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MOBILE TELECOMMUNICATIONS AND SOCIAL DEVELOPMENT IN BANGLADESH

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ABSTRACT

Social development is the transformation of institutions to empower people. Since there is no comprehensive theory guiding on how this is achievable, World Bank, based on their experience, identified three operational principles to guide its approach to social development: inclusion, cohesion, and accountability. Social Inclusion encourages equal opportunities for men and women to contribute to society. Cohesive society allows individuals to work together to achieve common goals peacefully by overcoming hurdles. Accountable institutions ensure transparency and respond to public interests effectively and equitably. This paper employs an exploratory study and aims to address how Grameenphone Limited, a leading multinational telecommunication company in Bangladesh is contributing to the country's social development. To investigate the research questions a documentary research approach is pursued. Documentary research is the use of documentary sources in social research. It refers to the analysis of the documents that contains information about the phenomenon under investigation. The findings show that Grameenphone Ltd. played a crucial role in creating equal opportunities for men and women to contribute to society. Furthermore, it also contributed in creating a cohesive society which allowed individuals to work together to achieve common goals peacefully by overcoming hurdles. Lastly, though social compliance, CSR and environmental sustainability, GP ensured transparency and responded to public interests effectively and equitably. To the best of our knowledge, this is one of the first studies which strive to explore how mobile telecommunications can contribute to social development.

Contribution/ Originality: This paper employs an exploratory study and aims to address how Grameenphone Limited, a leading multinational telecommunication company in Bangladesh is contributing to the country's social development.

1. INTRODUCTION

According to a World Bank report, social development is the transformation of institutions to empower people. Since there is no comprehensive theory guiding on how this is achievable, World Bank, based on their experience, identified three operational principles to guide its approach to social development: inclusion, cohesion, and accountability. Social Inclusion encourages equal opportunities for men and women to contribute to society. Cohesive society allows individuals to work together to achieve common goals peacefully by overcoming hurdles. Accountable institutions ensure transparency and respond to public interests effectively and equitably (Bank, 2005).

In another notable report, it is suggested that ICT could alleviate poverty and contribute to social development in five different ways (Yamamichi, 2011):

- Faster and easier information delivery.
- Information exchange and network creation.
- Efficiency and Transparency.
- Transformation of people's lives.
- Decentralization and empowerment.

Partial liberalization of the telecommunications industry in Bangladesh attracted significant Foreign Direct Investment (FDI) inflow which acted as a catalyst in developing the country's infrastructure network. Mobile penetration in Bangladesh is relatively high even in rural areas which are not common in many emerging countries. The extant literature suggests a positive correlation between telecommunications and economic growth in developing countries (Datta & Agarwal, 2004; Lee, Levendis, & Gutierrez, 2012; Madden, 2000). However, the impact of telecommunications on social development remains unexplored. This paper employs an exploratory study and aims to address how Grameenphone Limited, a leading multinational telecommunication company in Bangladesh is contributing to the country's social development.

The paper is divided into five sections. The first section discusses the theoretical concept of social development. The next section discusses the research objectives and research methodology. The third section contains overview of the telecommunication sector and the role of Grameenphone in social development. The fourth section sheds light on how Grameenphone is contributing to social development through inclusion, cohesion and accountability. Finally, in the last section we provide directions for further research.

2. THEORETICAL FRAMEWORK OF RESEARCH

Cohesion allows individuals to work collectively, face difficulties together and put efforts to solve them together thereby generating a feeling of belongingness in the group. This is crucial in the development of human beings which eventually translates to economic growth. As Easterly, Ritzen, and Woolcock (2006) suggest that social cohesion is important in order to generate confidence and patience required to implement government reforms, i.e. citizens of a country must learn to trust the government as the short term losses arising out of the reforms will more than offset the long term benefits. This means human beings learn to build trust when they work cohesively. So, it is interesting to wonder what builds cohesion. According to Easterly et al. (2006) the building blocks of cohesion are laws and norms against discrimination which essentially means inclusiveness of a country's communities and institutions. According to research in the Bank (2005) paper it is mentioned that foreign direct investment correlates positively with cohesion as per some social development indicators, suggesting people are more likely to work collectively when foreign fund flow in for infrastructural projects and industrial development. Other studies on civil war show that incomes are, on average, 15% lower after the end of conflict than it would have been otherwise, Bank (2005). This indicates extreme absence of cohesion and hence reduced growth.

