a) report, there are 502 CICs in nearly 450 (or about 97%) of the *upazilas* (sub-districts) in the country.

The CIC initiative makes explicit reference to its potential development benefits, highlighting the goal of creating opportunities in business, spurring local entrepreneurship and generating employment opportunities. The CIC website states, "this initiative is part of Grameenphone's drive to do something good for the society, the rural people who are the major

portion of the population of the country.”²¹ In addition to providing basic ICT services like the Internet, CICs have mandate to deliver information and content on education (e.g. digitally provide examinations results for secondary and higher secondary exams), agriculture information like use of fertilizers, soil, cropping systems, employment: provide employment listing at the local level and health mainly focusing on tele-dermatology. The program already received some global recognition. In 2007, CIC was presented with the GSM (*Groupe Spécial Mobile*) Association's Global Mobile Award for 'Best use of Mobile for Social and Economic Development' at the 3GSM World Congress.²²

Inclusion as consumers and entrepreneurs - social inclusion

According to the CIC project manager, “Grameen CIC’s vision is to bring Internet and information based services to the *unserved rural community*” (emphasis added) (cited in Sein, Ahmad, & Harindranath, 2008, p.19). The CIC initiative was estimated to provide over 20 million rural people the chance to use the Internet and email for the first time (Liyanage, 2009; Rahman, et al, 2014).

The analysis of IPAI data which included 175 users, provide an overview of the demographic and socioeconomic characteristics of CIC users. The analysis shows that most of users surveyed (84%) are located in urban areas. Only around 20% of the users are women (Table 4.1). The combined percentage of users who are employed (part and full time) and self-employed is 53%, while 42% are students, which partly explains why a majority of the users have high school or equivalent education or more. Around half of the users reported that their income is above the poverty line.

²¹ www.stableglobalprogress.com/tag/community-information-center/

²² <https://www.grameenphone.com/about/media-center/awards-and-recognition>

Similar to the VPP, there is evidence that CICs are contributing to digital inclusion of through the provision of Internet connectivity. Nearly 70% and 90% of those surveyed have no computer and internet at home respectively. While these users may have access to other ICTs (survey data show that all the users have mobile phones), it is likely that user have limited alternative communication options including mobile-based internet.

Table 4.1: Selected socioeconomic and ICT indicators of CIC users

Demographic and ICTs indicators	Percentage of users (n=175)
Gender (% of Women)	22%
Education (Primary education and less)	7%
No income	35%
No computer at home	68%
No internet connection at home	91%

The CICs had the mandate to provide key services in telemedicine or health line education linkage, video chatting with experts and government service facilitation from GrameenPhone. The CIC brochure lists several services that are general in nature (for example, Internet surfing and e-mailing, chatting, video conferencing, computer composing, scanning and printing etc). CICs are supposed to also offer e-Government services (such as access to government forms, access to government web sites), job searches and market information.

An analysis of the CIC content by Sein, Ahmad, & Harindranath (2008), however, highlighted the lack of content the appropriate for the local context. In particular, the information available at CICs lacked context-specific application of ICTs. In an example cited by Sein, Ahmad, & Harindranath (2008), one of the health tips on CIC sites tells people of health benefits of parsley- which for the overwhelming majority of the people in Bangladesh is an unknown word. Another service is the Fertilizer Recommendation Software (FRS), introduced through a partnership between Katalyst, an NGO, and GrameenPhone, with the objective to help the

farmers select appropriate fertilizer for their crops (Gurstein, 2013). However, GrameenPhone had concerns about the commercial sustainability of delivering FRS and therefore the service has been discontinued.

The analysis of the IPAI survey data further support the secondary findings that the content services were not adequately provided. Nearly 60% of the users report that they do not go to CICs looking for any specific information. For those who do seek specific information, the most sought after information is related to employment and business opportunities (Table 4.2). There is very little demand for information on education, government services or health. From the findings, it appears that CICs are mostly catering to the relatively well-off demographic group who frequent CICs primarily for general browsing, and for employment searches.

Table 4.2: Type of information sought at CICs

Type of information sought at CICs	Percentage of CIC users (n=73)
Employment and business opportunities	69%
Health	11%
Education	31%
Government services	2%

IPAI survey also explored the users’ perception of impact across several economic and social dimensions. Figure 4.2 presents the findings in terms of percentage of users who report positive, negative or no impact of their CIC use in these dimensions. The findings show that using CIC services had very little impact on users’ income, health and the provision of information on government services. Users, however, report positive impact in terms of communications with friends and family and friends as well as time and money saved. These

benefits are well-documented impacts of using ICTs. Perhaps more significantly, users report very positive impact in terms of education, access to resources and skills.

A breakdown of these dimensions by profession shows that more than 70% of the students report positive impact on education. More than 80% of the self-employed and full-time employed groups report positive impact in terms of access to resources and skills, while 60% of the students report positive impact in the same category. Among the various age groups, those aged between 20-24 and between 25-34 report greater positive impacts. The findings suggest that the young students are availing the benefits derived from Internet, learning to use ICTs in the process. Other studies support the findings from the IPAI survey that CICs are contributing to learning and accessing resources and skills. Roldan & Due (2008) highlight the emergence of a digital youth culture characterized by group sharing, learning, and experimentation at CICs.

