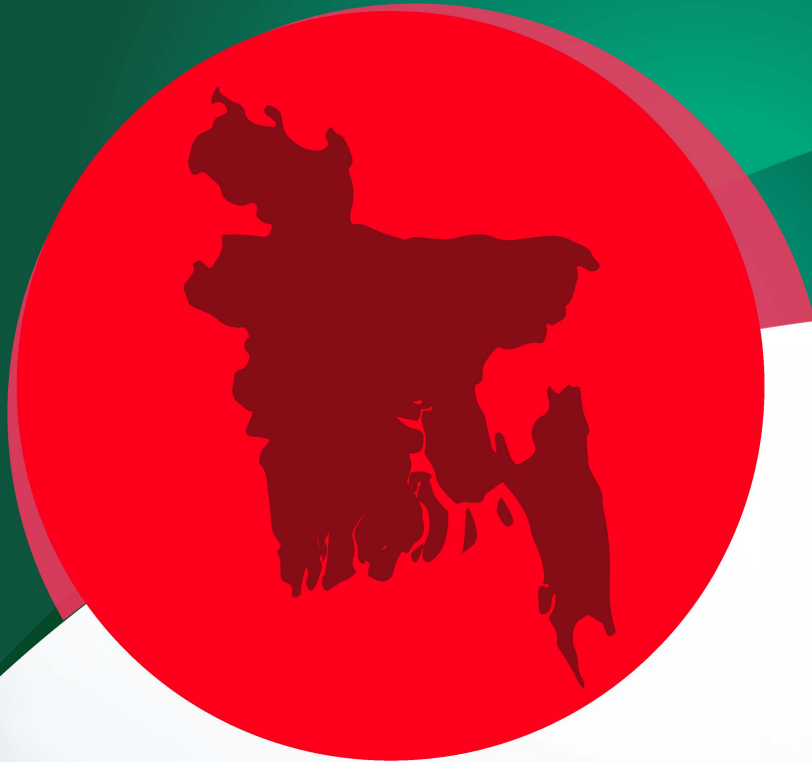
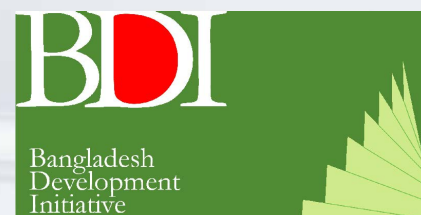


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Special Issue, Volume 21, Number 2, 2019

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We are grateful to the following scholars for taking some of their valuable time to help with the blind review process for this special volume. Without their service, this volume would not have been possible. Thank you!

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ADIEU – FROM THE EDITOR IN CHIEF

As I was reflecting on my twenty years as Editor of JBS, I wanted to reminisce a bit in this final editorial about the long and arduous but exciting journey in academic entrepreneurship. I would also like to take this opportunity to thank numerous individuals without whose support we simply could not have come this far, given the milieu of intense competition and numerous challenges.

In the early days (1998-99), when we started out, we had only a simple idea (to influence policy in Bangladesh), almost no money, no skills of producing a journal, no idea of who would write for us or subscribe, and no knowledge of how to get the journal to the right places (such as our readers and academic libraries of which we only had a faint idea). All of this was mingled with my personal concerns about how much time I could afford to allocate for building a journal with my responsibilities as Chair of Marketing at Penn State Behrend, upcoming tenure, and other teaching and research pressures that my regular job demanded.

But I felt it was worth a try, especially because in my visits to libraries across the world (I just love to visit libraries) – MIT, Berkeley, Stanford, Oxford, Cambridge (UK), Columbia, Sorbonne, University of Canberra, Charles University in Prague, Kyushu Institute of Technology, Damascus University, Istanbul University to even University of Alcalá, occupying a 16th-century building northeast of Madrid, and many more in India (Delhi, Goa, Bombay, Calcutta, etc.) as well as other universities – I would look for publications from Bangladesh. While journals from various parts of the world occupied the shelves, rarely did I come across a journal from the country I was looking for. I honestly thought we had a real good chance to publish a journal that would represent Bangladesh in the academic sphere. I am happy to report that JBS is well-received by many academic centers in Bangladesh and globally renowned universities; Columbia University has leather-bound copies of JBS in its shelves, while Cornell and Cambridge University's South Asia Library showcases JBS prominently.

We literally had no money (Bangladesh Development Initiative had little in its coffers to sustain the journal indefinitely); so I began scouting around for funds. Among others, I met Dr. Syedur Rahman of the American Institute of Bangladesh Studies and explained what we wanted to accomplish; it didn't take him long at all to see the value of the project and he stepped in with a \$10,000 grant. That was the real take-off moment for JBS. I will remain indebted to Dr. Rahman for his bold initiative to get us up and running.

Sue Pennington (at Penn State Behrend), took over the onerous task of formatting articles (which neither of us knew how to do, but kept at it until things looked “journal-like”). All of this was done with a smile as we went over numerous formats until we were both satisfied that it was the best version. These were then printed at the photocopying setup at Penn State Behrend and I couldn't wait to see the final print of each issue as the packet was delivered to my door. The emotional reward was huge. The School of Business supported mailing costs, thanks to Dr. John M. Magenau, the Director of the School. All I had to do was lug the boxes to the mailing center to be delivered to about 250+ recipients – mostly free. In the middle years, Sukomal Modak was constantly by my side and formatted the articles using the Latex software. And when I was Vice Chancellor of BRAC University, Shahidul Islam exquisitely made the articles print-ready. As I think back, I wonder why we didn't spend money (that we had begun to obtain from various sponsors) to get the formatting done professionally. How much personal time we could have saved! I am happy to say that I will not miss the countless hours I have spent on editing to ensure that the quality impression about JBS remained unquestioned.

Gathering articles was another onerous task. Who was going to write (spending time) in this unknown journal? The strategy was to entice a few prominent scholars, beginning with Professor Nurul Islam who taught at Dhaka University and was Deputy Chairman of the Planning Commission, Bangladesh. Once he said yes, when he was at IFPRI, it became easy for me to solicit articles from others. The leading article of the first issue of JBS was by him - *Democracy and Development in Bangladesh*. In the next issue the lead article was by Professor Rehman Sobhan of the vaunted Center for Policy Dialogue in Bangladesh - *Mediating Political Conflict in a Confrontational Environment: The Experience of the G-5*. And the lead article of the third issue was by Professor M. Yunus the Nobel Laureate of Grameen fame - *Information Technology Can Be Bangladesh's Superhighway to Prosperity*. With these three authors in our arsenal, JBS was off to a running start. Many other scholarly papers of merit came in subsequently, some because the authors genuinely wanted to join us in our efforts and some because I was relentless in pursuing them!

As things looked up, I had several stalwarts in my editorial board whose support was unparalleled. The heart and soul of JBS in the early days were Ahrar Ahmad, Ashraf Ali, Farida Khan, Munir Quddus, and Sukomal Modak. In later years, Rahim Quazi was another formidable source of

support. From reviewing articles (quality control was a big issue for me) to editing – they were simply amazing. I may mention Shahnaz Y. Andaleeb and Sartaz Aziz who also spent many hours editing articles in those days, especially ones that were accepted for their ideas but were not quite articulate in presenting them. I am also indebted to numerous reviewers whose contributions and guidance have been immeasurable in our march forward.

In a few years, when I was jointly Editor of JBS and President of Bangladesh Development Initiative, we began organizing the first Harvard Conferences (2008 and 2009) in a new bold move to garner quality papers for the Journal; we also started a serious book publication program. This idea now feeds JBS with quality papers.

As we evolved, our vision and mission began to emerge more clearly. In our vision we wanted:

- To be the premier research and policy advocacy group in North America dedicated to informing and influencing the development of Bangladesh.
- To engage in scholarly research with policy implications on:
 - Economic issues (development strategy, economic growth, fiscal and monetary policy, infrastructure provision, financial sector).
 - Political issues (national security, institution building, human resource development, governance, democratic habits).
 - Social issues (empowerment of women and excluded groups, protection of human rights, environmental management, transparency and accountability, etc.).
- To make BDI a conscious and deliberative voice for sustained and comprehensive development in Bangladesh.

Our mission was to:

- Energize/motivate the intellectual community to use BDI/JBS as a platform to generate ideas through research and help shape policy and action.
- Generate a body of policy-relevant ideas and research relevant to issues of development in Bangladesh.
- Disseminate ideas through the Journal of Bangladesh Studies, books, conferences and other publications incorporating expert opinion and relevant research.
- Engage in development by participating in civil society, nurturing women’s empowerment, devising ways of fighting corruption, building schools and hospitals, providing scholarships and research support, and installing chaired positions in the universities.

In hindsight, while there were serious opportunity costs for me of giving up other academic enterprises (conferences, research collaborations, journal articles, books, and even some leisure time with family), leaving behind a journal that is now well-recognized, especially in development circles, and has a decent standing was well worth it.

I am happy to leave JBS in the hands of an able and dedicated academic, Farida Khan, who has been an ally since we began the journey in 1999. It is a wonder that she stuck by me and JBS through thick and thin. I wish the very best to the new editorial team and all success to them in taking JBS to greater heights.

I end with a word of appreciation for Ahrar Ahmad’s proposal and BDI’s formal acceptance to place my name as the Founding Editor in every issue of JBS. This is indeed a wonderful reward that I will cherish.

Syed Saad Andaleeb

Editor
July 2020

FROM THE EDITOR

Special Volume on the Yale Conference Papers

The Bangladesh Development Initiative (BDI) has hosted *The Journal of Bangladesh Studies (JBS)* since the journal's inception, some 20 years ago. During this period, BDI organized a number of international conferences. Typically, after each conference, we published selected papers in book volumes. For example, selected papers from the BDI Conference held at the University of California, Berkeley (2013 and 2015), were published in two book volumes. Additionally, a few papers were published in the JBS. This time we decided that it would be more efficient to publish the best conference papers as "special volumes" of the JBS. This was partly motivated by having fallen behind schedule, but also because the gestation period for books is much longer given it involves a publisher (UPL in our case). Given this, we are publishing the best papers from the Yale Conference in two "special volumes" of the JBS, including this volume.

There is no overarching theme for papers in either special volume. Each volume contains a collection of papers on diverse topics presented at the March 2019 BDI conference held at Yale University. In Volume 21-2, you will find a diverse mix of papers on development themes in Bangladesh, from scholars working in a wide range of disciplines. This follows the overall philosophy of BDI - the study of development should be inclusive. Scholars from every scholarly discipline interested in the study of society and human behavior are invited to publish in the JBS. This volume includes six papers, two in economics, one in finance, one in marketing and sustainability, one in health care, and one in education.

After the initial screening, the authors were contacted with a request to prepare their papers for a special volume of JBS. The authors had no guarantee of publication, since a "double blind review" process was followed by an emphasis on relevance, good writing, and rigor.

Since this may help future researchers, it is important to mention that the poor quality of writing is the major hurdle faced by the editors in finding good quality papers for an academic refereed journal such as JBS, where academic and scientific rigor is at a premium. Academic writing is a specialized form of writing, which requires authors to use a dispassionate tone and be parsimonious in using words to convey their analysis and findings. Given limited space, the editors remove all "redundancies and duplications" in the narrative. This often requires deleting entire sentences and paragraphs. The surviving narrative is restructured – a painstaking and time-consuming task.

I want to thank the authors for their patience and cooperation, as we went back and forth for months to improve the papers. A keynote address is included, requiring the author to re-write the paper in the academic journal article format.

Second, I wish to express my gratitude to a dozen or so scholars and practitioners who readily reviewed papers in this volume. Each reviewer read the assigned paper at least twice and sometimes multiple times. Given the iterative nature of this process, it takes time and careful attention. A thorough review and editing process weeds out poorly written papers and helps authors of the surviving papers to polish their narratives. The success of the process depends on the goodwill of many scholars who volunteer their valuable time. I am grateful to them and I hope they will continue to stay engaged with the JBS. The service of the reviewers is the backbone of this scholarly endeavor.

Let me briefly discuss the papers included in this volume. The paper by Muhammad Mamun and coauthors examines the potential of developing a robust global "call center industry" in Bangladesh. Using survey data to measure attitudes and competencies of potential Bangladeshi workers in this fast-growing global industry, they compare these attitudes and competencies with call center workers in the Philippines, where a robust call center industry operates. Given the increasing importance of this global service industry, the authors recommend higher levels of investment to substantially enhance English language skills, and related competencies of college graduates in Bangladesh. The paper by Manzoor Ahmed critically reviews the state of education on "ethics and values" subjects in the school curriculum in Bangladesh, finding major deficiencies. The author recommends greater investments to the "moral" aspect of children and youth education, since a deficiency in learning on ethics and morality in schools is likely to result in profound negative consequences for future citizens, and the nation.

The paper on an efficient digital-payment system by Sayera Younus and her coauthors from the Bangladesh Bank explores issues around strengthening of the financial transactions [payment] system in Bangladesh, and in every South Asian Association for Regional Cooperation (SAARC) country. The authors recommend the development of a common digital platform, operational across member nations, and the harmonization of rules and regulations in each member nation. The paper by Shamima Manzoor explores the

demand for food items with green or environmentally friendly packaging. Using data from a survey of working women employed in corporate Bangladesh, an important and growing segment of the population, the paper finds evidence of rising interest in demand for such products, reflecting a burgeoning sustainability movement among consumers in Bangladesh.

The paper by Mainul Islam and coauthors on trends in C-section surgery during childbirth calls our attention to alarming trends in this widespread medical procedure in Bangladesh. These trends portend serious implications for the health of the mother, and for the society. The authors recommend the creation of an easily accessible database, designed to capture all C-section surgeries performed nationwide, so patients and their families have the information they need to make informed choices. Credible data publicly available will also enable researchers and regulators to identify private health care facilities where doctors may be performing excessive and redundant surgeries.

The paper by Nazrul Islam takes a deep dive into future economic challenges and the potential of Bangladesh

economy over the next 30 years. The author takes an optimistic view on the future development of Bangladesh based on a plethora of factors that bode well for future growth of the economy, but also addresses challenges and pitfalls which could derail this progress. These include the rise of authoritarian government, rampant corruption by the bureaucracy and politicians, rent-seeking behavior by the businesses, disturbing trends in income and wealth inequality, and last but not the least, environmental degradation.

I hope you enjoy these well-researched and thoughtful papers. If you wish to share comments and feedback on how we can improve the JBS, we would love to hear from you.

Munir Quddus, Ph.D.

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Editor, JBS, Special Volume

August 1, 2020

Bangladesh's Readiness for the International Call Center Industry

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Abstract

Recent trends in the global outsourcing industry have identified an opportunity for Bangladesh to enter the offshore Call Center Industry. A major challenge for Bangladesh is to create a pool of workers who would find employment as call center agents. This paper focuses on four important dimensions of the skills required of these workers: English proficiency, enlightening proficiency (skills related to computer handling, communication, and cultural adaptation), psychological orientation, and willingness to work. Our findings reveal that potential Bangladeshi workers for the global Call Center Industry are less skilled by international standards in several areas: English language, listening, speaking, comprehension, and communication. However, their competencies are high in cultural compatibility and computer handling. For Bangladesh to succeed in this international global business, the country must invest in improving the English proficiency of potential employees. There must also be additional emphasis on interactive teaching and extracurricular activities to improve the listening and communication skills of graduates.

1 Introduction

A Call Center for business process outsourcing (BPO¹) is a business, where interested customers call in for support. Trained agents handle these incoming inquiries using a variety of technologies such as the phone, fax, e-mail, web, and kiosk. The services provided by the call center agents include customer service, inbound/outbound marketing, direct sales, sales support, reservations, and market research, technical help, inside support, order/billing processing, credit/collections, fundraising, and appointment setting, among others. These businesses serve as the “first line of defense” for an organization. They serve businesses across different sectors. The Call Centers have emerged as a strategic response by large

businesses to improve their customer services, and to reduce costs. These centers manage customer relationships, drive revenues, and increase profits (Carmel & Tjia, 2005; John, 2000).

Setting up a Call Center is a sizeable investment. The terms of the initial decision, service agreements, location and facilities, all affect the success of the business. The highest quality of efficient service and strategic planning to hire the best employees is critical for the success of a well-organized Call Center (Houlihan, 2002). It is imperative to make good decisions in assessing technologies, hiring, staffing logistics, certification, orientation, strategic support skills and technical training.

¹BPO is contracting of non-primary business activities and functions to a third-party provider, e.g., payroll, human resources (HR), accounting and customer/Call Center relations. BPO - also known as Information Technology Enabled Services (ITES) performs a process or part of a process for another organization; while a Call Center performs that part of a client's business, which involves handling customer service telephone calls. Thus, a Call

Center can be considered a BPO organization; because there are BPO organizations (e.g., medical transcription agencies) which handle their business through websites, not telephonic calls.

Call Centers have evolved from companies that used to provide customer service via primarily low-tech, single-facility environments to those, which support full-service multi-channel centers located strategically across time zones and broad geographic areas. To meet the growing global demand for lucrative, customer-interaction centers, many organizations worldwide are outsourcing these services to countries like India, the Philippines, the Bahamas, and other developing countries for lower cost. The core competency offered by these host nations includes a large pool of technically competent workers. For example, India graduates about 100,000 engineers each year, many of whom find employment in Call Centers providing tech support (Haq, 2008).

In a typical Call Center, labor accounts for 55 to 60 percent of the total cost (Anton and David, 2000). The cost of recruiting, and hiring and training “agents” is high and getting higher in the developed countries. Thus, companies are willing to outsource Call Centers to the Indian subcontinent to reduce their labor cost (Srinivasan, et al., 2004). The competitive pressures from the emergence of “boundary-less” global economy, have spurred outsourcing - for providing significant cost savings, flexibility, and improved operational performance. Therefore, offshoring of Call Centers is not a short-term tool for cost-savings – rather a long-term strategic move, which has become an integral part of many multinational corporations (PwC, 2005).

But there remain considerable challenges in controlling projects remotely, since there are differences in culture, language, business methods, politics, etc. across nations (Carmel and Tija, 2005). The business model of focusing on core competencies and leveraging benefits of outsourcing has become a key strategy pursued by large corporations across the world (Hollman et al., 2007). BPO providers provide a wide spectrum of services to their customers, from expertise in the outsourced processes, lower costs achieved through economies of scale, scalability, and the ability to absorb cyclicity of demand (PwC, 2005).

Wage arbitrage, improved quality and higher productivity of Call Center agents is the basis for decisions on the destination of Call Centers across the globe (Freeman, 2008). Labor competitiveness comprises of components such as labor availability, education, skills, English fluency, cultural compatibility to western markets and attrition rates. Other factors consist of a nation’s specific business and political risks, geographic location and time difference, tax regime and regulatory considerations. Overall, the main attributes of workforce readiness are psychological readiness, English proficiency, technical proficiency, and work ethics.

1.1 Bangladesh’s Preparedness for Call Centers

Bangladesh has the potential to become the next emerging destination for offshore Call Centers. There has been a recent push for Bangladesh to enter the Call Center market to take advantage of the spillover from India. Strategically located near India, hosting a significant number of educated and skilled workers, Bangladesh can develop a cost-effective outsourcing industry, especially for smaller companies. Experts forecast that nearly 10,000-20,000 Call Center jobs will be generated in Bangladesh in the next 2 to 5 years (Haq, 2008; Rahman et al., 2015).

The Labor Force Survey (2013) found that Bangladesh has nearly 50 million people in the labor force, of which 75% are male and 25% are female (BBS, 2017). The survey revealed that the labor force is growing at nearly twice the rate of growth in population. This relationship is likely to persist over the next few decades. To meet the country’s employment needs by the year 2020, Bangladesh must create 2.25 million new jobs annually (World Bank, 2000). The education system is producing graduates whose skills are not in demand resulting in joblessness among the educated youth (Chowdhury et al., 2016). The expectations generated among the graduates by the content curricula, educational environment, labor market incentive structure and the whole system, in general, further aggravate the problem. Even though the students and graduates have realistic perceptions about their employment prospects, they continue to aspire for certain white-collar jobs.

The medium of instruction in Bangladesh was predominantly English until the 1960s when Bengali was introduced at the secondary and post-secondary level as a medium of instruction, along with English. Since Bangladesh’s independence in 1971, the government phased out English and implemented Bangla as the only medium of instruction in public schools (Selim et al., 2001). This has resulted in a decline in the standards of teaching of English in public schools (Miller, 2002), with the teaching in English confined to elite private schools, leaving public school graduates with poor English skills (Zaman, 2003). In the last decade, the situation has somewhat improved with an increase in the number of English medium educational institutions in the secondary and tertiary level (Ahmad, 2006).

Recent graduates are more likely to acquire a business degree, which has higher employment prospect. Despite this, business graduates are frustrated given the high levels of unemployment. The dilemma of employability appears since there are imbalances between the skills of

the graduates and skills the employers need (Islam, 1980). Thus, it is important to focus on technical skills and personal aptitudes, in addition to the degree, certificate, and diploma. Also, the corporate bodies in Bangladesh put greater emphasis on exposure to the corporate culture, work experience, and analytical competence (Chisty et al., 2007).

The depressed levels of employment opportunities, job insecurity and displacement, growing risk of exclusion from employment for those without expertise, all underline the urgency of developing workers' skills through continuous training and education. The changes in employment in an increasingly complex and uncertain labor market warrants adjustments in job content, skill requirements and knowledge (Titumir and Hossain, 2003). Graduates with some specialization are clearly more employable with a lower rate of unemployment.

According to experts, with appropriate government and private sector support, Bangladesh can be an excellent destination for the outsourcing industry in terms of manpower, location, expertise and cost (BACCO, 2015). The fiber optics internet backbone has provided a strong technological infrastructure support for BPO operations in Bangladesh (Karmakar, 2007). Another major advantage is that the English pronunciation of potential employees of Call Centers is not heavily affected by the local accents, as is the case for workers in India and the Philippines.

Substantial investments in private universities and vocational training institutes recently have created strong prospects in the BPO space for Bangladesh including Call Center business. There has been a creation of ample supply of relevant human capital both at undergraduate and graduate levels due to a sustained growth in the number of private universities. According to an industry study, even though Bangladesh produces 200,000 graduates every year, only 10-20% of these are BPO ready given the rigorous needs of global commerce. The country has yet to have the capability, credibility and cultural understanding of this high growth industry.

The global BPO industry has grown to a hundred-billion-dollar industry, with an annual growth rate of 10% in recent years. Globally, the total number of available positions in this industry is estimated to be 1.24 million (BACCO, 2015). In anticipation of the growth and potential of this industry, the government of Bangladesh

has identified the Information Technology (IT) and IT Enabled Services (ITES) sectors as "thrust" sectors and have introduced major regulatory reforms for this industry. The private sector has shown overwhelming response to set up Call Centers (Islam, 1980). However, considerable ambiguity exists among entrepreneurs regarding the most fundamental resource required for success in this business - the workforce.

Countries like India (\$80 billion), the Philippines (\$16b), Sri Lanka (\$2b) and Malaysia (\$1.4b) have dominated the Call Center industry due to their efficient and cheap labor force (BACCO, 2015). However, with the cost arbitrage weakening, the stage is set for a relocation of this industry to Bangladesh. To capture this opportunity, Bangladesh must have a skilled workforce. Given this, it is important to investigate, the state of readiness of the workforce in terms of compatibility and efficiency regarding the international Call Center Industry. This study will help the industry grow by identifying the strengths and weaknesses of the labor force with potential for working in the Call Center Industry. This research will provide insights into the readiness and availability of the potential workforce for interested Call Center entrepreneurs.

2 Objectives

The broad objective of the study is to measure the workforce readiness for the international Call Center Industry (not BPO) in Bangladesh compared to that of a major global player, the Philippines². This study looks at the workforce readiness in Bangladesh based on factors such as English proficiency, enlightening (technical) proficiency, psychological orientation, and the willingness to work.

3 Methodology

3.1 Data

This research is exploratory. The study made use of both primary and secondary data and pertinent literature review. The primary data was collected through questionnaire given to two independent populations (Bangladesh and the Philippines). In Bangladesh, the survey was conducted among university students. For the Philippines, an online survey was conducted through social media (e.g., Skype and MIRC) among agents

²Call Center performs that part of a client's business, which involves handling customer service telephone calls. Thus, a Call Center can be considered a BPO organization; because there are BPO organizations (e.g.,

medical transcription agencies) which handle their business through websites, not telephonic calls.

employed in Call Centers. The secondary data came from journal articles, academic publications, books, others. Statistical tools like index analysis, t-test, ANOVA, and Factor Analysis were used for analyzing the data.

3.2 Population, Sample Size and Sampling Technique

For Bangladesh, the sample was taken from students enrolled in the bachelor and master programs in public and private universities in Dhaka. These students will be part of the workforce in the next few years. For the international survey, the sample was drawn from Call Center agents working in the Philippines. Due to the absence of an exhaustive list of agents working in Call Centers in the Philippines and in Bangladesh, and their accessibility and convenience, the study could not reach the required number of respondents. Finally, the total number of Bangladeshi respondents was 120 compared to 30 for the international population. In the local sample, 62 were from public and 58 from private universities. The ratio of male to female respondents was 63:37. In the international sample, the ratio of male to female respondents was 1:1. The small sample of 30 has increased the importance of maintaining a fair representation of genders to reduce any bias. The study employed convenience sampling for the survey.

3.3 Questionnaire Development

A structured survey instrument was used to collect the data. Except for an additional section included for the Bangladeshi respondents, the questionnaire was identical for both populations. The survey was classified into five sections: i) leisure activity, ii) English proficiency (listening, speaking, and comprehension), iii) technical proficiency (computer handling skills, communication skills, and cultural compatibility), iv) psychological orientation (Big Five personality traits - agreeableness, extraversion, conscientiousness, emotional stability, and intellect), and v) work willingness (job-specific fit and economic fit).

3.4 Measuring Workforce Readiness

Workforce readiness assessment is a 14-step process (O'Neil et al., 1992). It requires a comprehensive analysis of the task, required competencies, and psychological orientation. Statistical analysis must be conducted on various proxies assigned to measure these readiness indicators (O'Neil et al., 1992). The psychological orientation of the workforce can be measured using a Myers Briggs type tool. This will help identify whether

the workforce possesses the required personality traits (Mustapha et al., 2003).

On average, a Call Center agent handles roughly two thousand calls per month. The agent must demonstrate a range of psychological and technical skills to build stronger customer relations. The personality profile of Call Center agents should include traits such as empathy, adaptability, and the ability to perform. The agent must exhibit clear thinking and calm demeanor with irate clients. Acting decisively and sticking to stock answers is important since a wavering personality does not go well with an inquisitive customer (Skyrme, 2008). Strong interpersonal skills go a long way in this profession. Displaying a positive attitude towards developing a strong rapport with the customer is a vital skill for Call Center agents. An agent should possess the temperament to handle stress since the phone lines will be busy with calls (John, 2000).

The agent/employee must possess basic computer skills. Technical skills include good verbal and written communication, keyboard accuracy, a pleasant voice, call handling skills, etc. The staff should be adept in using search tools, browsers and other email features such as attaching files to outgoing emails, employing tracking and other relevant features, etc. Good verbal and written communication skills are pivotal since the job requires fast and correct typing, ability to create grammatically correct responses without spelling errors. The agent should also know how to write online, promptly recognize signals of a disgruntled customer and respond to deescalate (Bhide et al., 2009).

The mini marker is an effective tool for measuring personality attributes crucial for any front-line employee of an organization. Therefore, it is equally important that Call Center staff possess these attributes (Carmel & Tjia, 2005). The five attributes based on a total set of forty factors are: extraversion, agreeableness, conscientiousness, emotional stability, and intellect (Appendix 1). Each attribute is scored on a 40-factor scale, assigned standard weights to reflect appropriateness (Appendix 2). Each scale constitutes eight items and these highest factor loadings are the factors with the highest weights. The items that have negative loadings are scored negatively and are subtracted from the total sum of positive-loading items. Each scale is divided by 8 to arrive at the mean response for items on the given scale (Gerard, 1994).

4 Research Findings

listening/watching music/movies (3.63), reading (2.74), watching TV (2.74), and CCA (2.29) (Table 1).

4.1 Leisure Activity Behavior

For Bangladeshi respondents, the core leisure activity is computer/internet surfing ($\mu=3.82$), followed by listening/watching music/movies (3.61), watching TV (2.87), reading (2.63), and CCA (2.26). Whereas, for international respondents the main leisure activity is listening/watching music/movies (3.70), followed by computer/internet surfing (3.40), reading (3.20), CCA (2.43), and watching TV (2.23). It is further noted that the mean values for listening/watching music/movies, CCA and computer/internet surfing are not significantly different ($\alpha=5\%$) of the two populations. Hence, there is little difference in the leisure time activities of the Bangladeshi and international respondents.

4.1.1 Based on "Mean Index"

The leisure activity of the respondents includes five specific actions: i) Reading, ii) Listening/watching music/movies, iii) Co-curricular activities (CCA), iv) Watching television, and v) Computer/Internet surfing. The respondents were asked to rank the activities according to the time spent on each activity on an average day on a scale of 1-5 (1= Least time spent, 5= Most time spent). The results show that they spend maximum time in computer/internet surfing ($\mu=3.73$), followed by

Table 1: Leisure activity of the respondents (by country)

Activity	Country	Mean	Std. Deviation	Sig (2 tailed)
Reading	BD (n=120)	2.63 (4)***	1.30	**
	INT (n=30)	3.20 (3)	1.10	
	All (n=150)	2.74 (3)	1.28	***
Listening/watching music/movies	BD (n=120)	3.61 (2)***	1.18	*
	INT (n=30)	3.70 (1)***	1.02	
	All (n=150)	3.63 (2)	1.14	***
Co-curricular activities (CCA)	BD (n=120)	2.26 (5)***	1.16	*
	INT (n=30)	2.43 (4)***	1.50	
	All (n=150)	2.29 (4)	1.23	***
Watching television (TV)	BD (n=120)	2.87 (3)	1.37	**
	INT (n=30)	2.23 (5)***	0.97	
	All (n=150)	2.74 (3)	1.32	***
Computer/Internet surfing	BD (n=120)	3.82 (1)***	1.20	*
	INT (n=30)	3.40 (2)	1.52	
	All (n=150)	3.73 (1)	1.27	***
N. B.: Figures in parenthesis in the mean column gives the ranking in respective categories, *Means not different at $\alpha=5\%$, **Means different at $\alpha=5\%$, ***Means different from 3 at $\alpha=5\%$.				

4.1.2 Based on Paired Comparison Method

Here the ranking of the leisure activity is made by the Paired Comparison Method (PCM). In PCM we count, in pairs, how many responses are above an activity. For example (Table 2), 29 respondents scored reading over music and movie, whereas 79 respondents scored music

and movie over reading. For Bangladesh, since Computer/Internet surfing has relatively less total (90) frequency of activities above, it is ranked as the most frequent activity (1: least frequent, 5: most frequent); followed by, music movie, TV, CCA and reading.

Table 2: Leisure Activity Ranking of Bangladeshi Respondents (n=150)

Leisure Activity	Leisure Activity				
	1) Reading	2) Music & movie	3) CCA	4) TV watching	5) Computer/Internet
1) Reading	-	29	61	47	28
2) Music & movie	79	-	93	73	38
3) CCA	44	19	-	36	18
4) TV watching	59	33	67	-	34
5) Computer/internet	83	57	93	75	-
Total Counts Above	265	109	253	184	90
Ranking (1: least frequent, 5: most frequent)	1	4	2	3	5

Using the same-paired comparison activity method for international respondents, Music/movie is found to be the most frequent activity followed by Computer/Internet, Reading, CCA, and TV (Table 3). The findings from the Paired Comparison Method support the findings obtained in the ranking based on mean indices. The analysis shows that there is a lot of similarity in responses of the two groups.

Table 3: Leisure Activity Ranking of International Respondents

Leisure Activity	Leisure Activity				
	1) Reading	2) Music & movie	3) CCA	4) TV watching	5) Computer/Internet
1) Reading	-	11	19	23	10
2) Music & movie	16	-	19	27	16
3) CCA	10	9	-	13	8
4) TV watching	6	1	14	-	12
5) Computer/internet	19	13	21	18	-
Total Counts Above	51	23	54	58	36
Ranking (1: least frequent, 5: most frequent)	3	5	2	1	4

4.2 Leisure Time (Language Usage-Leisure Index)

The language usage-leisure index is calculated by using the time spent by a respondent on leisure activities and the language in which s/he prefers to perform that activity. A weight of two (2) is assigned to English language usage (given this is the most important language for agents) and a weight of one (1) is attached for native language and other languages spoken (considering these are less important than English). The weighted score (maximum

50, minimum 5)³ of the international respondents have a higher mean (26.63) compared to the Bangladeshi respondents (24.6), at $\alpha=5\%$ (Table 4). On average the mean index for all the respondents are found to be 25.01 ($\sigma=5.83$). However, since this index is not standardized, the *median* value provides a better measure of central tendency. The close median values (25.0~26.5) indicates a similarity in the language used for leisure between these two groups.

Table 4: Language-Leisure Index (Country-wise)

Median		Mean		Standard Deviation		Skewness		Kurtosis	
BD	Int.	BD	Int.	BD	Int.	BD	Int.	BD	Int.
25.0	26.5	24.6	26.63	6.08	4.37	0.051	-1.11	0.22	1.97

³ The Philippines Call Center industry is considered among the most successful in the world.

4.3 English Proficiency

English proficiency is one of the most important parameters for the prospective Call Center agents. In this parameter, eight simple variables are grouped in three complex variables (Table 5): (i) Listening ability (1, 2), (ii) Speaking ability (3, 4, and 5), and (iii) Comprehension ability (6, 7, and 8). A Likert-scale (1: least agreed; 5: most agreed) is used to analyze the responses. The mean values of the two groups are different at $\alpha=5\%$ for all variables except variable 1 (No difficulty in understanding English class lectures).

Regarding listening ability, we note that the Bangladeshi respondents rank below international

respondents in both the understanding of an English lecture (4.03 vs. 4.27), and in the understanding of an English movie without subtitle (3.58 vs. 4.70). Regarding speaking ability, the study found that the international agents are less interested in attending free-spoken English course (1.80 vs. 3.53). However, they are more comfortable giving a public speech in English compared to their Bangladeshi counterparts (4.23 vs. 3.01). Similarly, we find that the international agents communicate more frequently in English with their friends and family compared to their Bangladeshi counterparts (3.23 vs. 2.09).