World Bank's identification of inclusive institutions as an integral element for social development highlights the importance of such institutions. These types of institutions must exist within societies which ensure equal opportunities for all women and men, ensuring access to resources and services. These institutions value merit that people possess and discourage discrimination against gender, race, religion and ethnicity. In order to ensure effective use of resources and increased growth, robust institutions should make sure that certain groups are not systematically excluded from economic opportunities, not remain unemployed or discriminated against, Bank (2005).

The existence of accountable institutions is vital to social development. Responsible and transparent firms ensure answerability, thereby ensuring equality for all. Lack of accountability corrodes public respect and proves detrimental to growth. Based on cross-country data of social development indicators, the World Bank paper shows

positive correlation between accountable firms and economic growth, suggesting that increase in accountable institutions results in increasing economic growth of a country. Therefore, accountable institutions are important in any society as they are answer to the interest of public in an effective, efficient and fair way.

The three guiding principles of inclusiveness, cohesiveness and accountable institutions is necessary to ensure that better quality of life is achieved, especially for the poor and vulnerable women and men (Bank, 2005). Eradication of inequality and eliminating discrimination followed by equal opportunity for all lies at the very core of social development.

3. RESEARCH OBJECTIVES AND METHODOLOGY

The paper is pivoted on responding to some fundamental research questions:

- How does Grameenphone ensure social inclusion?
- How does Grameenphone ensure cohesion?
- How does Grameenphone ensure accountability?

To investigate the research questions a documentary research approach is pursued. Documentary research is the use of documentary sources in social research (Mogalakwe, 2009). According to Ahmed (2010) performing documentary research is much more than just what people refer to as "recording facts". It refers to the analysis of the documents that contains information about the phenomenon under investigation (Bailey, 1994). To that end material form may be any kind of written text, government and census publications, novels, certificates, newspapers, paintings, photographs and numerous other audio and visual sources in hard copy or electronic form. According to Payne and Payne (2004) documentary methods are the techniques used to categorize, investigate, interpret and identify the limitations of physical sources, most commonly written documents whether in the private and public domain.

Since, Grameenphone is the market leader with its immense impact in the development of the country, the primary subject of this study is how Grameenphone is contributing to the social development of the country.

4. GRAMEENPHONE AND SOCIAL DEVELOPMENT

4.1. Overview of Telecommunications Industry in Bangladesh

After the independence of Bangladesh in 1971, the state-owned telecommunication company Bangladesh Telegraph and Telephone Board (BTTB) came into existence. In 1989, four additional licenses including one mobile phone license were issued which led to the formation of the country's first mobile phone operator Citycell in 1993. In 1996, three new mobile phone licenses were awarded to Grameenphone Limited (Joint venture of Grameen Telecom and Norway based Telenor), Telekom Malaysia International (currently known as Robi Axiata Limited), and Sheba Telecom who started their operations in the following year. Before the advent of the mobile phone operators, the telecommunications industry was dominated by the state-owned BTTB. (Bank., 2013).

In 1996, Citycell was the only market player in the mobile phone industry, and Bangladesh had a telephone density of about 0.3 lines per 100 inhabitants which was the thirteenth lowest in the world and the third lowest in Asia at that time. Seventy percent of telephone lines were situated in the three major cities-Dhaka, Chittagong and Khulna; the rest of the country had only one telephone per 1000 citizens. During that time, market players in the telecom industry consisted of state-owned BTTB with 350,000 subscribers, two rural payphone service providers with 20,000 subscribers and Citycell, the lone mobile phone operator with only about 20,000 subscribers. In 1997, the three newly formed mobile phone operators started their operations; however, their network coverage was limited only to the capital of Dhaka. However, the number of subscribers began to increase from less than 100,000 to over one million in 2002. In 2005, Sheba Telecom was acquired by Orascom Telecom of Egypt (now known as Global Telecom Holding). Two more mobile phone operators Teletalk (the only state-owned mobile phone operator) and United Arab Emirates (UAE) based Warid Telecom (currently known as India based Airtel, which

acquired Warid Telecom in 2010) were introduced in 2005 and 2007 respectively. The telecom industry in Bangladesh has come a long way since then (Islam, 2010).