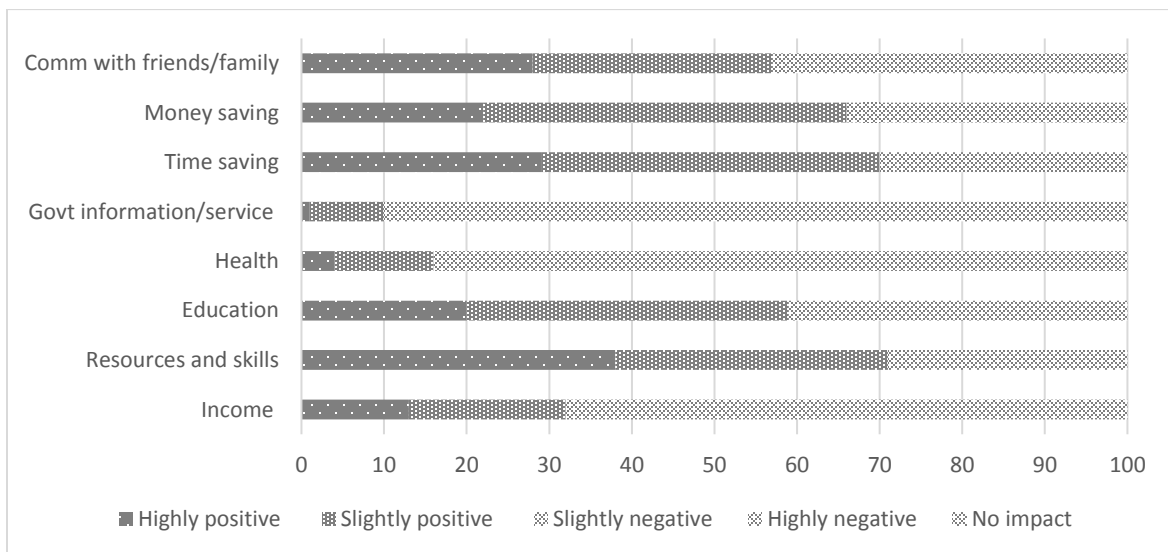


Figure 4.2: Perception of impact by CIC users

IPAI survey and other secondary sources provide insights into the socioeconomic and demographic characteristics of CIC operators. A survey of 134 CIC operators showed that 56%

were aged between 21-30 and in terms of education, 23% had secondary education or less, 25% had a diploma, 40% had bachelors, while 12% had a post-graduate degree (Rahman, et al, 2016). Around 54 percent have been running their business for last 6 years. The IPAI venue survey provide further insight into CIC operations. Out of the 38 CICs in the survey, 37 are profitable. The services that provide most revenue is Internet user fees, followed by mobile phone top-up of GrameenPhone (Flexiload) and other services related to mobile phones (repair and sale of mobile set, equipment). The venue survey also confirms that almost all of the CICs provide no services related to e-health or e-governance.

The entrepreneurs receive financial and institutional support from GrameenPhone to facilitate their business. For example, GrameenPhone provided free Internet services in the first twelve-month gestation period to help the CICs break even. This allowed CIC owners to have a marketable service to offer from day one, without significant upfront cost. Furthermore, while most of the CICs were self-financed by the owners, many of the owners received credit from different sources, including from Grameen Bank.

Development agent

The CIC operations fall within the core line of business of GrameenPhone. Given the low Internet penetration in Bangladesh, introducing Internet to the rural areas appears to be of significant strategic importance for GrameenPhone, particularly in terms of creating customer awareness about mobile-based internet. The use of state-of-the art EDGE (Enhanced Data Rates for Global Evolution) technology enabled high-speed Internet and data services in CICs, making GrameenPhone the only provider of such technology in Bangladesh and, in turn, the default Internet service provider for CICs (Liyanage, 2009). The franchise fee of CICs is also a source of

revenue for GrameenPhone: the estimated revenue from user fees in the year 2007-2008 was US \$100,000 (Liyanage, 2009).

Furthermore, CICs also offer GrameenPhone's existing services, such as payphones (again using Grameenphone's mobile network) and prepaid mobile electronic recharges (Flexiload) for prepaid and postpaid mobile accounts. Grameenphone CICs reported a revenue of US \$3 million through the sale of FlexiLoad prepaid mobile phone cards in 2006-2007 (Liyanage, 2009). The Flexiload service offers CIC operator a continuous stream of revenue for each transaction as commission and CIC serves as viable distribution points for its mobile services. In sum, CIC's economic and technical features demonstrate a definite strategic interest in the expansion of GrameenPhone's business.

The findings indicate that the CIC program does not have a focus on the poor, both in terms of the entrepreneurs (CIC franchisees) as well as the consumers (CIC users). The CICs require a large capital base and capabilities that are beyond the reach of the poor. As rural women generally cannot access such venues, the venture cannot be described as 'women-centred'. As Hossain & Beresford (2012, p.463) argue,

“The CIC kiosks necessarily have significantly less impact on women than men in the context of restricted female mobility. If simple mobile phone usage [through the VPP] by rural women confined to home cannot help them move forward to the path of real empowerment, then going to kiosks in the bazaar and using more difficult technology than mobile phone casts even more gloom on the picture.”

Overall the lack of relevant content, combined with mounting pressure to generate revenue characterize some of the key tensions within the CIC initiative. These issues raise doubts over the efforts in addressing poverty and marginalization. Despite having the main mandate of providing Internet services and relevant information to the rural people, the focus of CICs had

clearly been on urban areas. CICs are mainly catering to the educated middle and lower-middle class as illustrated in the slick advertising films show a country cousin telling his visiting relative from the city that “we may not have this and that, but we have Internet” (Sein, Ahmad, & Harindranath, 2008, p.21). From the perspective, CICs arguably resemble traditional cyber cafés as opposed to ICT access and service points for under-served communities.

Discussions and conclusion

On the basis of the analyses of VPP and CIC initiatives, the following section discusses key issues of GrameenPhone’s BOP approach and the implications for development. Table 4.3 provides a summary of the VPP and CIC initiatives across the dimensions investigated in the paper: development agent and inclusion as consumers and entrepreneurs and the extent to which they contribute to social through effective integration of ICTs.

In both the cases of VPP and CIC, GrameenPhone was motivated by potential opportunities of unexplored markets for mobile phone services. The capital-intensive nature of mobile network technology, along with a high population density in Bangladesh provide the conditions for efficient nationwide coverage of mobile phone. Both initiatives also took into account the demand side of the equation, i.e., the affordability factor. The shared access model used in the VPP program—where one phone provides access to multiple users—concentrates demand and aggregates purchasing power. As the original proponents of BOP C.K. Prahalad & Hammond (2002, p. 10) argued: “an individual consumer might not be able to afford a particular product or service, [while] a group, or even a whole village, often can.”