Table 5: English Proficiency of the Respondents (by Country of Residence)

Complex Variables	Statements	Country of Residence (n)	Mean (μ)	Std. Deviation (σ)
a) Listening	1) Understanding English class lectures with ease*	BD (130)	4.03	1.13
		INT (30)	4.27	0.79
	2) Fully understanding English movies without subtitles	BD (130)	3.58	1.17
		INT (30)	4.70	0.47
b) Speaking	3) Willingness to attend free spoken courses	BD (130)	3.53	1.37
		INT (30)	1.80	1.13
	4) Comfortable giving public speech in English	BD (130)	3.01	1.16
		INT (30)	4.23	0.97
	5) Communication with friends and family mostly in English	BD (130)	2.09	1.15
		INT (30)	3.23	1.01
c) Comprehension	6) Preference for non-English movies (language preference)	BD (130)	3.74	1.25
		INT (30)	2.73	1.48
	7) Good translation ability	BD (130)	3.37	1.12
		INT (30)	4.20	1.16
	8) Comfortable reading in English	BD (130)	3.30	1.25
		INT (30)	4.30	0.99

* Means not different at $\alpha=5\%$

Regarding English comprehension, the study noted that the Filipino agents have a lower preference for non-English movies compared to the Bangladeshi agents (2.73 vs. 3.74). In terms of translation ability, the Filipino agents are better than the Bangladeshi respondents (4.2 vs. 3.37). We see similar results for reading in English (4.30 vs. 3.30).

From this analysis, we can conclude that the international agents' English proficiency is better than that of the Bangladeshi agents. Hence, if the Bangladeshi agents wish to find employment in the market, they must

improve their English proficiency (listening, reading and comprehension ability).

4.4 Enlightening (Technical) Proficiency

Under the parameter Enlightening Proficiency, there are nine simple variables grouped into three complex variables (Table 6)⁴: (i) Computer handling skills (1, 2), (ii) Communication skills (3, 4, 5, 6, 7), and (iii) Cultural compatibility (8, 9). A Likert-scale [1: least agreed; 5: most agreed] is used to analyze the responses. The mean

⁴ The value is calculated by multiplying time spent [1 (least) to 5 (most)] with language use [2 (English) and 1 (other)] for five leisure activities.

values of the two groups are different at $\alpha=5\%$ for all variables except 2, 5 and 8 (typing efficiently, selling ability to foreigners, support for coeducation, respectively)⁵.

Regarding computer handling skills, we note that the Bangladeshi respondents are more stressed for long PC use (3.18 vs. 2.67) and their typing ability is lower than that of international respondents (3.13 vs. 3.57). Regarding five communication skills, some observed that the international agents communicate in English more than their counterparts (4.10 vs. 3.52). We note that

international agents are more confident in selling products to locals (4.47 vs. 3.82), and to foreigners (3.93 vs. 3.48). The instructional ability of the international agents is better (4.53 vs. 3.72), and their questioning ability is more effective (4.70 vs. 3.63) compared to their Bangladeshi counterparts.

Regarding cultural compatibility, the results show that both groups support coeducational schools (4.13 vs. 4.13), but Bangladeshi respondents have a greater preference for non-English movies (3.74 vs. 2.73) than their international counterparts do.

Table 6: Enlightening Proficiency of the Respondents (by Country of Residence)

Complex Variables	Statements	Country of Residence (n)	Mean (μ)	Std. Deviation (σ)
a) Computer handling skills	1) Stressed for long hour PC use	BD (130)	3.18	1.26
		INT (30)	2.67	1.09
	2) Typing efficiently without looking at the keyboard*	BD (130)	3.13	1.34
		INT (30)	3.57	1.33
b) Communication skills	3) Communicate more in English	BD (130)	3.52	1.14
		INT (30)	4.10	1.19
	4) Confidence in selling ability to locals	BD (130)	3.82	1.08
		INT (30)	4.47	0.68
	5) Confidence in selling ability to foreigners*	BD (130)	3.48	1.08
		INT (30)	3.93	1.14
	6) Good instructional ability	BD (130)	3.72	0.93
		INT (30)	4.53	0.68
	7) Effective questioning ability	BD (130)	3.63	1.00
		INT (30)	4.70	0.54
c) Cultural compatibility	8) Support for co-education*	BD (130)	4.13	1.25
		INT (30)	4.13	1.17
	9) Preference for Bollywood movies	BD (130)	3.74	1.25
		INT (30)	2.73	1.48
* Means not different at $\alpha=5\%$				

4.4.1 University type-wise mean difference for Bangladeshi respondents

The study includes respondents from two universities in Bangladesh - public and private. The mean indices of the responses of each group are tabulated in Table 7. A

Likert-scale (1: least agreed; 5: most agreed) is used to analyze these responses. The mean value of the response for the groups is not found different at 5% significance level. Indicating no significant mean difference between responses from students in the two universities.

⁵ We note that three complex variables in the study capture over nine underlying variables. However, considering the exploratory nature of the study, the view of experts, and basic

characteristics of Bangladeshi agents we have taken nine variables, which may not be an exhaustive list, but should explain a lot.

Table 7: Mean Difference for Bangladeshi Respondents by University

Statements	University type	N	Mean	Std. Deviation	Sig (2-tailed) $\mu_{\text{male}} = \mu_{\text{female}}$
1) Understand class lecture	Public	62	4.06	1.10	0.76
	Private	58	4.00	1.17	
2) Translation ability	Public	62	3.53	1.07	0.10
	Private	58	3.19	1.16	
3) Comfortable reading in English	Public	62	3.18	1.20	0.26
	Private	57	3.44	1.30	
4) Understanding English movies without subtitles	Public	62	3.48	1.21	0.34
	Private	58	3.69	1.13	
5) Willingness to attend free spoken courses	Public	62	3.55	1.46	0.85
	Private	58	3.50	1.27	
6) Comfortable giving public speech in English	Public	62	3.03	1.13	0.82
	Private	58	2.98	1.19	
7) Communication with friends & family	Public	62	1.98	1.05	0.29
	Private	57	2.21	1.25	
8) Communication with teachers	Public	62	3.35	1.09	0.11
	Private	58	3.69	1.17	
9) Selling ability to a Bangladeshi	Public	62	3.97	0.92	0.14
	Private	58	3.67	1.22	
10) Selling ability to a foreigner	Public	62	3.52	1.05	0.73
	Private	58	3.45	1.11	
11) Giving instructions	Public	62	3.74	0.89	0.84
	Private	58	3.71	0.97	
12) Questioning ability	Public	62	3.52	1.00	0.19
	Private	58	3.76	1.00	
13) Support for co-education	Public	62	4.08	1.22	0.68
	Private	57	4.18	1.30	
14) Preference for Bollywood movies	Public	62	3.94	1.21	0.08
	Private	58	3.53	1.27	
15) Stress level in front of PC	Public	62	3.18	1.34	0.86
	Private	58	3.19	1.19	
16) Typing ability	Public	62	3.24	1.39	0.36
	Private	58	3.02	1.29	

4.4.2 Gender-wise mean difference for Bangladeshi respondents

The study noted no major significant difference in responses (mean indices) of the Bangladeshi respondents by gender (Table 8). Out of 16 variables, only in three

cases (Support for co-education, Preference for Bollywood movies, and Typing efficiency) the mean values are different.

Table 8: Gender-wise Mean Difference for Bangladeshi respondents

Statements	Gender	N	Mean (μ)	Std. Deviation	Sig (2-tailed) $\mu_{\text{male}} = \mu_{\text{female}}$
1) Understand class lecture	Female	44	4.18	1.04	0.26
	Male	76	3.95	1.18	
2) Translation ability	Female	44	3.16	1.06	0.12
	Male	76	3.49	1.15	
3) Comfortable reading in English	Female	43	3.30	1.34	1.00
	Male	76	3.30	1.20	
4) Understanding English movies without subtitles	Female	44	3.55	1.23	0.79
	Male	76	3.61	1.14	
5) Willingness to attend free spoken courses	Female	44	3.39	1.39	0.40
	Male	76	3.61	1.36	
6) Comfortable giving public speech in English	Female	44	2.91	1.14	0.47
	Male	76	3.07	1.17	
7) Communication with friends & family	Female	44	2.07	1.25	0.87
	Male	75	2.11	1.10	
8) Communication with teachers	Female	44	3.41	1.26	0.46
	Male	76	3.58	1.06	
9) Selling ability to a Bangladeshi	Female	44	3.75	1.12	0.57
	Male	76	3.87	1.06	
10) Selling ability to a foreigner	Female	44	3.43	1.25	0.71
	Male	76	3.51	0.97	
11) Giving instructions	Female	44	3.66	1.08	0.58
	Male	76	3.76	0.83	
12) Questioning ability	Female	44	3.75	1.18	0.37
	Male	76	3.57	0.88	
13) Support for co-education	Female	44	4.43	1.04	0.03
	Male	75	3.95	1.34	
14) Preference for Bollywood movies	Female	44	3.36	1.31	0.02
	Male	76	3.96	1.17	
15) Stress level in front of PC	Female	44	3.27	1.40	0.58
	Male	76	3.13	1.18	
16) Typing ability	Female	44	2.73	1.28	0.01
	Male	76	3.37	1.33	

4.4.3 Mean difference for Bangladeshi respondents by Academic Year

The Bangladeshi respondents were divided into six groups: i) First year Bachelor, ii) Second year Bachelor, iii) Third year Bachelor, iv) Fourth year Bachelor, v) First year Master, and vi) Second year Master. An ANOVA test was conducted to see if there are differences in their responses. Except for two variables (Understand class lecture and Translation ability), the mean values across the groups are found similar by academic year.

4.5 Psychological Orientation

One of the most important parameters of the study is psychological orientation of the respondents. This section

delves into the psychological orientation of the prospective Bangladeshi respondents for the Call Center industry using a standardized psychometric test of the Big Five Personality traits (John & Srivastava, 1999). These traits are:

- 1) Extraversion (talkative, assertive, energetic)
- 2) Agreeableness (good-natured, cooperative, trustful)
- 3) Conscientiousness (orderly, responsible, dependable)
- 4) Emotional Stability versus Neuroticism (calm, not neurotic, not easily upset)
- 5) Culture (intellectual, polished, independent-minded)

This research used the methodology first used by Saucier (1994), which can drive the Big Five Personality traits from 40 personality variables (Section 3.4). Each variable can be captured by one of five traits (Appendix 2). Specific weights identified by Saucier (1994) are assigned to each of the 40 variables to derive the orientation of the respondents on the Big Five Traits (Appendix 3). The higher the mean aggregate, the more accurate are the traits. Reliability analysis of the dataset for the 40-personality variable reveals the Cronbach's

Alpha coefficient is 0.651, which is an adequate value (Netemeyer, 2003).

We find the mean indexes for each of the Big Five Traits are higher for the international respondents, except for Emotional Stability (Table 9). It can be concluded that in terms of extraversion, agreeableness, conscientiousness, and culture, the Bangladeshi respondents are behind their international counterparts. However, for emotional stability, the Bangladeshi respondents score higher.

Table 9: Descriptive Statistics for the Dataset on Big Five Traits

	Extraversion**		Agreeableness**		Conscientiousness**		Emotional Stability*		Culture**	
	BD	INT	BD	INT	BD	INT	BD	INT	BD	INT
N	108	30	108	30	108	30	108	30	108	30
Mean	3.80	6.58	9.18	14.00	7.70	15.08	2.55	0.89	5.41	12.48
Std. Dev	6.46	6.06	6.53	4.99	8.78	5.70	5.72	5.15	5.63	5.94
Skewness	-0.01	0.09	-0.84	-0.54	-0.42	-0.86	0.25	-0.49	-0.83	-0.89
Kurtosis	-0.51	-1.31	1.65	-0.98	-0.58	0.00	0.39	-0.36	0.51	-0.01

* Means are not significantly different at $\alpha=5\%$, ** Means are significantly different at $\alpha=5\%$

To compare the differences between the two samples, an independent t-test was conducted. The hypotheses assumed that a replication of the traits of the Bangladeshi sample with that of the international sample is necessary (the t-values assumed of unequal population variances). The results show that the means are significantly different at $\alpha = 5\%$, except for one variable - emotional stability.

4.5.1 Mean difference of Big Five Traits for Bangladeshi respondents by gender

To test if there is a gender-specific difference, an independent samples test is conducted for all the Big Five Traits for the Bangladeshi respondents (Table 10). The findings based on gender of Bangladeshi respondents suggest that only one variable (Emotional Stability) is significantly different at $\alpha = 5\%$.

Table 10: Gender-wise Mean Difference of Big Five Traits

Big Five Personality Traits	Gender	N	Mean	Std. Deviation	Sig (2-tailed) $\mu_{male} = \mu_{female}$
Extraversion Index	Female	40	3.77	6.02	0.97
	Male	68	3.82	6.76	
Agreeableness Index	Female	40	10.75	6.53	0.06
	Male	68	8.26	6.40	
Conscientiousness Index	Female	40	9.03	8.87	0.23
	Male	68	6.92	8.69	
Emotional Stability	Female	40	1.06	4.87	0.04
	Male	68	3.42	6.04	
Intellect/Openness Index	Female	40	6.05	5.34	0.36
	Male	68	5.04	5.80	

4.5.2 University type-wise mean difference of Big Five Traits for Bangladeshi respondents

To test if there is difference by university type, an independent sample test is conducted for all the Big Five

Traits for only the Bangladeshi respondents (Table 11). The findings suggest that none of the traits have a significant difference in means, at $\alpha = 5\%$ level.

Table 11: University Type - Mean Difference on Big Five Traits

Big Five Personality Traits	University type	N	Mean	Std. Deviation	Sig (2-tailed) $\mu_{\text{male}} = \mu_{\text{female}}$
Extraversion Index	Public	58	4.63	5.87	0.16
	Private	50	2.84	7.03	
Agreeableness Index	Public	58	8.62	6.95	0.34
	Private	50	9.82	6.01	
Conscientiousness Index	Public	58	6.93	8.78	0.33
	Private	50	8.59	8.78	
Emotional Stability	Public	58	2.53	6.24	0.98
	Private	50	2.56	5.12	
Intellect/Openness Index	Public	58	5.13	6.11	0.57
	Private	50	5.74	5.06	

4.5.3 Mean difference of Big Five Traits for Bangladeshi respondents by academic year

An ANOVA test was conducted to see if there are differences in responses based on academic year (Appendix 3). Except for emotional stability, the mean values across the groups are found similar.

12) in a 5-point scale (1 = least agreed, 5 = most agreed). The study found that the respondents are unsure of the suitability of the job for future career development. They are not prepared to work casually (part-time) even though they lack better options. They have reservations regarding night shifts. Further, only 44.2% of the Bangladeshi respondents show a willingness to work as agents in a Call Centre, while 35% were unwilling to work, and 20.8% are indecisive. A lack of knowledge of this relatively new industry could have been the reason for the lackluster results.

4.6 Job Suitability of Bangladeshi Respondents

Regarding job suitability, the Bangladeshi respondents were asked to respond to six job related statements (Table

Table 12: Responses to Job Related Statements

Job Statements	Sample (N)	Mean (μ)	Std. Deviation	Sig (two-tailed) $\mu = 3$
a) Suit my personality	120	3.18	1.17	0.09
b) Help me in career development	120	3.02	1.25	0.88
c) Work as a part-timer only	120	2.10	1.24	0.00
d) Capable of getting better jobs	120	1.82	0.94	0.00
e) Willing to pay for training to get this job	115	2.31	1.17	0.00
f) No problem working at nightshifts	117	2.82	1.44	0.18

5 Conclusions

This paper analyzed the readiness of the Bangladeshi workforce to participate in the International Call Center industry in terms of English proficiency, Enlightening (Technical) proficiency, Psychological orientation, and

Work willingness. This research is exploratory and uses both primary and secondary data. The primary data was collected through survey questionnaire for respondents from Bangladesh and the Philippines. The survey was conducted among 130 university students in Bangladesh

and 30 Call Center agents in the Philippines. The study found little difference in the leisure activities of Bangladeshi and international respondents. We note that the respondents spend the maximum time in computer/internet surfing, followed by listening/watching music/movies, reading, watching TV, and co-curricular activities.

Regarding technical skills, the mean values for the two groups are different for all variables except typing efficiently, selling ability to foreigners, and support for co-education. The study found that the Bangladeshi respondents are more stressed from long hours of PC use, and their typing ability in English is less than that of the international respondents. The study noted that the international agents communicate in English more than their counterparts in Bangladesh. Also, the international agents are more confident in selling products. The "instructional ability" of the international agents is better and their "questioning ability" is more effective. Regarding cultural compatibility, we find both groups support co-education, but Bangladeshi respondents have a greater preference for watching movies.

The study found no major significant difference in responses of the Bangladeshi students by university type (private and public), academic year, or gender (male and female). Out of 16 variables, in three cases only (Support for co-education, Preference for Bollywood movies, and Typing efficiency) the mean values are significantly different. The responses show that except for two variables (Understand class lecture and Translation ability), the mean values do not depend on the academic year. Regarding the psychological traits, the Bangladeshi respondents are far behind their international counterparts in terms of extraversion, agreeableness, conscientiousness and culture. However, emotionally they are more stable. For Bangladeshi respondents, the answers are similar across gender, institutions, and academic year, except for emotional stability.

This research showed that the workforce in Bangladesh has adequate computer handling skills, English speaking skills as well as cultural compatibility to be competitive for jobs as international Call Center agents. However, the workforce lacks good communication skills in English listening and comprehension. Therefore, proper policy changes must be made to upgrade the skills and competencies of the workers in these dimensions. With a growing market for Call Center outsourcing and diminishing cost advantages of the traditional providers, there are substantial opportunities for Bangladesh to tap into this market. This study discovers the existence of an adequate workforce for the Call Center Industry in Bangladesh. Thus, Bangladesh can capture a significant market share in the

global Call Center Industry if the necessary focused investments are made to train the workforce.

6 Recommendations

To upgrade the competencies of Bangladeshi workforce, long-term and short-term strategies must be considered. Keeping the long-term vision of making Bangladesh a desired BPO location, steps must be taken at every level of the education system. In the primary level (up to grade 5), English courses must be restructured with designing books with illustrated figures and cartoons to make it easier and fun for children to learn English. The classroom should be more interactive with teachers speaking in English with their students to help groom students to take up the challenges of a global workforce. The higher secondary level is a vital stage to equip students with the adequate communication skills necessary to be globally competitive. Debate clubs, drama clubs, and other activities in English should be designed with active student participation to gain valuable experience and language skills.

Universities and training institutes must enhance the standards in language and communication recognized by international customers. Providing English language orientation courses and introducing a few English language courses will address the problem associated with learning the language mainly from books. While designing academic programs, institutions must expand disciplines and stress business communication and English language courses. Training institutions and English language proficiency centers must be established to improve the interpersonal skills of the workforce in Bangladesh. These centers, developed in tandem with English-speaking classes, can also impart special training to the prospective Call Center employees. With focused training, the knowledge gap can be closed, and communication skills substantially improved.

A close relationship between the private sector and educational institutions is important. It is vital that the private sector makes known its demand for workforce with diverse skills. It will then fall to the training and educational institutions to respond with the right curriculum. Awareness about the attractiveness of working in Call Centers must be disseminated among undergraduate students, so that they actively prepare themselves to take up jobs as Call Center agents. Joint ventures can be developed with global players in outsourcing industry for quick and appropriate knowledge transfer. Such partnerships will diversify risks for the joint venture partners and provide much-needed credibility for the local partners. It is important to increase public funding for education at all levels.

Appendices

Appendix 1: Big Five Personality Traits from 40 personality variables

I: Extraversion 8 (4+4)

Positive (4)	Negative (4)
ii. Bold (Extraversion)	i. Bashful/Reserved (Extraversion Reversed)
xi. Energetic (Extra)	xxiii. Quiet (Extra R)
xii. Extraverted (Extra)	xxvi. Shy (Extra R)
xxxiv. Talkative (Extra)	xviii. Withdrawn (Extra R)

II: Agreeableness 8 (3+5)

Positive (3)	Negative (5)
xviii. Kind (Agree)	iv. Cold (Agreeableness Reversed)
xxiii. Sympathetic (Agree)	xxv. Rude (Agree R)
xxxvii. Warm (Agree)	xxxvi. Unsympathetic (Agree R)
	xiv. Harsh (Agree R)
	xl. Un-empathetic (Agree R)

III: Conscientiousness 8 (4+4)

Positive (4)	Negative (4)
xx. Organized (Conscientiousness)	iii. Careless (Conscientiousness Reversed)
xxii. Practical (Consc.)	ix. Disorganized (Consc. R)
xxxii. Systematic (Consc.)	xvi. Inefficient (Consc R)
x. Efficient (Consc.)	xxvii. Sloppy (Consc. R)

IV: Emotional Stability 8 (2+6)

Positive	Negative
xxiv. Relaxed (EmStab)	vi. Envious (Emstab R)
xxx. Unenvious (EmStab)	xii. Fretful/Nervous (EmStab R)
	xvii. Jealous (EmStab R)
	xix. Moody (EmStab R)
	xxxv. Temperamental (EmStab R)
	xviii. Touchy (EmStab R)

V: Intellect or Openness 8 (6+2)

Positive	Negative
v. Complex (Openness)	xxix. Uncreative (Openness Reversed)
vii. Creative (Openness)	xxxi. Unintellectual (Open R)
viii. Deep (Openness)	
xv. Imaginative (Openness)	
xxxix. Intellectual (Openness)	
xxi. Philosophical (Openness)	

Appendix 2: Specific weights, identified by Saucier (1994), to each of the 40 variables on the Big Five Traits

	Extraversion	Agreeableness	Conscientiousness	Emotional Stability	Intellect or Openness
1) Reserved	0.73	0.14	-0.12	-0.05	-0.05
2) Bold	0.51	-0.17	0	0.24	0.03
3) Careless	0.09	-0.1	-0.61	-0.05	-0.05
4) Cold	-0.21	-0.65	0.03	-0.05	-0.02
5) Complex	-0.09	0.01	-0.1	-0.13	0.51
6) Envious	-0.1	0.07	-0.03	-0.61	-0.15
7) Creative	0.05	0.01	0.01	0.15	0.69
8) Deep	-0.13	0.22	-0.09	0.03	0.44
9) Disorganized	0.01	0.02	-0.82	0.05	-0.02
10) Efficient	0.01	0.04	0.65	0.07	0.05
11) Energetic	0.44	0.18	0.18	0.18	0.02
12) Extraverted	0.7	0.07	-0.07	0.11	-0.01
13) Nervous	-0.17	0.09	-0.07	-0.54	-0.08
14) Harsh	0.1	-0.54	0	-0.14	-0.06
15) Imaginative	0.11	0.03	0.01	0.07	0.65
16) Inefficient	-0.16	-0.05	-0.62	-0.01	-0.05
17) Jealous	-0.04	-0.01	-0.03	-0.63	-0.15
18) Kind	0.02	0.66	0.14	-0.01	-0.01
19) Moody	-0.06	-0.12	-0.04	-0.64	0.12
20) Organized	-0.06	-0.01	0.83	-0.01	-0.02
21) Philosophical	-0.08	0.04	-0.03	0.07	0.56
22) Practical	-0.08	0.13	0.51	0.15	-0.1
23) Quiet	-0.76	0.15	0.04	-0.08	-0.03
24) Relaxed	0.11	0.16	0.07	0.49	-0.1
25) Rude	0.14	-0.55	-0.18	-0.03	-0.04
26) Shy	-0.79	0.15	0.04	-0.08	-0.03
27) Sloppy	-0.01	-0.1	-0.62	0.13	0.02
28) Touchy	-0.09	0.01	0.04	-0.59	-0.01
29) Uncreative	-0.13	0.06	-0.01	0	-0.66
30) Unenvious	-0.03	0	0	0.68	0.08
31) Unintellectual	-0.02	0.01	-0.09	0.09	-0.52
32) Systematic	-0.11	-0.02	0.63	0.13	0.02
33) Sympathetic	-0.05	0.67	0.08	0	-0.01
34) Talkative	0.73	0.14	-0.12	-0.05	-0.05
35) Temperamental	0.03	-0.17	-0.03	-0.62	0.03
36) Unsympathetic	-0.02	-0.64	0.03	0.07	-0.1
37) Warm	0.2	0.67	0.08	0	-0.01
38) Withdrawn	-0.71	-0.15	-0.07	-0.1	0.02
39) Intellectual	-0.03	-0.01	0.12	0.15	0.54
40) Un-empathetic	0.14	-0.55	-0.18	-0.03	-0.04

Appendix 3: ANOVA among Respondents from Different Academic Years

Big 5-Traits	Group Results	Sum of Squares	df	Mean Square	Sig.
Extraversion Index	Between Groups	129.57	5	25.91	0.69
	Within Groups	4341.72	102	42.57	
	Total	4471.29	107		
Agreeableness Index	Between Groups	63.75	5	12.75	0.92
	Within Groups	4502.34	102	44.14	
	Total	4566.10	107		
Conscientiousness Index	Between Groups	64.04	5	12.81	0.98
	Within Groups	8179.69	102	80.19	
	Total	8243.73	107		
Emotional Stability	Between Groups	395.11	5	79.02	0.03
	Within Groups	3108.64	102	30.48	
	Total	3503.74	107		
Intellect/Openness Index	Between Groups	141.69	5	28.34	0.49
	Within Groups	3249.29	102	31.86	
	Total	3390.98	107		
a. Country of Residence = Bangladesh					
* Significant difference between means					

References

- Anton, Jon and Gustin, David. (2000). *Call Center Benchmarking: How Good Is "Good Enough"*. Purdue University Press Books.
- BACCO. (2015). *Bangladesh Association of Call Centre and Outsourcing*. The Business Process Outsourcing (BPO) Summit Bangladesh 2015, organized by ICT Division and BACCO, December 9-10.
- BBS. (2013). *Bangladesh Bureau of Statistics. Labor Force Survey*. Dhaka: Bangladesh Bureau of Statistics, Ministry of Planning, Government of Bangladesh. www.bbs.gov.bd
- Bhide, M., Negi, S., Subramaniam, L. V., and Gupta, H. (2009). Customer-focused service management for contact centers. *IBM Journal of Research and Development*, Volume 53, Issue 6, 9:1-9:12.
- Carmel, E. and Tjia, P. (2005). *Off-shoring Information Technology: Sourcing and Outsourcing to a Global Workforce*. ISBN 0521843553, 9780521843553, Cambridge: Cambridge University Press.
- Chisty, K., Uddin, G., and Ghosh, S. K. (2007). The Business Graduate Employability in Bangladesh: Dilemma and Expected Skills by corporate world. *BRAC University Journal*, Vol. IV, No. 1, 1-8.
- Chowdhury, Ahmed, and Miah, Mohammad Khasro. (2016). Employability skills for entry-level human resources management positions: Perceptions of students and employers. *Australian Journal of Career Development*, Volume: 25, Issue: 2, 55-68.
- Freeman, Laura M., and Whitfield, Hilary C. (1996). *Setting up for integrated inbound/outbound telemarketing*. Retrieved 2008-06-05. Working conditions and health in Swedish call centers. (<http://www.eurofound.europa.eu>)

- Haq, A. I. (2008). *Bangladesh 2015: Growth, Investment, Opportunity*. Asian Tiger Capital Partners research publication. 17 April 2008, pp. 67-72. www.at-capital.com.
- Hollman, D., Batt, Rosemary, and Holtgrewe, Ursula. (2007). *The Global Call Center Report: International Perspectives on Management and Employment*. ISBN 9780979503610, NY: McGraw Hill.
- Houlihan, M. (2002). Tensions and variations in Call Center management strategies. *Human Resource Management Journal*, 12(4), 67-85.
- Islam, Rizwanul (1980). Graduate Unemployment in Bangladesh: A Preliminary Analysis. *The Bangladesh Development Studies*, Volume VIII, No. 4. 47-74.
- John, O. P., and Srivastava, S. (1999). The Big Five Trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (pp. 102-138). New York, NY, US: Guilford Press.
- Karmakar, C. K. and Wahid, C. M. (2007). *Recommendation for Bangladesh towards E-learning Readiness*. Department of Computer Science and Engineering, Shah Jalal University of Science and Technology, pp. 97-102. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.514.5556&rep=rep1&type=pdf>
- Mustapha, R., Ishak, N. M. and Nadzir, N. R. M. (2003). *Personality profiles and workforce readiness: a comparative study of university students in technical and non-technical fields*. Bangi, Malaysia: Universiti Kebangsaan Malaysia. <https://www.worldcat.org/title/personality-profiles-and-workforce-readiness-a-comparative-study-of-university-students-in-technical-and-non-technicalfields/oclc/969241128>
- Netemeyer, R. G., Bearden, W. O., and Sharma, S. (2003). *Scaling Procedures: Issues and Applications*. Thousand Oaks, CA: Sage.
- O'Neil, H. F., Allred, K. and Baker, E. L. (1992). *Measurement of Workforce Readiness: Review of theoretical frameworks*. CSE Technical Report 343, National Center for Research on Evaluation, Standards, and Student Testing (CRESST), Graduate School of Education, UCLA: University of California.
- Price Waterhouse Coopers (PwC). (2005). *The evolution of BPO in India*. A report prepared by PwC and Indo American Chamber of Commerce (IACC), April 2005. PwC Pvt. Ltd., India.
- Rahman, M., Darus, S., and Hussain, N. (2015). English Language Competency and Outsourcing Call Centers in Bangladesh. *Bahasa and Sastra*, 1(2), 1-15.
- Saucier, Gerard (1994). Mini-markers: A brief version of Goldberg's Unipolar Big Five Marker. *Journal of Personality Assessment*, 63(3), 506-516.
- Skyrme, P., Wilkinson, L., Abraham, J. D. and Morrison, J. D. (2005). Using personality to predict outbound Call Center job performance. *Applied H.R.M. Research*, Volume 10, Number 2, 89-98.
- Srinivasan, R., Talim, J. and Wang, J. (2004). Performance analysis of a Call Center with interactive voice response units. *Sociedade e Investigaçidn Oper'ativa Top*. Vol. 12, No. 1, 91-110.
- Titumir, R. A. M. and Hossain, J. (2003), Learning for Skills Formation and Employability: A Strategic Framework for Informal Sector in Bangladesh. *Journal of the Institute of Bangladesh Studies*, Vol. XXVI, 17-38.
- World Bank (2000). *Bangladesh Education Sector Review*. Vol. I, Dhaka: University Press Limited.

Ethics and Values Education in Bangladesh: The Challenges for an Aspiring Middle-Income Country

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Abstract

Starting with the premise that a key mission of schools is to promote ethical values and moral development of young people, this study explores the promotion of ethics, values and moral development in schools -- curriculum, textbooks, teacher preparation, teacher performance, classroom practices, school culture, and assessment of student learning. An innovative feature of this study is to construct a “values profile” for students, teachers, parents, and the relevant members of the committees, to understand the state of Ethics and Values Education in Bangladesh. The methodology is primarily qualitative, including literature review, focus group discussions, expert panel review, and field observations - supplemented by an analysis of data collected through surveys. Our findings highlight the individual and collective role of teachers -- their capabilities, professional competence, and ethical position, which are critical to what the schools can achieve. The paper also summarizes the rationale, objectives, methodology, findings and policy recommendations of the report, “Ethics and Values in School – Capturing the Spirit of Education,” released by *Education Watch* in May 2018.

1 Introduction

The United Nations document, *Sustainable Development Agenda 2030* for “transforming our world” captures the global agenda on development (United Nations, 2015). The global community has expressed its commitment to this agenda. The overarching goal for education is SDG 4, which has seven sub-goals and is one of 17 Sustainable Development Goals [SDGs]. These capture a vision of progress in education to cope with the many challenges faced by humanity. They are also relevant to the national educational goals in each country (UNESCO, 2016; UNESCO, 2015a; UNESCO, 2015b). The *National Education Policy 2010* provides a normative framework for ethics, values, character development, and moral education for Bangladesh. This framework is reflected in the school curricula, teaching content, textbooks, teacher preparation, pedagogic practice, culture, and assessment of student learning. The national framework must be

informed by the global discourse on educational development, and the emerging consensus on the goals of education on how to attain these goals to serve all learners (Ministry of Education, 2010).

Bangladesh is poised to cross the threshold from a low-income to a middle-income country, which aspires to build a modern, democratic, and prosperous society. The country is deeply influenced by the forces of change across the world. These concerns may have become more complex in recent years given the national and global context.

The Education Watch Group in Bangladesh in its 2017 *Education Watch Report*, released in May 2018, explored these questions (CAMPE, 2018). This paper summarizes the report, including its findings and policy recommendations.

¹ The core research team for the study on which this article is based was led by Professor Manzoor Ahmed, and included Md. Abul Kalam, Sheikh Shahana Shimu, Riffat Jahan Nahreen, K. M. Enamul Hoque, Nafisa Anwar, Mitul Dutta, Sabira Sultana, Nashida Ahmed and Md. Sydur Mur Salin,

all staff members of BRAC Institute of Educational Development or Campaign for Popular Education.

2 Literature Review

Ethics and Values Education [EVE] in the Global and Bangladesh context

A detailed literature review included in the Education Watch Report (2017) explores the question of ethics, values, and moral education (CAMPE, 2018, Chapter 2). The major themes are the role of faith as a source of morality; the transition from faith to reason as source of Ethics and Values Education (EVE, hereafter); theories of moral development; the rationale behind the World Values Survey; the theory of cognitive dissonance; and the importance of establishing norms for human rights and dignity. The review also discusses how EVE is addressed in selected national education systems. The Bangladesh context of ethics and moral education are presented. On World Values Survey premises and results, see Welzel, 2013; other key references are cited in the literature review in the *Education Watch* report². The review of theories on ethics and values development such as the theory proposed by Kohlberg and the underlying premise of the World Values Survey, suggests certain classification of themes (Crain, 1985; World Values Survey website). The review of the evolution of ideas on ethics and values, and the goal to address the implications of teaching ethics and values in schools helped identify the themes and topics for this paper. This led to the construction of various domains of ethics and values education. Nine domains served as the analytical lens for this study (see CAMPE, 2018, chapter 2 and discussion below).

3 Research Objective, Scope and Key Questions

We start with the premise that a key purpose of schools is to promote the ethical and moral development of young people. Therefore, the aim of the study is to explore, *how the goal of promoting moral development is reflected in the constituent parts of school education including curriculum, textbooks, teacher preparation, teacher performance, classroom practices, school culture, and assessment of student learning.*

This study is limited to schools from pre-primary to secondary, and the equivalent government supported Madrasas. This desire to keep the study manageable, and the assumption that school education in the 5-17 age group lays the foundation of their moral and values development, was behind this decision.

The methodology used in this paper is primarily qualitative, including literature review, focus group discussion (FGDs), expert panel review, and field observation. The analysis of data collected through surveys complements the narrative. An innovative feature of the paper is to identify various domains of ethics and values, construct a survey instrument, and apply the survey instrument to collect data on students, teachers, parents, and members of the school managing committees. Readers interested in the rationale, premises, methodology, and findings are referred to *The Education Watch* report. The instruments including the values profile survey are included in the appendix of the report (CAMPE, 2018).

² Of particular relevance are European Commission (2015); Center for Universal Education (2017); Central Board of Secondary Education, India (2012); Jubilee Centre for Character and Virtues (2015); National Council for Educational Research and Training, India (2012); Dill (2007); and Donnelly (1986).