Figure 1 illustrates the exponential growth in the mobile phone subscriptions and Tele density (mobile phone subscriptions per 100 inhabitants) over a time span of 2000-2017. Mobile phone subscriptions surged sharply from 0.28 million in 2000 to 151 million in 2017. Besides, mobile phone density has amounted to around 92 subscriptions per 100 inhabitants in 2017, which was only 0.21 in 2000. This well explains the rapid growth in the penetration rate of mobile usage. Following the merger of Airtel and Robi and the exit of Citycell in 2016, the telecom industry is now dominated by three major companies. By the end of 2018, with a market share of 46%, Grameenphone continues to be the market leader followed by Robi (30%), Banglalink (21%) and Teletalk (3%) Figure 2.
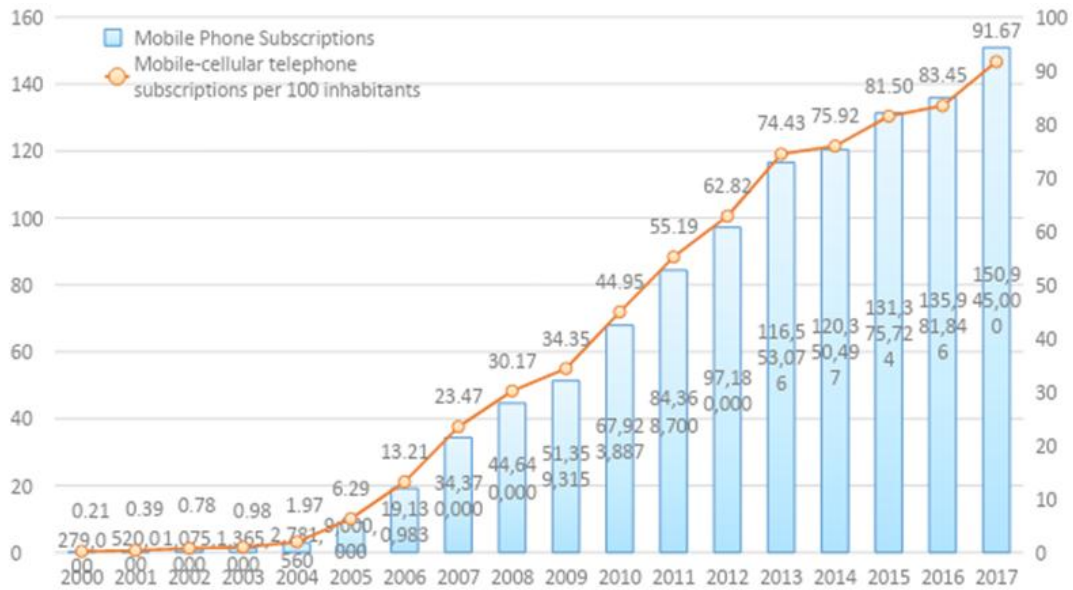

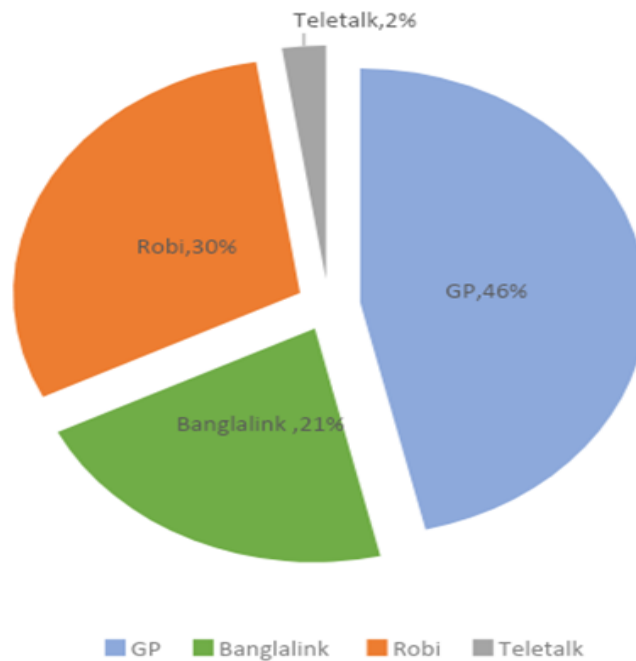**Figure-1.** Mobile phone subscriptions and tele density in Bangladesh (2000-2017).

Figure-2. Market share of mobile phone operators as of December '18.

4.2. The Story of Grameenphone

Since the inception of Grameen Bank, founded by Nobel Prize Laureate Muhammad Yunus, it became one of the most successful microfinance institutions of the developing world. By 1996, it made $2 billion in loans to rural entrepreneurs leading to widespread development in the poor communities. With 1128 branches and over 66,000 centres spread over 65000 villages in the country, Grameen Bank's presence was far-reaching. The banks' primary goal was to make microcredit to finance rural entrepreneurial ventures and cottage industries mainly agro-based.