Table 4.3: Summary of VPP and CIC against assessment criteria of development agent and inclusion

Criteria	Village Phone Program	Community Information Centre
Capital and resources invested- Mutual interest in commercial and developmental objectives	Introducing mobile phones to rural areas creating a market base- subsidizing airtime; income for women entrepreneurs	Expanding the market for internet services- financial incentives for franchises; Use of venues as distribution point to sell mobile top-up services;
Primacy to the benefits for the poor and marginalized	Mobile phone access in rural areas but most of the users non-poor; created income for women entrepreneurs	Requires significant financial and educational capacity to be franchisee; most users are non-poor
Pro-active and accountable approach to address poverty and marginalization	Lack of sustainable income for entrepreneurs; Operations taken over by men	Located in urban areas, main user based educated, employed, young; focus is on financial sustainability
Inclusion as consumers	Evidence of benefit for rural consumers through contact with family, friends; reducing travel time and cost	Served as internet access points mostly for employed and students;
Inclusion as entrepreneurs	Entrepreneurs chosen from Grameen Bank borrowers leading to exclusion of others;	Focused on mid -level entrepreneurs; profitable enterprises
Social inclusion enabled by ICTs	Evidence of increased status and income for some women but a short-term solution	Contributes in the access to resources and learning, but overall no effective integration of ICTs for development

CICs, on the other hand, cater to more affluent customers in peri-urban areas.

GrameenPhone took strategic decisions to promote the initiatives for long-term business expansion. In the case of VPP, the GrameePhone airtime cost was initially subsidized at a discounted rate of around 50 percent. In the CIC, the owners were given free Internet services for one year, enabling them to break-even in the effort to support long-term sustainability.

The analysis of VPP raises a few complexities and contradictions. Overall, the findings contradict the claim of VPP as a successful BOP venture, if assessed on the criteria developed, particularly in its perceived role as a development agent. As shown above, GrameenPhone's financial success during the rollout of VPP was evident and VPP gave GrameenPhone such a

significant strategic advantage that the other mobile operators failed to carve out formidable market shares (Seelos & Mair, 2007, p 55).

The strategic alliance between GrameenPhone and Grameen Bank also needs critical assessment. Mohammad Yunus argued that such partnerships between actors who are not in direct competition with each other are highly productive and low in risk (Yunus, Moingeon & Lehmann-Ortega, 2010). Thanks to the partnership, GrameenPhone did not need to engage directly with poor, as the task was managed by the Grameen Telecom. In that sense, VPP fits nicely into the newer articulations of BOP that emphasize social embeddedness” of BOP interventions (London & Hart, 2004, p.364).²³ Grameen Bank, with its extensive micro-finance infrastructure and network in rural areas, served as a key partner conducting central functions of value chain and enabled trust in local communities and provided important local knowledge. All of these factors contributed to reducing uncertainty (Seelos & Mair, 2007; Knight-John, 2008).

Another critical factor in terms of general acceptance of the VPP was the charismatic leadership of Muhammad Yunus, as an internationally renowned personality who pioneered micro-credit schemes in Bangladesh, providing legitimacy and credibility on the part of GrameenPhone and VPP (Rashid & Rahman, 2009). The VPP partnership, however, can be termed as an “in-house” solution to reduce transaction cost in the context of perceived weak legal framework and governance in BOP contexts. While this solution transformed captive NGO members into commodity producers, distributors, or consumers and created an internal market

²³ London & Hart (2004, p. 364) define social embeddedness as “the ability to create competitive advantage based on a deep understanding of and integration with the local environment. This capability involves the ability to create a web of trusted connections with a diversity of organizations and institutions, generate bottom-up development, and understand, leverage, and build on the existing social infrastructure.

for corporate services, it excluded other equally deserving members of the community (Mannan, 2009).

The issue of partnership also needs to be analyzed in terms of an increasing trend of commercialization within NGOs and microfinance institutions. In Bangladesh, there has been a distinct transformation of the NGO sector, with a veritable collapse of social mobilization NGOs that focus on conscientization and collective action, and, the concomitant rise and influence of service provisioning NGOs that focus on micro-credit and other services (Banks & Hulme, 2012). The blurring of the lines between non-profit and for-profit goals in the efforts to solve development problems poses the risks of cooptation by corporate interests. In the case of VPP, the focus on mobilizing and combining the distinctive capabilities to generate value occurred at the cost of pro-poor primacy and a lack of accountability for developmental outcomes. Therefore, assessment of NGO-business partnerships needs to recognize the ideational, institutional, economic and political factors and forces underpinning them, rather than merely viewing these as a pragmatic solutions to create mutual value (Utting & Zammitt, 2009). The case shows that as much as corporations are seeking to leverage NGOs to enter BOP markets, the NGOs are ideologically and functionally drawing themselves into collaborative arrangements with businesses.

The VPP also highlight how women are a key target group in the BOP distribution system. Given the context of a patriarchal society in Bangladesh where women's mobility and economic opportunities are more limited (Goetz & Gupta, 1996), the inclusion of women in the distribution system and providing them with tools for entrepreneurship maybe considered as a desirable and appropriate design element. Yet, a closer scrutiny of the case raises the question whether women's participation in the economy is a necessary tool for market expansion. As I

have shown, inclusion of women as a “producer” (i.e. as distributors) facilitates the inclusion of people as “consumers”, thereby fulfilling the goal of increasing consumption of goods and services.

The shift from VPP to CIC was a strategic transition for GrameenPhone. The inherent limitations of the VPP business model was exposed through changing context of reduced call rates and increased adoption of mobile phones in rural areas as well its inability to meet multiple and varied needs of customers. Establishing multipurpose telecentres, which offer various services, such as Internet, telephone, and other ancillary services in one venue, appears to be a viable business strategy. At the same time, CICs are uniquely positioned as the only private sector led telecentre in Bangladesh with a profit-driven entrepreneurial model and a stated promise to empower the rural community through the provision of ICTs.