Matrix of research questions and methodology

Table 1: Key research questions and methodology

Key Questions	Main Methodology	Comments
1. Conceptualization of Ethics and Values in Education (EVE) and their reflection in education content	Panel of experts used guidelines to review curricular and learning content	Selected curriculum and content areas considered relevant – language, social studies, and religious/moral education; quantitative weights also were considered
2. EVE in teacher preparation and performance	Panel of experts used guidelines to review content of teacher preparation, in-service training and teacher performance monitoring	Reviewed selected long- and short-term training for pre-primary, primary, secondary school and madrasa teachers; examined teacher performance standards and their use
3. Classroom and school pedagogy practices regarding EVE	Survey a sample of schools including observation of classrooms	Sample of primary schools included- primary, secondary and equivalent madrasas, receiving public support
4. School culture and environment	Use a combination of school survey and visits	The survey included appropriate questions, complemented by site visits; co-curricular activities including student government activities were given special attention
5. School community interaction	FGDs with parents, community leaders, teachers, and school committee members	FGDs were organized in a subset of schools in the sample; researchers conducted FGDs following guidelines
6. Student perceptions and expectations about EVE	FGDs with higher grade primary students, secondary students and youth (recent completers of school education)	Conducted in a subset of sample schools with guidelines; a sample of first year Dhaka University students was also included
7. Assessing moral beliefs and behavior of young people and adults in their lives	An instrument was developed to determine belief and behavior in real life situations for young people (samples of 10-12 and 15-17 years) as well as teachers, parents, and school committee members	The results provided insights on the state of moral beliefs and behavior of young people and concerned adults. Attention was given to developing a valid and reliable survey instrument and administering it well. (This was adapted from the World Values Survey tools)

Sampling

Given that this is primarily a qualitative study, statistically representative sampling and making national or sub-national quantitative estimates are not the main

objectives. The quantitative techniques were used to enrich and complement the qualitative analysis and conclusions. The following sampling frame was used (Table 2).

Table 2: Sample of Institutions and Respondents

Sample Items	Description	Purpose
32 public system primary level institutions	Clusters of 8 urban, 20 rural schools; and 4 <i>Ebtidayee</i> madrasas chosen from 8 divisions	To ensure a broad representation of primary and secondary institutions in the study; collecting information about and observing school provisions, facilities and learning environment and how these influence EVE
32 public system secondary level institutions	Clusters of 8 urban, 20 rural, 4 <i>Alia</i> madrasas selected from 8 divisions	Same as above
20 classrooms observed at primary and secondary levels	8 primary and 8 secondary, 2 <i>Ebtidayee</i> and 2 <i>Alia</i> madrasas from subsets of clusters of institutions	To understand reflection of EVE in the classroom
10 Student FGD groups at primary and secondary levels	Average of 10 students from each primary and secondary sample institutions, across 8 divisions	To ascertain perceptions of and expectations about EVE
10 Teacher FGD groups at primary and secondary levels	Average of 8 teachers in each from primary and secondary sample institutions from 8 divisions	To ascertain perceptions and expectations about EVE
10 Parents/SMC Members FGD groups at primary and secondary levels	Average of 10 from subset of institutions in 8 divisions	To ascertain perceptions and expectations about EVE
640 primary level students 640 secondary level students 120 first-year university students 576 teachers at both levels 1280 SMC members/parents	20 class 5 and class 10 students from each sample school (with randomization when class size is large), 120 DU first-year university students invited by Dhaka University Research Association (a student/faculty voluntary group), teachers, SMC members/parents invited for voluntary participation in each sample school	To obtain responses to the values survey: 47 common items for secondary and university students, teachers and SMC/parents 25 items in simple language for primary students.

4 Domains of Ethics and Values in Education – The Analytical Lens

This section presents the domains of EVE, which form the basis of the analytical frame for this paper. Subsequent sections provide the key findings and recommendations based on these findings.

In order to examine the elements of the school system in relation to EVE, it was necessary to agree first on the components or domains of ethics and values. Constructing an analytical framework is one of the methodological contributions of this research. In attempting to place diverse themes and topics in a logically connected

sequence, the team adopted a social dynamics perspective (Durlauf & Young, 2001). The family helps us form self-awareness, self-identity, core beliefs and a way of looking at society and the world. Humans also engage in social interaction between self and others. Moreover, there are universal normative goals that serve as guide for behavior and action in society. This perspective underlies the following nine domains of ethics and values.

1. *Personal beliefs on ethics and values* – This domain helps us understand: purposefulness in life; consciousness about spirituality and the human condition; positive attitude about life and the future; honesty in personal conduct, being upright and possessing self-esteem; compassion and empathy for

others; commitment to performance standards (“anything worth-doing is worth-doing well”); appreciating and participating in creative, artistic, and aesthetic expressions; and a commitment to fairness and to a just society. *This domain may be seen as an anchor for the individual, since it seeks to capture how a person perceives and internalizes other value domains.*

2. *Interpersonal relationships* – Respect for and acceptance of differences, belief in human rights and dignity for all, mutual trust and empathy in interacting with others.
3. *Responsibility as a member of the community, society and a nation* - Being mindful of civic duties and responsibilities; abiding by law; promotion of common interests of the community, society, nationality and nation; respecting diversity in the society; promoting societal obligation to the disadvantaged and those with special needs; love for the country and nation; and appreciation of national history and culture.
4. *Responsibility as a global citizen* – Respect for other cultures and traditions; promoting human rights and dignity for all; respect for and belief in common humanistic values and norms; respect for international laws and treaties; and responsive to and supportive of people in crisis and danger anywhere.
5. *Building a just and democratic society* – Equity, equality and inclusiveness; freedom of faith, belief, speech and opinion; rule of law; promoting democratic processes and behavior; and respect for rights and needs of minorities.
6. *Protecting environment and the planet* – Love for nature, protecting planet’s resources; balancing needs of present and future generations; living by sustainable life-style; promoting bio-diversity; and preventing cruelty to animals.
7. *Gender justice, norms and attitudes* – Gender equity and equality; non-discrimination, preventing gender barriers and gender-based denial of freedom; gender equality in personal, social, economic, and political roles; fair gender representation in art, culture, and creative spheres.
8. *Attitude towards children* – Societal obligation to children; respect for children’s rights, protection of

children; and listening to children, mutually supportive child-adult interaction.

9. *Action to uphold ethics and values* – Being active, engaged, and standing up to uphold ethical principles and moral values.

These domains have been used to construct the analytical frame for examining how ethics and values are reflected in the curriculum and learning content, classroom practices, school environment, teacher preparation and performance, and student knowledge, attitude, and behavior. These domains also have been used to design the “values profile survey.”

A scanning was undertaken of ethics and values themes and topics in the primary and secondary school curricula and textbooks in Bangladesh (see below). The International Bureau of Education methodology for a similar review of curricular materials for SDG4.7 contents was adapted for the scanning (International Bureau of Education, 2016).

5 The Key Findings

The analysis and findings of the study are organized under four headings:

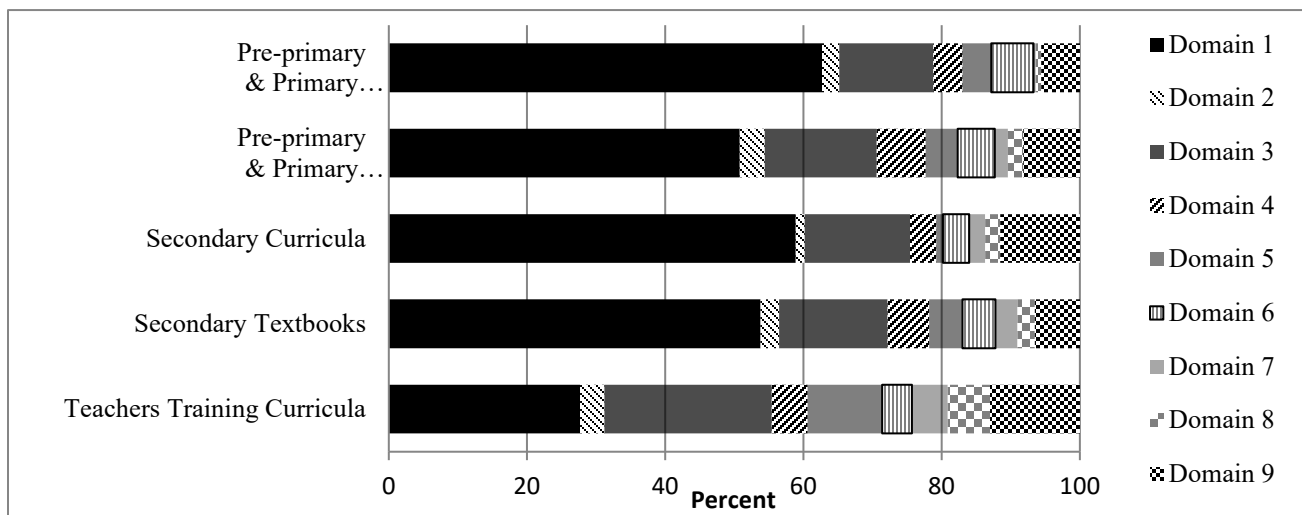
- a. Ethics and values in teaching and learning
- b. Ethics and values and the school culture
- c. The social context of ethics and values in school
- d. A values profile of students, teachers, school committees and parents

The findings in these four areas, along with the conclusions drawn, are presented below. The key conclusion is the mutual complementarity and inter-relationship, and the importance of taking a holistic approach.

Ethics and Values in Learning Content and Pedagogy

Figure 1 shows the prominence of each EVE domain in the curricula, textbooks and pedagogical material. There is a clear dominance of the first domain related to personal belief and general concepts of values. Practical applications represented by other domains are less represented in the learning content.

Figure 1: Distribution of EVE domains by student curricula, textbooks, and teacher training curricula



- Domain 1: Personal beliefs
- Domain 2: Interpersonal relationships
- Domain 3: Role as member of community, society, and nationality
- Domain 4: Role as global citizen belonging to the human community
- Domain 5: Building a just and democratic society
- Domain 6: Protecting environment and the planet
- Domain 7: Gender justice, norms, and attitudes
- Domain 8: Attitude towards children
- Domain 9: Engaging in action to uphold ethics and values

Table 3: Sub-topics under each domain most frequently mentioned in curricula and textbooks

Domains of EVE	Most frequently mentioned item of each domain of EVE in curricula and textbooks	Most frequently mentioned item from each EVE domain in curricula and textbooks in percentage (N=1,531)
Domain 1: Personal Beliefs	Spirituality and human condition	51.9%
Domain 2: Interpersonal relationships	Respect for and acceptance of differences (acceptance and adaptability, negotiation, assertiveness)	2.7%
Domain 3: Member of community, society, and nationality	Love for country/nation and appreciation of national history/ culture	12.8%
Domain 4: Global citizen belonging to the human community	Respect for other cultures and traditions	4.5%
Domain 5: Building a just and democratic society	Promoting democratic practices and behavior	3.1%
Domain 6: Protecting environment and the planet	Love for nature, protecting planet's resources	5.8%
Domain 7: Gender justice, norms, and attitudes	Gender equity and equality; non-discrimination	2.2%
Domain 8: Attitude towards children	Societal obligation to children	2.8%
Domain 9: Action to uphold ethics and values	Being active and engaged on ethics and values	14.0% (Total -100%)

The following conclusions are drawn from the review of curricula, textbooks, and teacher training content.

- a. Religion, and Bangladesh and Global Studies (Social Studies) are identified by curriculum developers and policy-makers as areas where ethics and values can be most emphasized.
- b. The dominant topics related to ethics and values in curriculum are the same values and ethics identified in personal beliefs and attitudes [Domain 1]. The least cited are those related to gender (Domain 7), interpersonal relationships (Domain 2), and attitude towards children (Domain 8).
- c. There is little emphasis on the shared religious values, and the spiritual dimension of human beings that is emphasized in all religions. The study of religion based on the religious affiliations of students fosters a sense of separateness, suggesting that differences among faith traditions are more significant than solidarity and respect for different religious traditions.
- d. The history of nationalism is intended to foster pride and love for the country, and to glorify the national history. The Liberation War and the sacrifices made by the people to achieve independence are a source of inspiration and pride. However, there is a lack of critical perspective regarding the past, and a lack of sensitivity to diverse perspectives necessary for a genuine appreciation of history.
- e. There is a need to revise textbooks on religion and social studies (as well as other subjects) to give greater scope to topics under the EVE domains.
- f. In the Bangla language curriculum, textbooks use examples of moral and ethical behavior to illustrate moral and ethical dilemmas. This is not the case for English language curriculum and textbooks at primary and secondary level. There is little effort to introduce students to the great literary works in English literature, which would sensitize readers to the great moral dilemmas faced by humans.
- g. EVE topics are found infrequently in the teacher-training curriculum compared with curricula and textbooks designed for students. The training materials for teachers focus on pedagogy and cognitive elements of learning, rather than fostering an understanding and knowledge in ethics, values, social, and emotional aspects of student development. This prevents many teachers from being self-aware and self-critical of their personal values and beliefs.

- h. The selection of topics and themes in the curriculum and textbooks demonstrate a preference for a didactic and prescriptive approach to teaching and learning. This is a widely acknowledged and discussed problem in our educational culture, which must be addressed.

The inclusion of EVE topics in the curriculum is only the first step. The bigger challenge is teaching the curriculum more effectively. How will it enable students to develop their knowledge, skills, and understanding that in future will shape their behavior? This challenge also applies to promoting ethics and values in school.

5.1 Ethics and Values and the School Culture

There is an expectation that schools are the most important setting where ethics and values should be taught. The reality is more complicated. The ability of the schools to educate young people is severely circumscribed by the norms of the larger society. Data from FGDs with different stakeholders, school surveys, and classroom observations as well as the “values survey” have been used to explore how schools are promoting the learning of ethics and values.

The key conclusions with respect to EVE and the school culture beyond the classroom are mentioned below:

- a. The environment in most schools is not conducive to promoting learning and competences in ethics and values. Two-thirds of all schools and the *Alia Madrasas* do not have the physical, health, and hygiene environment for effective learning.
- b. The values survey (below) found that on average 90 percent of teachers, parents, and students of primary, secondary and tertiary level feel strongly regarding their responsibility for maintaining the physical environment of the school and the community.
- c. The research team ratings show inadequate provision for co-curricular activities in terms of school hours and physical facilities, and in teacher encouragement. FGDs did not see any significant disparity in opportunities for boys and girls to engage in sports, though empirical observation suggests otherwise.
- d. Half of primary school students, two-thirds of secondary school students, and nearly three quarters (70%) of the tertiary school students responded negatively to the question on whether they consider teachers as role models on ethical and moral conduct.

At the same time, nearly half of the teachers did not consider themselves as role model for their students.

- e. The overall scenario during class observation of teachers conducting themselves well in carrying out their teaching and interaction with students suggests that most teachers are aware of the correct methods, but they do not necessarily behave accordingly.
- f. Classroom observations did not detect discriminatory behavior by teachers towards students. However, FGDs indicate that children from very poor families and *dalit* families face social discrimination from their peers.
- g. Both teachers and SMC members feel that co-educational schools foster mutual respect and cooperation among boys and girls from the beginning. With respect to social and psychological environment (including sexual harassment and anti-bullying policy, teachers' behavior and counselling), however, only a quarter of secondary schools and a fifth of primary schools had an acceptable psychosocial environment according to observers' rating.
- h. Students, teachers and SMC members agreed that parents play a key role in developing children's character. About half of the teachers agree that the family comes first; school is the next best place to cultivate moral development among the young; over half of respondents in the survey reported a conflict between student experience in the family and school environment with respect to ethics and values.
- i. A large majority of survey respondents, especially the primary grade students and parents, believe that children should be taught the merits of sympathy and empathy starting at an early age.
- j. Nearly all teachers and SMC members said that they regularly communicate with parents on absenteeism

and academic results; it seems there is no good mechanism to engage parents in raising awareness of ethics and morality.

- k. Although, there are high expectations regarding the role of schools in students' moral development, the external societal forces restrict the ability of schools to affect any change in this arena.

5.2 The Social Context of Ethics and Values in School

When responding to overcoming the barriers to the promotion of ethics and values, students, teachers, and parents considered the following perspectives –

- Role of school and teachers
- Role of society
- Role of the state

A large majority of respondents rejected the idea that doing well in exams by “any means” is acceptable. However, faced with a choice of honest and dishonest conduct, respondents were not very clear. In actual practice, the respondents were evenly divided between taking a high moral ground versus acting “pragmatically.” The response on taking advantage of leaked exam questions (and opportunities for related academic misconduct) was also ambiguous and thus supports this observation.

The teaching of desirable values may be undermined by divergent views at home as illustrated in Table 4. A strong majority of respondents in aggregate endorsed the idea of teaching sympathy and empathy to children from a young age, both at home and in the school. However, roughly half of the respondents found experience on ethics and values between the school and home to be in conflict to some degree.

Table 4: Distribution of Values Survey Responses - Teaching sympathy and empathy from a young age (Item V43 in values survey) and contradictions in values formation in school and society (Item V30)

Items of Values Survey	Respondents	Percentage of Responses		
		Agree	Disagree	Neutral
Teaching sympathy and empathy from an early age (Item V43 in Values Survey)	Parents (N=1,252)	89.4	4.3	6.3
	Teachers (N=559)	77.8	20.2	2.0
	Tertiary students (N=110)	85.5	9.1	5.5
	Secondary students (N= 640)	72.2	16.4	11.4
	Primary students (N=613)	92.0	4.9	3.1
Experience of ethics and values in family and school often contradictory (Item V30)*	Parents (N=1,252)	54.3	32.4	13.3
	Teachers (N=559)	51.2	44.0	4.8
	Tertiary students (N=110)	47.3	37.3	15.5
	Secondary students (N=640)	53.0	32.0	15.0
	Primary students (N=613)	-	-	-

Primary school children were not asked this question

Conflicting teachings on these issues at home and in the school is an example of “cognitive dissonance.” The influence of the social context on EVE as perceived by the stakeholders is presented under three headings: 1) role of school and teachers; 2) role of community and society; and 3) role of the state.

Role of school and teachers: Determining the relative importance of school and the surrounding community, and the larger society led to a debate among respondents. From this debate we draw the following conclusions:

- a. The larger social forces, including the political culture (see below) and the power structure in the community, influence – often negatively – the governance and accountability of the school. Similarly, in our unitary and centralized country, central government policies and priorities determine resources for education and educational policy and strategy. These policies and priorities by the society set the boundaries within which the schools have to function.
- b. The FGDs, observations, as well as the survey points to the individual and collective role of the teacher – his/her capabilities, professional competence, and ethical position. These determine what the schools can teach, given the larger social setting, to overcome many of the constraints created by the society and state.
- c. Responses to the survey by the stakeholders, including teachers, showed ambivalence about teachers as “role models” for students in ethics and values.

Role of community and society: Teachers were asked in focus groups about issues in ethics and values which they consider important. Their response to this open-ended question resulted in the following list:

- a. A recurring theme was a perception of a general decline in ethics and values in the larger society, community, and family. This decline has become a major obstacle in promoting ethics and values among the new generation.
- b. The social setting, power structure, and a structure of injustice in political, economic, and social institutions were mentioned as critical constraints on what schools are able to teach.
- c. Some teachers and managing committee members saw a lack of awareness of moral and ethical issues among many parents. This leads to parental neglect in providing ethical guidance to their children.

- d. Drug addiction and the attraction of religious extremism are major concerns. This is not confined to the urban population or the privileged segments of the society.
- e. The reports in the media on dishonesty, negligence, and impropriety in the governance of educational institutions demonstrate major shortcomings in the system.
- f. An analysis of selected social media (SM) postings shows that SM undermines ethics and values, leading to an increase in discrimination against marginalized social groups.
- g. Given the increasing influence of social media, what can be done to employ this weapon for a positive impact on ethics and morality? There have been some promising initiatives which can be strengthened and replicated.

Role of the state: Although the role of the state and the political culture were not the focus of this study, this came about given the policy and strategic role of the state in our highly centralized structure. Centralized control is also a feature of the school system (see Riaz, 2017; Momen, 2018). The state of politics and the role of the state suggest the following - recent history, political culture, and policy discourse have set the stage for cognitive dissonance on a grand scale at the state policy level. This partly arises from the constitutional provision that allows for both secularism and Islam as state religion. Other examples of the dissonance include the rights and dignity of ethnic minorities, reluctance to withdraw reservations on clauses in the UN Convention on the Elimination of all Forms of Discrimination against Women (CEDAW), and the rise in state-support for the madrasa education.

- a. A governance structure which allows and promotes greater participation of key stakeholders – especially parents of school children – and moves decision-making closer to them must be followed, despite the risks. In general, there is much support for greater transparency and greater accountability in all aspects of governance.
- b. A key message regarding the social context of the school is the potential role of teachers, individually and collectively, noted above, which the state must support.

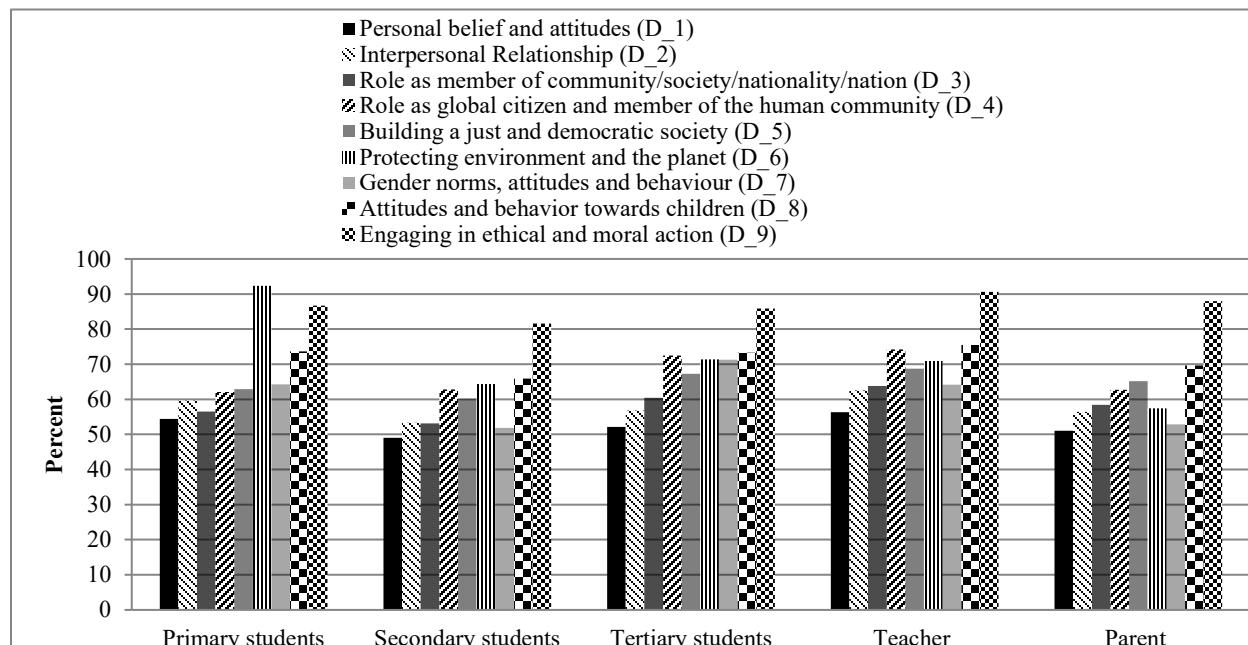
5.3 Values Profile of Students, Teachers, School Committees and Parents

The goal of the values profile was to provide an understanding of beliefs and values held by respondents about ethical and moral issues.

Overall, roughly 60 percent of the respondents held a positive view regarding the values domains in the study.

“Positive” implies a value position, as explained in the discussion of the values domains. These positions are consistent with a forward-looking, rationality-based, progressive and scientific worldview with a commitment to human dignity and rights of people everywhere, respectful of diversity and plural identities. These positions also support the objectives of protecting nature, the planet, and a commitment to build just societies with shared stakes and prosperity for all (see Figure 2).

Figure 2: Positive responses on values domains held by respondents in percentages



The existence of cognitive dissonance (holding contradictory beliefs and attitudes) is a significant finding of the survey. As suggested by Leon Festinger, a proponent of the theory of cognitive dissonance, it is a means for a psychological comfort, or a rationalization for opportunistic and immoral conduct (Festinger, 1957). The results of the values survey illustrate several examples of this phenomenon. At least seven instances of cognitive dissonance from the survey are listed below.

Pair 1: *Greater purpose in life versus Priority to be rich and have easy life.*

Pair 2: *Using any means to score high in exam versus Practicing honesty is the best policy.*

Pair 3: *Primacy to life in the after-world versus Need to take initiatives and not leaving all to God’s will.*

Pair 4: *Positive outlook on future versus Not having pride in own work.*

Pair 5: *Respecting plural identities of people versus Belief that the most important identity of humans is the one based on religion.*

Pair 6: *Engagement of youth in protecting biodiversity and natural resources versus Compromising on environmental measures to secure economic growth.*

Pair 7: *Protecting human rights of domestic workers versus Acceptance of scolding and corporal punishment for children for disciplinary reasons.*

The following conclusions can be drawn from the values survey which are presented below under four subheads.

Aggregate Results

- a. On average, 60 percent of responses to the values questions are positive (see Figure 2). However, when the results are disaggregated, the average results become less positive. The phenomenon of cognitive

dissonance casts doubts on the respondents' positive convictions.

- b. Respondents on average show the highest positive views with respect to participation in ethical and moral actions (D9: 81 percent) followed by attitudes and behavior towards children (D8: 70%) and protecting the environment and the planet (D6: 70%).
- c. A few domains display overall middle-range scores across respondent groups. The gender justice domain (D7) results range from 52% to 71%; positive scores on building a just and democratic society (D5) range from 60% to 69%, and scores on responsibility as a member of community and society (D4) range from 53% to 64%. Many respondents across the five groups seem to be in the middle, not displaying passion or enthusiasm about these issues.

Cognitive Dissonance

- a. At least seven pairs of cognitive dissonance positions related to fourteen items from the survey tool, noted above, show that respondents held logically inconsistent beliefs simultaneously.
- b. Addressing cognitive dissonance is an educational challenge, which is often neglected, although there are many situations where moral reasoning and judgement have to be exercised and sacrifices made if necessary.

Teachers and SMC Members/Parents

- a. The teachers received strong positive scores in most domains. Compared to other groups, they have the highest overall score in seven of the nine domains, and the highest average total score. In the remaining domains where teachers are not at the top -- gender norms and environment-- their score is still high. Teachers know how to respond, regardless of how they chose to act.
- b. Parents have attained the highest number of negative scores – in six domains their score is the lowest for the average total positive scores. This seems to reveal a generational gap in values and attitudes between parents and students.

The Idealist Primary School Students

- a. Among student respondents, the primary school students seem progressive and forward looking with a positive outlook towards the future. They have the highest score on protecting the environment domain, which is 11 percentage points higher than the next

highest score; they also do well on two other domains -- engaging in action to uphold ethics and values; and personal beliefs and honesty.

- b. The secondary school students are revealed to be cautious, conservative, and not willing to express their views on many issues. They do not commit themselves strongly for building a just and democratic society, taking responsibility as member of community and society, or improving gender norms. As a group, they tend to keep close to the middle ground on the dimensions of ethical choices.
- c. The tertiary school students favor gender justice, scoring the highest on this question. In other respects, their position is close to their counterparts in secondary school.

The findings about the attitude of students across different levels raise some questions -- do the optimistic, positive, and activist views of the students have to do with their natural enthusiasm and innocence, which is yet to be spoiled by their experience with the real world? As they grow older, do they become more cautious, calculating, and conservative, as the survey suggests? These questions merit further research.

6 Recommendations

The recommendations are grouped under four headings presented in the report. However, they do not necessarily fit into the neat categories. The recommendations cut across the categories and have broad relevance for the education system. They indicate a need for a holistic view of EVE and schools.

6.1 Learning content and pedagogy

A didactic and overly prescriptive approach to teaching-learning is a widely recognized problem in pedagogy and school culture. The challenge for our schools is to create opportunities for students to develop and practice reasoning on moral issues, so that they can deal with the real-world moral dilemmas. The following areas demand particular attention.

Supporting active and experiential learning: Sustained actions are recommended in the following areas:

- Improve learning content and materials related to EVE
- Greater emphasis on co-curricular experience to deepen students' learning and enable experiential learning

- Reform learning assessment to reduce rote learning, and
- Prepare and support teachers for multiple tasks and roles in teaching.

Promoting universal human values: Recommended actions are:

- A common subject on religion and spiritual values should be introduced in primary and secondary school to teach the common heritage of great religions, sanctity of life, dignity, and rights of all humans, and a greater purpose in life.
- Learning materials and activities on history, patriotism, and diversity of cultures should be selected with sensitivity, objectivity, and fairness, and should not be subject to *ad hoc* revisions.

Practicing ethics in school: Recommended actions include:

- Reviewing learning content and curricula to emphasize practical issues of ethics and morality in life, rather than only prescriptive injunctions; emphasizing opportunities for practice in the classroom; and co-curricular activities in school and in the community involving students, teachers, and parents.
- Some of the recommendations under other headings are also relevant to this issue.

Bringing ethics into teacher training: Actions in this area include:

- Reviewing teacher training materials to place emphasis on the moral and ethical role of the teachers, and making them more aware on moral issues to become role models for their students.
- New thinking on how teachers are recruited, trained, supported, rewarded, and supervised to encourage them to become role models for students.

6.2 School Environment and Culture

Teachers and school administrators should have a regular and open line of communication with parents regarding matters of ethics and values issues, beyond specific problems with individual students.

Working with parents: Parents must be apprised of:

- The goal of the teachers to promote ethics and values among students, and how parents can partner in this effort.
- How to handle conflicts in values learned at home and what is taught in school.
- What can and should the parents do to foster moral development of their children.

Starting early with children: Sympathy and empathy, consideration for others and appreciation of diversity must be fostered among children from an early age at school and home. Recommended actions include:

- Review of preschool, early childhood education, and primary school content and teaching practices from this perspective.
- The co-curricular activities in schools should create opportunities for practice, including prevention of bullying and disparagement of children of different backgrounds.
- Working with parents and families.

Promoting vital co-curricular activities: Children, teachers, and SMC members have expressed willingness to support improvement in this respect and work together. Priorities in this area are:

- Consider co-curricular activities which build into them learning in ethics and values, as a vital component of school experience.
- Plan and provide resources for this purpose with expanding opportunities for participation by all students, especially girls.
- Take advantage of the willingness of stakeholders to work together on supporting and improving co-curricular activities, including community-based projects; schools must partner with parents and community members on designing these activities.

Making school a place of pride: A dispiriting environment and poor facilities are not conducive to promoting either ethics and values or academic performance. Actions in this respect should include:

- Review of standards for infrastructure, especially how these are applied to schools. Since the facilities in most schools are inadequate, steps should be taken to make sure the existing standards are implemented.

- A school should be a place of pride for the community with respect to the physical facilities. School authorities should take advantage of the willingness of stakeholders (teachers, students, and community members) to contribute and collaborate in this respect.
- Identify people of proven-integrity in the political arena, bureaucracy, education establishment, and civil society to build alliance for change; institutions like Transparency International Bangladesh (TIB), Anti-Corruption Commission (ACC), civil liberties bodies, rights bodies, and professional forums should work together to create a movement for reform and change.

6.3 The Social Context of School

The social context limits what schools can implement with respect to promoting ethics and values. The view of the stakeholders points to the critical role of the teachers – their capabilities, professional competence, and ethical posture.

New thinking about the teaching profession: It is important to ensure that teaching is not considered as the least attractive choice for new college graduates. This calls for an initiative with a four-step action:

- Attracting high school graduates to college courses, including courses on teaching and education; selecting applicants competitively and providing incentives, including scholarships;
- Establishing a degree program in government colleges, one or two in each district, to ensure quality facilities, faculty, and academic programs;
- Introducing a National Teaching Service Corps for graduates with attractive compensation, status and career path; and
- Taking steps to raise the status, compensation, and social esteem of teachers by establishing high performance standards, and applying these with transparency and fairness.

Coalition-building to strengthen values: A recurring theme voiced by survey participants is the decline of ethics and values in the society, community, and family. An activist approach in a collective and collaborative mode is essential. This may include:

- Naming and shaming wrong-doers, including elected representatives, government officials, and teachers once the evidence on unethical behavior is proven.
- Raise these issues using democratic institutions, such as local and national elections; public discourses and forums, civil society bodies; media exposure, and other strategies to draw attention to the problem, working in collaboration and applying pressure for change.

- Affirmative actions must be strengthened in favor of people who are different, including ethnic and cultural minorities, people with different abilities and special needs, and those considered social “outcasts” such as the *dalits*. Respect and appreciation of diversity must be an important part of the school experience.

Working together to undermine the influence of gangs, drugs, and extremism: The dangers represented by these must be recognized, and appropriate steps should be taken. The education system and individual institutions must wake up to the dangers of youth gangs, drugs, and extremism, which are not confined to cities. The education system must plan both preventive and remedial actions in collaboration with parents, community, and other stakeholders.

Using social media: Social media contents have functioned as tools to propagate conventional tolerance of discrimination against marginalized social groups.

Given the power and influence of social media, it should be effectively used as a force for positive change in the ethics and moral development of the citizens, including the young.

6.4 Implications of the Values Profile

The average positive scores across groups of respondents and domains of ethics and values suggest that many are taking the middle ground, not exhibiting any passion or enthusiasm for either side. There are important areas of ethics and values domains that the future generations must cultivate.

Cultivating values in school: This must be recognized as a major educational project backed by actions, which are in line with the recommendations of this study.

Handling moral dilemmas: The prevalence of cognitive dissonance shows that it is necessary to carefully evaluate educational materials, which will help prepare young learners tackle moral dilemmas through experience at school, supported by the family and community interaction.

Nurturing children's idealism: Is it possible that our children become more cautious, calculating, and conservative as they grow older? This merits further research.

Supporting teachers to serve as role models: It is important for us to consider how we can engage teachers with their students as they practice routinely ethics and values. For this to be effective, we have proposed a number of strategies.

These recommendations attempt to capture a range of actions to address the formidable challenges our schools and society face today. These recommendations, although far from exhaustive or exclusive, are based on the findings of the study.

7 Concluding Remarks

The focus group discussions, news media reports, and our own survey have revealed a general decline in the teaching and learning of ethics and values in our society. This poses a serious challenge for schools and educational institutions in preparing the young citizens for a life of ethics and morality. The role of the state at the central government level is a determining influence in a highly centralized and unitary structure of management of public services, including the school system. The broader socio-economic and political developments present difficult challenges for promoting ethics and morality among the post-millennial generation now in the school system.

Both in our conclusions and in recommendations, the role of teachers has come up repeatedly. The teaching profession comprises, at present, of a million members and is likely to be double in a decade. They touch the lives of millions of young people in the classroom and outside. Even if only one of five teachers has a passion and moral strength to make this the center piece of their interaction with students, it will make a major difference.