At the same time, in 1994, US-based native Bangladeshi entrepreneur Iqbal Quadir approached Grameen Bank with his idea of using Grameen Bank's extensive rural presence to introduce a telecom business nationwide that would mainly serve the nation's rural population. Quadir regarded mobile phones a necessity in contrast to luxury and he managed to convince Grameen Bank that access to mobile phones in rural Bangladesh would lead to the productivity of poor Bangladeshis. To Iqbal, Bangladeshi market was a crucial case, since at that time it was lacking far behind in terms of Tele density (less than one subscriber per 100 inhabitants) even well behind its neighbors India and Pakistan. For instance, 97% of the households, i.e., homes outside cities did not have telephones, and it was quite common for a rural villager to spend two days to travel to the nearest town to make an urgent phone call.

In 1995, the liberalization of Bangladesh's telecommunications sector turned out to be an exceptional opportunity for Grameen Bank. The government of Bangladesh decided to auction licenses to private companies to set up cell phone businesses. Grameen Bank and US-based Quadir's company Gonofone formed a consortium with Norway's Telenor (the technical partner and investor) to bid for one of the licenses. At that time, Telenor was in search of a sector where it could invest responsibly as a part of its Corporate Social Responsibility (CSR). Grameen Bank started Grameen Telecom (GT) as a wholly owned not for profit organization and submitted a bid for the license with a newly created profit entity Grameenphone Limited (GP) as the operating company. On November 11, 1996, GP was awarded the permission, and within a short period it started its operation on March 26, 1997 (Bangladesh Independence Day).

Once Grameenphone started its operation, the goal was to serve both rural and urban customers. For urban customers with adequate income, GP sells individually owned handsets and mobile plans. On the other hand, GT was formed mainly to serve the rural population with mobile phone connectivity that otherwise would not have any connectivity. The target was to make at least one phone available in every Bangladeshi village and allow phone service within ten minutes reach by walking. Figure 2 illustrates the rapid growth of Grameenphone subscribers from 1996 to 2018 (Cohen, 2001).

4.3. Social Development

The birth of Grameenphone has a strong connection with social development in Bangladesh primarily through the Village Phone initiative. However, as the subscriber base of Grameenphone rocketed from 2004 onwards Figure 3 along with its extensive network coverage, it continued to participate in the social development of the country through various initiatives. Grameenphone's efforts are acclaimed all over the world which earned them several awards. It won 3GSMA Global Mobile Award in the category of *Best Use of Mobile for Social and Economic Development* ' awarded by GSM Association. The awards are as follows:

- Bangladesh Corporate Social Responsibility (CSR) Leadership Awards (2018).
- The Green Mobile Award for Climate Change Program (2014).
- "mBillionth award South Asia", (2013) for the SMS based solution to ensure safe drinking water in partnership with The Hygiene Sanitation and Water Supply (HYSAWA).
- "Best Use of Mobile for Social & Economic Development" category in 3GSMA Global Mobile Award (2008).
- "Best Use of Mobile for Social & Economic Development" category in 3GSMA Global Mobile Award (2007).
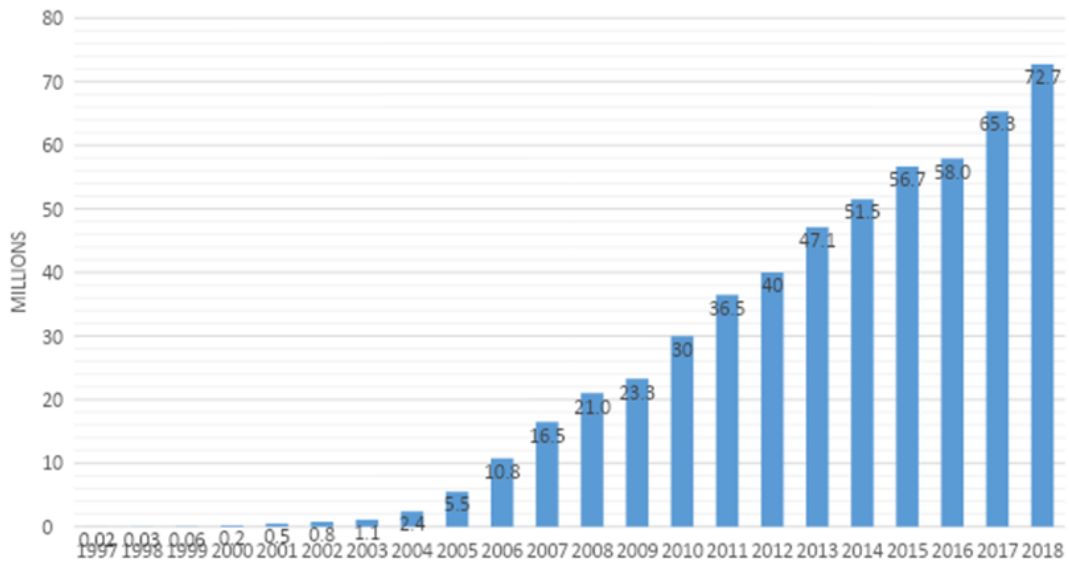- GSM in the Community Awards (2000).