In contrast to VPP, CICs present a different set of complexities and contradictions. The CIC venture did not have a local NGO partner, and adopted a franchise model instead. While telecentres are typically located in rural areas where ICT services are generally scarce, the CICs in the sample under study were mainly located urban and peri-urban areas and the services were mostly used by the non-poor. The decision not to focus exclusively on the typically poor population at the BOP but rather to target a broader range of population such as low to middle income consumers was a strategic choice by GrameenPhone in order to reach critical mass of consumers more rapidly (Schrader, Freimann, & Seuring, 2012). Findings show some positive impact of CIC on the youth, serving as a space of group sharing and learning, although, as will be argued below, there is no evidence that such practices are being leveraged upon by creating educational content in CICs.

CICs also require a larger capital base and capabilities from the entrepreneurs. Unlike in the case of VPP, decisions like the selection of entrepreneurs were taken by GrameenPhone corporate office, an example of top-down centralized management practice that values return on economic investment over other considerations. This is problematic as it runs counter to the ethos of bottom up approach propagated by the BOP advocates. According to Kleine (2010), the further down the directional control continuum a particular project or program is located, the more risk there is that the project diverges from the capabilities of and intended outcomes perceived by the beneficiaries.

The shift from VPP to CIC also illustrates a shift from microfinance to micro-franchising, an emerging phenomenon that entails a business model, applying traditional franchising to very small businesses (Hart et al, 2013). In the CIC case, micro franchises operated by local entrepreneur are creating scalable business opportunity for GrameenPhone. The systemic replication of micro-enterprises focusing on selling low-cost products or services, is a further legitimization of the business perspective of BOP, as the primary focus is on return on investment through, for example, selection of location of franchises in urban areas that are more likely to have more affluent users and offering products based on profit calculation as opposed to development needs.

BOP efforts to promote ICTs for development initiatives need to be evaluated not only in terms of promoting socioeconomic welfare of disadvantaged groups, but also in terms of their social and cultural appropriation. From this perspective, broad-based digital development is a justified expectation from CICs. For ICTs to be transformational, there is a need to focus on not only the technical and financial elements– but also the human (roles and capabilities, infomediation) and institutional (contextual norms and values, service provision) elements. The

human element is particularly important if CICs are to go beyond what appears to be their main user-base-- educated, young, and employed who are relatively more capable of benefitting from using Internet. On the basis of the findings, it can be argued that with the exception of providing access to Internet, which only the educated few are able translate into resources for themselves, CIC has generally failed to promote broader social inclusion enabled by ICTs.

The case of CIC illustrates that despite digital technologies spreading rapidly in much of the developing world, the broader development benefits from using these technologies have lagged behind (World Bank, 2016). It also demonstrates how private businesses are moving into the public space, but are reluctant to invest “public” goods such as building a digital ecosystem where the return of investment is not clear. The absence of a broad-based development approach means CICs are generally not considering or addressing the needs of disadvantaged groups and accountably taking on issues on poverty and marginalization. Through the CICs, GrameenPhone appears to be drawing the line between corporate innovation and market expansion, thereby adopting a “business as usual” approach rather focusing on attempts to become a development agent.

In conclusion, while both VPP and CIC contribute to inclusion of consumers and entrepreneurs to varying degrees, they do not adequately respond to the broader development efforts. We find that GrameenPhone’s engagement as a development agent is predicated by what Blowfield (2012) calls an instrumental rationale, which is not synonymous with the elements of international development as a whole. Here, short term financial incentives are accompanied by what appears to be a short-term developmental “by-product”, while the key driving force *is* the longer terms monetary returns. The case of Grameenphone raise doubts about the extent to

which private sector led BOP initiatives are addressing concerns of digital *and* social exclusion in Bangladesh.

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Table 4.4: Role of different stakeholders in the VPP

	Grameen Phone (GP)	Grameen Telecom (GTC)	Grameen Bank (GB)
Established	1995	1997	1983
Type of company	For-profit	For-profit, private limited	Financial Institution (specialized bank, for-profit)
Shareholders/ Owners	Telenor (Norway) 62%, GTC 38%	GB	Micro-credit borrowers 94%; government 6%
Objective	“to receive economic return on its investments and to contribute to the economic development of Bangladesh where telecommunication can play a critical role”	“to establish universal telephone access all over rural Bangladesh and to become a model for utilizing telecom and information technology to empower rural poor”	To extend banking facilities, create opportunities for self-employment for to poor men and women
Role in VPP programme	<ul style="list-style-type: none"> - ownership, maintenance, and expansion of communication infrastructure - provision of technical support - provision of airtime (50% discount) - provision of summary bill to GTC - securing government license, compliance, with regulations, liaison with government - government financial and taxation liaison 	<ul style="list-style-type: none"> - village phone network management, VPO monitoring - system design for specific installations - importation, distribution, aftercare of handsets - provision of support and training of VPOs - bulk airtime purchase - provision of bill to GB branches 	<ul style="list-style-type: none"> - Selection of VPOs, - Provision of micro-finance and other support to VPOs - Issue individual bills

Source: Adapted from Knight-John (2008, p.121)

Chapter 5: Conclusion

“Even if the poor were to get a little richer, this would not necessarily imply that the poor were getting a fair share of the potentially vast benefits of global economic interrelations.”

Amartya Sen (2002, p.5)

Revisiting the thesis objective

Against the backdrop of persistent poverty and rising inequality across the developing world, there are calls for creative and innovative solutions that harness the power of the private sector to achieve sustainable development. In such a view, undertaking profitable business ventures are seen as a crucial process for sharing of wealth and prosperity among all. The role of businesses is now firmly established in development debates and global policy frameworks, such as the United Nations' Millennium Development Goals (2000-2015) (Castresana, 2013), as well as the new agenda for Sustainable Development Goals, which aims to wipe out extreme poverty, fight inequality and tackle climate change (United Nations, 2016).

One of the most influential articulations of the increasing interest and role of business in development is the bottom of the pyramid (BOP) approach. The BOP proposition argues that corporations are the key catalysts for wealth creation in poor communities. Deploying their unique capabilities can contribute to the goals of profit generation as well as poverty reduction. *BOP as a development strategy* is predicated upon the provision of products and services to those living under the poverty line and promoting employment and entrepreneurship. A core element of BOP is the integration of people into the market (or “inclusion”) so that they can reap the benefits of greater wealth.