It is understood that teachers serve as role models for students. Therefore, their personal and professional attitudes and competencies are of critical importance in the proposed strategy. Therefore, it is important that the preparation, performance, and status of all educators, especially school teachers, be periodically evaluated to achieve the highest standards.

References

- Campaign for Popular Education (CAMPE). (2018). *Ethics and values in school: Capturing the spirit of education* (Education Watch 2017 Report). Dhaka: Campaign for Popular Education.
- Center for Universal Education. (2017). *Measuring global citizenship education – A collection of practices and tools*. Washington, DC: Brookings Institution.
- Central Board of Secondary Education. (2012). *Values education – A handbook for teachers*. New Delhi. https://www.academia.edu/24962247/Values_Education
- Crain, W. C. (1985). Theories of development. In Chapter. 7, *Kohlberg's stages of moral development*. (pp. 118-136). New York: Prentice-Hall.
- Dill, J. S. (2007). Durkheim and Dewey and the challenge of contemporary moral education. *Journal of Moral Education*, 36(2), 221-237.
- Donnelly, J. (1986). International human rights: A regime analysis. *International Organization*, 40(3), 599-642.
- Durlauf, S., and Young, P. (2001). *Social dynamics*. Cambridge, MA: MIT Press.
- European Commission. (2015). *Ethics and values education - Manual for teachers and educators*. http://www.ethics-education.eu/resources/ManualTeachers_EN.pdf
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- International Bureau of Education. (2016). *Global monitoring of target 4.7: Themes in national curriculum frameworks. Series Current and Critical Issues in the Curriculum and Learning*. Geneva. <https://unesdoc.unesco.org/ark:/48223/pf0000245629>
- Jubilee Centre for Character and Virtues. (2015). *Character education in UK schools — A Research Report*. School of Education, University of Birmingham.

- Ministry of Education. (2010). *National Educational Policy 2010*. Dhaka.
<https://reliefweb.int/sites/reliefweb.int/files/resources/02.National-Education-Policy-2010-English.pdf>
- Momen, A. (2018, January 11). Election calculus and potential tragedy, *Prothom Alo*.
- National Council for Educational Research and Training. (2012). *Education for values in schools – A Framework*. New Delhi.
<http://www.ncert.nic.in/departments/nie/depfe/Final.pdf>
- Riaz, A. (2017, July-September). Politics, religion and state [Bangla], *Protichinta*, [Counter-thoughts].
- UNESCO. (2015a). *Education 2030 – Incheon declaration and framework for action*. Paris.
<https://unesdoc.unesco.org/ark:/48223/pf0000245656>
- UNESCO. (2015b). *Global citizenship education – Topics and learning objectives*. Paris.
http://www.unesco.org/new/fileadmin/MULTIMEDIA/FIELD/Beirut/pdf/GCEDTopicsandLearningObjectives_01.pdf
- UNESCO. (2016). *Unpacking sustainable development goal 4 education 2030 – Guide*. Paris.
<http://unesdoc.unesco.org/images/0024/002463/246300E.pdf>
- United Nations (2015). *Transforming our world: the 2030 Agenda for Sustainable Development*.
<https://sustainabledevelopment.un.org/post2015/transformingourworld>
- Welzel, C. (2013). *Freedom Rising: Human Empowerment and the Quest for Emancipation*. Cambridge, UK: Cambridge University Press.
- World Values Survey Website. (n.d.).
<http://www.worldvaluessurvey.org/WVSContents.jsp>

Developing a Common Platform for the Digital Payment System in the SAARC Region

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Abstract

Digital payments play a critical role in developing an efficient financial system by lowering the cost of payments and increasing privacy, security, and transparency of payments. Given the benefits of digital payments, the Bangladesh Bank has substantially upgraded and digitized its payment and settlement system over the past few years. Despite these developments, most transactions in Bangladesh are still in cash; consequently, there is a significant potential for further digitization of payments in the country. This paper discusses how to develop a common platform, which will strengthen the digital payment system across the South Asian Association for Regional Cooperation (SAARC) region, especially in Bangladesh. The domestic payment infrastructure in most SAARC countries is not standard or interoperable today. There is a lack of uniformity in rules and regulations across the member countries. This paper recommends developing a common platform for cross-border payments. Uniformity of regulations, standardization of payment methods, organizational readiness, selection of common currency, liquidity management, settlement policy, dispute resolution mechanism, and a common Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT) standard among member countries, are the primary requirements for developing an efficient, cross-border digital payment system in the region.

1 Introduction

Payment systems play a critical role in developing a market economy and implementing monetary policy. The healthy growth of financial markets is achieved through an efficient payment system. By delivering financial services in the rural areas, a good payment system helps financial inclusion that leads to a strong economic momentum and development. According to the Section 7A (e) of the Bangladesh Bank Order, 1972, included among the main functions of the Bangladesh Bank (BB) is “to promote, regulate, and ensure a secure and efficient payment system.” In fulfilling this mandate, the BB has developed an efficient payment system for the stability of the overall financial markets and the efficiency of the monetary policy. The Central Bank has substantially upgraded and digitized its payment and settlement system over the past few years. The successful adoption of modern technologies for retail and large payments has revolutionized the overall payment system. Ordinary citizens are enjoying greater freedom of choice in their financial transactions. Further, the new payment channels have reduced the cost of doing business in the country.

Despite these positive developments, the overwhelming numbers of transactions in Bangladesh are still made in cash. A 2016 report by *Better than Cash Alliance*, showed that government entities, businesses, and individuals conduct only 12 percent of the payments in value terms, roughly \$44 billion of \$367 billion annually, electronically.

In terms of volume, only 6 percent or roughly 260 million of 4.4 billion payments are electronic. The report concludes that 31 percent of government payments, 97 percent of business payments and 97.5 percent of individual payments are in cash. Therefore, there exists a significant potential for further digitization of payments in Bangladesh.

Besides developing domestic payment system over the past few years, there has been increasing efforts to establish a common regional platform to facilitate cross-border transactions. These platforms are undertaken with the broad objective of fostering economic growth and

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Bangladesh Bank. Any comment/suggestion/input is welcome at sayera.younus@bb.org.bd.

financial inclusion by enhancing access to markets. This paper discusses developing a common platform for strengthening the digital payment system within the SAARC region, particularly in Bangladesh. The research on this issue is somewhat lacking, a void this study attempts to fill.

This paper is organized as follows: Section 2 discusses the purpose and methodology of the study. Section 3 provides a brief literature review. Section 4 highlights the major benefits of a digital payment system. Section 5 describes the state of the existing payment system in Bangladesh, identifies the challenges, and specifically recommends furthering the digitizing of the payment system in Bangladesh. Section 6 presents a review of the payment systems in other SAARC Countries. Section 7 discusses developing a common platform for strengthening the digital payment systems across the SAARC region. Section 8 presents concluding remarks.

2 Purpose and Methodology of the Study

The overall objectives of this study are:

- To understand the state of the existing payment system in Bangladesh;
- To identify major challenges and recommend policies for improvements in the payment infrastructure in Bangladesh;
- To understand the existing payment landscape in other SAARC Countries; and
- To appraise the feasibility of developing a common regional platform across the SAARC region.

Unlike the standard academic research paper, which applies analytical/statistical (regression analysis) tools to verify hypotheses or an economic model, this study builds on various reports from the Government of Bangladesh, the international organizations and donor agencies, working papers, seminar papers, conference proceedings, publications, journal articles, websites of the central banks of the SAARC countries, etc. The data are collected from many secondary sources and processed manually. Tables and graphs are added where necessary.

3 Literature Review

The literature on the digital payment systems is somewhat limited. This is a relatively new concept across the world. Cross-border digital payment systems are also a relatively new phenomenon, and have not been adequately researched. Many parts of the world are interested in creating close economic partnerships, given the strong

economic links among neighbouring economies. This opens opportunities for innovation and growth within the region. For example, the SADC Payments Project is a collective initiative of 15 member countries in South African region. SEPA is an initiative to achieve greater economic and political alliance in the EU. The GCC-Net is a single ATM network linking all the GCC national switches. Heinrich and Dubón (2011) examined the goals and practical functioning of cross-border payment systems in Central America and the Dominican Republic. They identified various steps (processing, settlement, messages, governance, risk mitigation, operating hours, cost, legal basis, etc.) leading to its implementation in regional integration.

Uddin and Akhi (2014) analyzed the electronic wallet, or “e-wallet” system in Bangladesh. They argue that traditional business models are increasingly limited, whereas e-wallet is a convenient, easy-to-use and secure payment system. They identified Authentication (digital signature, fingerprints, two-step verification, password or smartcards, etc.) as an important challenge for attaining the goal, which is to establish an efficient electronic payment system in Bangladesh.

Goyal (2015) examined the role of payment systems in fostering integration in South Asian economies. According to the author, as payment systems become more sophisticated, their converge expands so they can actively facilitate trade in the region. The paper suggested that the existing Asian Clearing Union could be revitalized, given new developments in the payment systems. Changes include faster settlement using real time flow, reduction in transaction costs, and expansion of facilities. *Better than Cash Alliances*, a global partnership committed to moving from cash to digital payments, in their *Country Diagnostic Report for Bangladesh* (2016) mentions that although Bangladesh is making significant strides toward a digital economy, the majority of payments in Bangladesh are still made in cash. The report identifies barriers towards a more integrated digital payment system in Bangladesh, and recommends the completion of Bangladesh National ID system and to improve regulations of digital payments.

The World Bank (2014b) in a report (*Guidelines for the Successful Regional Integration of Financial Infrastructures*) discusses key elements for a successful regional integration, including driving factors, potential benefits, and risks and challenges of regional financial integration. The report also provides specific experiences of regional and cross-regional financial integration, and identifies different models of regional and cross-regional financial integration.

4 Benefits of Digital Payment

Digital payments have many benefits. It makes the payments process more efficient by lowering the cost of payment, benefiting both the senders and the receivers. It increases the capacity for individual risk management. The major benefits of a digital payment system are:

- Digital payment is more transparent than cash payment. Cash payment is subject to leakage. It may not reach the targeted recipients. In contrast, every digital payment can be tracked and properly identified.
- Digital payments can be processed quickly, lowering overall cost. Recipients of cash payments often must travel to a bank or government office, which results in significant travel time and waste of resources. A study conducted by a2i Program in the Prime Minister's Office found that the digitization of G2P payments of six social safety net programs would save an estimated US\$146 million annually (44 percent of the operating cost, or 3 percent of the total budget of these six safety net programs).
- Digital payment allows remitters more control over money. It embeds poor people in a system of automatic deposits and scheduled text reminders that help people in overcoming psychological barriers to save.
- Digital network *increases risk management capacity of individuals*. It helps people to tackle shocks by collecting money from well-wishers, friends, and relatives. It allows government and NGOs to reach the affected people rapidly.
- In contrast to a cash payment, digital payment is virtually instantaneous. Speedy and timely delivery is crucial, particularly in emergency situations.
- Digital payment can be held more securely than cash payment. Recipients can store their money in e-wallet and cash it out at their convenience.
- Digital payment is an important tool for financial inclusion. Financial institutions may find that their products are not suitable for unbanked people who live in remote areas due to higher service cost. Digital payment is well-suited to reach these unbanked people at a lower service cost. Digital payments are often the first entry point to the financial system for the unbanked individuals.

5 State of the Existing Payment System of Bangladesh, Challenges and Policy Options

5.1 Current Payment Infrastructure in Bangladesh

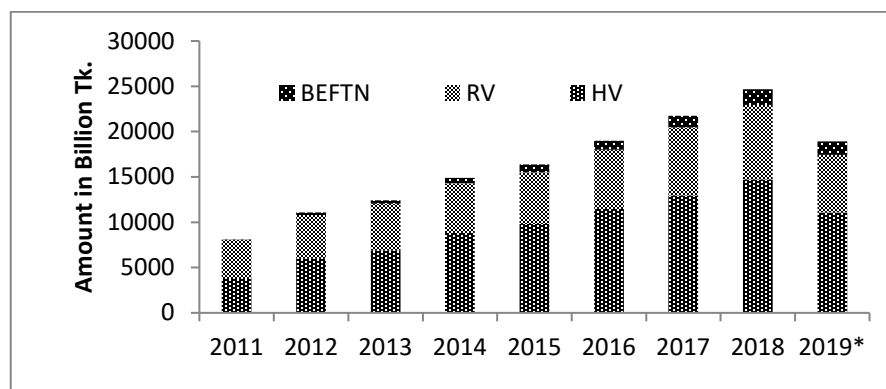
Since 2006, the BB has undertaken various steps to develop the country's payment system BACPS, operated in 2010. Later, BEFTN, NPSB, RTGS, MFS, e-commerce and m-commerce joined the BACPS (Bangladesh Bank Annual Report, 2018).

5.1.1 Bangladesh Automated Clearing House (BACH)

BACH has two components: the BACPS and the BEFTN. Transaction instruments or instructions received from the banks are processed at a pre-fixed time and settled through a single multilateral netting figure on each individual bank's respective book maintained with the BB. BACPS uses CIT technology, one used for clearing the paper-based instruments, i.e., check, pay order, dividend, refund warrants, electronically, etc. There are two clearing sessions available under BACPS, check valued Tk. 500,000 (five lakh) or above are cleared in HV, while smaller checks may be cleared at a RV clearing session. The clearing cycle has been brought down to t+1 for regular value checks and t+0 for high value checks throughout the country.

BEFTN facilitates interbank payment, clearing and settlement of electronic credits and debits. BEFTN started its live operation with credit transactions in 2011, to encourage paperless electronic transactions. In EFT credits, the originator instructs his/her bank to debit his/her account and transfer the funds to a receiver's account. Payroll, dividends, refund payments, business to business payments, and government benefit payments are some examples of EFT Credit transactions. The network started its operations with debit transactions on September 15, 2011. In EFT debits, the originator instructs his/her bank to collect payment from a receiver, often on a recurring basis. Utility bills, loan installments, and insurance premiums are examples of EFT debit transactions.

The transaction profile through BACH shows steady growth over the years. In 2018, 48.07 million items amounting to Tk. 24,670 billion were transacted under BACH, of which 20.85 million regular checks, 2.41 million high value checks and 24.80 million EFT checks were processed valued at Tk. 8,214 billion, Tk. 14,733 billion and Tk. 1,723 billion respectively (Figure: 1 and Annexure: Table-1).

Figure 1: BACH Transactions Trends

Source: Bangladesh Bank. * Up to September 2019.

Notes: HV=High Value, RV=Regular Value, BEFTN=Bangladesh Electronic Funds Transfer Network, BACH=Bangladesh Automated Clearing House=HV+RV+BEFTN.

5.1.2 Mobile Financial Services (MFS)

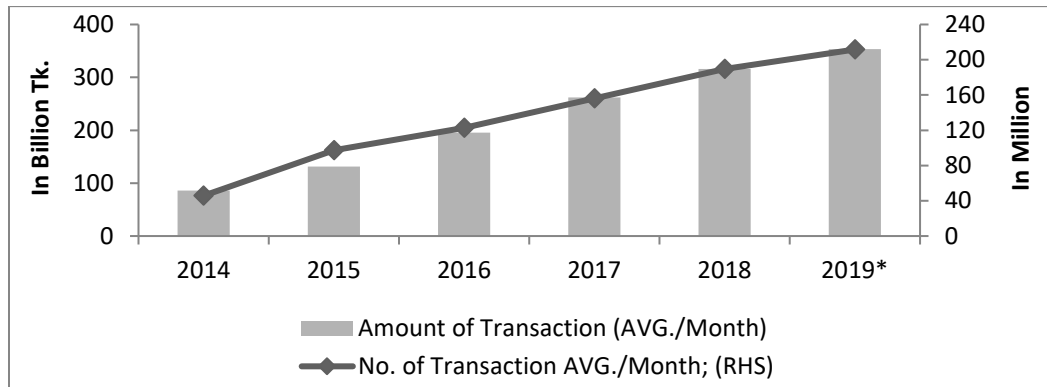
With the ability to deposit/withdraw and send/receive funds to a mobile account, the MFS system has become an important part of the financial system in Bangladesh. Banking services in Bangladesh are traditionally concentrated in urban areas. Online banking is not available in every branch of commercial banks. Customers must travel to a branch, given the limited number of online and alternative delivery channels in traditional banking services. Moreover, customers living in remote areas are beyond the coverage of banking services. However, rapid countrywide expansion of mobile phone networks and modernization of the IT infrastructure have opened up opportunities for mobile financial services to the unbanked distant population. It is estimated that there are roughly 100 million bank accounts in the country (as of June 2019), whereas the number of mobile users is 164.17 million (as of October 2019). Since mobile users have a broader geographical distribution, MFS has become a key driver for financial inclusion, especially in transferring money from urban to rural areas.

The approved MFS categories are: disbursement of foreign remittances, cash-in and cash-out payments, P2B

payments (utility bill payments, merchant payments, etc.), B2P payments (salary, dividend and refund warrant, vendor payments, etc.), G2P payments (elderly allowances, subsidies, etc.), P2G payments (tax, levy payments, etc.), and P2P payments and other payments (microfinance, overdrawn facility, insurance premium, etc.).

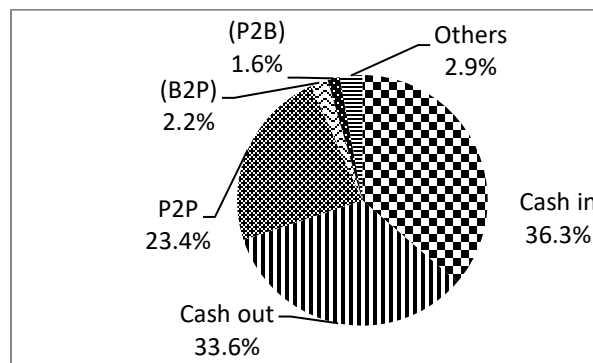
Transactions through MFS have grown exponentially over the years. At present, 28 banks and one bank subsidiary have been awarded MFS licenses, although only 16 banks (and one subsidiary) are offering MFS. As of September 2019, the number of registered MFS customers stood at 75.98 million, who were served by 951,777 agents countrywide. In 2014, the monthly average transaction of MFS was Tk. 86 billion, which increased to Tk. 316 billion in 2018. At the same time, the number of transactions via MFS was 212.37 million, and the average size of each transaction was Tk. 354.33 (Figure 2 and Annexure Table 2). The market share of different transactions through MFS shows that the highest transactions in value terms were cash-in (36.3 percent) followed by cash-out (33.6 percent), P2P (23.4 percent), B2P (2 percent), and P2B transactions (1.6 percent) (see Figure 3).

Figure 2: MFS Transactions Trends



Source: Bangladesh Bank. * Up to September 2019.

Figure 3: Market Shares of Different Services of MFS in September 2019



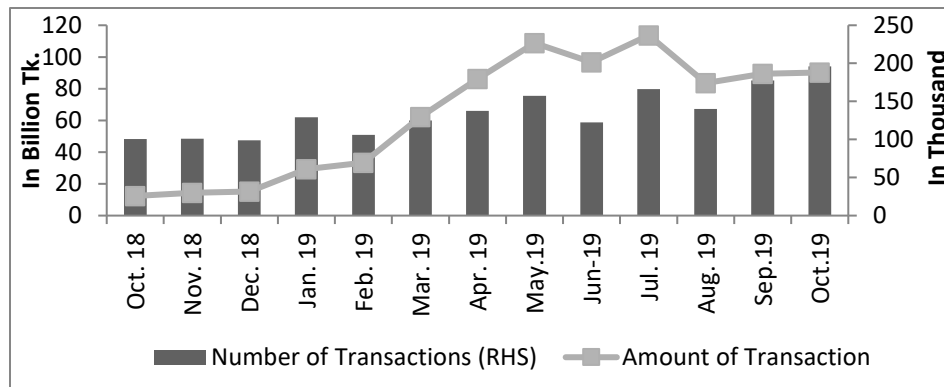
Source: Bangladesh Bank. Note: P2P =Person to person payments, B2P= Business to person payments and P2B=Person to business payments.

5.1.3 Bangladesh Real Time Gross Settlement (BD-RTGS) System

BD-RTGS is an electronic inter-bank payment (settlement) system where the transfer of funds takes place from one bank to another on “real time” and “gross” basis. Settlement in real time means the transactions are instant. Gross settlement means the transaction is recorded in the Central Bank’s ledger on a one-to-one basis, without netting with another transaction. Among 11,000 bank branches of 57 banks, roughly 7,000

branches of 55 scheduled banks participate in this system. The system handles only high-value (at least Tk. 1 lakh) transactions in local currency; foreign currency transactions are expected to be added to this system soon. The transactions with RTGS show rapid growth in recent years. The transactions grew from Tk. 1,387 billion in 2015 to Tk. 6,675 billion in 2018, a five-fold increase. (Figure: 4 and Annexure: Table 3).

Figure 4: RTGS Transactions Trends



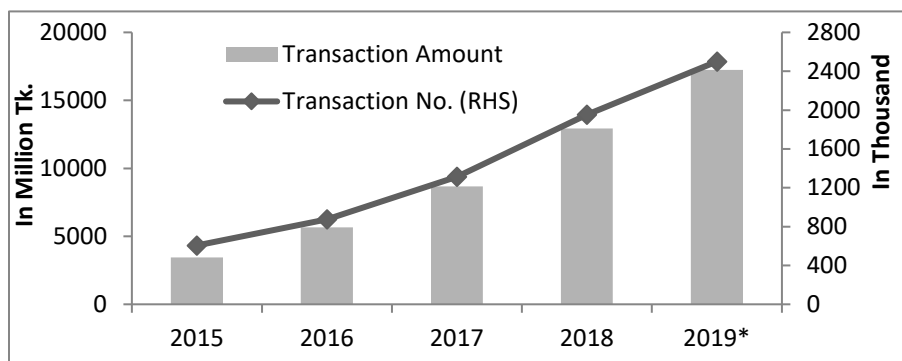
Source: Bangladesh Bank

5.1.4 National Payment Switch of Bangladesh (NPSB)

In order to facilitate interbank electronic payments originating from different channels like ATM, POS, Internet, etc., BB introduced NPSB in 2012. The main objective of NPSB is to act as a mother switch and to connect all child switches (owned and operated either by bank or a non-bank entity) ultimately to create a common platform for the switches which settle the electronic payment in Bangladesh. At present, 53 banks are

operating a card-based electronic payment process in Bangladesh. Among those, interbank ATM transactions of 51 banks, POS transactions of 50 banks and IBFT transaction of 18 banks are being routed through NPSB. Other banks are likely to join NPSB soon. Various card-based payments are rapidly gaining popularity (Annexure, Table 4). In 2018, NPSB processed 23,442 thousand transactions amounting to Tk. 155,174 million (Figure 5 and Annexure: Table 5).

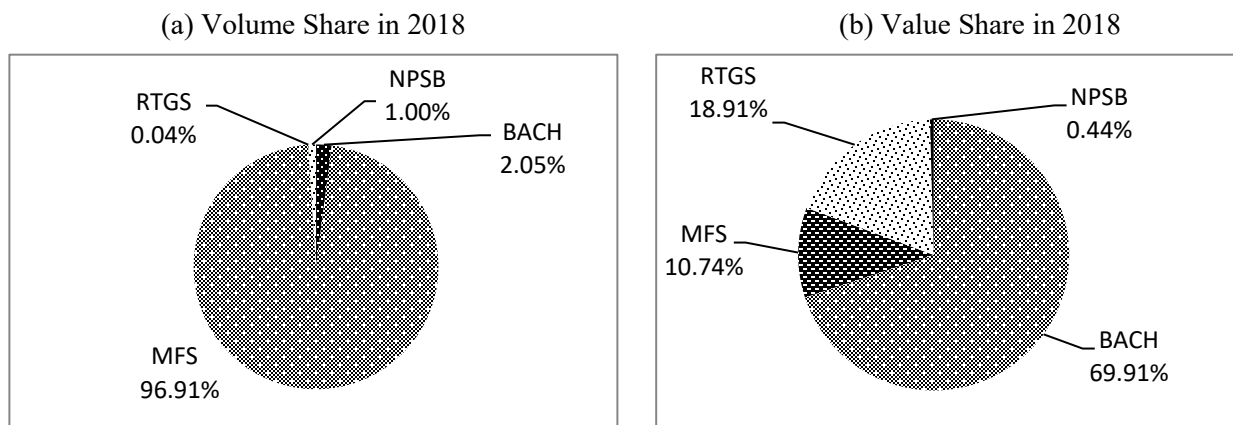
Figure 5: NPSB Transactions Trends



Source: Bangladesh Bank. * Up to August 2019

A comparison of the shares of different transaction platforms in Bangladesh in 2018 shows that MFS contributed the highest (97 percent) and BACH constituted only 2 percent of transactions in volume. In

values terms, BACH held the highest (70 percent), followed by RTGS (19 percent), and MFS contributed roughly 11 percent (Figure 6 and Annexure, Table 6).

Figure 6: Comparison of Share of Transaction by Platforms in Bangladesh

Source: Bangladesh Bank

5.1.5 PSO, OPGSPs, E-commerce and M-commerce Facilitation

As an expanding economy, both e-commerce and m-commerce are spreading in Bangladesh. Responding to market demand, the BB has approved five organizations to work as PSP and PSO to facilitate the online payment. Banks now also may receive remittances against small value service exports in non-physical form such as data entry/data process, offshore IT service, business process outsourcing etc. The exporters of these services can receive their international payments through the OPGSPs such as PayPal, Money Bookers, Best Payment Gateway and Virtual Pay online platforms. BB has permitted the transfer of funds up to Tk. 500,000 from a client's account to that of another client in the same bank using Internet/online facilities. Mobile network operators can sell railway and sports events tickets, using mobile technology.

5.1.6 Legal & Regulatory Frameworks of the Payment System of Bangladesh

Proper legal and regulatory frameworks are important to ensure the smooth functioning of the payment and settlement system. The legal basis for the BB to promote a safe secure payment system lies in the Bangladesh Bank Order, 1972. From time to time, the BB issues regulations, systems rules, and circulars, circulate letters, among others, defining the roles and operational procedures of specific payment systems. The major legal and regulatory documents published by the BB to support payment systems are: Bangladesh Automated Check Processing Systems Operating Rules and Procedures; Guidelines on Mobile Financial Services for the Banks; Guidelines on Agent Banking for the Banks; Bangladesh

Payment and Settlement Systems Regulations; Bangladesh Electronic Funds Transfer Network Operating Rules; and Bangladesh Mobile Financial Services Regulations. The BB has finalized the draft Payment and Settlement Systems Act, 2018. Steps have been taken to amend the *Negotiable Instruments Act, 1881*.

5.2 The Challenges of Domestic Payment System in Bangladesh

Despite many positive developments over the last couple of years in the national payment system of Bangladesh, there remain deficiencies and challenges, which must be resolved to further develop the domestic payment. The major challenges are:

Interoperability of financial service providers: Lack of interoperability among MFS, banks, and other platforms is a significant barrier for the domestic payment system. It may be mentioned that there are only 47,663 card-based acceptance points (9,586 ATMs and 38,077 POS) across the country, whereas mobile banking has more than 811,073 acceptance points. Therefore, a convergence of MFS and the card system can complement each other. Moreover, bKash (a subsidiary of BRAC Bank for MFS) and Rocket (a subsidiary of Dutch Bangla Bank Limited for MFS) capture more than 90 percent of MFS market share. Because of this monopoly, the service charge of MFS is relatively high (at a flat rate of about 2% for cash-out).

Physical infrastructure: Providing access to financial services, cash-in and cash-out points and ensuring

sufficient liquidity remain the core challenges for digital payments. The lack of electricity, mobile towers, mobile networks, ATMs and POS terminals, and poor transport networks are some of the bottlenecks in digital payment services in Bangladesh, particularly in rural areas.

Customer education: Educating customers about the digital payments is a challenge. Many recipients do not understand cash-out process or how to use an ATM. These clients are not comfortable using a digital payment system. They must remember their PINs, understand how much money they receive, protect their PIN, and be prepared for problems.

Money laundering and financing of terrorism issue: Preventing criminal transactions, money laundering, and terrorist financing which use digital channels is a challenge. OTC transaction remains a dominant part of MFS in Bangladesh. As OTC customers do not have KYC information, they may facilitate untraceable transfer of black money. Preventing the use of MFS channels to settle *Hundi/Hawala* transaction is also a challenge.

Safety and reliability: Maintaining confidence and reliability is important for digital payments. Digital payments could have adverse effects if it does not work properly. Payment delays or agents' liquidity problem can undermine customers' confidence and they may lose trust in the digital system. Digital payment systems must prevent security breaches, provide a proper dispute-resolution mechanism, and maintain fraud management policies.

Probable cyber-crime: Cyber security has remained a matter of concern. Some banks lag behind in using two-factor authentication to protect consumer accounts. Use of biometric security technology is still limited in Bangladesh. Lack of qualified IT labor and lack of knowledge on cyber-crime by customers pose risks to the digital payment system.

6 Payment Landscapes of Other SAARC Countries²

6.1 Payment Systems in India

The Board for Regulation and Supervision of Payment and Settlement Systems, a sub-committee of the Central Board of the RBI is the highest policy making body of

payment systems in the country. The RBI has introduced many initiatives towards Electronic Payments:

- ECS Credit handles bulk and repetitive payment requirements.
- NECS facilitates multiple credits to beneficiary accounts against a single debit of the account of the sponsor bank.
- ECS Debit provides a faster method of periodic and repetitive collections of utility companies.
- NEFT system enables an account holder to electronically transfer funds to another account holder with any other participating bank.
- RTGS system settles all inter-bank payments and customer transactions above 2 lakhs.
- CCIL settles trades in money market, government securities and foreign exchange markets.
- NPCI acts as an umbrella organization for operating various retail payment systems.
- Other Payment Systems in India include pre-paid payment, mobile banking system, ATMs, POS terminals and online transactions.

6.2 Payment Systems in Pakistan

The SBP has played a key role as a regulator, operator, and facilitator of national payment systems. The large value payment system in Pakistan facilitates clearing and settlement of interbank payments, government, and corporate securities and other critical financial transactions. On the other hand, the retail payment system has become crucial for the provision of digital financial services to the general public. The major institutions and systems that play a key role in the country's payment and settlement systems are PRISM, NIFT (Pvt.) Ltd. (Check Clearing Entity), 1LINK (provides ATM, IBFT and utility bill payment switches), and NCCPL (provides clearing and settlement of capital markets).

6.3 Payment Systems in Bhutan

The RMAB implemented Check Truncation System in 2007 and EFTCS in 2010. EFTCS consists of three

² Based on country papers presented in the SAARC FINANCE Governors Symposium held in Nepal, 2018.

electronic payment systems, i.e. NECS Credit, NECS Debit and NEFT. NECS enables interbank single debit, multiple credit/debit and single credit transfers, and NEFT facilities one-to-one interbank funds transfer among its member banks. Bhutan implemented BFS in 2011 to enable interoperability of ATMs and POS. BIPS was launched in 2017, which has now captured major shares of retail payments. The process for inter-connection between BFS and NFS of India enables cross-border interoperability of Repay Cards issued by commercial banks in the ATM and POS terminals in India and Bhutan.

6.4 Payment Systems in Sri Lanka

The payment systems in Sri Lanka fall into two categories: LVPS and RPSI. The RTGS is a category of LVPS. The RPSI can be classified as paper-based systems and electronic fund transfer systems. Checks are the most widely used retail payment instrument among the general populace. However, debit and credit cards are gaining ground as a faster way of making retail payments. SLIPS is an online interbank electronic fund transfer system for smaller payments (up to Rs. 5 million). Mobile banking and Internet banking are relatively recent phenomena. The CCAPS, which consists of five sub-switches was established in 2003 under the brand name “Lanka Pay” for creating a single platform for electronic retail payments in Sri Lanka.

6.5 Payment Systems in Nepal

The existing retail payment systems in Nepal are NCHL, SCT, NEPS and IPS. NCHL is an electronic check clearing system. SCT and NEPS are shared ATM Networks which facilitate the processing of card transactions. IPS is operated by NCHL, which facilitates interbank payments, direct debit, and credit cards. The high-value payments are still processed manually through checks. The threshold for payments for check clearing currently stands at Rs. 100 million. While NCHL clears checks between Rs. 100-300 million through Electronic Check Clearing (ECC) system, NRB manually clears checks larger than Rs. 300 million. NRB is also in the process to establish RTGS for critical and large payments to enhance the effectiveness in payment systems.

6.6 Payment Systems in Afghanistan

Afghan payment system covers the following:

- Mobile banking and payment, such as bill payment, salary payments, P2P fund transfer, e-Top up, etc.

- Retail payments, which include checks, credit cards, debit cards, and prepaid cards.
- Card payments, which serve merchants throughout the country.

6.7 Payment Systems in Maldives

All inter-bank transactions in Maldives are executed via the MRTGS system and the ACH system, both operated by the MMA. The MRTGS system settles urgent, high value inter-bank transactions. Meanwhile, the ACH system is a session-based clearing system for low-value transactions consisting of direct credits, direct debits and check imaging and truncation. Payments through card and mobile banking are the dominant electronic means of payment in the Maldives.

7 Developing a Common Platform for Cross-Border Payments in the SAARC Region

Payments sent by an individual, business or government agency from one country to another are called “cross-border payments.” The existing system of cross-border payments through correspondent banking is slower, costlier and less transparent than domestic payments. Cross-border payments involve more risks, complexities, and additional rules than domestic payments. The complexity is rising with technological advancement and innovations in the financial payment market.

Over the past decade, the benefits of integration of regional payments received greater attention. A regional platform for cross-border payments has numerous benefits, including:

- (i) Sharing the development and operational costs among member countries
- (ii) Economies of scale from high volume of transactions and reductions in the end-to-end transaction costs
- (iii) Enhances risk management through harmonized regulatory and institutional framework
- (iv) Improves the market infrastructure through transfer of knowledge, expertise and technology
- (v) Facilitates growth and innovation through enhanced trade and financial integration
- (vi) Strengthens the relationship between countries, and

(vii) Is less dependent on banking relationships outside the region. Therefore, a common platform for strengthening digital payment systems in the SAARC region would be a good step in order to reap the benefits from each member nation's innovations, regulatory reforms, and user experiences.

However, implementing a common platform in the SAARC region would face some challenges. An important challenge is the difference in the level of sophistication and compatibilities in the domestic payment systems. This includes market organization, technical standards and regulatory framework. Countries like India, Sri Lanka, Pakistan, and Bangladesh have relatively modern domestic payment infrastructures while other countries like Afghanistan and Nepal lag behind in their payment infrastructures. Some barriers that arise from legal and regulatory framework include access of foreign financial institutions to domestic markets, netting arrangements, irrevocability of final settlement, and applicability of bankruptcy and wind-up procedures (World Bank, 2014 and BIS, 2005).