Figure-3. Subscriber Base (in millions) of Grameenphone (1997-2018).

4.4. Operational Principles of Social Development and Grameenphone

Based on the three operational principles of social development as guided by the World Bank, we strive to investigate how Grameenphone is following those principles Figure 4.

4.4.1. Cohesion

4.4.1.1. Social Cohesion

Bangladesh predominantly has a culture of strong social ties. The exponential growth in mobile communication has bridged the rural-urban divide and enhanced cohesion in society and families in a number of ways. Lane, Sweet, Lewin, Sephton, and Petini (2006) for instance, in a report prepared for GSM Association discusses how access to cheap mobile phone service allows families and communities to stay coherent as a unit when family members are away for an extended time. When a family member lives abroad, it not only allows the family to remain intact as a unit but also generates inbound call revenues. The study indicated that 79% of those surveyed in South Africa and 85% of those in Tanzania stated that using a mobile phone improved relationship. It enabled people across the country to communicate more and in a cheaper way leading to better family ties and social cohesion. Social cohesion is particularly more important for Bangladesh which experiences a high incidence of economic migration (Bairagi, Roy, & Polin, 2011).

Figure-4. Three operational principles of social development guided by World Bank.

4.4.2. Inclusion

4.4.2.1. Women Empowerment

One of the decisive reasons for Bangladesh's rapid expansion in terms of mobile penetration is the impact of Grameenphone's Village Phone Program. As discussed earlier, the Village Phone Program was developed by combining Grameen Bank's expertise in village-based microcredit program with the latest technology from Telenor's Grameen Phone. The idea was to select eligible women based on some essential criteria (in terms of education, credit history, residence, etc.) and lend money so that she should purchase a phone and sell minutes to the local inhabitants. Various studies have found the Village Phone Program to have a significant impact on women empowerment in Bangladesh. In a survey conducted by Bayes, Von Braun, and Akhter (1999) it was revealed that 72% of the rural women are involved in the family decision making (e.g., schooling for children, the marriage of daughters or sons, etc.) jointly with their husbands. Additionally, the degree of mobility of women in and around the village increased. Traditionally, Bangladeshi women have limited mobility. However, village phone allowed them to explore business opportunities thus increasing economic freedom (Richardson et al., 2000).

In addition to that, Grameenphone also partnered with JITA help empower women and create consumer impact on health-hygiene-energy through an innovative network of enterprises of women entrepreneurs selling door to door. JITA reached 3 million consumers, all by empowering 7,650 women across 48 districts and helped in developing 255 enterprises with base employment of 510.

4.5. Use of Digital Technology

In a research study by Okeleke and Stryjak (2015) digital society was found to be based on three pillars such as Digital Citizenship, Digital Lifestyle and Digital Commerce Table 1.

Table-1. Three pillars of digital society.

	Digital Citizenship		Digital Lifestyle		Digital Commerce
• • • • • • •	Increased employment rate Increased financial inclusion Reduce poverty Reduce crime & fraud Improve gender equality Reduce incidence of key diseases Improve Food Security Improve Disaster Response	• • •	Improve utility efficiency Increase internet penetration Increase education and literacy rates	• •	Improve ease of doing business Increase Productivity

Formation of digital society benefits the economy in various ways which are outlined with the three pillars. Digital Citizenship connects the government with its citizens allows better interactions in terms of efficient delivery of public services and timely dissemination of information. For instance, the government of Estonia has implemented the most comprehensive digital citizenship. Over the last 15 years, the e-Estonia initiative has digitalized vital government services such as e-elections, e-taxes, e-police, e-healthcare, e-identity, and e-school. The impact of digitalization was evident in the form of higher transparency and accountability in government services; secure, convenient and flexible exchange of private, public and corporate data; enhanced educated population with easy access to social services and a better environment for business and entrepreneurship. 90% of the population have e-ID cards which could be used to purchase public transportation tickets (m-ticket) and pay parking charges (m-parking) without using cash. Moreover, in 2011, 94% of the taxes were filed through the e-tax board, and 25% of the votes were cast through the Internet in the 2011 parliamentary elections.