In developing countries, the information and communication technologies (ICTs) have been identified as critical for not just economic growth, but also for poverty reduction and inclusion of the low-income population segments. The purpose of the thesis was to investigate how BOP initiatives are contributing to inclusion of the poor in developing countries like Bangladesh. The specific focus of the thesis was public access ICT venues, notably telecentres.

In Bangladesh, there has been significant uptake of enterprise-driven telecentres with profit-maximizing or sustainability objectives that provide ICT services, such as, access to internet. The expected development benefits of telecentres are not only equitable access to digital connectivity, but also serving as an important space for the provision of information and services for ICT-enabled development for the poor and the marginalized.

Summary of the findings

The thesis focused on the concept of inclusion as *the* central developmental dimension within the BOP approach, couched in broader notion of inclusive capitalism. The narrow and somewhat vague interpretation of inclusion in the BOP discourse was replaced with one that draws from sociology and development studies, particularly stressing the “social” dimension of inclusion (and exclusion) (De Haan, 1998; Sen, 2000). The capabilities approach of Sen (1999) was a normative analytical theme throughout, considering the potential of ICTs to contribute to human and social development as highly dependent on how individuals are able to take advantage of their economic and social opportunities. A conceptual framework was developed to illustrate the causal links between ICT interventions and the various forms of inclusions facilitated by BOP interventions. The framework sees ICTs as a transformative tool, not only in terms of access but also purposeful use that leads to a pervasive set of complementary consumption and production capabilities. Applying the mechanisms specific to ICTs (for example ICT access and use) to the idea of inclusion helps to draw out the specific outcomes in a meaningful way. The thesis also underscored the influence of corporate motivations and strategies in undertaking BOP interventions, which shape the outcomes in terms of inclusion.

Inclusion and social context

Through the analysis of survey data, we find that public access ICTs venues like telecentres, cybercafés and libraries have different implications in terms of digital inclusion for people in Bangladesh, Brazil, Chile, Ghana and the Philippines. A closer examination shows that women in Bangladesh suffer from digital exclusion, underscoring that interventions have differential impact on individuals due to mediating socioeconomic factors. The thesis thus highlights a broader phenomenon of lower than expected use of ICTs in Bangladesh despite the increasing diffusion in recent years. The findings show that controlling for all other variables, including gender, those who are less educated are more likely to suffer from digital exclusion.

The findings also show that women do not lack autonomy or positive attitude towards technology but rather they are able to access fewer productive services because such service provisions have traditionally been biased toward male clients. For example, in Bangladesh, we find that GrameenPhone's Community Information Centres (CICs) served as a learning hub for male youth. In the context of some geographic region of country, young women may not have similar levels of acceptability to frequent CICs. By empirically uncovering some of these gender elements and observations, the thesis demonstrates that digital exclusion is intricately linked to social exclusion, characterized by the presence of deep differences across socioeconomic boundaries. Overall, the findings demonstrate that the digital divide is in fact a social divide and any interventions to reduce such divisions would need to take into account these broader factors.

In addition, the extent to which individuals are able to take advantage of ICT services has a lot to do with the design of BOP interventions. In contrast to GrameenPhone's Community Information Centres (CICs), which had a very low usage among women, the D.Net initiative of providing door-to-door ICT services through the infolady program was able to effectively reach

women. In general, we found that the telecentres operated by D.Net and the telecentres operated through the public-private partnership of the government (Union Information Service Centres) had reached deeper into the BOP population segments. The findings also underscore the important role of the intermediary- people with a basic education who act as the interface between technologies and users. While it is often argued that “connectivity” - or access to new ICTs like internet - is sufficient to bring downstream benefits, the findings show that the ability to take advantage of ICTs is highly dependent on the education level of users. In that context, the info-lady program is an important component in D.Net’s design of digital and social inclusion of illiterate women.

The targeting of women in the value chain of market-driven interventions is a persistent theme in the literature that eulogizes their entrepreneurial agency or capacity. As Prahalad, citing the selected cases in his book, argued, “Although the evidence [of the critical role of women in development] is overwhelming, very little explicit attention has been paid to *actively coopting women in the efforts to build markets* and lead the development process” (emphasis added) (2005, p.108).²⁴ Such a view does not acknowledge the real challenges women face in developing countries where women’s entrepreneurial prowess has a lot to do with a lack of choice (Banerjee & Duflo, 2007) and as found in this thesis – the kind of existing networks of which they are a part. The Village Phone Program (VPP) demonstrated positive impacts (higher income and social status) on women entrepreneurs who were recruited as Village Phone Operators to sell phone services or air time in rural Bangladesh. The Operators however would not likely have been able to purchase their handsets without pre-negotiated favorable loans from

²⁴ One of the most cited examples of BOP promoting entrepreneurial women is Project Shakti launched by Hindustan Unilever (HLL) in 2001 to extend the company’s market penetration in India by using under-privileged rural women (Shakti ammas) to distribute a range of Unilever’s consumer goods in ‘untapped’, hard-to-reach areas (See Dolan, Johnstone-Louis & Scott, 2012).

Grameen Bank.²⁵ The inclusion of members from within Grameen's internal network potentially excluded other women in the community. Similarly, the Community Information Centre initiative requires that its franchisees have a significant amount of capital and other resources that the poor do not have. As such, the thesis findings uncover the effect of social inequality, highlighting the exclusionary processes of BOP interventions reinforcing existing social divides. As Dolan (2012, p.7), in analyzing the question of inequality in the BOP, reminds us: "...inclusion for some, whatever the merits, is often produced through, the exclusion of others".

Overall, a common thread in the findings is the heterogeneity amongst the poor influencing the extent to which individuals participate and interact in the digital sphere. The important question thus is who among the bottom billion gets to benefit from the wealth generated by capitalism. The findings indicate that for the most part the BOP approach is based on a decontextualized understanding of processes and relations that characterize the lives of people in the poorest communities around the world.

Inclusion and the impact of organizational features

This thesis has emphasized that various dimensions of inclusion are dependent on the motivations of the corporations as well as meso-level organizational formations and structures. Such factors influence how 'inclusion' is defined and shape the activities undertaken to address inclusion. The case of GrameenPhone Limited, the largest mobile phone company in Bangladesh, shows that the adoption of its BOP ethos was based on concrete business strategies (prospects of gaining competitive advantage) and the introduction of new business models

²⁵ There is now increasing evidence that most of those who receive micro-credit are not the poorest of the poor but rather come from the middle class.