Similarly, arriving at a consensus on a common currency platform is a key challenge. As SAARC countries do not share a common currency, the dominant currency (for example, Indian Rupee) could serve as the settlement currency. However, this may add to potential problems which may arise from India's political stance. Alternatively, a widely available third currency such as US\$ or Euro can be considered as the ideal option for settlement. In this case, an exchange rate policy should be in place.

Another important challenge is ensuring the involvement and commitment from the stakeholders. The success of such a platform depends on a strong business case that outlines the net gains for the stakeholders. The commitment of the stakeholders also depends on the availability of sufficient information on the common platform. Thus, it is important to provide the stakeholders with relevant information and the real value to the system in terms of efficiency and costs.

Establishing a common platform also exposes the participants to different types of risks. For example, legal and regulatory risks may arise from inconsistencies in the regulatory framework among countries. Similarly, variations in the domestic risk management framework across the region significantly intensify the credit risk for the participants.

To participate in any cross-border payment platform, it is essential for Bangladesh to modernize the existing domestic payment infrastructure of the country. At present, the three broad payment infrastructures of

Bangladesh (BACH, NPSB and RTGS) are not interoperable among themselves. These systems are running on a different set of standards for IT software, operational procedure, and guidelines. Moreover, existing PSPs such as banks, non-bank MTOs, post offices, and MFS are not interoperable and working on different set of structures. Connecting this PSPs domestically and later in cross-border platform is the prerequisite for establishing a common regional payment platform.

To set up an efficient cross-border payment mechanism, correspondent banking, interlinking payment infrastructure under central banks, and interlinking payment infrastructure under private efforts, there are three possible solutions. Correspondent banking is a longtime practice for the cross-border payments among countries. Fine-tuning regulations and further innovating in technology must be achieved in correspondent banking. However, cross-border interoperability among countries of a certain economic zone is an idea which is yet to be implemented successfully except in the Euro zone. The forms of integration at the regional or cross-regional level can range from, (i) relatively simple agreements among payment infrastructures to facilitate direct or indirect cross-participation among the participants; (ii) interoperability arrangements involving technical interfaces between the separate operating platforms; and (iii) full harmonization of the operating schemes and integration of the technical platforms into a common unified system for dealing with cross-border payment transactions (World Bank, 2014). So, in the case of SAARC region, later implementation may be considered.

A report by BIS and the World Bank (2007) on the general principles for international remittance services sets out principles in five key areas: (1) transparency and consumer protection; (2) payment system infrastructure; (3) legal and regulatory environment; (4) market structure and competition; and (5) governance and risk management for efficient remittance services.

Based on the discussion above, the paper recommends addressing the following issues to set up a common platform for cross-border transaction in the SAARC region:

- Regulatory issues: Different countries have different set of rules for domestic and cross-border payments. To set up a common platform, uniformity of rules is a primary requirement;
- Modernizing domestic infrastructures: Domestic payment infrastructures of the member countries must first modernize and become interoperable;

- Payment methods and payment processing: Standardization of payment methods, instruments, identification of banks and PSPs, software payment infrastructure for all member countries must be first implemented;
- Organizational readiness: Central banks, participants of the system must complete their preparation as specified in the guidelines for hardware and software;
- Cross-currency arrangement: A settlement currency must be determined as means of payment among the member countries. In the absence of a single common currency among the SAARC countries, a global reserve currency like the US\$ or the Euro can be chosen as the currency for final settlement. A mechanism to determine the exchange rate must be in place;
- Liquidity management: A clear policy of liquidity support for member countries should be in place;
- Settlement: For executing payment via a common digital platform, a decision regarding settlement policy, settlement organization, and settlement method needs to be first taken. There must be a contract between settlement organizations, where each member country should have pre-defined roles and responsibilities;
- Dispute resolution mechanism: A clear policy of dispute resolution should be devised;
- Common AML/CFT and KYC standard must be there; and
- If the decision is made for establishing a common digital payment platform, implementation of such platform in the host and member countries will require careful nurturing and efficient management.

8 Conclusions

Transparency, speed, and costs are the primary motivation for end-users of a payment system. These goals are not easy to achieve in cross-border payment mechanisms. For improvements, the best experience of each member country should be harmonized to develop a payment platform that offers high quality payment services across the borders. However, working with a diversified group requires a careful balance between innovation, new technology, and expectations of the end-users.

Establishing a common electronic payment platform in the SAARC region would promote fast, safe, and efficient means of cross-border payments in the region. A common digital platform would enhance the efficiency of cross-border payments by increasing the speed and reducing the cost of transactions. However, before Bangladesh joins such a platform, it is essential to further modernize the domestic payment infrastructures and interoperability. Similarly, the potential challenges of a common platform should be addressed by harmonizing the rules and regulations, and standardizing technical processes across the SAARC nations.

References

- Bangladesh Bank. (1972). *Bangladesh Bank Order, 1972*. Dhaka.
- Bangladesh Bank. (2018). *Annual Report 2017–2018*. Dhaka.
- Bank for International Settlements. (2005). *General Guidance for Payment System Development*. Consultative Report, Committee on Payment and Settlement Systems.
- Bank for International Settlements and World Bank. (2007). *General Principles for International Remittance Services*. Committee on Payment and Settlement Systems.
- Better than Cash Alliance. (2016). *Building Digital Bangladesh: The Way Forward for Digitizing Payments, Country Diagnostic*. Retrieved from <http://www.pistrategy.org/wp-content/uploads/2016/12/Bangladesh-Diagnostic-ExecutiveSummary.pdf>
- Country Papers of SAARC Countries. (June 2018). *Developing a Common Platform for Strengthening Digital Payment System in the SAARC Region*. Papers presented at SAARC FINANCE Governors Symposium, Kathmandu, Nepal.
- Goyal, A. (2015). *Payment systems to facilitate South Asian integration*. Indira Gandhi Institute of Development Research, Mumbai. <http://www.igidr.ac.in/pdf/publication/WP-2015-021.pdf>

- Heinrich, G., and Dubon, E. G. (2011). *The development of a regional payment system in Central America: A step towards further integration and economic development*. MPRA Paper No. 47398.
- Uddin, M. S., and Akhi A. Y. (2014). E-wallet system for Bangladesh - an electronic payment system. *International Journal of Modelling and Optimization*, 4(3), 216-219.
- World Bank. (2014a). *The opportunities of digitizing payments*. World Bank Development Research Group, Better Than Cash Alliance, and Bill & Melinda Gates Foundation.
<http://documents.worldbank.org/curated/en/188451468336589650/pdf>.
- World Bank. (2014b). *Guidelines for the successful regional integration of financial infrastructures*. Financial Infrastructure Series.

Appendix

Table 1: Transactions through BACH in Bangladesh

1. (a) Items Processed in BACH (No. in Million)					
Year	BACPS		BEFTN	BACH (HV+RV+BEFTN)	Avg./Month
	HV	RV			
2011	0.68	15.30	0.82	16.79	1.40
2012	1.26	18.82	5.07	25.16	2.10
2013	1.37	20.69	7.59	29.65	2.47
2014	1.61	23.50	10.21	35.33	2.94
2015	1.81	21.02	13.76	36.59	3.05
2016	1.99	20.22	15.09	37.29	3.11
2017	2.22	20.95	18.64	41.81	3.48
2018	2.41	20.85	24.80	48.07	4.01
2019*	1.82	15.36	25.81	42.99	4.78

1. (b) Amount of Transactions in BACH (in Billion Tk.)					
Year	BACPS		BEFTN	BACH (HV+RV+BEFTN)	Avg./Month
	HV	RV			
2011	3,732	4,335	54	8,121	677
2012	5,977	4,827	285	11,090	924
2013	6,877	5,165	396	12,439	1,037
2014	8,812	5,497	598	14,908	1,242
2015	9,795	5,707	874	16,376	1,365
2016	11,479	6,518	994	18,992	1,583
2017	12,969	7,462	1,334	21,765	1,814
2018	14,733	8,214	1,723	24,670	2,056
2019*	11,081	6,341	1,504	18,927	2,103

*Source: Bangladesh Bank. * Up to September 2019. Notes: HV=High Value, RV=Regular Value, BEFTN=Bangladesh Electronic Funds Transfer Network, BACH=Bangladesh Automated Clearing House.*

Table 2: Present Scenario of MFS in Bangladesh

2 (a) Number of Agents, Customers and Accounts				
YEAR	No. of Agents	No. of Registered Customers (in Millions)	No. of Active Accounts (in Millions)	
2014	540,984	25.19	12.15	
2015	561,189	31.85	13.22	
2016	710,026	41.08	15.87	
2017	786,460	58.79	21.00	
2018	886,473	67.52	37.30	
2019*	951,777	75.98	34.39	
2 (b) MFS Transactions				
Year	No. of Transactions	No. of Transactions (AVG./Month)	Amount of Transactions	Amount of Transactions (AVG./Month)
	in Million	in Million	in Billion Tk.	in Billion Tk.
2014	549.48	45.79	1,031.55	85.96
2015	1166.05	97.17	1,577.73	131.48
2016	1473.24	122.77	2,346.92	195.58
2017	1875.63	156.30	3,146.62	262.22
2018	2272.75	189.40	3,788.86	315.74
2019*	1904.71	211.63	3,181.61	353.51
September 19	212.37	212.37	354.33	354.33

*Source: Bangladesh Bank. *Up to September 2019.*

Table 3: Transactions through RTGS in Bangladesh

Year	No. of Transactions (In thousands)	Amount of Transactions (In Billion Tk.)
2015	8.83	1,387.1
2016	225.82	11,378.28
2017	785.29	20,063.90
2018	863.35	6,674.75
2019*	1,456.82	11,012.84

*Source: Bangladesh Bank. *Up to October 2019.*

Table 4: Total Number of Cards, ATMs and POS in Bangladesh

Terminal	June 2017	June 2018	June 2019	Growth (June 2019 over June 2018)
No. of Debit Cards	10,802,217	12,575,605	15,758,977	25.31
No. of Credit Cards	936,148	1,000,474	1,203,427	20.29
No. of Prepaid Cards	205,285	158,526	277,498	75.05
Total Cards	11,943,650	13,734,605	17,239,902	25.52
ATM Booths	9,246	9,747	10,722	10.00
POS	36,288	41,130	52,846	28.49

Source: Bangladesh Bank.

Table 5: Transactions through NPSB in Bangladesh

Year	ATM		POS		IBFT		NPSB (ATM+POS+IBFT)	
	No. (000)	Amount (Million Tk.)	No. (000)	Amount (Million Tk.)	No. (000)	Amount (Million Tk.)	No. (000)	Amount (Million Tk.)
2015	7,197	41,162	77	263	-	-	7,274	41,425
2016	9,740	65,418	742	2,567	-	-	10,482	67,985
2017	13,443	95,335	2,315	8,622	3	42	15,760	103,999
2018	19,261	137,650	4,077	15,572	104	1,953	23,442	155,174
2019*	16,122	117,416	3,536	12,995	344	7,422	20,002	137,833

*Source: Bangladesh Bank. * Up to August.*

Table 6: Share of Transaction of Payment Platforms in Bangladesh (2018)

Market share in terms of number of transactions			Market share in terms of transaction amount		
Platforms	No. of Transactions	Share in Volume	Platforms	Transaction Amount (in Million Tk.)	Share in Value
BACH	48,067,630	2.05	BACH	24,669,819	69.91
MFS	2,272,746,487	96.91	MFS	3,788,860	10.74
RTGS	863,352	0.04	RTGS	6,674,750	18.91
NPSB	23,441,756	1.00	NPSB	155,174	0.44

Source: Bangladesh Bank.

Acronyms

ACH	Automated Clearing House	NCHL	Nepal Clearing House Ltd.
a2i	Access to Information	NECS	National Electronic Clearing System
AML	Anti-Money Laundering	NEFT	National Electronic Funds Transfer
ATM	Automated Teller Machine	NEPS	Nepal Electronic Payment System
BB	Bangladesh Bank	NFS	National Financial Switch
BACPS	Bangladesh Automated Cheque Processing System	NGO	Non-Governmental Organization
BEFTN	Bangladesh Electronic Funds Transfer Network	NIFT	National Institutional Facilitation Technologies
BFS	Bhutan Financial Switch	NPCI	National Payments Corporation of India
BIPS	Bhutan Immediate Payment Service	NPSB	National Payment Switch Bangladesh
B2P	Business to Person	OPGSPs	Online Payment Gateway Service Providers
BRAC	Bangladesh Rural Advancement Committee	OTC	Over-the-Counter
CCAPS	Common Card and Payment Switch	P2B	Person to Business
CCIL	Clearing Corporation of India Limited	P2G	Person to Government
CFT	Combating the Financing of Terrorism	P2P	Person to Person
CIT	Cheque Imaging and Truncation	POS	Point of Sale
ECS	Electronic Clearing Service	PRISM	Pakistan Real-time Interbank Settlement Mechanism
EFTCS	Electronic Funds Transfer and Clearing System	PSO	Payment Systems Operator
EU	European Union	PSPs	Payment Service Providers
GCC	Gulf Cooperation Council	RBI	Reserve Bank of India
G2P	Government to Person	RMAB	Royal Monetary Authority of Bhutan
HV	High Value	RPSI	Retail Payment Systems and Instruments
IBFT	Internet Banking Fund Transfer	RTGS	Real Time Gross Settlement
ID	Identification	RV	Regular Value
IPS	Interbank Payment System	SAARC	South Asian Association for Regional Cooperation
KYC	Know Your Customer	SADC	South African Development Community
LVPS	Large Value Payment Systems	SBP	State Bank of Pakistan
MFS	Mobile Financial Services	SCT	Smart Choice Technologies
MMA	Maldives Monetary Authority	SEPA	Single Euro Payments Area
MRTGS	Maldives Real Time Gross Settlement	SLIPS	Sri Lanka Inter-bank Payment System
MTOs	Money Transfer Operators	Tk.	Taka
NCCPL	National Clearing Company of Pakistan		

Measuring Working Women’s Demand for Eco-Friendly Food Packaging in Bangladesh

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Abstract

The study aims to test the “Theory of Planned Behavior” (TPB) by measuring the buying behavior (demand) for food in eco-friendly (green) packaging among women professionals in Bangladesh. As one of the most densely populated countries in Asia and the Pacific with an urban growth rate of 3.6%, Bangladesh is overwhelmed with environmental problems. The most visible is waste, particularly in its urban areas full of Municipal Solid Waste (MSW). Due to the increasing awareness by the customers of the harm caused to the environment by packaging materials, companies must address this issue. Globally, over three billion people live in cities and buy their groceries away from home – many of these products come packaged, mostly in disposable plastic containers. This paper analyzes the green buying pattern among professional female employees interested in green packaging to preserve the environment and the public health. One hundred female employees participated in a structured survey, based on random sampling, and responded to questions on a 5-point Likert Scale. The study used the Partial Least Squares (PLS) method, which is a variance-based technique for the analysis of data using a structural equation model. The outcome of this study shows that environmental attitude and perceived behavioral control positively influences purchase intentions among women. The results of the study serve as a benchmark for food manufacturers and marketers. It encourages them to comply with the 3R (Reduce, Reuse, Recycle) strategies to comply with the UNDP’s Sustainable Development Goal (SDG) by 2030. The findings and recommendations of this study support the growing emphasis on Sustainable Production and Consumption (SCP) and the commitment of the Government of Bangladesh to the SDGs.

1 Introduction

This decade has seen a dramatic shift in environmental awareness worldwide. The environmental impact of packaging waste has been widely discussed (Wever, 2011), but the past decade has seen a renewed interest in green packaging (Svanes et al., 2010; Rundh, 2005).

Today, one-third of household waste consists of food packaging (Packaging Strategies, 2017). Recently, a huge amount of litter was found floating in the Pacific Ocean – with an area equal to twice the size of continental America. Most of this island of solid waste is made of disposable plastic food packaging containers and plastic bags. A majority of the world’s population live in cities with few options for growing their own food. Three and a half billion people in the planet’s cities buy their food away from home—and these products (a large portion of

which is food or groceries) come packaged. Herein lies the importance of green or eco-friendly packaging of food items, in which urban consumers can play a more responsible role since the large cities have a greater variety of stores and a wider selection of products (Raziuddin & Vaithianathan, 2018). A survey by Hower (2015) reveals that “more than three-quarters of consumers¹ claim that eco-friendly packaging has an influence on the beverage brand they purchase.” Across countries included in the survey, environmental factors are found to exert considerably strong influence on brand choice in developing markets like China, Turkey, Brazil, and India compared to developed nations like UK, USA and Japan. A large majority of businesses consider environment as part of their business strategy, and using eco-friendly reusable materials as packaging materials is becoming a key focus for businesses. Interestingly,

¹ The global survey was carried out for food processing and packaging solutions firm Tetra Pak among 6,000 consumers across 12 different countries.

environmental factors were found to be “a bigger influence for more businesses in developing countries” like Brazil, Turkey, and India, than in developed nations such as UK, USA and Japan. In developing countries, roughly 60% of those surveyed say they actively look out for environmental information when thinking about a purchase, compared to only 25% in the developed countries (Ward, 2017).

Consumers are increasingly concerned about the environment, and believe that environmental protection is not a responsibility of the government alone, but also their responsibility as consumers (Martinez, 2006). Firms have introduced green packaging based on the recommendations of the recyclable and reusable packages industry (Jamal, Islam & Barua, 2016). In a survey in the UK, green packaging was an influential driver of demand for food items (Haigh, 2018). Lately, researchers have expanded the field of sustainability studies by focusing on the drivers of the eco-friendly purchasing behavior of customers in developing countries (Mair & Laing, 2013). Therefore, a study of Bangladesh will better facilitate an understanding of the factors behind consumers’ green buying behavior.

Sustainable green packaging has a measurable impact on the environment and public health. Proper packaging allows protection of food from physical, chemical and microbiological contamination. It also plays a vital role in preserving food quality, minimizing food waste and reducing the use of preservatives. In Bangladesh, the average per capita plastic consumption is 5 kg per year (Mosharraf, 2018), a significant source of which is food packaging.

This study is in line with past studies related to environmental sustainability in Bangladesh. However, this study makes a few new contributions to the literature. First, this research is based on the extended Theory of Planned Behavior (TPB) model. It breaks down the Perceived Behavioral Control (PBC) into two dimensions --the external PBC and the internal PBC, and examines their distinct influences. Second, this study focuses exclusively on the eco-friendly packaging for consumer food products in Bangladesh. Third, the participants in this study are female employees who work in corporations, and are presumably the most suitable segment of buyers who can add to our understanding of the significance of green packaging of food items (Jahanshahi & Jia, 2018).

1.1 Research Problem

Human activities such as industrialization, urbanization, and improving living standards are responsible for waste products. As the ninth most populous, and the twelfth most densely populated country in the world, Bangladesh

has experienced an increasing rate of waste generation, which is projected to reach 47,064 tons per day by 2025 (Islam, 2016). Bangladesh’s urban growth is among the highest in South Asia, and is 2.5 times higher than the population growth rate of 1.42% (Atienza, 2017). Given this rapid economic growth, fast transforming its age-old agricultural economy into an urban-industrial economy (Atienza, 2017), Bangladesh faces environmental challenges on many fronts. The most visible is physical waste, particularly in urban areas. As we know, urbanization has a positive impact on the national GDP per capita (Table 1).

The economic growth is associated with a proportionately generated Municipal Solid Waste (MSW) throughout the country (Table 2), much of which can be traced to packaging, particularly food packaging.

“Packaging not only contributes to environmental problems through packaging material production and waste management but also affects other key environmental issues, such as product waste rates and logistical efficiency” (Svanes et al., 2010). As consumers are becoming more environmentally conscious, Nomacorc (2008) has identified environmental concerns of the food industry, which the packaging companies must respond to.

According to Rasheed (2013), some businesses in Bangladesh have been quick to adopt “environmental management systems and waste minimization” and have integrated environmental issues into their organizational activities. Civil societies are now launching environmental campaigns, including *Buriganga Bachao Andolon*, Campaign Against Air Pollution, and Campaign Against Polythene, which was conducted by BAPA (*Bangladesh Poribesh Andolon*). BAPA also organized *Sundarban Bachao* Conference and Environmental Health Conference. Some of these campaigns have succeeded. However, studies on pro-environment consumer behavior are still at an early stage for emerging markets. No significant formal research has been conducted to understand the green purchase behavior of Bangladeshi consumers (Jamal et al, 2016) particularly from the perspective of female consumers. Biswas and Roy (2015) call for “new research efforts to examine the progression of pro-environmental consumer behavior in the Asian region” (p. 467).

The objective of this study is to analyze factors, which influence the green buying behavior of women professionals toward food with eco-friendly packaging. The study applies the Extended Theory of Planned Behavior (TPB) (Ajzen, 1991) framework, considered among the most persuasive theories in understanding consumer behavioral intentions (Kidwell & Jewell, 2003). This study will recommend facilitating green buying behavior in Bangladesh.

This first part of the paper presents the research problem and objectives, followed by a review of the literature. The research method, results and discussions are presented subsequently. The paper concludes with implications for consumer food products and recommendations to increase green packaging of food items to achieve sustainable development in Bangladesh.

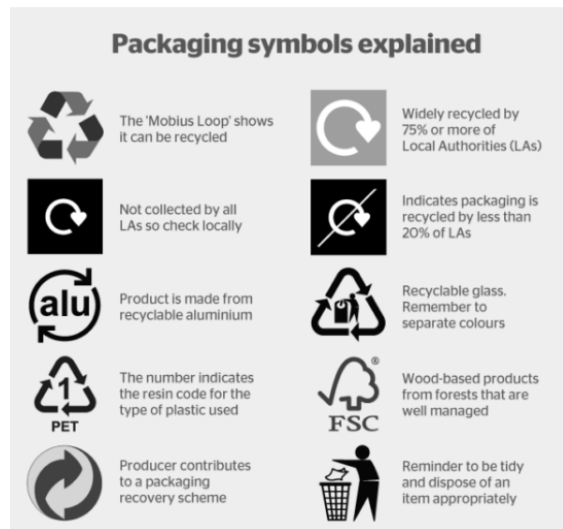
1.2 What is green/eco-friendly food packaging?

Orzan, Cruceru, Bălăceanu and Chivu (2018) emphasize packaging as one of the most important aspects of food, since well-packed food contributes to consumer safety and protection. According to Carlson (2009), eco-packaging must be safe and healthy for both individual and the community. Such packaging is market-efficient, cost-effective and recyclable to add to the energy supply. Seo et al. (2016) highlight that packaging materials have been identified as a major source of pollution in recent years. Hence, there is a greater need for eco-friendly packaging. Packaging has changed radically given the consumer's unlimited access to information (Sandu, 2014). Ottman (1993) and others believe that products packaged in an eco-packaging manner are considered more valuable by the consumer.

Global brands are increasingly looking for ways to redo their product packaging in response to environmentally conscious consumers. Coca-Cola recently took a social stance with its new "World without Waste" vision, which is a plan to collect and recycle every bottle/can it sells. PepsiCo North America is also aiming to design 100% of its global packaging to be recyclable, compostable or biodegradable by 2025². Several regions in Europe have proposed and/or implemented restrictions on plastic bags. This gradual transformation toward green packaging by the leading global food and beverage companies is expected to significantly affect green packaging of food globally.

Today, step-by-step guidelines are available to food manufacturers to transform their processes to eco-friendly packaging (Figure 1). Consumers can learn more about the benefits of green packaging (Figure 2), given the eco-friendly packaging are becoming more common. Consumers can increase their awareness of various recycling options such as biodegradable and compostable, by understanding the symbols (Haigh, 2018).

Figure 1. Choosing sustainable packaging



Source:

<https://www.dssmithepack.co.uk/blog/sustainable-packaging/sustainable-packaging-millennial-consumer/>

Figure 2. Packaging symbols



Source:

<https://www.packaginginsights.com/news/recycling-symbols-are-confusing-uk-consumers-research-group-notes.html>

² <https://packagingeurope.com>

2 Literature Review

“Green marketing” refers to environmentally safe marketing strategies, or those that create no threat to the environment (Jamal et al, 2016). Mishra & Sharma (2010) highlight several aspects of green marketing, which includes product modification, packaging, and advertising. This section addresses the current state of research on green buying behavior in Bangladesh to explore where the gaps still exist. Hafez (2017) conducted a study to find more about Bangladeshi consumers’ green purchase behavior and identified factors, which motivate the purchase of energy-saving lamps. They find that eco-friendly packaging leads to increased demand for energy-saving lamps. They find that awareness of green products is a critical factor, which significantly influences consumers’ purchasing decisions in Bangladesh (Siddique & Hossain, 2018). Hossain (2016) recommends finding additional systematic strategies to recycle paper, metals, and plastics in an environmentally harmless manner.

However, most of these studies focus on green marketing and green product awareness from the perspective of customers. Our study looks at green buying behavior toward eco-friendly packaged consumer food products from the perspective of working women in urban corporate setting. This study attempts to fill the gap in existing literature on the subject for Bangladesh.

2.1 Theoretical Framework

The TPB model improves the predictability of the purchase intention model (Jebarajakirthy & Lobo, 2014) for green products. This model has been validated in several studies investigating recycling behavior (Davis et al., 2009; Oreg & Katz-Gerro, 2006) and green purchase intentions (Chen & Tung, 2014; Zhou et al., 2013). Sustainable consumer behavior can be explained using a number of models. This model is based on the TPB employed by various scholars to predict and explain recycling behavior (Chan & Bishop, 2013), sustainable consumption (Richetin, 2012) or the personal vision of sustainable development. This study constructs the framework for TPB, which captures how attitudes, subjective norms and perceived behavioral control contribute toward consumers’ intentions and behavior.

Environmental attitude has been defined as the collection of beliefs and behavioral intentions regarding environmentally related activities (Frick, Kaiser & Wilson, 2004; Milfont & Duckitt, 2004). The positive association between the attitude of the customers and their buying has been found in environment-related behaviors (Diamantopoulos, Schlegelmilch, Sinkovics &

Bohlen, 2003; Alwitt & Pitts, 1996). Specifically, in green products, a positive relationship between attitude and behavioral intention has been established across many cultures (Mostafa, 2009). For instance, in the choice for organic food, scholars find a strong positive relationship between attitude and intention (Ha & Janda, 2012; Zhou et al., 2013), determining that attitude-intention rationale prevails in the green consumption settings. Likewise, Birgelen et al. (2009) observe that consumers prefer eco-friendly beverage packaging if they have a positive attitude toward the environment.

The intention to purchase green products indicates the extent to which consumers will purchase green products or adopt green alternatives (Paul, Modi & Patel, 2016). Consumers’ intention to buy green products is higher when they know their spending choices would contribute to sustainable development and environmental protection (Moser, 2015).

H1: Environmental attitude influences the green purchase intention of urban professional women toward eco-friendly packaged food products.

According to Baker, Al-Gahtani and Hubona (2007), subjective norm refers to “the individual’s perception of significant referents’ opinions toward a behavior.” In marketing and consumer behavior, several studies have documented subjective norm as an important determinant of intention, including intention to participate (Lee, 2005), technology-use intention (Baker et al., 2007), organic food purchase intention (Ha & Janda, 2012), green hotel revisit intention (Chen & Tung, 2014; Han et al., 2010) and environmentally conscious consumption (Khare, 2015; Moser, 2015). Therefore, it is expected that consumers are more likely to adopt group behavior such as the purchase of green products, considered critical in predicting positive intention (Wilson, 2004; Alwitt & Pitts, 1996) toward pro-environmental behavior of working women in Bangladesh.

H2: Subjective norm influences the green purchase intention of the urban professional women toward eco-friendly packaged consumer food products.

Perceived behavioral control refers to the perceived ease or difficulty (time, money and opportunity) of performing a behavior that reflects on experiences and anticipated impediments (Ajzen, 1991). This study places the perceived behavioral control (PBC) into two categories namely: external PBC and internal PBC, and examines its specific influences on green purchase intentions.

Internal PBC has been described as an individual's internal perception that she/he is in control over personal resources, such as skills, confidence, planning, and the ability to perform the specific behavior (Armitage, Conner, Loach, & Willetts, 1999). If a customer has higher internal PBC, this is expected to lead to stronger intention for purchasing eco-friendly packaged food products. A person has required skill and confidence act as a necessary trigger for their green purchase intention. Past studies show that internal PBC influences the intention to adopt a behavior (Baker et al., 2007; Kidwell & Jewell, 2003).

According to Armitage et al. (1999), external PBC can be described as a consumer's perception that she/he has control over external conditions such as time, money, and availability to perform a certain task. Jin and Kang (2011) believe that the external PBC is related to a consumer's perception of their control over external barriers. In previous research, the external PBC has been an important predictor of the intent to purchase eco-friendly products (Jin & Kang, 2011; Armitage et al., 1999).

H3: Internal PBC influences the green purchase intention of urban professional women toward eco-friendly packaged consumer food products.

H4: External PBC influences the green purchase intention of urban professional women toward eco-friendly packaged consumer food products.

The behavior of consumers who spend on green products has received considerable scholarly attention in recent years (Chen et al., 2017). Green purchasing behavior refers to spending on consumer products, perceived to be beneficial to the environment, recyclable, conservable, or responsive to ecological concerns (Kozar & Connell, 2013) such as eco-friendly food packaging. Yadav and Pathak (2017) in a study on Indian consumers a positive relationship between behavioral intentions and green buying behavior.

H5: Green purchase intention influences the green buying behavior of the urban professional women toward eco-friendly packaged consumer food products.

Hence, the conceptual model (Figure 3) in this study has integrated environmental attitudes, subjective norms, internal and external PBC, and green purchase intention as determinants of green buying behavior.

3 Methodology

3.1 Sampling Frame

The size of the female labor force in Bangladesh has increased more rapidly than that of men, from 2015-16 to 2016-17 (Dhaka Tribune, 2018). Understanding the pro-environmental attitudes of the educated younger generation, such as female employees in corporate Bangladesh (Table 3), is instructive. Given these working women represent the future consumers, and the future of the society, developing sustainable marketing strategies for this group is critical (Kanchanapibul, Lacka, Wang & Chan, 2014). Past research has recognized women, young people, and consumers with relatively high education and incomes are most likely to be attracted to consumption of green products.

Table 3: Education and female labor force participation

Level of Education	Female Labor Force Participation Rate	Female Rate of Paid Labor	Female Rate of Own-Account or Family Labor
None	21.1	3.9	13.8
Primary	52.4	9.7	39.4
Secondary	33.0	14.2	15.7
Higher Secondary	35.6	15.2	13.1
Tertiary	54.2	35.1	10.0

Source: Analysis of data from Bangladesh Bureau of Statistics. 2015. *Labour Force Survey 2013*. Dhaka.

3.2 Data Collection

The capital city of Bangladesh, Dhaka, is selected for data collection, as it is the most urbanized part of the country, with the highest composition of the MSW (BBS, 2010). A random sample of female corporate employees (professional women) in various banks and multinational companies across the city was the target group for this study. Khare (2015) hypothesizes that urban residents, especially women, are more likely to purchase green products. We can make a good case that professional women in Dhaka are comparatively more informed of the green concept, given their experience in buying packaged food from various supermarkets including, *PQS*, *Shopno* and *Agora*. Therefore, a study of this group's buying behavior toward packaged food may lead to important insights on the future trends in buying behavior for green products across Bangladesh.

The survey was conducted from December 2018 to January 2019 in various locations in Dhaka including, Banani, Gulshan, Bashundhara, Mirpur, Dhanmondi and Uttara. On weekdays, the women buyers were randomly approached during their visit to the various supermarkets for buying groceries. Given the absence of a list of a sampling frame, the author employed non-probability sampling. One hundred and fifty questionnaires were distributed. After dealing with the missing values, 100 returns were available further analysis (66.6% response rate). The sample size is considered reasonable. PLS-SEM was used to analyze the data, since this statistical package allows a high level of statistical power with a small sample size (Hair et al., 2017).

3.3 Development of Survey Instrument

The first part of the questionnaire focuses on demographic variables such as age, income, marital status, and education. The second part of the survey covers the constructs of the model such as environmental attitude, subjective norm, perceived behavioral control and green buying behavior. Table 4 below summarizes the items, which were adapted to measure various constructs in the model for this study.

Table 4: Summary of measurement items of the constructs

Variables	Construct	Items	Source
Independent variables	Environmental attitude	4	McCarty and Shrum (1994) and Tanner and Kast (2003)
	Subjective norm	3	Armitage et al. (1999)
	Internal perceived behavioral control	4	Armitage et al. (1999)
	External perceived behavioral control	4	Armitage et al. (1999)
	Green purchase intention	5	Paul et al. (2016)
Dependent variable	Green buying behavior	6	Ahn et al. (2012)

The questionnaire was pre-tested among three experts from the field of environmental science and two corporate women employees to check the content validity. Afterward, necessary adjustments were made to contextualize the measurement items used in the final questionnaire (Appendix 1). The survey was conducted in English. The Cronbach's alpha coefficient is 0.85 for environmental attitude, 0.80 for subjective norm, 0.84 for internal perceived behavioral control, 0.84 for external perceived behavioral control, 0.85 for green purchase intention, and 0.78 for green buying behavior, which indicates the scale's reliability. Participants used Likert Scale from "1" (completely disagrees) to "5" (completely agrees) to register their responses.

3.4 Statistical Technique

The data gathered from the survey was analyzed by using the Partial Least Squares (PLS) method, which is a variance-based technique for the analysis of Structural Equation Modelling (SEM). The SEM is most appropriate when the model has multiple constructs each represented by a number of variables, and allows the simultaneous estimation of relationship/equations (Hair et al. 2010, p. 641).

4 Analysis and Findings

Based on the survey, Table 5 presents the demographic profile of the female corporate employees in Bangladesh. The sample reveals that 26% have a minimum monthly income in the 20,000 - 40,000 taka range (US\$ 237.65-USD \$475.30), and 27% have a monthly maximum income of 50,000 taka (USD\$ 594.12) or higher. Most women in the sample are at least 30 years old. We can conclude that most women corporate employees in Bangladesh prefer grocery shopping once a month. *Agora* is still on their priority list as a place to shop grocery.

4.1 The Model – An Assessment

Convergent validity refers to "the degree to which multiple items measuring the same concept are in agreement" (Hair et al., 2010). In this study, we used factor loadings, composite reliability and average variance extracted to assess convergence validity. The loadings for all items exceeded the recommended value of 0.5 as suggested by Hair et al. (2010). Composite reliability values that depict how much the construct indicators indicate the latent construct ranged from 0.87 to 0.90, exceeding the recommended value of 0.7 (Hair et al., 2010). The average variance which reflects the overall variance in the indicators represented by the latent construct was in the 0.578-0.718 range, exceeding the recommended value of 0.5.

4.2 Validity of Constructs

Discriminant validity is examined by comparing the squared correlations between constructs and the average variance extracted for a construct (Fornell & Larcker, 1981). The squared correlations for each construct in this study is less than the average variance as extracted by the indicators implying adequate discriminant validity.