Digital Lifestyle is the concept of using the Internet to integrate and interconnect multiple devices with different services and infrastructure over digital networks which allows the users to interact remotely. For instance, Seoul, the capital of South Korea, had initiated the 'Smart Seoul 2015' in 2011. Firstly, this helped the city to develop Smart Work Centers which allows government employees to work remotely from 10 offices close to their homes. Secondly, through the open governance model, it allowed the citizens to participate in the administration of the city. Thirdly, it initiated the Smart Metering which is intended to reduce the city's energy usage by 10%. Lastly, a project called U-Seoul Safety service was initiated which used CCTV and location-based services to notify family members and authorities in emergencies of family members and disabled people.

From the three pillars, it is evident that digitalization of the society is expected to lead to socioeconomic benefits. Since this paper primarily focuses on social development, we discuss how the use of digital technology leads to social development in the context of the telecommunication sector in Bangladesh with a particular focus to Grameenphone. Use of digital technology leads to improvements in health care (m-health), food security (m-agriculture), financial inclusion (m-money), education (m-education), utilities and disaster management.

M-Health is another area where digital technology can bring in the huge development of a country. Bangladesh, significantly, lacks the sufficient number of skilled healthcare workers that include doctors, nurses, and specialists. Poor people have limited access to healthcare due to insufficient income and limited access to public healthcare facilities. Since the mobile infrastructure is already there, it relatively costs less to implement m-health. Without m-health, Bangladesh's aim of achieving the life expectancy of 70 years by 2021 might remain unachieved. In a study, Group (2012) claimed that since only 39% of the births in Bangladesh are attended by skilled doctors or professional, m-health could be an effective solution to fill the gap. For instance, partnering with the telecommunications companies, the Bangladesh government has already initiated a project to create awareness among the pregnant women through SMS campaign. In 2006, Grameenphone launched Healthline, a 24/7 medical tele call center which was acclaimed globally and won them the GSMA award in 2007. In Bangladesh, since there is only one doctor for every 4000 inhabitants, there is an extensive need of primary healthcare services. Grameenphone Healthline allows a customer consult over the phone to seek information related to drugs and pharmacies, doctors and medical facilities, interpretation of laboratory test reports, emergency advice and so on.

Bangladesh predominantly is an agrarian economy where 47% of the labor force are employed in the agriculture sector. In a report prepared for the World Bank, Bhavnani, Chiu, Janakiram, and Silarszky (2008) argued that access to mobile phones and the benefits associated with it are more valuable to the rural population compared to the urban inhabitants. One of the several benefits to rural people is that mobile phones can act as substitutes for transportation. Transportation cost can decrease as the information flows better between buyers and sellers without travelling. In some cases, mobile phones can even eliminate intermediaries. Use of digital technology when applied in the agriculture sector could lead to more significant benefits to the rural people mainly farmers, fishers, herders, indigenous people and so on. Grameenphone has an agricultural info service where farmers can dial GP's agriculture hotline to seek advice and updated information related to agriculture from agro-specialists. The service includes information related to crop cultivation, soil information, fertilizer information and information related to poultry, livestock, fisheries, and farming. Other than the hotline, GP also provides service that allows a customer to receive daily SMS on gardening (flower, fruit, vegetable), weather update, and various tips on the plant, dairy, and fisheries.

Grameenphone's online school initiative, free internet hours and National Enrichment program is intended to reduce the urban-rural digital divide with access to better education to remote areas. However, m-education is still a new concept, and its success highly depends on Internet penetration. Previously, Grameenphone launched a hotline called 'Studyline' which is a call center-based service that provides callers education-related information over the phone.