(changing organization of production and marketing). The analysis shows that the two salient features of GrameenPhone's BOP strategy were:

- The expansion of telecommunications networks, giving it the early mover's advantage and a foothold in the mobile phone market
- The innovation of shared access model for mobile-based internet connectivity in view of the competition for the internet market in rural areas

While the GrameenPhone case confirms the strategic dimension of BOP, the findings raise three important issues in terms of inclusiveness and impact. The first is related to the idea of sustainability, juxtaposed in the analysis of the two initiatives: the Village Phone Program (VPP) and the Community Information Centres (CICs). VPP was mainly targeted in rural areas to cater to the communications needs of the poor and provide income for the Village Phone Operators, typically women. However, the scheme became obsolete due to market realities, and there was a lack of subsequent follow-up to sustain the incomes for women (Boettiger, Toyama & Abed, 2012).

On the other hand, the CIC targeted mostly employed and relatively well-educated users--generally not the demographic group associated with the low-income segment. CIC operations were concentrated in urban areas with products and services (and price points) geared for the middle-class. This strategy had lower risk and best upside potential in terms of profitability (all the CICs included in the 'Impact of Public Access ICTs' survey were profitable). Therefore, while both the initiatives had the imperative of inclusion, VPP had to be abandoned, while in the case of CIC, inclusion was primarily orchestrated as digital inclusion of consumers who are not necessarily poor. Overall, what we observed through the cases is that sustainability has been

primarily perceived in financial terms while the social dimension of sustainability²⁶ – proactively identifying and managing business impacts on the various stakeholders like employees, workers in the value chain, customers and local communities was absent.

The second issue that emerges from the GrameenPhone case is that both the VPP and CIC interventions lacked a deliberate pro-poor design and the integration of poor was largely premised on peripheral strategies. In the case of VPP, the partnership with the microfinance institution Grameen Bank presents some interesting paradoxes. On one hand, the VPP had more resonance in terms of a community-centric approach through the engagement of local women entrepreneurs. On the other hand, GrameenPhone leveraged Grameen Bank to enter BOP markets in Bangladesh. Indeed the integration of the entrepreneurs was an important mechanism to facilitate the rollout of VPP in the country. In other words, inclusion of women as entrepreneurs contributed significantly to the inclusion of more consumers. More importantly, however, GrameenPhone's lack of accountability towards the women entrepreneurs was apparent where mutual interests and priorities were no longer naturally aligned.

The third issue is the lack of adequate understanding and effort to promote ICT-enabled content and services, despite the fact that the shared access models of ICTs like telecentres overcome the need for technology ownership at individual and household levels. Overall, we found that telecentre users in Bangladesh report more positive impact in terms of communications with friends and family as well as money and time saved. As indicated earlier, a

²⁶ For an elaboration of the concept of social sustainability see <https://www.unglobalcompact.org/what-is-gc/our-work/social>

large proportion of telecentre users are students who indicate beneficial use of ICTs through telecentres.

On the other hand, there is very little impact in accessing government services, health information, and using ICTs for income, all of which are more pronounced among those who use GrameenPhone's Community Information Centres (CICs). The findings show that CICs have not initiated a tailored approach to develop appropriate content, which requires significant amount of financial and time investments. GrameenPhone, we conclude, is unwilling to invest due to the complexities of developing the content but also the lack of a clear pathway toward financial return.²⁷ Therefore, we find very little evidence of CIC promoting social inclusion, i.e. not only access to ICTs but also effective integration of ICTs for development. This entails the provision of appropriate content and resources and the capability of individuals to transform digital foundations into development outcomes, e.g in health or education.

The paradox of inclusion

Overall, the thesis highlights the problematics of the concept of 'inclusion' as envisaged in the discourse of BOP and operationalized in practice in the specific context of the use of public access ICTs in Bangladesh and other developing countries. In an early articulation, but one that is equally applicable in new version of BOP, Prahalad & Hart (2002, p.1) captured this inclusion imperative, by stating: "[t]he real source of market promise [at the BOP] ... are the billions of aspiring poor who are joining the market economy for the first time." Defining

²⁷ This reflects a general picture on BOP initiatives in the ICT4D sector, with only a few focused on ICT-enabled education services while a significantly large number of innovations in financial services that had the potential for quick returns (De Carvalho, Klarsfeld & Lepicard, 2011).

poverty as a lack of adequate integration into the market is the most critical weakness of the economic and social value propositions within the BOP approach. Such a simplistic conception of poverty and the narrow focus on consumption are inadequate for attaining meaningful inclusion of people.

In the context of ICTs, the BOP formulation favours a techno-determinist approach to spread ICTs in the developing world, and therefore tends to be supply-driven. The emphasis on access to newer ICTs as *the* solution to reduce the digital divide and facilitate economic growth sidesteps the ICT needs and capacities of those living at the bottom of the economic pyramid. Meaningful inclusion, however, would mean “social inclusion” where broader development benefits are derived from using digital technologies (Warschauer, 2004). As discussed above, the concept of social inclusion puts more emphasis on providing relevant ICT products and services and takes into account unique socio-economic needs and capabilities of people. When corporations do not invest resources to contribute to social inclusion, such corporate involvement leads to inclusion based solely on consumption. In that sense, inclusion in the BOP model entails adapting people to the needs of the market rather than regulating markets to the needs of people (Labonte, 2004).

In this thesis, we found that in practice such formulations of BOP have resulted in the adoption of a narrow view of inclusion. Here, inclusion is perceived as consumption while inclusion as entrepreneur is promoted as a necessary process innovation for market expansion. For example, in the case of VPP, GrameenPhone’s BOP approach utilized women as a tool for achieving corporate goals, rather than serving their needs and contributing to their well-being. Therefore, women’s participation in the economy served more as a strategic tool for achieving the BOP goals of expanding market scale and reach. The lack of accountability and social

sustainability means that less emphasis is placed on ensuring better jobs and scope for advancement and well-being of women, raising doubts about in whose terms “inclusion” is taking place and who is being supposedly “included”.