4.3 Assessment of the Structural Model

The structural model is important for testing our hypotheses. As shown in Table 6, the empirical results support three out of five hypotheses. Environmental attitude ($\beta = .651, p < 0.01$) and External perceived behavioral control ($\beta = .233, p < 0.01$) are positively related to intention to purchase green packaged products. Green Purchase Intention ($\beta = .607, p < 0.01$) is positively related to Green Buying Behavior (GBB). Thus, H1, H4 and H5, all are supported by the data; H2 and H3 are not supported.

5 Discussion

This study hypothesized that attitudes toward the environment are positively related to the purchase behavior of food products with green packaging among working women (female corporate employees) in Bangladesh. Previous studies found support for this hypothesis (Diamantopoulos et al., 2003; Alwitt & Pitts, 1996). However, the relationship between the subjective norm and intention (H2 in this study) was not supported by the data. This finding contradicts the outcome of Verma and Chandra (2018). One explanation is that those participating in the survey are mature women (30 years or older), who already had decided on their preferred items to shop (Werner, 2004; Lascu & Zinkhan, 1999).

Similarly, H3, which captures the relationship between internal perceived behavioral control, and green purchase intention, is unsupported by the sample data. The results from the study by Panahi, Keivandarian, and Azizi (2014) reveals that the majority of Bangladeshis are unaware of green products. They may be lacking requisite skills, confidence, adequate planning to selectively shop products with green packaging. This leads to our recommendation for organizing marketing campaigns in different supermarkets to make the customers more familiar with green packaging of food products, which would enhance their green buying behavior.

We find that the External Perceived Behavioral Control (PBC) is positively related to the intent for green purchase (supports H4), which is in line with the findings

of previous researchers (Armitage et al., 1999; Jin & Kang, 2011). By examining these aspects of the PBC model, the study validates the importance of women shoppers' decision-making power (external PBC) in the purchase of environmentally friendly products, given the rapid socioeconomic changes in Bangladesh. This approach advances previous studies that primarily viewed PBC as one dimension. Lastly, for H5, the data reveals a positive association between green purchase intention and green buying behavior among urban-based women consumers. This finding complements the findings of Yadav and Pathak (2017) which found a positive association between intentions and green buying behavior.

6 Recommendation and Implications

Given the growing emphasis on Sustainable Production and Consumption (SPC), and the commitment of the government of Bangladesh to United Nations Sustainable Development Goals (SDGs), the collection of data on 3R (Reduce, Reuse, Recycle) may become a routine part of the data collection by the BBS and other government agencies. This study recommends a three-pronged solution for achieving environmental sustainability through green consumer buying of food products: first, policy initiatives by the authorities: second, initiatives by the food product manufacturers, and third, initiatives by the ordinary citizens concerned about the nation's environment and welfare.

A story in *The New Nation* (2016) featured Kazi Sazedur Rahman of the KPC industry, who has contributed to the improved environment, by manufacturing alternative plastic products. The article highlighted high import duties (61 percent) on raw materials, which adds substantially to the cost of products, nearly doubling it. If the government lowers import duties on raw materials used to manufacture environmentally friendly products, his company will become more competitive with non-green food products packaging in the market.

To strengthen and sustain green buying behavior by urban customer groups in Bangladesh, the food manufacturing companies must change their practices:

- Inform the public of the positive impact of ecologically friendly packaging on the environment, through marketing campaigns (Grunert et al., 2014). This will encourage eco-friendly buying and consumption habits by increasing the visibility of these products in the marketplace. Companies, which produce and use green packaging, can work with banks and other businesses, including multinational companies to organize seminars and marketing

campaigns to sway the shopper's opinion (Jahanshahi & Jia, 2018) among their staff. This would increase their confidence in green buying behavior especially for products with eco-friendly packaging.

- Encourage the implementation of “eco-labelling” to influence consumer purchasing habits. This will lead to greater sales of products with environment-friendly packaging over others (Delafronz, Taleghani, & Nouri, 2014).

According to Sharma (2011), companies should organize campaigns to encourage green shopping behavior through educational communication. The focus should be on environmental concerns. Finally, companies must promote an environmentally friendly lifestyle by moving to sustainable production processes. This study recommends increased use of durable packaging, which can improve the product and change consumer attitudes toward sustainability and influence their green purchasing decisions (Orzan et al, 2018).

This study, with a focus on educated women employees as customers, reveals that their (green purchase) intentions are not because of the significant others, rather it is influenced by factors related to external perceived behavioral control. These include their control over time, money and availability of food products in eco-friendly packaging in the market. Past research by Jahanshahi and Jia (2018) with Bangladeshi data shows that green purchasing behavior is more common among customers (e.g. women corporate employees) who can challenge prevalent opinions in the society, and purchase products or brands because of their intention to help the environment. Therefore, a major implication of this study is the importance of increasing the awareness of the consumer on the availability of eco-friendly food products in the market, and the long-term benefits of eco-friendly packaging.

These initiatives gradually implemented are expected to help Bangladesh in strengthening the green buying behavior among different segments of the population. Jahanshahi and Jia (2018) in their research show customers can act as drivers of the green movement in Bangladeshi through a greater willingness to buy products with green packaging. As consumers increase their spending on environmentally friendly products, these trends are expected to motivate manufacturing companies to increase their investments in green marketing strategies and use more environmentally friendly packaging. The analysis of data on the buying behavior of women employed in corporate Bangladesh adds a fresh perspective on how to attain the long-term environmental goals for the country.

7 Conclusions

Green consumption of food items is fast emerging as a golden opportunity for food manufacturers and marketers interested in green/sustainable marketing and production to meet the changing preferences and attitudes of consumers (Chaudhary, 2018). However, the level of awareness regarding the environmental preservation is still rudimentary for most shoppers in Bangladesh. This can change if policymakers and businesses align themselves to the movement to protect the environment. The National Environmental Policy with Acts and Rules designed to protect the environment by reducing waste, will help modify the buying behavior of Bangladeshi consumers, both men and women, toward products, which are eco-friendly with appropriate packaging.

The findings of this study on the buying behavior of working women serve as a benchmark for manufacturers and marketers of food products. These findings may also guide businesses to comply with their own good practices and 3R policies, to align their production and packaging practices with the UNDP's Sustainable Development Goals by 2030. As with any study, there are limitations on these results. First, the data collected was within a defined period (cross-sectional data). Future studies may want to use longitudinal data to provide a deeper understanding of the customer behavior. Second, the focus of this study is a particular class of customers – urban women corporate employees. Using a larger sample size with a varied group of respondents such as Generation X, Generation Z, and male population will produce results which are more robust.

A change in consumer behavior for the environment is a prerequisite for strengthening the green revolution in developing countries like Bangladesh (Lee & Jeong, 2011). We hope that other researchers would build on the findings of this study to lay the foundation of more in-depth research to explore consumer behavior regarding eco-friendly food packaging.

References

- Ahn, J., Koo, D., & Chang, H. (2012). Different impacts of normative influences on pro-environmental purchasing behavior explained by differences in individual characteristics. *Journal of Global Scholars of Marketing Science*, 22(2), 163-182.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.

- Ajzen, I. (2011). The theory of planned behavior: Reactions and reflections. *Psychological Health, 26*(9), 1113-1127.
- Alwitt, L. F., & Pitts, R. E. (1996). Predicting purchase intentions for an environmentally sensitive product. *Journal of Consumer Psychology, 5*(1), 49-64.
- Armitage, C. J., Conner, M., Loach, J., & Willetts, D. (1999). Different perceptions of control: applying an extended theory of planned behavior to legal and illegal drug use. *Basic and Applied Social Psychology, 21*(4), 301-316.
- Atienza, V. (2017). The Philippines, Country Chapter State of the 3Rs in Asia and the Pacific, (November). Retrieved from: [http://www.uncred.or.jp/content/documents/5689\[Nov2017\]Indonesia.pdf](http://www.uncred.or.jp/content/documents/5689[Nov2017]Indonesia.pdf)
- Baker, E., Al-Gahtani, S. S., & Hubona, G. S. (2007). The effects of gender and age on new technology implementation in a developing country. *Information Technology & People, 20*(4), 352-375.
- BBS. (2010). *Compendium of Environment Statistics of Bangladesh 2009*. Dhaka: Bangladesh Bureau of Statistics (BBS), Ministry of Planning, Government of Bangladesh.
- Birgelen, M., Semeijn, J., & Keicher, M. (2009). Packaging and Pro-environmental Consumption Behavior: investigating purchase and disposal decisions for beverages. *Environmental Behavior, 41*(1), 125-146.
- Biswas, A., & Roy, M. (2015). Green products: an exploratory study on consumer behavior in emerging economies of the East. *Journal of Cleaner Production, 87*, 463-468.
- Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis*, Prentice-Hall, Upper Saddle River, NJ.
- Bong Ko, S., & Jin, B. (2017). Predictors of purchase intention toward green apparel products: A cross-cultural investigation in the USA and China. *Journal of Fashion Marketing and Management, 21*(1), 70-87. <http://doi.org/10.1108/JFMM-07-2014-0057>
- Carlson, K. (2009). *Green Your Work*. Adam Business: MA, USA.
- Chan, L., & Bishop, B. (2013). A moral basis for Recycling: Extending the theory of planned behavior. *Journal of Environmental Psychology, 36*, 96-102.
- Chaudhary, R. (2018). Green buying behavior in India: an empirical analysis. *Journal of Global Responsibility, 9*(2), 179-192.
- Chen, M. F., & Tung, P. J. (2014). Developing an extended Theory of Planned Behavior model to predict consumers' intention to visit green hotels. *International Journal of Hospitality Management, 36*, 221-230.
- Chen, Y., Zhang, R., Liu, B., Chen, Y., Zhang, R., & Liu, B. (2017). Joint Decisions on Production and Pricing with Strategic Consumers for Green Crowdfunding Products. *International Journal of Environmental Research and Public Health, 14*, 1090.
- Davis, G., O'Callaghan, F., Knox, K. (2009). Sustainable Attitudes and Behaviors amongst a Sample of Non-academic Staff. *International Journal of Sustainability in Higher Education, 10*, 136-151.
- Delafrooz, N., Taleghani, M., & Nouri, B. (2014). Effect of Green Marketing on Consumer Purchase Behavior. *QScience Connect, 1*, 1-9.
- Dhaka Tribune. (2018). BBS Labour Force Survey 2016-17.
- Diamantopoulos, A., Schlegelmilch, B. B., Sinkovics, R. R., & Bohlen, G. M. (2003). Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business Research, 56*(6), 465-480.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.
- Frick, J., Kaiser, F., & Wilson, M. (2004). Environmental knowledge and conservation behavior: exploring prevalence and structure in a representative sample. *Personality and Individual Differences, 37*(8), 1597-613.
- Grunert, G. K., Hieke, S., & Wills, J. (2014). Sustainability labels on food products: Consumer motivation, understanding, and use. *Food Policy, 44*, 177-189.

- Ha, H. Y., & Janda, S. (2012). Predicting consumer intentions to purchase energy-efficient products. *Journal of Consumer Marketing*, 29(7), 461-469.
- Hafez, M. (2017). Factors Affecting Green Purchase Behavior of Bangladeshi Customers: A Study on Energy Saving Lamp. *Journal of Science and Technology*, 6(1-2).
- Haigh, L. (2018, August 02). Are recycling symbols confusing UK consumers? *Packaging Insight*. <https://www.packaginginsights.com/news/recycling-symbols-are-confusing-uk-consumers-research-group-notes.html>.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Second Edition*. Thousand Oaks: Sage.
- Han, H., Hsu, L. T., & Sheu, C. (2010). Application of the Theory of Planned Behavior to green hotel choice: testing the effect of environment-friendly activities. *Tour Management*, 31, 325-334.
- Hower, M. (2015). More than 75% Customers Influenced by Eco-friendly Packaging. *Sustainable Brands*, July 27. <https://sustainablebrands.com/read/waste-not/more-than-75-of-consumers-influenced-by-eco-friendly-packaging-report-says>
- Islam, F. A. S. (2016). Solid Waste Management System in Dhaka City of Bangladesh. *Journal of Modern Science and Technology*, 4(1), 192-209.
- Jahanshahi, A. A., & Jia, J. (2018). Purchasing Green Products as a Means of Expressing Consumers' Uniqueness: Empirical Evidence from Peru and Bangladesh. *Sustainability*, 10(11), 1-17.
- Jamal, Z. B., Islam, S., & Barua, P. (2016). Analyzing Factors that Affect Green Purchase Behavior: From the Context of Bangladeshi Consumers. *Journal of Economics, Business and Management*, 4(10), 611-617.
- Jebarajakirthy, Charles, Lobo & Antonio, C. (2014). War affected youth as consumers of microcredit: an application and extension of the theory of planned behavior. *Journal of Retail Consumer Service*, 21, 239-248.
- Jin, B., & Kang, J. H. (2011). Purchase intention of Chinese consumers toward a US apparel brand: a test of a composite behavior intention model. *Journal of Consumer Marketing*, 28(3), 187-199.
- Kanchanapibul, M., Lacka, E., Wang, X., & Chan, H. K. (2014). An empirical investigation of green purchase behavior among the young generation. *Journal of Cleaner Production*, 66, 528-536.
- Khare, A. (2015). Antecedents to green buying behavior: a study on consumers in an emerging economy. *Marketing Intelligence & Planning*, 33(3), 309-329.
- Kidwell, E., & Jewell, R. D. (2003). An examination of perceived behavioral control: internal and external influences on intention. *Psychology & Marketing*, 20(7), 625-642.
- Kozar, J., & Hiller Connell, K. (2013). Socially and environmentally responsible apparel consumption: knowledge, attitudes, and behaviors. *Social Responsibility Journal*, 9(2), 315-324. <https://doi.org/10.1108/SRJ-09-2011-0076>
- Kumar, B. (2012). Theory of Planned Behavior Approach to Understand the Purchasing Behavior for Environmentally Sustainable Products. Working paper. <http://www.iimahd.ernet.in/assets/snippets/workingpaperpdf/>
- Lascu, D. N., & G. Zinkhan. (1999). Consumer conformity: review and applications for marketing theory and practice. *Journal of Marketing Theory and Practice*, 7(3), 1-12.
- Lee, G. G., & Lin, H. F. (2005). Customer perceptions of e-service quality in online shopping. *International Journal of Retail & Distribution Management*, 33(2), 161-176.
- Lee, J. D., Park, H. & Han, I. (2011). The different effects of online consumer reviews on consumers' purchase intentions depending on trust in online shopping malls: an advertising perspective. *Internet Research*, 21(2), 187-206.
- Lee, K. (2008). Opportunities for green marketing: young consumers. *Marketing Intelligence & Planning*, 26(6), 573-586.
- Mair, J., & Laing, J. H. (2013). Encouraging pro-environmental behavior: The role of sustainability-focused events. *Journal of Sustainable Tourism*, 21, 1113-1128.
- Martinez, E., & Fraj-Andres, E. (2006). Ecological consumer behavior: An empirical analysis. *International Journal of Consumer Studies*, 31(1), 26-33.

- McCarty, J. A., & Shrum, L. J. (1994). The recycling of solid wastes: Personal & cultural values & attitudes about recycling as antecedents of recycling behavior. *Journal of Business Research*, 30, 53-62.
- Milfont, T., & Duckitt, J. (2004). The structure of environmental attitudes: a first- and second-order confirmatory factor analysis. *Journal of Environmental Psychology*, 24, 289-303.
- Mishra, P., & Sharma, P. (2010). Green marketing in India: Emerging opportunities and challenges. *Journal of Engineering, Science and Management Education*.
- Moser, A. K. (2015). Thinking green, buying green? Drivers of pro-environmental purchasing behavior. *Journal of Consumer Marketing*, 32, 167-175.
- Mosharraf, A. (2018). Toxic Effects of Plastic Food Packaging. <http://www.theindependentbd.com/arcprint/details/>
- Mostafa, M. M. (2009). Shades of green: a psychographic segmentation of the green consumer in Kuwait using self-organizing maps. *Experts Systems Application*, 36, 11030-11038.
- New Nation. (2016). Bangladesh heads to plastic-free green revolution. July 14, 2016. Available at: <http://thedailynewnation.com/>
- Nomacorc. (2008). Carbon footprint of wine closures. http://www.corksupply.com/pdfs/nomacorc_footprint.pdf
- Oreg, S., & Katz-Gerro, T. (2006). Predicting pro-environmental behavior cross-nationally: values, the theory of planned behavior, and value-belief-norm theory. *Environmental Behavior*, 38, 462-483.
- Orzan, G., Cruceru, A. F., Bălăceanu, C. T., & Chivu, R. G. (2018). Consumers' Behavior Concerning Sustainable Packaging: An Exploratory Study on Romanian Consumers. *Sustainability*, 10, 1787.
- Ottman, J. (1993). *Green Marketing: Challenges and Opportunities New Marketing Age*. NTC Business Books: IL, USA.
- Panahi, M., Keivandarian, A., & Azizi, A. (2014). Investigating the Consumer Attitude toward Green Marketing. *European Journal of Business and Management*, 6(11), 1-6.
- Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using the theory of planned behavior and reasoned action. *Journal of Retailing and Consumer Services*, 29, 123-134.
- Rasheed, H. S. (2013). *Journal of Small Business Management*, 1770(813), 1-33. <http://doi.org/10.1111/j.1748-5827.2011.01219.x>
- Raziuddin, K., & Vaithianathan, S. (2018). A fresh look at understanding Green consumer behavior among young urban Indian consumers through the lens of Theory of Planned Behavior. *Journal of Cleaner Production*, 183, 46-55.
- Richetin, J., Perugini, M., Conner, M., Adjali, I., Hurling, R., Sengupta, A., & Greetham, D. (2012). To reduce and not to reduce resource consumption? That is two questions. *Journal of Environmental Psychology*, 32, 112-122.
- Rundh, B. (2005). The multi-faceted dimension of packaging: Marketing logistic or marketing tool? *British Food Journal*, 107(9), 670-684.
- Sandu, R. M. (2014). Green Marketing, Products and Consumers SEA. *Practical Applied Science*, 2, 555-561.
- Seo, S., Ahn, H. K., Jeong, J., & Moon, J. (2016). Consumers' attitudes toward sustainable food Products: Ingredients vs. packaging. *Sustainability*, 8, 1-19.
- Sharma, Y. (2011). Changing consumer behavior with respect to green Marketing—A case study of consumer durables and retailing. *International Journal of Multidisciplinary Research*, 1, 152-162.
- Siddique, Z. R., & Hossain, A. (2018). Sources of Consumers Awareness toward Green Products and Its Impact on Purchasing Decision in Bangladesh. *Journal of Sustainable Development*, 11(3).
- Stewart, D. (2019). How the Rise of Eco-friendly Packaging Can Transform Brands in 2019. <https://packagingeurope.com/>
- Straughan, R. D., & Roberts, J. A. (1999). Environmental segmentation alternatives: a look at green consumer behavior in the new millennium. *Journal of Consumer Marketing*, 16(6), 558-575.
- Svanes, E., Vold, M., Möller, H., Pettersen, M. K., Larsen, H., & Hanssen, O. J. (2010). Sustainable packaging design: a holistic methodology for packaging design. *Packaging Technology and Science*, 23(3), 161-175.

- Verma, V. K., & Chandra, B. (2018). An Application of Theory of Planned Behavior to predict young Indian consumers' green hotel visit intention. *Journal of Cleaner Production*, 172, 1152-1162.
- Ward, P. (2017). Environmentally Friendly Packaging and the Impact on Customer Satisfaction, Parcel May 18. <https://parcelindustry.com/article-4882-Environmentally-Friendly-Packaging-&-the-Impact-on-Customer-Satisfaction.html>
- Yadav & Pathak (2017). Determinants of consumers green purchase behavior in a developing nation: Applying and extending the theory of planned behavior. *Ecological Economics*, 134, 114-122.
- Zhou, Y., Thøgersen, J., Ruan, Y., & Huang, G. (2013). The moderating role of human values in planned behavior: the case of Chinese consumers' intention to buy organic food. *Journal of Consumer Market*, 30(4), 335-344.

Appendix

Table 1: Waste generation in urban centers of Bangladesh

Year	Urban population (million)	Waste generation (ton/day)	Waste generation (kg/per capita/day)	GDP per capita
1991	20.8	6493	0.31	US \$ 220
2005	32.76	13330	0.41	US \$ 482
2013	40.00	20000	0.50	US \$ 1190
2025	78.44	47000	0.60	----

Source: Practical Action (2016), based on BBS and World Bank data.

Table 2: Distribution of total MSW in Bangladesh

MSW Generation Source	% distribution of total MSW generated daily of major cities by waste generation sources					
	Dhaka	Chittagong	Khulna	Rajshahi	Barisal	Sylhet
Residential	75.86	83.83	85.87	77.18	79.55	78.04
Commercial	22.07	13.92	11.60	18.59	15.52	18.48
Institutional	1.17	1.14	1.02	1.22	1.46	1.29
Municipal services	0.53	0.51	0.55	1.24	1.15	0.80
Others	0.37	0.60	0.96	1.77	2.32	1.39
Total	100	100	100	100	100	100

Source: Bangladesh Compendium of Environmental Statistics, 2009 (BBS, 2010, p 323).

Table 5: Sample Characteristics

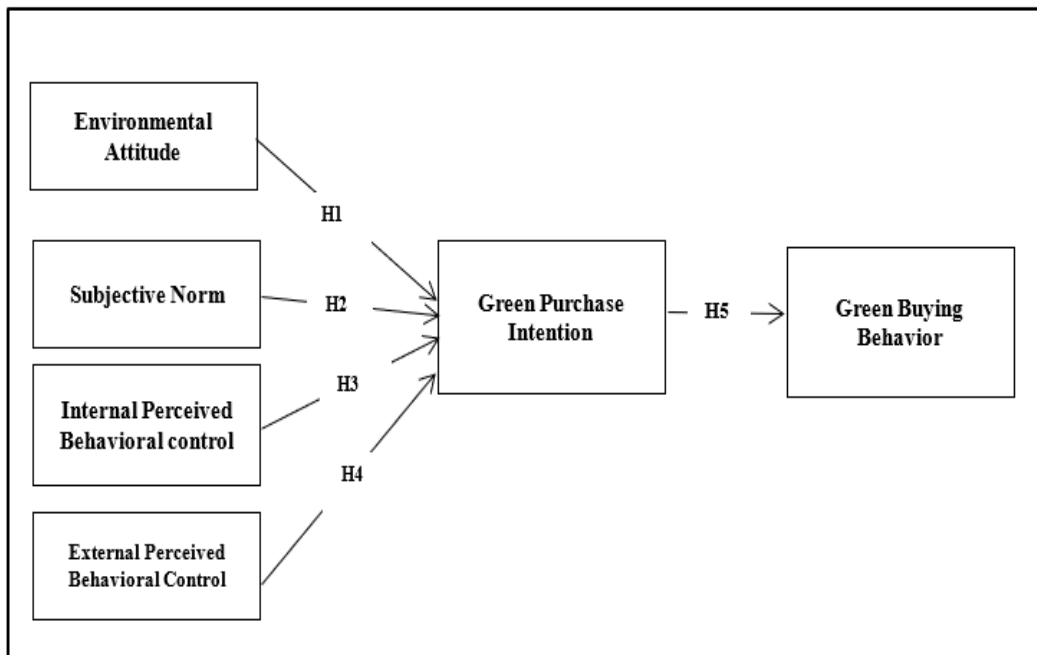
Variables	Category	Frequency	%
Age	16-20 years	1	1.0
	20-25 years	25	25.0
	25-30 years	21	21.0
	Above 30 years	53	53.0
Marital Status	Married	52	52.0
	Single	48	48.0
Income (Monthly)	<20,000 Tk.	27	27.0
	20,000-40,000 Tk.	26	26.0
	40,000-50,000 Tk.	20	20.0
	>50,000 Tk.	27	27.0
Types of Company	Bank	57	57.0
	FMCG (Fast Moving Consumer Goods)	18	18.0
	Readymade Garments	1	1.0
	Telecommunications	21	21.0
	Pharmaceutical and Health care	3	3.0
Preferred Super Shops in Bangladesh	Swapno	25	25.0
	Agora	35	35.0
	Meena Bazar	15	15.0
	Mostafa Mart	5	5.0
	UniMart	6	6.0
	Others	14	14.0
Shopping Frequency	Once in a month	35	35.0
	Twice in a month	35	35.0
	Thrice in a month	12	12.0
	More than that	18	18.0

Source: SPSS output

Table 6: Path coefficients and hypothesis testing

Hypotheses	Path	Coefficient	t-Statistics	P-Value	Decision
H1	Environmental Attitude → Green Purchase Intention	0.65	7.76	0.00	Supported
H2	Subjective Norm → Green Purchase Intention	-0.003	0.05	0.48	Not Supported
H3	Internal Perceived Behavioral Control → Green Purchase Intention	0.08	1.20	0.12	Not Supported
H4	External Perceived Behavioral Control → Green Purchase Intention	0.23	3.55	0.00	Supported
H5	Green Purchase Intention → Green Buying Behavior	0.61	6.50	0.00	Supported

Source: PLS-SEM output

Figure 3. Conceptual Model

Environmental attitude		
1	Environmental protection is important when making purchase packaged food products.	McCarty and Shrum (1994) and Tanner and Kast (2003)
2	Green (eco-friendly) packaging of food is important to reduce environmental damage.	
3	Green (eco-friendly) packaging of food is important to save the environment.	
4	If I can choose between green (eco-friendly) packaged food and normal food packaging, I prefer green packaged food.	
Subjective Norms		
1	People important to me think I should purchase green (eco-friendly) packaged food products.	Armitage et al. (1999)
2	People important to me would approve of my purchasing green (eco-friendly) packaged food products.	
3	People important to me want me to purchase green (eco-friendly) packaged food products.	
Internal Perceived Behavioral Control		
1	I believe I can purchase green (eco-friendly) packaged food products.	Armitage et al. (1999)
2	If it were entirely up to me, I am confident that I could purchase green (eco-friendly) packaged food products.	
3	How confident are you that you can purchase green (eco-friendly) packaged food products?	
4	To what extent do you see yourself as capable of purchasing green (eco-friendly) packaged food products?	
External Perceived Behavioral Control		
1	Whether or not I purchase green (eco-friendly) packaged food products is entirely up to me.	Armitage et al. (1999)
2	There are likely to be plenty of opportunities for me to purchase green (eco-friendly) packaged food products	
3	How much personal control do you feel you have over purchasing green (eco-friendly) packaged food products?	
4	How much do you feel that purchasing green (eco-friendly) packaged food products is within your control?	
Green Purchase Intention		
1	I will consider buying green (eco-friendly) packaged food products because they are less polluting in coming times.	Paul et al. (2016)
2	I will consider switching to environmentally friendly packaged food brands for ecological reasons.	
3	I plan to spend more on environment-friendly packaged food products rather than conventional products.	
4	I expect to purchase green (eco-friendly) packaged food product in the future because of its positive environmental contribution	
5	I definitely want to purchase green (eco-friendly) packaged food products in near future.	
Green Buying Behavior		
1	I do not use plastic/polystyrene food packaging in all possible ways.	Ahn et al. (2012)
2	I usually prefer to purchase green (eco-friendly) packaged food.	
3	If I have to buy food, I always purchase food sold in biodegradable packaging.	
4	I try to purchase green packaged food products with little and/or no environmental harm, even though they are more expensive.	
5	I always purchase biodegradable packaged food products.	
6	I always refrain from purchasing disposable packaged food products.	

Cesarean Section Delivery in Bangladesh

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Abstract

Cesarean deliveries (C-section) have continued to rise at an alarming rate in Bangladesh, a trend which may increase maternal health risks. The prevalence of C-section deliveries in an institutional setting has increased from 2.4% in 1999-2000, to 7.5% in 2007 and to 23% in 2014. This study finds that 15.3% of the C-section performed in 2014 were in the avoidable category. The bivariate analysis shows that the rate varied according to the age at first birth, division (region), place of residence, educational level, access to any media, household wealth quintile of the respondent, birth order, frequency of antenatal care visits, body mass index, and place of delivery. The analysis reveals that the rate of C-section delivery is substantially higher at private hospitals than at public facilities. Our results show that women with higher income households and higher education have a greater probability of a C-section childbirth. However, it is not only the demand side, but also the supply side issues such as the doctor's ethics or lack thereof, which may influence these trends and increase health risks for both the mother and child. These also result in an increased economic burden on the existing medical infrastructure of the country. The paper recommends creating a database for greater transparency, and other guidelines to regulate C-section deliveries in the country.

1 Introduction

Cesarean delivery (C-section) is a major surgical procedure which needs sound medical justification based on the maternal and child health. According to the World Health Organization (WHO), there is no logical justification for any country to have C-section deliveries exceeding 10% to 15% of total child births (Gibbons et al., 2010; WHO, 1985). However, less than 5% of deliveries by C-section in any population indicates a low antenatal and maternal care (WHO, UNFPA, UNICEF, Mailman School of Public Health, & AMDD, 2009). Anecdotal and empirical findings reveal that C-sections have become increasingly common in developing countries like Bangladesh. While 18.6% of all deliveries are currently performed by C-sections (Betrán et al.,

2016), according to the BDHS 2014 data, the rate is as high as 23% (National Institute of Population Research and Training (NIPORT), Mitra and Associates & ICF International, 2016). The 2016 data from the Bangladesh Maternal Mortality Survey (BMMS) reported the C-section delivery rate to be 31% (National Institute of Population Research and Training, MEASURE Evaluation & icddr, 2017). Although, C-section deliveries are rising in Bangladesh at a rapid level, not enough research is available to examine the factors, especially, demographic, socio-economic, and institutional causes that may explain this rise in the C-section procedures. There are gaps in the current literature as most studies are old and have generally ignored various aspects of the demand side of the equation. For example, trends and inequality aspects of C-section have not been explored in these studies. The high rates of C-section deliveries have at least two notable implications—an

increase in the pressure on hospital infrastructure (equipment and human resources), and high physical and psychological cost on the mother (increased risk of postnatal depression). Therefore, it is important to improve our understanding of these trends with the most recent data (Belizán, Althabe, & Cafferata, 2007; Torkan, Parsay, Lamyian, Kazemnejad, & Montazeri, 2009).

Historically, C-section delivery was associated with an improvement in maternal and prenatal health outcomes as a clinical practice to ensure safety of mother and child under conditions of obstetric risks (Roberts & Nippita, 2015). The prevalence of C-section follows the health care inequity pattern as underuse is found in low-income settings, and overuse in middle and high-income settings (Althabe et al., 2006; Betrán et al., 2007; Ronsmans, Holtz & Stanton, 2006). This is widely believed that, medical factors, and clinic managers' and physicians' financial interests also play an important role in determining the choice of C-section, although obstetricians deny this charge (Hasib, 2015). Concerns about high rates of C-section in private obstetric care settings exist in Bangladesh (Neuman et al., 2014; Rahman, Shariff, & Shafie, 2012). However, these factors also influence a provider's decision to perform both elective and emergency C-section in public hospitals in Bangladesh (Aminu, Utz, Halim, & van den Broek, 2014).

A 2015 study in northern Bangladesh showed that, having a previous C-section, higher educational level, prolonged labor, mother's age, a lower order of birth, height of the baby, and lack of a balanced diet are among the significant factors behind increased C-section delivery (M. Rahman, Shariff, Shafie, Saaid, & Tahir, 2015). Another study revealed the importance of residence, religion, birth order, frequent pregnancy, antenatal care-seeking and wealth as important predictors of medical facilities and C-sections in childbirth (Kamal, 2013). Thus the literature suggests that the main determinants of performing and utilizing C-section deliveries are: (a) medical condition -- *repeated Cesarean, presumed fetal distress, failure to progress, breech births, hypertensive disorders, antepartum hemorrhage, near birth complications, and postdate pregnancy* (Jabeen, Mansoor & Mansoor, 2013; Parliamentary Office of Science and Technology, 2002); (b) Non-medical factors, such as economic and socio-cultural factors, and (c) institutional factors for Cesarean deliveries.

In a developing country like Bangladesh, the determining factors for the increasing rate of C-section deliveries remain unclear. The existing studies suffer from a number of limitations too (Aminu et al., 2014; Kamal, 2013; Rahman et al., 2015; Rahman et al., 2018). For example, past studies have not considered income and wealth inequality aspects and have not used the most

recent data, and have not considered multiple factors responsible for C-section delivery (Aminu et al., 2014; Kamal, 2013; Rahman et al., 2015; Rahman et al., 2018). This paper explores the role played by education and wealth in the rising numbers of C-section deliveries in Bangladesh. Also, the paper explores the avoidable or non-emergency C-section rate in Bangladesh. Given the alarming increase of C-section deliveries in recent years, this study investigates this trend to identify factors associated with C-section delivery. Specific research questions are: (A) what are the trends in C-section delivery in Bangladesh over the last 10 years (2004-2014)? (B) Are demographic, socio-economic, and institutional factors largely responsible for the increasing rate of C-section delivery in Bangladesh? In addition, (C) How much of the rise in the Cesarean section rate can be explained by inequality and changes in household wealth index and educational attainment of mothers aged 15-49?

2 Data and methods

This study used data from the national cross-sectional survey of Bangladesh Demographic and Health Surveys from 1999-2000 to 2014 (National Institute of Population Research and Training - NIPORT), Mitra and Associates (MA), ICF International, & ORCM, 2001, 2005, 2009, 2013, 2016). For trend analysis, three data sets (1999-2000, 2007, and 2014) were used, whereas the BDHS 2014 data was used for multivariable analysis. The study analyzed 17,863 ever-married women aged 15-49 years, of which 4,904 had given birth at institutional settings in the three years preceding the survey.

Variables of the study

The key dependent variable in the study is the "mode of delivery" (normal deliveries and Cesarean delivery) during the last three years preceding the survey. Based on the literature, the "reasons for C-section" is also used as a dependent variable to address the unnecessary C-section delivery (Chen et al., 2018; Kingdon, Downe, & Betran, 2018a, 2018b; World Health Organization, 2018). We labelled two reasons given for C-section as unnecessary; one, surgery justified as convenience reasons, and, second, surgery to avoid the labor pain. The independent variables are: mother's age at marriage, mother's age at delivery, order of birth (primipara, multipara), place of antenatal care, place of delivery, body mass index (BMI) of women (current, if not available for delivery time), wealth index of household, educational attainment of women, husband's educational attainment, number of antenatal visits, number of visits by family planning workers for last six months, size of child at birth, number of living children, gender of all living children, mother's working status, region (division), place of residence,

access to media (TV, radio, newspaper or magazines), and religion of the mother.