Mobile money is becoming a popular and powerful tool for socio-economic development contributing to financial inclusion and augmenting access to essential services. In a report prepared as a part of a project undertaken by GSMA (GSM Association) namely, *Mobile Money for the Unbanked (MMU)*, the authors discussed three ways by which mobile money that leads to socioeconomic development. Firstly, mobile payment leads to better access to essential utilities where the unbanked or underserved population could use the mobile as a platform to pay the utility bills such as water, electricity, etc. Krolikowski, Fu, and Hope (2013) in a study in Tanzania, found the use of mobile to be more effective in collecting revenue and controlling government related losses. Secondly, mobile money benefits small holder farming and agribusiness. In the context of Uganda, it is seen that Orange Uganda is targeting farmers as their potential customers with its mobile money service called Orange Money which gives them a safe, convenient way of purchasing farming supplies and get payments for the crop harvests. In Sierra Leone, Airtel (Indian Telecom Company) is partnering with the Ministry of Agriculture to provide mobile money to the farmers. Lastly, mobile money allows tax payments from People to Government (P2G) and Business to Government (B2G). The government can collect tax payments for income, sales and value-added services in a better and quicker way. In addition to that, the government can also disburse social security pension contributions in an improved way. Mobile money could reduce fraud and increase transparency and revenues for tax authorities.

Mobile money in Bangladesh is still in an infant stage, and the growth potential is immense. More than 70% of the population of Bangladesh lives in rural areas where access to formal financial services is difficult. Less than 15% of Bangladeshis are connected to a formal banking system where over 68% have mobile phones. Grameenphone is the pioneer in mobile banking in Bangladesh. In 2006, it launched a bill payment service called 'Billpay' which allows customers to pay utility bills via mobile phones. Later on, in 2010, it launched 'Mobicash' which allows customers to purchase railway tickets, cricket match tickets, and lottery vouchers. However, mobile money started spreading rapidly as bKash (a subsidiary of BRAC Bank Limited) started its operation in April 2013. It is a joint venture between BRAC Bank Limited and Money in Motion LLC. USA. International Finance Corporation (IFC), member of the World Bank Group became an equity partner, and in April 2014 Bill & Melinda Gates Foundation became the investor of the company. However, the growth in this sector highly dependent on the government's policy towards mobile money. Currently, the law restricts a telecommunication company to own more than 15% stake on mobile money company. Telenor, the parent company of Grameenphone, is willing to invest an additional $62.5 million in developing the mobile money network. However, Telenor in return needs a controlling (more than 50%) stake in the initiative (Star, 2015).

5. ACCOUNTABILITY
5.1. Social Compliance

Grameenphone ensures all its contractual suppliers and value chain partners follow a set of Supplier Conduct Principles (SCP) which is prepared based on internationally recognized standards focusing on human rights, health, and safety, labor rights, environment, and anti-corruption. As of 2014, Grameenphone has signed 'Agreements on Responsible Business Conduct (ABC)' with 1264 suppliers and partners (99.7% of its suppliers) as a part of its plan to reduce supply chain risk, elimination of corruption in supply chain and training and awareness for its suppliers and partners. In addition to that Grameenphone also focuses on supplier capacity development in terms of compliance issues and annually arranges 'Supplier Awareness Program' for its suppliers, partners, and in-house contractors. To assess the level of compliance with SCP, it carries out supplier inspection regularly and until 2014 has conducted around 400 suppliers. The objective of continuous monitoring is to ensure decent conditions in the workplace, respect for human rights (includes the elimination of child labor) and environment and so on.

In line with its Norwegian parent company Telenor, Grameenphone adopted international standards of occupational health, safety, security, environment for its employees, suppliers and business partners. These standards ensure a safe working condition for its business partners directly working for Grameenphone and create

awareness to minimize the occupational injuries and diseases and minimize the negative impact on the environment. In 2008, when a Danish television documentary exposed the poor working conditions at some of the companies that provide towers to Grameenphone and other mobile operators, Grameenphone felt the need to improve its inspection measures. From 2009 onwards Health, Safety, Security and Environment (HSSE) became a vital area of focus for Grameenphone (Grameenphone, 2014).

5.2. Corporate Social Responsibility (CSR)

In their paper (Hoque & Chowdhury, 2014) investigated and compared the CSR activities of telecommunication companies in Bangladesh based on the evidence found on the annual reports and their respective websites. CSR activities are categorized into five sectors namely education, empowerment and poverty alleviation, environment, health care and others. Consolidating all the events, it was evident that the cellular companies in total were involved in 70 CSR activities till 2010, 40% of which were carried out by Grameenphone followed by Banglalink (20%), Robi (19%), Citycell (14%) and so on. However, CSR's impact on society depends a lot on the continuity of those programs meaning the activities need to exist for a considerable amount of time to ensure lasting effects. Among all the efforts, 34% of these were continuous. This paper focuses on the existing and ongoing CSR activities which are believed to have a lasting impact on the social implications for the country.