Overall, the thesis draws out the inherent tensions between the economic logic of business, even if its “inclusive” and the social logic of inclusion. Thus, the findings highlight the differences between “inclusion” and inclusive business”. These two concepts have often been used interchangeably or their differences have been glossed over in the BOP discourse. Inclusive business emphasizes a *business model* which is predicated on profit making initiatives that can improve the marginalized and vulnerable populations. Here, the business model is driven by, among other things, the ability to include targeted low-income BOP populations into consumption. As argued above, entrepreneurs and poor women whose interests and concerns can be easily aligned to those of the corporations fall nicely into the business model. This is rather different from a view of inclusion that is meaningfully contributing to one’s social and economic advancement. While such inclusion can be promoted through inclusive market-based efforts, the focus on business models diverts attention away from how such inclusion translates into outcomes which specifically benefit individuals and communities. The findings also highlight digital and social exclusion as recurring threads that has been absent in the BOP discourse.

ICTs and development in Bangladesh: is there a role for the state?

In analyzing the case of public access ICTs, the thesis shed light on three types of telecentres in Bangladesh with the aim to provide ICT services: BOP interventions by GrameenPhone Limited (Village Phone Program and Community Information Centres), a public

private partnership initiated by the government of Bangladesh (Union Information Service Centres) and telecentres operated by social enterprise D.Net. The analysis of the three institutional approaches highlights a convergence of ideas around increasing commercialization of ICT provision. The findings demonstrate that in promoting digital inclusion through telecentres, there appears to be a neat division of labor among the three actors (serving the different areas and socioeconomic groups). There is, however, a need to consider the wider implications of such division of labour.

The thesis illustrates the broader phenomenon of governments (and non-profits) increasingly applying commercial business principles and approaches typically used by the private sector. The approach of public-private partnership in the Union Information Service Centres (UISCs) is part of a broader effort by Bangladesh government to undertake the process of deep marketization process in key sectors (Neusiedl, 2016). Here, the emphasis lies on public-private partnerships and other strategies that advance a market fundamentalist agenda within the neoliberal development framework.

This shift raises some interesting issues around how private interests are increasingly entering the domain of “public” access ICTs, arguably weakening the inclusive conception of the public good (Pyati, 2010). It is argued that the government is in a position to lead the policies and strategies with a holistic view of development. For example, the lack of effort by private actors in developing relevant content begs the question whether the public sector needs take on this responsibility, particularly content on key services like education, agriculture and health. The involvement of the public sector would also have a greater potential to create social and developmental service-oriented ICT venues, in comparison to venues that mainly serve as ICT access points. Progress in the health sector of Bangladesh, for example, was attributed to the role

of the government-- both in terms of allowing the other actors such as NGOs to step in, and, in leading the pursuit of a women-centred, gender-equity-oriented health agenda (Chowdhury et al, 2013).

Capitalism: inclusive or exclusive?

Inclusive capitalism presents an interesting paradox in the contemporary discourse on poverty and development. On the one hand, neoliberal market-based solutions that align the dynamism of the commercial world have emerged as the most durable alternative to state and donor driven approaches. On the other hand, there is an increasingly louder call for an equitable, inclusive and environmentally responsible capitalism. Such a paradox is not as apparent in the BOP approach forwarded by its proponents. BOP encourages private sector interventions in development while ostensibly being concomitantly concerned with ensuring equity and participation (or inclusion) of people. Yet, on the basis of the empirical findings, the thesis demonstrates that BOP generalizations about the nature of capitalism are based on a limited or instrumental understanding of its unequal and exploitative processes. We find that the BOP discourse takes a very reductionist view of the knowledge, processes and results of development, as evident in the some of the discussions on inclusion, poverty and “community”.

Interestingly this instrumental view is also held by Dr. Mohammad Yunus, the pioneer of microcredit movement and the founding chairman of Grameen Bank (which coincidentally has a stake in GrameenPhone). Yunus stated that not only is capitalism good for the poor, “the poor are good for capitalism” (cited in Karim, 2008, p.14). Overall, the prevailing conceptualization of poverty within BOP propagates solutions to poverty through market interventions that emphasize economic and financial returns—a phenomenon of “marketization of poverty”

(Schwittay, 2011, p.73). In this thesis, we argued that the instrumental consideration of poverty enables an uncritical insertion of the role of business in development.

We have also seen that BOP is hardly bottom-up in practice; rather it is a manifestation of top-down corporate endeavour. In some instances, the bottom-up imperative is subsumed under a partnership (typically with an NGO), introducing a whole different set of exclusionary processes. In a way, the discourse on inclusive capitalism brings the focus back on neoliberal perspectives of economic growth through markets and trickle-down economics, and in turn shifts the focus away from more bottom-up approaches of human development and poverty reduction. It is perhaps too early to judge the extent to which inclusive capitalism and associated BOP proposition is a reversal of advances in human development and poverty reduction.

The BOP represents the increasing attempts to harness private enterprise mechanisms to solve development problems. The outcome often is that poverty is transformed into a global market—dubbed as “bottom billion capitalism” by Roy (2012, p.105). While the inclusive element remains elusive in the BOP approach, certainly for those who have been left behind in the contemporary economic order, what we see rather is the BOP phenomenon being integral to the bottom billion capitalism, where MNCs are aggressively staking a claim as key actors in development.

Ideas matter. As evident in the thesis, the BOP idea has had significant influence in development thought and practice during the last two decades. It is important that the analysis of BOP is not limited to the dominant discourses of business, development, and poverty. More fundamentally, we are witnessing the repositioning of business as a “development agent” (Blowfield & Dolan, 2014). Chatterjee (2014), for instance, argued that BOP approach can be thought of as an emergent “metanarrative”— a grand synthesizing framework which provides

scholars and practitioners a predetermined template or organizing principles for research and action aimed at creating market based solutions for poverty and marginalization. This thesis countered this metanarrative by interrogating some of the issues silent in the BOP discourse such as inequality and exclusion.