Analytical Approach and Framework

Both bivariate and multivariate analysis were carried out to understand the factors behind C-section delivery. First, based on chi-square test we have selected variables for the multivariable analysis. Since the dependent variable is of dichotomous nature, multivariable logistic regression models are fitted to identify the socio-economic, demographic, institutional, and spatial determinants of C-section with the findings have been presented as odds ratios (OR) with 95% confidence intervals. A general formula of logistic regression is:

$$\log \left[\frac{y}{1-y} \right] = b_0 + b_1X_1 + b_2X_2 + b_3X_3 \dots + b_nX_n \quad (1)$$

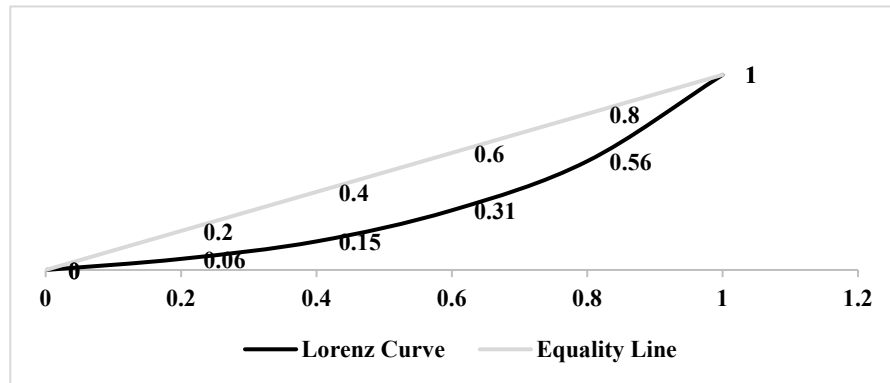
Here, $\frac{y}{1-y}$ is the log-likelihood, b_0 is the constant, b_1 to b_n

are the coefficients, and X_1 to X_n are the independent variables. In the first model, we used the socio-economic variables as independent variables. In the second model, we employed all demographic and institutional variables as independent variables. We combined both socio-economic and demographic and institutional variables as independent variables.

For assessing inequality, four methods of measurement are used; two of the methods were simply the ratio and the difference of C-section between two groups (e.g., C-section of educated women minus/divide C-section of non-educated), whereas the third is the Gini coefficient. If G is the Gini coefficient, A is the area between the diagonal and the Lorenz curve, and $A+B$ is the whole area under the diagonal of equality (see Figure 1 below):

$$G = \frac{A}{A+B} \quad (2)$$

Figure 1: Lorenz Curve of C-section by Wealth Quintile



Source: Lorenz curve was made using BDHS 2014 data

The final measure of inequality is the Concentration Index. If CI is the Concentration Index, d is the variable of concern (C-section), μ is average of C-section, and r is the fractional rank of C-section by income distribution (or other variable, e.g. education), then the Concentration Index can be defined as:

$$CI = \frac{2}{\mu} cov(dr) \quad (3)$$

Ethical statements

The Demographic and Health Survey (DHS) of Bangladesh was carried out under the provision of the National Institute of Population Research and Training (NIPORT) of the Ministry of Health and Family Welfare of Bangladesh. Mitra and Associates (a Bangladeshi

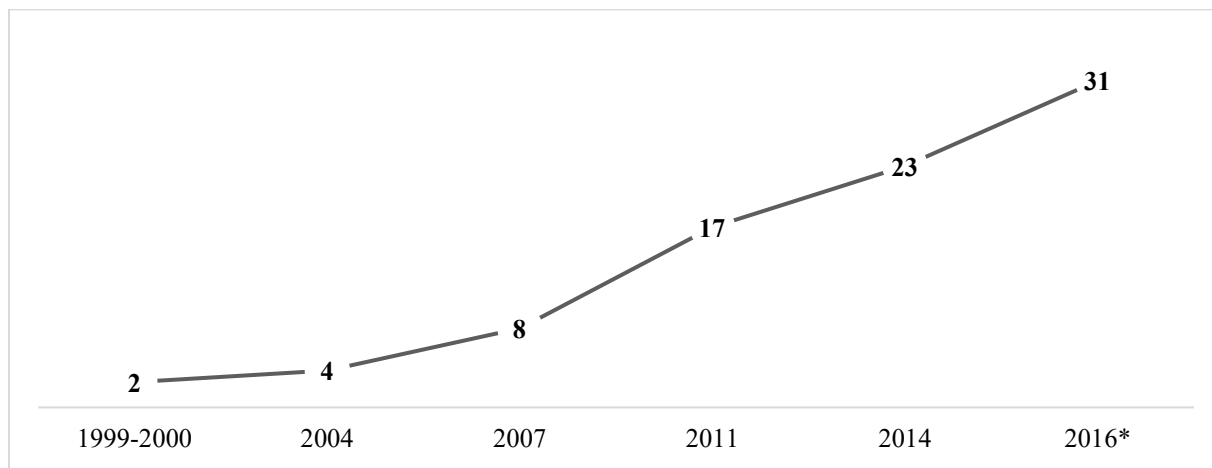
research firm) implemented the survey with technical assistance provided by ICF International of Calverton, Maryland, USA, as part of its international DHS Program (MEASURE DHS). An interview was conducted only if the respondent provided their consent (verbal). The permission for using the BDHS data set was received and is available from <https://dhsprogram.com/data>. The user instruction guidelines were strictly followed.

3 Trends of C-section delivery by demographic/socio-economic/institutional characteristics

The results from the latest 2014 *Bangladesh Demographic and Health Survey* (BDHS) show a dramatic increase in the number of C-section births in Bangladesh. C-section accounted for 2% of the childbirths in 1999-2000, 4% in 2004, 8% in 2007, and 17% in 2011, and 23% in 2014. These numbers imply that roughly five

in twenty births were delivered by C-section. According to the preliminary report of Bangladesh Maternal Mortality and Health Care Survey 2016, the rate now stands at 31%, which implies almost one in every three births in a health facility are delivered by C-section (see Figure 2).

Figure 2: Trends of the Rate of C-section in Bangladesh (1999-2000 to 2016)



Source: Analysis of BDHS 1999-2000 to 2014

* 2016 data was taken from the preliminary report of Bangladesh Maternal Mortality and Health Care Survey 2016.

According to descriptive statistics based on bivariate analysis in Table 1, Caesarian delivery is more common among relatively educated women. More than half of women with higher education had C-section in 2014, while only 8.3% of women with education delivered a child by this procedure. Husband’s education level also plays a similar role. In terms of employment of the women, 24.6% of those who experienced C-section are unemployed, while the figure is relatively lower (17.4%) for women employed. The prevalence of Cesarean delivery is the highest in Khulna division (33.1%), followed by Dhaka (29.1%), with Sylhet division is in the middle (11%). It is not surprising to find that C-section is more prevalent in urban areas (38.1%) than in rural areas (17.6%) according to the recent numbers. Women who

have access to media such as radio and television are three times more likely to experience this medical procedure compared to women who have little or no access to media outlets (30.7% vs. 10.5%).

These findings also reveal that C-section procedure is positively associated with a women’s weight as measured by the Body Mass Index (BMI). Among women who are underweight, the rate of occurrence of this procedure was only 13.4%. However, for obese women, the rate was much higher at 56%. Similarly, C-section rate was high for the first child’s birth (29.7%), followed by the birth of the second and third child. For later children, beyond three, the rate for this procedure falls to below 8%.

Table 1: Trends in C-section delivery by demographic and socio-economic characteristics

C-section by Background Characteristics	Attributes	Absolute percentage (%)			Changes in percentages point (%)	
		1999-2000	2007	2014	2014-1999	2014-2007
Demographic and institutional variables						
Age of women (year)	15-24	1.8	7.3	22.1	20.3	14.8
	25-34	3.2	8.1	23.9	20.7	15.8
	35-49	1.7	6.3	23.1	21.4	16.8
Age at first birth (year)	Adolescent (11-19)	1.4	4.7	17.3	15.9	12.6
	Others (20 +)	6.0	17.0	37.9	31.9	20.9
Number of living children	0	5.2	6.7	23.5	18.3	16.9
	1	4.5	13.7	30.6	26.1	16.9
	2	2.7	7.9	22.6	19.9	14.6
	3	1.2	3.6	15.8	14.6	12.2
	3+	0.6	1.8	6.0	5.4	4.2
Gender of living children	Male	4.2	12.0	26.9	22.7	14.9
	Female	1.8	6.0	20.9	19.1	14.9
Birth order number	1	4.4	12.7	29.7	25.3	17.0
	2	2.7	7.8	23.4	20.7	15.6
	3	1.5	4.2	17.6	16.1	13.5
	3+	0.7	2.2	7.8	7.1	5.6
Size of child at birth	Very large	5.7		19.8	14.1	19.8
	Larger than average	2.8		31.8	29.0	31.8
	Average	2.2		22.3	20.1	22.3
	Smaller than average	2.1		19.3	17.2	19.3
	Very small	2.6		23.3	20.7	23.3
Body Mass Index	Underweight	0.9	2.9	13.4	12.5	10.5
	Normal	2.8	7.5	21.2	18.4	13.8
	Overweight	14.0	26.7	40.0	26.0	13.4
	Obese	9.4	37.5	56.0	46.6	18.5
Visits by family planning worker for last six months	No	2.6	7.7	23.9	21.3	16.2
	Yes	1.9	7.0	19.7	17.8	12.8
Number of ANC visits	0	0.5	1.9	4.5	4.0	2.7
	1	1.5	3.4	13.3	11.8	9.9
	2	4.4	6.9	24.5	20.1	17.6
	3	3.6	10.7	31.2	27.6	20.4
	4	9.6	18.3	34.2	24.6	15.9
	4+	21.1	30.0	44.5	23.4	14.5
Place of delivery	Public Hospital	22.5	34.6	37.2	14.7	2.6
	Private Hospital	46.9	71.8	78.1	31.2	6.3
	Others	0.2	0.7	1.0	0.8	0.3

Socio-economic variables		(Table continued from the last page)				
Residence (Division) of the respondent	Barisal	0.5	3.9	17.7	17.1	13.6
	Chittagong	1.8	6.4	18.3	16.5	11.9
	Dhaka	3.4	10.1	29.1	25.7	19.1
	Khulna	4.1	9.7	33.0	29.0	23.4
	Rajshahi	1.5	6.4	22.3	20.8	15.9
	Rangpur			17.5	17.5	17.5
	Sylhet	1.8	4.4	10.9	9.2	6.6
Place of residence (urban/rural)	Urban	8.0	15.9	38.1	30.1	22.2
	Rural	1.3	5.4	17.6	16.3	12.2
Educational level	No education	0.6	1.1	7.0	6.4	5.8
	Primary	1.0	2.6	11.7	10.7	9.1
	Secondary	5.4	12.1	27.6	22.2	15.5
	Higher	20.9	36.3	54.8	33.9	18.5
Religion	Islam	2.3	7.2	22.8	20.5	15.5
	Others	3.1	11.0	24.3	21.2	13.3
Access to media (radio, TV, other)	No	0.6	3.3	10.5	9.9	7.1
	Yes	4.9	10.3	30.7	25.8	20.4
Wealth index of the household	Poorest	0.3	1.8	6.7	6.3	4.8
	Poorer	0.5	1.9	10.4	9.9	8.5
	Middle	0.8	3.3	18.5	17.7	15.1
	Richer	3.1	8.4	29.2	26.1	20.8
	Richest	11.9	25.7	51.4	39.5	25.7
Husband's education	No education	0.8	1.8	8.3	7.5	6.5
	Primary	0.7	3.3	14.8	14.1	11.5
	Secondary	3.8	11.3	28.2	24.4	16.9
	Higher	12.0	29.4	52.9	40.9	23.6
Employment status	No	2.5	8.3	24.6	22.1	16.3
	Yes	1.8	5.5	17.4	15.6	11.9
Total		2.4	7.5	22.9	20.5	15.3

Source: Analysis of BDHS 2014 data

C-section is more prevalent among relatively older women than younger. Roughly 38% of women who experienced C-section are 20 years or older. Caesarian delivery is more prevalent among women belonging to higher income households and less common among the poor households. According to the survey, 51.4% of women who underwent this procedure came from rich households, compared to only 6.3% with C-section from the poorest households in 2014. The highest change (31.9%) between BDHS 1999-2000 to 2014 was for mothers who gave birth to their first child at age 20 and older (Table 1).

According to Table 1, C-section birth is higher (44.5%) for those who reported making four or more visits to ANC. But for weight of the mother, there is no difference between those with normal delivery and those with C-section.

4 Determinants of C-section

Socio-economic factors:

The results of regression analysis based on the 2014 BDHS data are presented in Table 1. The results for Model 1 (socio-economic variables) and Model 3 (combination of socio-economic, demographic, and

institutional variables) show that C-section procedure is more prevalent among relatively richer households. The odds of C-section procedure for women who belong to the richest households is 4.6 times greater than women belonging to the poorest households. Similarly, educated women have a 2.77 times higher probability of C-section deliveries than uneducated women. The wives of uneducated husbands are 2 times more likely to have this procedure than the wives of educated husbands.

Although, not found significant in our final model, column 4 of Table 2 also reveals that compared to rural households, C-section delivery is more prevalent among urban households (Adjusted Odds Ratio - 1.14), although this finding is not statistically significant. C-section delivery is 35% more likely for women who are unemployed compared to working women.

Both descriptive and econometric analysis suggest that the likelihood of caesarian delivery varies significantly across different parts of the country. The rate of C-section was lowest in Sylhet division, and significantly higher in Khulna, Rajshahi, and Rangpur division.

Demographic factors and Institutional factors:

Our estimates of Model 2 and Model 3 reveal that C-section delivery is higher among women who have given

birth at a relatively old age compared to those between 11 to 19 years (adolescent); women who had their first child at age 20 or older have higher odds for a Cesarean procedure.

Although not found as significant in the final specification, in column 4 of Table 2, the dummy variable for capturing the death of a child has a significantly positive coefficient. A similar finding was also revealed by several living children. Our result reflects that compared to a mother with no living child, a mother with three or more living children is more likely to undergo a C-section delivery.

Given these results, the size of the child at birth appears to have no effect on C-section delivery; this is reflected in the descriptive statistics (Table 1). C-section delivery is more likely among women with higher Body Mass Index (BMI). It is plausible to expect that with an increased number of ANC visits, the likelihood of C-section delivery increases. However, visits by family planning workers is negatively associated with C-section delivery. The odds ratio of most variables decreased in the final model. For example, compared to the poorest women, the richest women are 3.7 times more likely to have C-section in Model 1, which declined to 3.1 times in the final model. It is likely an adjusted model will provide a more accurate relationship.

Table 2: Determinants/factors affecting C-section delivery in Bangladesh

Variables	Model 1: Socio-economic	Model 2: Demographic and Institutional	Model 3: Combined
	Odds Ratio (95% C.I.)	Odds Ratio (95% C.I.)	Odds Ratio (95% C.I.)
Wealth index (Ref: Poorest)			
Poorer	1.263 (0.909-1.756)		1.121 (0.795-1.579)
Middle	1.832*** (1.327-2.582)		1.521* (1.088-2.127)
Richer	2.774*** (2.004-3.838)		2.026*** (1.441-2.847)
Richest	4.690*** (3.307-6.652)		3.125*** (2.162-4.517)
Education of respondent (Ref: No)			
Primary	1.484* (1.040-2.117)		1.210 (0.831-1.762)
Secondary	2.344*** (1.656-3.318)		1.666** (1.152-2.410)
Higher	2.767*** (1.823-4.202)		1.743** (1.113-2.728)
Division (Ref: Sylhet)			
Chittagong	1.512 (0.944-2.422)		1.521 (0.928-2.493)
Dhaka	1.175 (0.820-1.685)		1.195 (0.814-1.752)
Khulna	2.487*** (1.769-3.498)		2.348*** (1.634-3.373)
Rajshahi	3.464*** (2.321-5.169)		2.822*** (1.854-4.295)
Rangpur	2.282*** (1.527-3.412)		2.130*** (1.390-3.263)
Barisal	1.586* (1.044-2.410)		1.268 (0.816-1.969)

Place of residence (Ref: Rural)		(Table continued from the last page)	
Urban	1.276** (1.062-1.533)		1.138 (0.938-1.380)
Religion (Ref: Islam)			
Other	1.167 (0.881-1.545)		1.219 (0.909-1.634)
Access to any mass media (Ref: No)			
Yes	1.081 (0.873-1.339)		0.970 (0.775-1.214)
Husband's education (Ref: No)			
Primary	1.251 (0.950-1.646)		1.070 (0.805-1.423)
Secondary	1.649*** (1.250-2.174)		1.354* (1.014-1.809)
Higher	2.565*** (1.847-3.561)		2.085*** (1.476-2.945)
Working status of respondent (Ref: Yes)			
No	1.406*** (1.158-1.706)		1.355** (1.104-1.663)
Age at first birth (Ref: 11-19 years)			
20 and Above (year)		1.953*** (1.648-2.314)	1.790*** (1.495-2.142)
Number of living children (Ref: 0)			
1		0.974 (0.454-2.089)	0.959 (0.430-2.136)
2		0.628 (0.293-1.349)	0.690 (0.309-1.543)
3		0.457* (0.209-0.997)	0.688 (0.302-1.568)
3+		0.231*** (0.101-0.529)	0.396* (0.165-0.951)
Ever experience the death of any children (Ref: No)			
Yes		0.655** (0.502-0.854)	0.901 (0.682-1.190)
Size of a child at birth (Ref: Very large)			
Larger than average		1.448 (0.824-2.546)	1.379 (0.763-2.493)
Average		1.001 (0.587-1.706)	0.859 (0.491-1.503)
Smaller than average		1.030 (0.582-1.823)	0.975 (0.536-1.772)
Very small		1.173 (0.645-2.131)	1.088 (0.579-2.042)
Number of ANC visits (Ref: 0)			
1		3.587*** (2.491-5.167)	3.019*** (2.071-4.402)
2		6.687*** (4.720-9.473)	5.121*** (3.566-7.354)
3		8.922*** (6.280-12.675)	6.538*** (4.538-9.420)
4		10.523*** (7.329-15.108)	6.123*** (4.183-8.961)
4+		13.986*** (10.037-19.48)	7.698*** (5.430-10.912)
Body Mass Index of women (Ref: Underweight)			
Normal		1.513*** (1.233-1.855)	1.161 (0.934-1.444)
Overweight		3.755*** (2.924-4.823)	1.932*** (1.469-2.541)
Obese		5.135*** (3.296-8.000)	2.343*** (1.453-3.777)
Visits by family planning workers (Ref: Yes)			
No		1.372*** (1.150-1.638)	1.290** (1.069-1.556)
Constant	0.012***	0.032***	0.006***
Level of significance * = $p \leq 0.05$, ** = $p \leq 0.01$ and *** = $p \leq 0.001$			

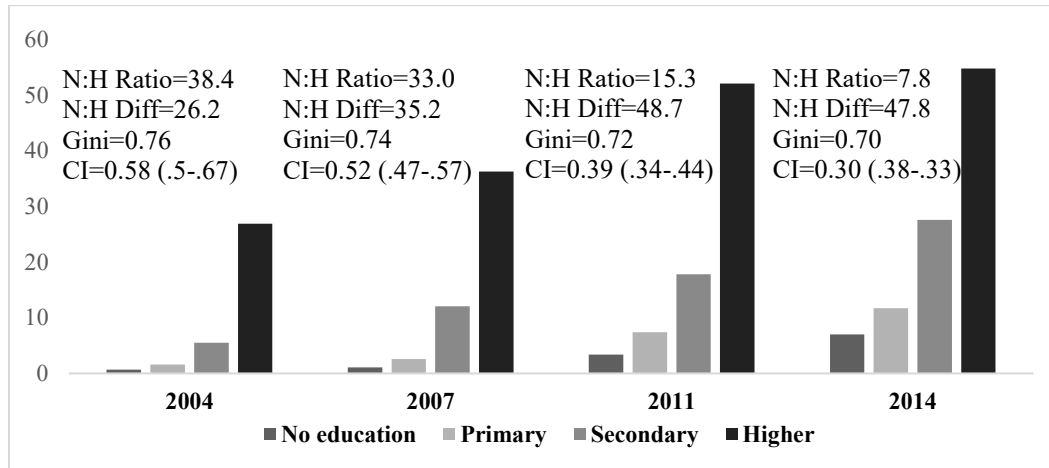
Source: Analysis of BDHS 2014 data

5 Inequalities in C-section in Bangladesh

Though inequalities in C-section is decreasing, Figures 3 and 4 reveal that there still exists a large gap between rich and poor households, and between educated and

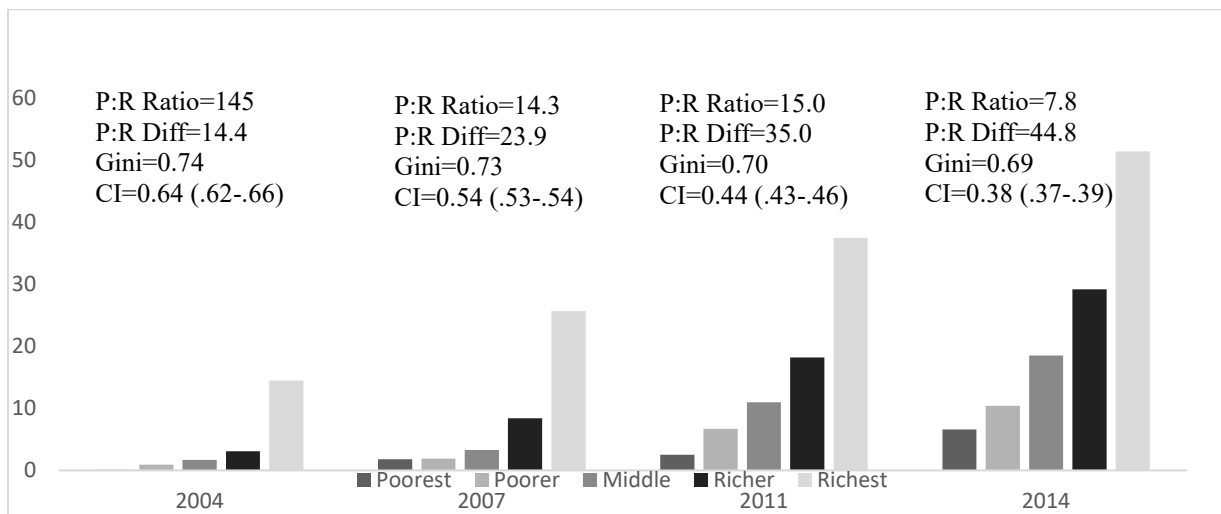
non-educated households with the prevalence of C-section delivery of a child. However, due to increased access to maternal health care in recent years, these inequalities may be declining

Figure 3: Trends and Inequalities of C-section by Education Level



Note: N:H=No education: Higher education, Diff=Difference, Gini=Gini Coefficient, CI=Concentration Index
 Source: Analysis of BDHS 2014 data

Figure 4: Trends and Inequalities of C-section by Wealth Index

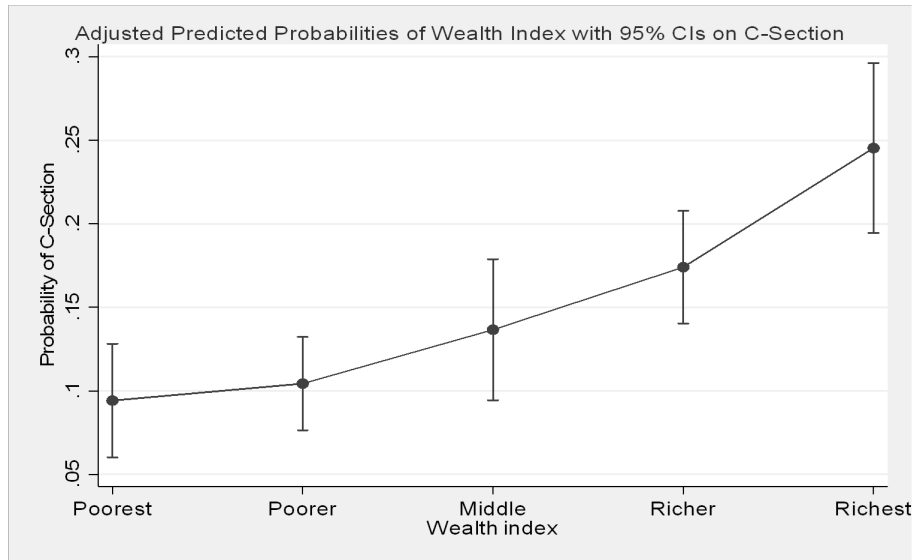


Note: P:R=Poorest: Richest, Diff=Difference, Gini=Gini Coefficient, CI=Concentration Index
 Source: Analysis of BDHS 2014 data

6 The marginal impact of wealth and education on C-section

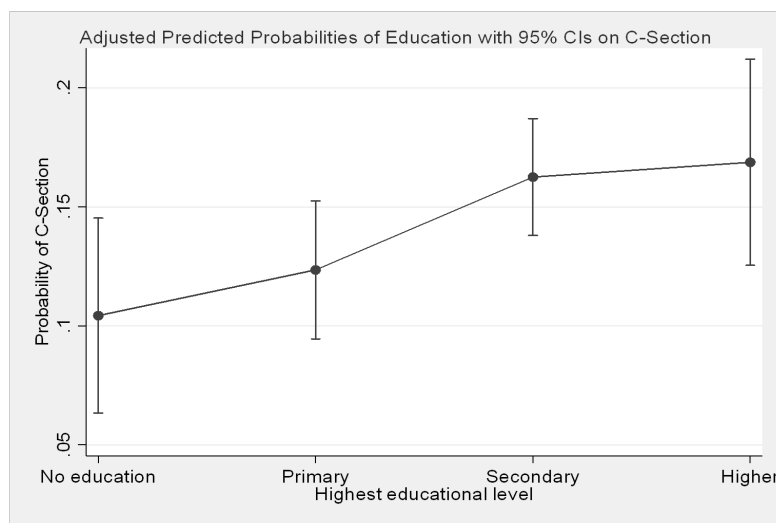
Predicted probabilities of C-section from the regression model (column 4 of Table 2) are plotted in Figure 5. These show that belonging to households not among the poorest have a higher probability of C-section. Figure 6 shows that mothers belonging to the educated category have a higher probability of C-section.

Figure 5: The probability of C-section by wealth (final model)



Source: Analysis of BDHS 2014 data

Figure 6: The probability of C-section by women’s education (final model)



Source: Analysis of BDHS 2014 data

7 The avoidable C-section by wealth and education in Bangladesh

Table 3 illustrates two major reasons for choosing C-section delivery in Bangladesh. Bivariate analysis in Table 3 shows that 9.4% of C-section were due to convenience and a perception of lower risk. The incidence was 13.4% among educated women and 11%

among women from rich households. The table reveals that 6.8% chose C-section to avoid labor pain. Excluding the convenience and the pain factor, we find the “avoidable” C-section in Bangladesh was 15.1% in 2014. We find that 28.6% of the requests for C-section came from the mother or their family, while the rest came from the physicians.

Table 3: Avoidable C-section delivery by education and wealth in Bangladesh, 2014

Background	Convenience (%)	Sig. of χ^2	Avoid labor pain (%)	Sig. of χ^2	Total Avoidable C-section (%)	Sig. of χ^2
Educational attainment		0.044		0.000		0.000
No education	7.5		3.8		13.2	
Primary	5.8		2.9		8.8	
Secondary	8.8		5.7		13.8	
Higher	13.4		12.7		22.4	
Wealth index		0.033		0.013		0.001
Poorest	3.8		3.8		7.5	
Poorer	5.9		3.0		8.9	
Middle	5.9		4.3		10.1	
Richer	11.5		5.7		14.8	
Richest	11.1		9.7		19.6	
Total	9.4		6.8		15.1	

Source: Analysis of BDHS 2014 data

8 Discussions and conclusions

This empirical study explores the rising trends in C-section delivery as a medical procedure in Bangladesh in recent years. Our research reveals that the rate of this medical procedure varies with age, place of birth, educational level, access to media, and household wealth quintile of the mother. The rate also depends on the frequency of antenatal care visits, mother’s body mass index (weight), size of the child at birth, and the place of delivery. Our analysis finds that the rate of increase in C-section delivery is higher at private hospitals than at public hospitals. These findings are similar to previous studies (Aminu et al., 2014; Kamal, 2013; Rahman et al., 2012). The results from bivariate analysis show that among women receiving institutional antenatal care, those with higher education, residents of Khulna division, those belonging to the richest households, and finally women living in urban areas, experience a higher rate of C-section delivery. These findings are similar to what we know from the existing literature on Bangladesh and other developing countries (Althabe et al., 2006; Aminu et al., 2014; Betrán

et al., 2007; Kamal, 2013; M. Rahman et al., 2012; Roberts & Nippita, 2015; Ronsmans et al., 2006). Finally, our study also finds that the prevalence of C-section delivery rises with the increased availability of maternity services.

Among socio-economic factors, mothers living in Khulna/Dhaka (Model 1, Model 3), residing in urban areas (Model 1, Model 3), having higher education (Model 1, Model 3), being in wealthier quintile of households (Model 1, Model 3) and four or more visits to the doctor during pregnancy (Model 2, Model 3) are more likely to experience delivery by C section. For Sylhet, although, the region is relatively affluent, it is also relatively “conservative” with a traditional socio-cultural outlook that may favor avoiding surgery. The value of CI and Gini coefficient reflects higher disparities between the poorest and the richest households, and between illiterate and literate women. The marginal impact of the richest wealth quintile of households and educated mothers likely to have more C-sections.

Using multivariate analysis, this study unearths new and often contradictory findings on the relationship between ANC visits and C-section delivery, and between visits by the FP (Family Planning) social workers and C-section delivery. We find that an increased number of ANC visits increases the likelihood of C-section delivery, but visits by family planning workers decreases the likelihood. Institutional coverage such as ANC home visits are likely to detect complicated pregnancies before delivery, which may lead to C-section birth instead of normal delivery. However, home visits by family planning workers lead to a decrease in the frequency of C-sections.

The study highlights two major reasons for preference for C-section delivery in Bangladesh - convenience factor and avoiding labor pain. Both of these factors may be considered “unnecessary and avoidable.” Higher educated and wealthy mothers prefer C-section primarily to avoid labor pain, and they feel C-section delivery is more convenient compared to the natural method of child delivery. These factors have led to a steady rise in maternal demand for C-section procedure, which are often unnecessary and avoidable. These two factors alone contribute 15.1% to the total number of C-section deliveries in 2014.

The World Health Organization (WHO) reported that 6.2 million unnecessary C-sections were performed worldwide in 2008. These have a significant negative implications for health equity in a country (Gibbons et al., 2010). The study also identifies that 28.6% of the requests for C-sections came from pregnant mother or her family, while the rest (71.4%) was based on the doctor’s recommendation. If we control for the requests from the mother and the families, the rate of C-section delivery in Bangladesh (16.4%) is still considered an “overuse” of this medical procedure. According to the WHO categories, if the rate of avoidable surgeries is 15% or more, this would be an overuse which bring into question the ethical role played by the attending doctor in these worrisome trends (Gibbons et al., 2010; WHO, 1985).

High rates of C-section deliveries have severe implications on health sector resources and on the mother’s health. This procedure burdens the hospital infrastructure (equipment, space, doctors, and nurses) and adds to the physical and psychological cost on the mother undergoing the surgery. We recommend that policy measures should be enforced to reduce the incidence of unnecessary C-section surgeries in Bangladesh. Reducing the rate of increase in C-section deliveries and reversing these trends, especially in private hospitals/clinics, should be considered an urgent health issue by the healthcare leaders and policymakers. Here it can be argued that demand from mothers for the surgery may not be the

actual reason for C-section. An increase in the inclusion of trained midwives during childbirth may lead to a reduction in C-section deliveries. Last but not the least, the ethical behavior of the attending physician must also be reviewed. Following the United Nations SDG-3 (3.1, 3.7 and 3.8), the Government of Bangladesh should develop specific guidelines and measures, including promoting health education for women of reproductive age to reverse these trends. Women of reproductive age should be educated on how to reduce obesity and lead active healthy living, which leads to lower complications and more normal deliveries.

While interpreting these results, we should note that to confirm these findings, further qualitative research is called for. Given the paucity of data, including information on whether a previous pregnancy was terminated, history of past C-section delivery, cost of delivery, service provider aspects, etc. were not included in our models. Future research should explore why urban, educated, and wealthy mothers prefer C-section, and if the attending physicians and for-profit private facilities specifically target women with these characteristics for higher profits.

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References

- Althabe, F., Sosa, C., Belizán, J. M., Gibbons, L., Jacquerioz, F., & Bergel, E. (2006). Cesarean section rates and maternal and neonatal mortality in low-, medium-, and high-income countries: An ecological study. *Birth*, 33(4), 270-277. doi:10.1111/j.1523-536X.2006.00118.x
- Aminu, M., Utz, B., Halim, A., & van den Broek, N. (2014). Reasons for performing a caesarean section in public hospitals in rural Bangladesh. *BMC Pregnancy and Childbirth*, 14, 130. doi:10.1186/1471-2393-14-130
- Belizán, J. M., Althabe, F., & Cafferata, M. L. (2007). Health consequences of the increasing caesarean section rates. *Epidemiology*, 18(4), 485-486. doi:10.1097/EDE.0b013e318068646a
- Betrán, Ana P., Merialdi, M., Lauer, J. A., Bing-Shun, W., Thomas, J., Van Look, P., & Wagner, M. (2007).