Grameenphone's core focus area is health, education, and climate which it comes to Corporate Social Responsibility (CSR). Grameenphone launched a program nationwide, to provide 2.1 million free Internet hours to 250 schools across the country with the support from BRAC (the most prominent local NGO). Due to low Internet penetration, a large rural schooling population is deprived of the latest required information and content services. This service would create equal opportunity to access educational content, news, information and knowledge for the students in those schools.

Grameenphone also partnered with JAAGO Foundation and developed a concept of 'Online School' which could be used to educate the remotest regions of the country. At present, there are ten Online Schools sharing knowledge with 699 underprivileged students. Teachers situated in Dhaka (online teachers) conduct classes using video conferencing technology with the aid of moderators (classroom teachers) in the actual class. The Online Teachers are responsible for designing and preparing the course material, whereas, the classroom teachers are responsible for operating equipment, taking and maintaining attendance records, assisting children individually or in small groups.

Under 'It's My Turn' Program, Grameenphone employees spared their time to educate school students on the benefits of the internet which includes promoting the practice use of responsible and safe Internet use. Currently, over 850 Grameenphone employees registered to participate in the program. Through the National Enrichment program, Grameenphone has reached 1.5 million students of 12,000 educational institutions throughout the nation enrolled in this program. The program partnered with 'Bishwo Shahitto Kendro' a mobile library, also developed an online library helping them to read books whenever and wherever they desire (Grameenphone, 2018)

5.3. Corporate Environmental Sustainability

Towards 2020, the telecom industry will experience rapid growth which will lead to increased energy usage and increased CO_2 emissions. Energy use in GP's network operations represents around 81% of the total energy consumption and is the primary source for our CO_2 emissions. Keeping this mind, Grameenphone initiated the Climate Change Program in 2008, to minimize the negative environmental impact on society. At the same time, GP also adopted the Environmental Management Systems (EMS) approach that laid out the policy framework to look for sustainable operations. As a result of such sustainable operational activities, GP has been both locally and globally recognized and rewarded on different occasions. Recently, GP became the winner of the prestigious GSMA Green Mobile Award 2014. GP has taken several initiatives like the introduction of green base stations, swapping of

air conditioners with DC ventilation fans, and modernization of entire network which helped reduce carbon footprint significantly over the years. Its corporate headquarter GPHouse is a paperless office and has become an exemplary model of pure green architecture in the country. A rainwater harvesting system has been implemented recently at GPHouse to reduce the consumption of groundwater. The current rainwater harvesting system at GPHouse is a pilot project to capture rainwater that falls on the courtyard and the water body. Water collected, is transferred to a storage tank. This water is used for toilet flushing. A rough estimation suggests that by using the collected rainwater, approximately 93,000 toilet flushes can be done annually. Grameenphone also claims that its mobile money product (BillPay and Mobicash) has reduced customers' travel requirement, thus minimizing carbon emission. In 2015, Grameenphone decided to design 40% of its network expansion by solar power. These solar-powered base station sites will be saving around 4 Million liters of fossil fuel and more than 10 thousand tons of CO_2 emission annually. Through modernization of transmission network, GP saved 650 MWhr electricity and 10,500 liters fuel which is saved 420 tons of CO_2 emission. To generate power, GP partnered with a local company and introduced bio-generator which runs on biogas produced from poultry litters. This set up is adding more than 1 KW of power for the base station in parallel to supplying power to nearby few small shops. Finally, GP is also creating awareness among its employees and general people. This includes 'Click Green Photography Contest' to promote environmentally friendly and 'Green Lifestyle'.

6. CONCLUSION AND RECOMMENDATION FOR FURTHER STUDIES

The study aims to address how Grameenphone Limited, a leading mobile telecommunications is contributing to social development in Bangladesh. With guiding operating principles of the World Bank, this study strives to explore how Grameenphone Ltd. contributed through cohesion, accountability and inclusion. We used documentary research method where the study conducted was entirely based on documentary information and data available in the public domain. With women empowerment and use of digital technology, Grameenphone Ltd. played a crucial role in creating equal opportunities for men and women to contribute to society. Furthermore, it also contributed in creating a cohesive society which allowed individuals to work together to achieve common goals peacefully by overcoming hurdles. Lastly, though social compliance, CSR and environmental sustainability, GP ensured transparency and responded to public interests effectively and equitably. However, our study is based on documented evidences which solely relies on reports provided by Grameenphone and other publicly available documents. A further critical evaluation of this proposition would enhance the effectiveness of this social development model.

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