Limitations

The thesis relied on secondary data due to limited time and resources. The secondary sources, notably the IPAI survey data, were viable in terms of geographical and thematic focus, ensuring the appropriateness for the research topic. The analysis of survey data was complemented with findings from a number of research publications, providing the possibility of comparing and contrasting findings. Nevertheless, the research would have benefited significantly from ethnographic data. For example, ethnographic research would have permitted a deeper understanding of how individuals interpret their experiences of BOP interventions in the study settings. Such approaches are also particularly useful in uncovering the complex social dynamics such as those based on gender—a recurrent theme in the thesis.

In conducting the research, I confronted the lack of existing frameworks or criteria for analyzing BOP interventions. The developmental “impact” of BOP was captured mainly through the concept of inclusion. The approach taken in the thesis was developing measures of inclusion in the context of ICTs. While I argue that such a formulation is necessary in capturing the causal processes of how ICTs contribute to inclusion, this criteria may not be fully exhaustive in addressing the complexities of development impact, or more importantly, may not be useful in assessing BOP interventions in other domains.

I have also argued that there is a need to consider the motives and activities of diverse organizations under the BOP concept. To date, multinational corporations have received the bulk of scholarly attention in the discussions of BOP, but different manifestations of the private sector initiatives such as social businesses and various forms of partnerships are intricately linked with a diverse range of actors. In some cases, the activities of these actors are indistinguishable from those led by MNCs. While such inter-mingling of for-profit and non-profit actors presents complexities in specifying their roles, it nevertheless supports the contention that any theory of bottom of the pyramid business which does not include the full spectrum of business is incomplete (Blowfield & Dolan, 2014; Banks & Hulme, 2014).

Implications for future research

The debate on the role of the private sector in development has been clearly shifting towards the BOP approach. Yet, the BOP debate is often motivated by opposing ideologies, “...producing more heat than light” (Paton & Halme, 2007, p.585). Indeed, businesses have been for too long left out of development thinking, either ignored or seen as problematic (Blowfield, 2005). Besides the contribution to fill the gap in empirical studies of BOP that scrutinize its social or developmental dimensions and present its conceptual and theoretical shortcomings, the thesis opens up a few areas for future research.

First, the conceptual framework to describe inclusion in the domain of ICTs presented herein can be tested by more case studies in different geographical contexts. At the same time, there are strong justifications for developing and testing theoretical and heuristic frameworks in other domains of development. One such domain that has been particularly relevant in terms of the BOP proposition is health (Reuters, 2017).

Finally, the thesis revealed some new organizational approaches to implement enterprise-based interventions based on BOP ethos. While approaches like business-NGO coalitions have been well-studied, phenomena like micro-franchising (as seen in the case of GrameenPhone's Community Information Centres) are only emerging now. Furthermore, as mentioned above, there are a number of alternative ideas and practices that propose solutions to development problems through business. In particular, case studies of social business would add value since it is often considered as an *alternative* to the profit imperative and motivation underlying BOP interventions. While businesses can and do play a legitimate role in development (e.g. by developing innovative products, promoting local entrepreneurship, etc), there is a need to analyze the conditions under which business drives inclusive and sustainable development and the consequences to the most marginalized groups of people whom they often target.

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VERBAL CONSENT/ASSENT – USER SURVEY
Global Impact Study of Public Access to Information and Communication Technologies –
Public Access Computing User and Operator Survey

Technology & Social Change Group
University of Washington Information School
4311 11th Ave NE, Suite 400
Seattle, WA 98195

Hi, my name is _____ and I am involved in a research study called the *Global Impact Study of Public Access to Information and Communication Technologies* at the University of Washington. You have been selected as a possible participant in this study because you have been using a computer at this public access computing venue.

We are asking you to take part in a research study because we are trying to learn more about the impacts of using computers at public venues such as this one.

If you volunteer to participate in this study, we would ask you to participate in an interview that would include questions about how often you use computers at public venues, what you do, and what the impacts are. The length of the survey could range from 45 minutes to one hour. The survey will take place at this venue.

There should be little or no risk involved in participating in this research. If any of the questions make you feel uncomfortable, you do not have to answer them. Your participation is voluntary, and you can stop the interview and/or withdraw from the study at any time without any consequences to you. I may withdraw you from this research if circumstances arise which warrant doing so.

We may also ask to take photos of you. The pictures may be published in reports and journal articles but would never include your name or name of this venue. Photos may be posted online in reports or the project website. After we take the photographs, you may view them and request that they not be used.

The data from this study may be used in the future for other studies on the same topic.

You will not benefit directly from participating in this research. The primary benefit to society of this research will be its potential contribution to knowledge about ways to maximize the impacts from public computing centers in developing countries, as well as policy implications for the future development of computing centers.

[You will not be paid for participating in this study.]

Or

[Should you choose to participate in this study you will be compensated for your time with -----.]

User Verbal Consent Script (rev. 1/20/10)

APPROVED

FEB 09 2010

UW Human Subjects

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. We will ask for your e-mail address because we may send you a follow-up survey by e-mail in the future. Providing your email address is also voluntary. The information will be kept in a secure location where only the researchers in this study will have access to it. Data from this study will be kept indefinitely.

If you have any questions or concerns about the research I can provide you the contact information for researchers at the University of Washington.

If you have questions regarding your rights as a research subject, I can provide you with the contact information of the University of Washington Human Subjects Division.

Do you have any questions about this research?

Are you willing to participate in this research study?

Do you give us permission to take photographs of you?

Annex 2: Response from Office of Research Ethics and Integrity, University of Ottawa

Thank you for your interest in the University of Ottawa's research ethics process. We are asking you to take part in a research study because we are trying to learn more about the views of ethics committees at public research institutions.

PDF IRB approved con...

Ethics <ethics@uottawa.ca>

5/11/15 ☆

to me ▾

Good morning,

Thank you for providing the additional details. This confirms that the project falls under Article 2.2 of the Tri-Council Policy Statement and that it therefore isn't necessary to obtain ethics approval in order to use the data for research purposes.

Good luck with your research.

Jasmine Sarazin

Coordonnatrice d'éthique / **Ethics** Coordinator
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