- Rates of caesarean section: Analysis of global, regional and national estimates. *Paediatric and Perinatal Epidemiology*, 21(2), 98-113. doi:10.1111/j.1365-3016.2007.00786.x
- Betrán, Ana Pilar, Ye, J., Moller, A. B., Zhang, J., Gülmezoglu, A. M., & Torloni, M. R. (2016). The increasing trend in caesarean section rates: Global, regional and national estimates: 1990-2014. *PLOS ONE*, 11(2), 1-12. doi:10.1371/journal.pone.0148343
- Chen, I., Opiyo, N., Tavender, E., Mortazhejri, S., Rader, T., Petkovic, J., Betran, A. P. (2018). Non-clinical interventions for reducing unnecessary caesarean section. *Cochrane Database of Systematic Reviews*, (9). doi:10.1002/14651858.CD005528.pub3
- Gibbons, L., Belizán, J., Lauer, J., Betrán, A., Merialdi, M., & Althabe, F. (2010). The global numbers and costs of additionally needed and unnecessary caesarean sections performed per year: Overuse as a barrier to universal coverage. *World Health Report 2010*. Retrieved from: <http://www.who.int/healthsystems/topics/financing/healthreport/30C-sectioncosts.pdf>
- Hasib, Nurul, I. (2015, April 26). DHS points to abnormal rise of C-section in Bangladesh - bdnews24.com. *Bdnews24.Com*. Retrieved from <https://bdnews24.com/health/2015/04/26/dhs-points-to-abnormal-rise-of-c-section-in-bangladesh>
- Jabeen, J., Mansoor, M. H., & Mansoor, A. (2013). Analysis of indications of caesarean sections. *Journal of Rawalpindi Medical College*, 17(1), 101-103. Retrieved from: <https://www.journalrmc.com/jrmc/volumes/1395214345.pdf>
- Kingdon, C., Downe, S., & Betran, A. P. (2018a). Non-clinical interventions to reduce unnecessary caesarean section targeted at organisations, facilities and systems: Systematic review of qualitative studies. *PLOS ONE*, 13(9), e0203274. doi:10.1371/journal.pone.0203274
- Kingdon, C., Downe, S., & Betran, A. P. (2018b). Women's and communities' views of targeted educational interventions to reduce unnecessary caesarean section: a qualitative evidence synthesis. *Reproductive Health*, 15(1), 130. doi:10.1186/s12978-018-0570-z
- Mostafa Kamal, S. M. (2013). Preference for institutional delivery and caesarean sections in Bangladesh. *Journal of Health, Population and Nutrition*, 31(1), 96-109. doi:10.3329/jhpn.v31i1.14754
- National Institute of Population Research and Training (NIPORT), Mitra and Associates (MA), & ORC Macro (ORCM). 2001. *Bangladesh demographic and health survey 1999-2000*. Dhaka, Bangladesh and Calverton, Maryland [USA]: National Institute of Population Research and Training, Mitra and Associates, and ORC Macro. Retrieved from <https://dhsprogram.com/pubs/pdf/FR119/FR119.pdf>
- National Institute of Population Research and Training (NIPORT), Mitra and Associates, & ORC Macro. 2005. *Bangladesh demographic and health survey 2004*. Dhaka, Bangladesh and Calverton, Maryland [USA]: National Institute of Population Research and Training, Mitra and Associates, and ORC Macro. Retrieved from: <http://dhsprogram.com/publications/publication-FR165-DHS-Final-Reports.cfm>
- National Institute of Population Research and Training (NIPORT), Mitra and Associates, & Macro International. (2009). *Bangladesh demographic and health survey 2007*. Dhaka, Bangladesh and Calverton, Maryland, USA: National Institute of Population Research and Training, Mitra and Associates, and Macro International. Retrieved from: <http://dhsprogram.com/publications/publication-FR207-DHS-Final-Reports.cfm>
- National Institute of Population Research and Training (NIPORT), Mitra and Associates, & ICF International (2013). *Bangladesh Demographic and Health Survey 2011*. Dhaka, Bangladesh and Calverton, Maryland, USA: NIPORT, Mitra and Associates, and ICF International. Retrieved from: <http://dhsprogram.com/publications/publication-FR265-DHS-Final-Reports.cfm>
- National Institute of Population Research and Training (NIPORT), Mitra and Associates, & ICF International. (2016). *Bangladesh Demographic and Health Survey 2014*. Dhaka, Bangladesh and Calverton, Maryland, USA: NIPORT, Mitra and Associates, and ICF International. Retrieved from: <http://dhsprogram.com/publications/publication-FR311-DHS-Final-Reports.cfm>
- Neuman, M., Alcock, G., Azad, K., Kuddus, A., Osrin, D., Shah More, N., & Prost, A. (2014). Prevalence and determinants of caesarean section in private and public health facilities in underserved South Asian communities: Cross-sectional analysis of data from Bangladesh, India and Nepal. *BMJ Open*, 4(12). doi:10.1136/bmjopen-2014-005982

- NIPORT, MEASURE Evaluation, & icddr. (2017). *Bangladesh Maternal Mortality and Health Care Survey 2016*. Retrieved from: http://www.niport.gov.bd/document/notice/BMMS_2016_Summary_Bangla_and_English.pdf
- Parliamentary Office of Science and Technology. (2002). Caesarean Sections. *Postnote*, (184), 1-4. doi:10.1136/bmj.324.7343.983/a
- Rahman, M. M., Haider, M. R., Moinuddin, M., Rahman, A. E., Ahmed, S., & Mahmud Khan, M. (2018). Determinants of caesarean section in Bangladesh: Cross-sectional analysis of Bangladesh demographic and health survey 2014 data. *PLOS ONE*, 13, 1-14. <https://doi.org/10.1371/journal.pone.0202879>
- Rahman, M., Shariff, A. A., & Shafie, A. (2012). Caesarean risk factors in northern region of Bangladesh: A statistical analysis. *Tropical Journal of Pharmaceutical Research*, 11(5), 823-833.
- Rahman, M., Shariff, A. A., Shafie, A., Saaid, R., & Tahir, R. M. (2015). Caesarean delivery and its correlates in Northern Region of Bangladesh: Application of logistic regression and Cox proportional hazard model. *Journal of Health, Population and Nutrition*, 33(1). doi: 10.1186/s41043-015-0020-2
- Roberts, C. L., & Nippita, T. A. (2015). International caesarean section rates: The rising tide. *The Lancet Global Health*, 3(5), 241-242. doi:10.1016/S2214-109X(15)70111-7
- Ronsmans, C., Holtz, S., & Stanton, C. (2006). Socioeconomic differentials in caesarean rates in developing countries: a retrospective analysis. *Lancet*, 368(9546), 1516-1523. doi:10.1016/S0140-6736(06)69639-6
- Torkan, B., Parsay, S., Lamyian, M., Kazemnejad, A., & Montazeri, A. (2009). Postnatal quality of life in women after normal vaginal delivery and caesarean section. *BMC Pregnancy and Childbirth*, 9, 4. doi:10.1186/1471-2393-9-4.
- WHO. (1985). Appropriate technology for birth. *Lancet*, 2, 436-437. doi:10.1016/S0140-6736(85)90673-7
- WHO. (2018). *WHO recommendations: Non-clinical interventions to reduce unnecessary caesarean sections*. Retrieved from: <http://apps.who.int/iris/bitstream/handle/10665/275377/9789241550338-eng.pdf?ua=1>
- WHO, UNFPA, UNICEF, Mailman School of Public Health, & AMDD. (2009). *Monitoring emergency obstetric care : A Handbook*. Retrieved from: <http://www.who.int/reproductivehealth/publications/monitoring/9789241547734/en/>

Bangladesh of the Future: Prospects and Challenges

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Abstract

At the time of its independence, some experts called Bangladesh a “test case of development.” Defying the challenge implied by this characterization, Bangladesh has attained remarkable progress in the past decades, becoming a middle-income country with significant social achievements. The nation has bright prospects over the next thirty years, favored by factors such as political stability, homogeneity of the population, compactness of settlement, demographic bonus, a dynamic entrepreneurial class, a culture that places a high premium on education, a large diaspora, and the proximity to India, China, and the ASEAN countries. However, Bangladesh also faces many challenges in realizing the full potential of these factors. The challenges include raising the efficiency of public investment, strengthening local government, achieving greater equity and social cohesion, reducing corruption, protecting the environment, and ensuring political inclusion. The young generation, imbued by patriotism, confidence, and enthusiasm should be able to carry Bangladesh to greater success.

1 Introduction

Bangladesh has come a long way since winning independence in 1971. At its inception, the nation experienced a duality in its circumstances and prospects. On the one hand, there were tremendous hope and aspirations. The independence was achieved through the victory in a glorious Liberation War, which generated a tidal wave of expectations, energy, and enthusiasm. On the other hand, there was the sober reality of an economy with low per capita income, a large and rapidly growing population, and an undeveloped infrastructure, further diminished from the severe damage during the war.

Soon after the Liberation, and before the process of rehabilitation and reconstruction was complete, the country was thrown into a crisis by a military coup on August 15, 1975, which changed the direction of the country, placing the administration under a military and quasi-military rule. Bangladesh took many years to restore civilian rule and reassert its political identity.

Over time, Bangladesh has made significant progress in economic growth and social progress. It has moved from the ranks of “Low Income” countries to that of “Lower Middle Income” countries, surpassing Pakistan in per capita income. Further, it has surpassed India in many health and social indicators, including life expectancy and gender parity. The country has achieved self-sufficiency in food. It has emerged as the second largest exporter (after China) of ready-made garments in the world. The country is manufacturing many household appliances,

including refrigerators and air-conditioners and is poised to manufacture cars. It is building ships and exporting them to developed countries.

Encouraged by this progress, the government has declared the goal of making Bangladesh a high-income country by 2041. Bangladesh indeed has the potential to make further progress in the coming decades. The favorable factors include: (i) political stability, (ii) homogeneity of the population, (iii) physical compactness of settlement, (iv) the emergence of a dynamic entrepreneurial class, (v) “demographic bonus”, (vi) a culture that puts high premium on education, (vii) a large diaspora, (viii) access to sea, (ix) and proximity to India, China, and the ASEAN countries.

However, Bangladesh faces many challenges in taking full advantage of these favorable factors. The challenges include: (i) raising efficiency of public investment, (ii) strengthening local government, (iii) achieving greater equity and social cohesion, (iv) protecting the environment, and (v) ensuring political inclusion. The progress the country makes in the next thirty years will depend largely on its success in meeting these challenges.

The rest of the paper is organized as follows. Section 2 briefly reviews the progress Bangladesh has made since independence. Section 3 reviews the factors favorable to Bangladesh’s growth and development in the coming decades. Section 4 discusses the challenges that Bangladesh faces in taking advantage of these favorable factors. Section 5 offers concluding remarks.

2 Significant achievements in economic growth and social development

At the time of its independence in 1971, some experts characterized Bangladesh as the “test case of development,” implying that if development was possible in Bangladesh, it would be possible anywhere in the world.¹ Former US Secretary of State, Henry Kissinger, is alleged to have described Bangladesh as a “bottomless basket” during those early years.²

However, defying these pessimistic and pejorative characterizations, Bangladesh has achieved remarkable progress since independence. From a Low-Income country, it has become a Middle-Income country. It is in the process of graduating from the UN category of Least Developed Countries (LDCs). The country’s growth rate increased to 8.13 percent in 2018-19. Its foreign currency reserves now exceed 30 billion US dollars. It has financed large infrastructure projects, such as the Padma Bridge, out of its own resources. It has a flourishing pharmaceutical industry, which now exports medicine even to the USA. The following briefly reviews the progress that Bangladesh has made.³

Virtuous cycle among labor-intensive export, remittances, construction, and service sector growth

Bangladesh has done well in utilizing its ample, low-cost labor in several ways. The first is in developing a labor-intensive manufacturing industry for exports. Bangladesh is the second largest exporter (after China) of ready-made garments in the world. Its manufacturing capability has now extended to many consumer durables, such as refrigerators and motor bikes. It is about to graduate from car assembly to car manufacturing. It is building ships for export to developed countries. It is becoming a hub for producing labor-intensive electronics. Second, Bangladesh has a booming construction sector, which is labor-intensive with strong forward and backward linkages. Third, Bangladesh has succeeded in exporting labor directly for overseas employment, most notably in the Middle East. This has resulted in significant remittance earnings, which have a strong multiplier effect on the economy. The augmentation of domestic demand

by remittances helped the growth of industry, housing, and services. The remittances enable the flow of capital to small investors and entrepreneurs. The success in increasing exports and capturing remittance earnings has been the main source of Bangladesh’s significant foreign currency reserves.

Progress in agriculture

Another process, which has contributed to Bangladesh’s recent economic progress, is the growth of the agriculture sector. Government policies played an important role in this regard, ensuring the supply of modern inputs such as tube-well irrigation, chemical fertilizers, and pesticides. Once a severely food-deficit country, Bangladesh is now self-sufficient in food, despite the increase in population from 75 million in 1971 to about 165 million in 2019. Government policies have also helped the expansion of farm poultry and fisheries. Bangladesh is now the second largest producer of freshwater fish in the world. The technological foundation for the agriculture sector has changed, with machines replacing muscle power in tilling, irrigating, threshing, milling, crushing, and plying of boats and carriages, etc. Thus, the process of industrialization is not limited to industry and urban areas; it has spread to rural areas and agriculture.

Impressive social development

Alongside economic growth, Bangladesh has made impressive gains in the social and health sectors. The life expectancy at birth has risen from 42 years in 1971 to more than 70 years in 2019. Bangladesh has received global recognition for its success in achieving the Millennium Development Goals (MDGs), particularly in raising school enrolment rates, decreasing the gender gap in schooling, and reducing child and maternal mortality rates. Bangladesh has also achieved progress in sanitation and access to clean drinking water. Dramatic changes have occurred in tertiary education with the emergence of hundreds of new universities and other educational institutions, mostly in the private sector. Bangladesh is ahead of many developing countries in the penetration of mobile phones, internet connections, and various platform-based digital services.

¹ See Faaland and Parkinson (1976). See Nazrul Islam (1984) for a discussion of the views of Faaland and Parkinson and other scholars expressed during the 1970s on the prospects of Bangladesh.

² See *Financial Express*, Saturday, May 11, 2013.

³ For detailed data and information, see CPD (2018), IMF (2019) and World Bank (2019a).

The growth of the ready-made garments manufacturing sector, employing roughly four million women, has played a major role in “liberating” women in Bangladesh in recent decades. Non-government organizations (NGOs), including various micro-lending agencies, played an important role in Bangladesh’s social achievements. By focusing on women, the Grameen Bank, BRAC, and other micro-financing organizations have helped women emerge from the confines of their homes and assume a more active role in the economy and society. The government’s policies to employ women in public sector jobs, including police and military, have also played a significant role.

Comparison with Pakistan and India

Bangladesh’s success in economic growth and social development becomes more prominent when compared

with Pakistan and India. Table 1 presents data on the GDP, life expectancy, gender parity, and Human Development Index (HDI) for these neighboring countries (Figures 1a, 1b, and 1c provide the same information). The graphs show that by 2017 Bangladesh surpassed Pakistan in terms of per capita GDP. Its life expectancy at birth was six years higher than that of Pakistan. Bangladesh was ranked higher than Pakistan on gender parity and the Human Development Index (HDI). These rankings are instructive since Bangladesh was economically exploited by Pakistan for several decades before it gained independence. The fact that Bangladesh successfully emerged from the damages of semi-colonial exploitation and the disruption caused by the Liberation War to overtake Pakistan in social and economic progress validates the fundamental argument for its independence movement.

Table 1: Comparative performance of Bangladesh, Pakistan, and India

Item	Year	Bangladesh	Pakistan	India
GDP per capita (\$)	2017	1,588	1,548	2,009
Life expectancy (year)	2016	72.49	66.48	68.56
Gender ranking	2018	48	148	108
HDI	2017	0.608	0.562	0.640

Source: Author, based on data from World Bank (2019b) and UNDP (2019)

Table 1 further shows that Bangladesh has done well relative to India, the largest country in South Asia and one of the fastest growing economies in the world. Bangladesh is close to India in terms of per capita GDP and has surpassed both India and Pakistan by at least four years in terms of life expectancy at birth. Bangladesh is also far ahead of India in terms of gender parity.

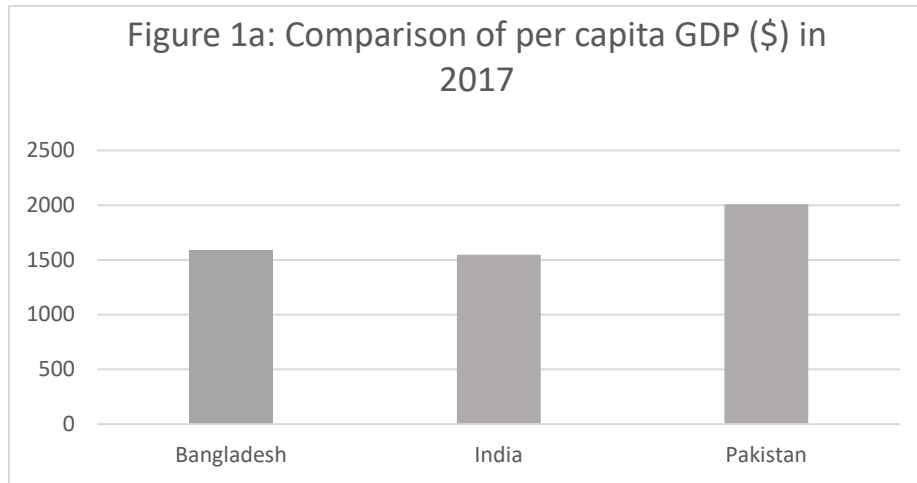
This review shows that Bangladesh has made remarkable progress in recent decades as measured by many economic and social indicators. As per the Rostow (1960) growth model, the economy of Bangladesh is now poised for take-off. However, will a take-off actually take place? Will Bangladesh soon become a modern industrial economy and society? Encouraged by recent achievements in economic growth and social development, the government of Bangladesh has set the goal of becoming a high-income nation by 2041. Can Bangladesh achieve this goal? The next sections address these questions.

3 Factors favorable for Bangladesh’s progress

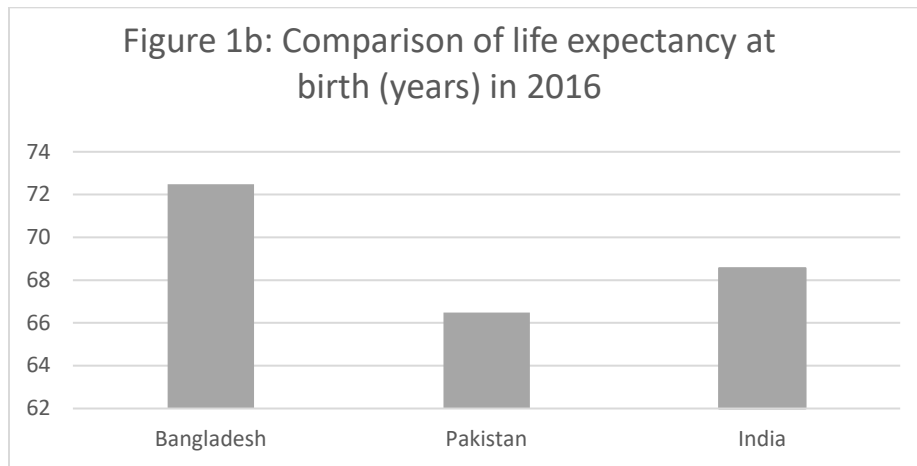
In considering answers to questions posed above, one may begin by noting that there are a number of factors that are favorable for Bangladesh’s prospects. Among these are:

- (a) Political stability
- (b) Homogeneous population
- (c) Physical compactness
- (d) Dynamic entrepreneurial class
- (e) “Demographic bonus”
- (f) Culture that puts high premium on education
- (g) Large diaspora
- (h) Access to sea
- (i) Proximity to India and China, and
- (j) Proximity to ASEAN

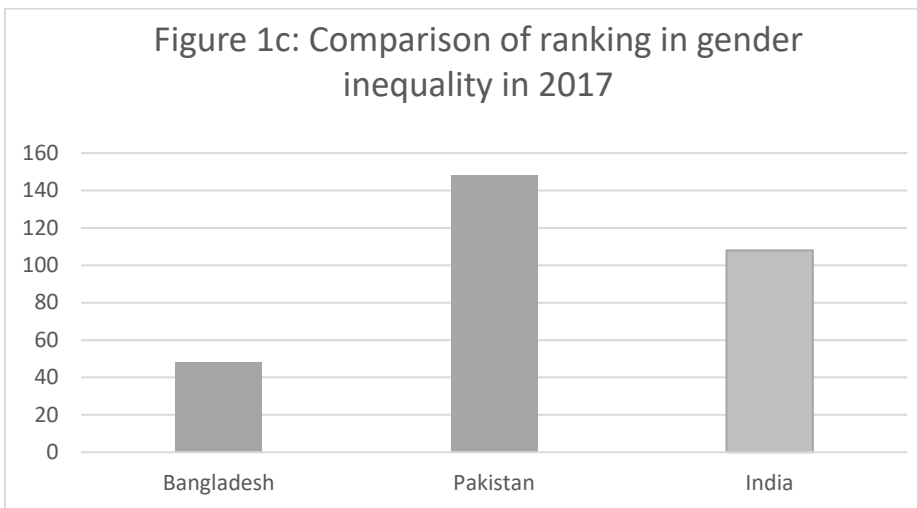
These factors are interrelated, and the above listing implies no hierarchy. To conserve space, we note below only some aspects of a few of these factors.



Source: Author, based on data in Table 1.



Source: Author, based on data in Table 1.



Source: Author, based on data in Table 1.

(a) Political stability

Following independence, Bangladesh experienced violent political upheavals. Initially, political changes involved coups and counter-coups (Islam, 1981). Since the 1990s, political changes involved violent street-level agitations, including continuous general strikes, blockades, bombing, and killing of civilians. Although issues of democratic governance remain, the political situation has become relatively calm in recent years. In part, this is a result of an increased level of capital accumulation, making the capitalist class less interested in violent street agitation that hampers the functioning of capital.

(b) Homogeneity of the population

The second factor that favors Bangladesh is the remarkable homogeneity of its population. In this regard, Bangladesh is comparable to South Korea, Taiwan, and Japan. The bulk of the population have the same ethnicity, language, and culture. The country does not yet have an entrenched *social* division. Bangladesh's only distinct social category – comprising the Zamindars – ended with the abolition of the Zamindari system through the East Bengal State Acquisition and Tenancy Act (EBSATA) of 1950.⁴ This does not mean that religious and ethnic diversity of the country should be belittled. The 1996 Peace Treaty signed between Bangladesh Government and the Parbatya Chattagram Jana Sanghati Samiti (PCJSS) -- the organization representing the population of the Chittagong Hill Tracts (CHT) -- has been a significant step, and this treaty should be properly implemented. Bangladesh should be able to benefit from the relative homogeneity of its population in the coming years.⁵ It should be noted in this regard that economic inequality is increasing in Bangladesh at a rapid pace. This economic inequality may soon solidify into a *social* division unless trends in income and wealth inequality are reversed.

(c) Physical compactness of the settlement

Bangladesh is among the most densely populated countries in the world, with a density of 1,115 people per sq. km or 2,889 people per sq. mile in 2019.⁶ The Bangabandhu (Jamuna) Bridge, opened in 1998, integrated North Bengal more tightly with the rest of the country. The Padma Bridge, expected to be completed by 2020, and the Payra Seaport will do the same for south Bangladesh. The enhanced physical connectivity, together with connectivity via mobile phones and the internet, and the homogeneity of the population are making Bangladesh an even more tight-knit society, where development ideas and practices can spread very quickly.⁷ This may be called the “density dividend.”

(d) Dynamic entrepreneurial class

Bangladesh did not have a well-developed capitalist class before its independence. However, currently it has a dynamic entrepreneurial class. Its growth is a rather recent phenomenon, beginning largely in the 1980s. Because of the above-mentioned homogeneity of the population, the members of this class are drawn from across the society and are not limited to any specific ethnic, religious, or geographic group. There is still considerable upward mobility so that this class continues to expand through recruits from different sections of the society. As a consequence of these economic changes, the socio-cultural value system has also changed. Being engaged in entrepreneurship and business has become *socially* respectable, drawing talented youth. Because of its nascent origin, the entrepreneurial class of Bangladesh is energetic. Bangladesh can rely on this entrepreneurial class for future economic growth. However, the current incentive framework encourages rent-seeking behavior and other corrupt practices. It is important to prevent these trends and direct the talents of the entrepreneurs toward positive goals.

(e) Demographic bonus

Demographic bonus refers to the situation when an unusually large fraction of the population belongs to the

⁴ See Abdullah (1976) for a discussion of EBSATA and its impact on Bangladesh's economy and society. See also Islam (2017).

⁵ There were complaints from PCJSS that the provisions of the 1996 Treaty, particularly those related to land rights, were not implemented properly. Similarly, there were complaints from the Hindu community that their properties taken over by the State under the Enemy Act during the Pakistan period (following the 1965 War) were not properly returned to their rightful owners and their descendants.

⁶ Bangladesh ranks 12th in terms of population density. Countries with higher density are mostly city-states or small islands.

⁷ For example, ideas regarding cultivation of commercial crops for export have spread rapidly across the country. The same is true for poultry, fisheries, and animal farming.

working-age group as compared to those in the non-working age groups (i.e. old and very young). Bangladesh's fertility rate has declined from 6.3 births per woman in 1975 to 2.3 (close to the replacement level) in 2011. Its mortality rate has also decreased, thanks to large reductions in child mortality and a general improvement in healthcare. Large cohorts, born since Bangladesh's independence, are reaching working age, providing a demographic bonus, which the country can convert into human capital (see Rahman 2014, for details).

(f) Culture that puts a high premium on education

Bangladesh also has the advantage of a culture that puts a high premium on education. As in countries influenced by Confucianism, the people of Bangladesh have always appreciated learning and have seen education as the path to higher income and social status. Low income families also appreciate the importance of education. It is encouraging that people also value female education. Research has shown that the spread of female education is one of the most effective routes to social development (see, for example, Behrman, 1999 and Lincove, 2008). Education is the only pathway through which Bangladesh's huge population can succeed in a global economy, characterized by rapid technological progress.

(g) Large diaspora

Bangladesh's diaspora, currently about 7.5 million strong, is growing each year. A large part of this diaspora comprises Bangladeshis working in the Middle East and Southeast Asian countries.⁸ They are also sending the bulk of the remittances. The number of Bangladeshis residing in Western developed countries is also large and growing rapidly. Previously, economists held the view that outmigration of talented citizens was a permanent loss to the country. However, increased connectivity, resulting from the revolution in communications technology, including the Internet, has enabled migrants to stay in touch and contribute to Bangladesh's development, even while residing abroad (for details see Islam, 2018). The diaspora's contribution to Bangladesh's development is, therefore, not limited to sending remittances.

(h) Access to sea

An important advantage of Bangladesh is its wide access to the sea. Bangladesh already has two functioning ports, and another one, at Payra, is under construction. The country is planning to construct additional ports, including deep-sea ports. Bangladesh has also constructed LNG terminals, and is planning to construct a few more. Many development economists, such as Gallup, Sachs, and Mellinger (1999), Sachs and Rappaport (2003), have emphasized the role of access to sea as a determinant of economic growth. Bangladesh's physical situation at the apex of the Bay of Bengal is an important advantage in this regard.

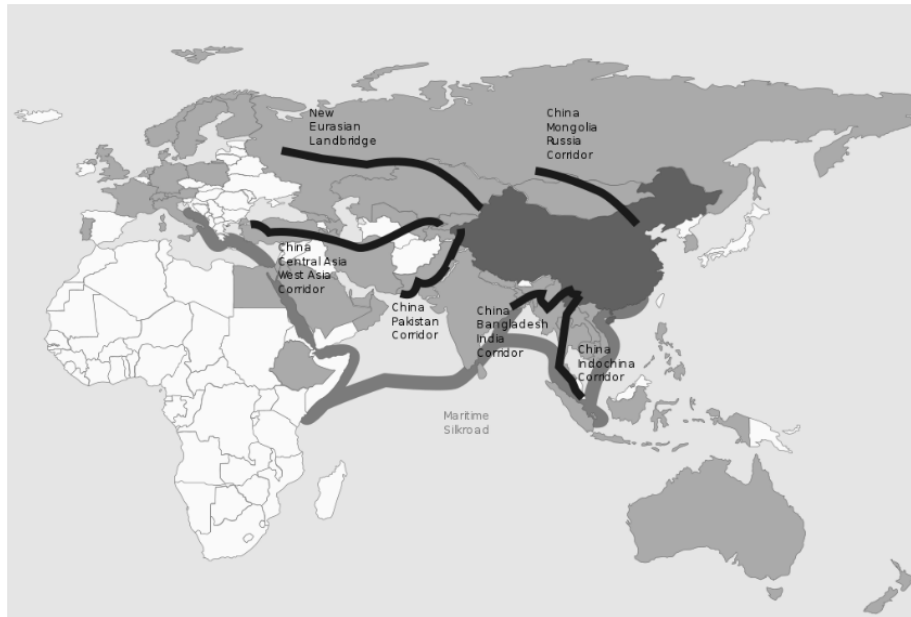
(i) Proximity to India and China

Growth economists, such as Chua (1993) and others, have emphasized the role of proximity to global growth centers as a determinant of growth. From this viewpoint, Bangladesh's proximity to India and China, which are among the largest and fastest growing economies of the world, is an important positive factor. With the ongoing restoration of railway and road links, which were closed following the 1965 war between India and Pakistan, the effective connectivity between Bangladesh and India is increasing. Besides, there are initiatives to establish a corridor – involving both road and railway links -- between Bangladesh, China, India, and Myanmar (Figure 2). This corridor will improve the connectivity of Bangladesh with both China and India, opening up new opportunities for trade and economic growth.

(j) Proximity to ASEAN countries

The proximity to ASEAN countries, many of which represent the second tier of Newly Industrializing Countries (NICs), is another favorable factor for Bangladesh. Unlike China and India, the ASEAN countries are similar to Bangladesh in terms of size and other characteristics. Psychologically, it is, therefore, easier for Bangladeshi entrepreneurs to relate to their compatriots of, say, Thailand or Malaysia. Greater exposure to ASEAN countries can instill confidence among Bangladeshi entrepreneurs for attaining what entrepreneurs in these countries have done.

⁸ The main part of the Bangladeshi diaspora resides in the Middle East. However, large number of Bangladeshis also live in high and upper middle-income countries in the West.

Figure 2: Kunming-Yangon-Dhaka-Kolkata corridor as part of BRI

Source: <https://creativecommons.org/licenses/by-sa/4.0/>

4 Challenges to Bangladesh's progress

The factors noted in the section above hold significant positive potential for Bangladesh's growth. However, thoughtful policies are required to realize this potential. Bangladesh faces many challenges in this regard, a few of which are listed below.

- (a) Raising the efficiency of public investment
- (b) Strengthening local government
- (c) Achieving greater equity and social cohesion
- (d) Protecting the environment, and
- (e) Ensuring political inclusion

These challenges are also interrelated. The following points to some of these interrelationships.

(a) Raising the efficiency of public investment

Raising the efficiency of public investment is a big challenge for Bangladesh. In recent years, the ratio of private investment to GDP in Bangladesh has stagnated at about 22 percent. To raise the overall investment levels, the government has been increasing public sector investment. The size of the Annual Development Plan (ADP) has expanded from several *thousand* crores Taka

in the early years of independence to several *lakh* crores Taka in recent years. Public investment in the economy now stands at roughly 8 percent of GDP.

For a developing economy like Bangladesh, public investment has considerable rationale. Public investment can help capture positive externalities and crowd-in private investment. However, for this to be true, public investment must be efficient. Otherwise, higher levels of public investment may do more harm than good. This is particularly the case when public investment is financed by budget deficits. In Bangladesh, the budget deficit often exceeds 4 percent of GDP, and the government generally borrows from the banking system to bridge the gap. As a result, banks have fewer funds to lend to private investors, crowding-out private investment. Meanwhile, borrowing from banks increases the accumulated debt and annual debt-service payments. Unless the public investment proves efficient, contributing to government revenues, this may lead to a *debt trap* (Figure 3).⁹

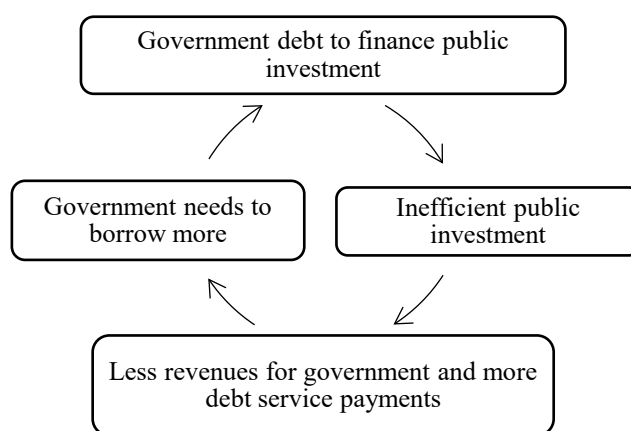
The situation in Bangladesh in this regard is not encouraging. There are widespread allegations that much of the ADP represents waste and corruption. For example, some point out that the costs of construction of roads and highways per mile in Bangladesh are substantially higher

⁹ On the other hand, if a government finances inefficient public investment through seigniorage (printing money), it risks creating inflation and undermining the macro-economic stability.

than in other countries. According to Zahid Hussain, the World Bank Chief Economist in Bangladesh, construction cost per kilometer of Dhaka-Mawa, Dhaka-Sylhet, Dhaka-Chittagong, and Dhaka-Mymensingh road was \$11.9 million, \$7 million, \$2.5 million, and \$2.5 million dollars, respectively. By comparison, the construction costs of a four-lane highway (including the cost of acquisition of land) in India ranged between \$1.1 and \$1.3 million dollars and in Europe between \$2.5 and \$3.5 million dollars.¹⁰ To add insult to injury, the construction

work in Bangladesh is often shoddy, with highways becoming unusable a few years after construction. The fact that many large investment projects are implemented without adequate public scrutiny aggravates the problem. In view of the widespread corruption, it is not surprising that Bangladesh's Global Competitiveness ranking declined in 2019 to 105. Also instructive is that the ranking in terms of infrastructure in 2019 declined to an even lower level of 114 (see Schwab, 2019 for details).¹¹

Figure 3: Government Debt Trap Caused by Inefficiency of Public Investment



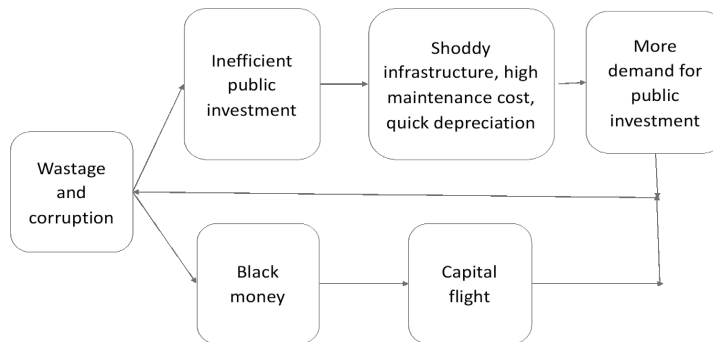
Source: Author

The waste and corruption in public investment are setting off several undesirable chains of consequences, leading to vicious cycles (Figure 4). On the one hand, these malpractices lead to ever-higher budgets. For example, poorly built roads deteriorate rapidly, requiring additional funds for repair and reconstruction. But corruption generates “black” money leading to capital flight. According to a recent study by Global Financial Integrity (GFI), the size of capital flight from Bangladesh is alarming (GFI, 2014; Aziz et al. 2014; A). The phenomena of “Begum Para” in Canada and “Second

Homes” in Malaysia offer vivid evidence of this capital flight. These chains of events can be self-reinforcing. For example, more demand and allocation for public investment, in the absence of supervision, lead to more waste and corruption. Similarly, greater opportunities and capital flight create additional incentives for corruption, leading to more capital flight. The waste, corruption, flight of capital, etc. have broader pernicious effects, distorting the incentive structure, undermining moral values, and disorienting the younger generation (Aziz et al. 2014; Alam et al. 1995).

¹⁰ See BDnews24.com report, “Bangladesh infrastructure is World’s costliest,” available at: <https://bdnews24.com/economy/2017/06/20/bangladesh-infrastructure-is-worlds-costliest-says-world-bank>. See also *The Daily Star*, June 21, 2017, for another account of Dr. Zahid Hussain’s press conference. On cost padding of Bangladesh infrastructure projects, also see Ahmed (2012) and Sohel (2016).

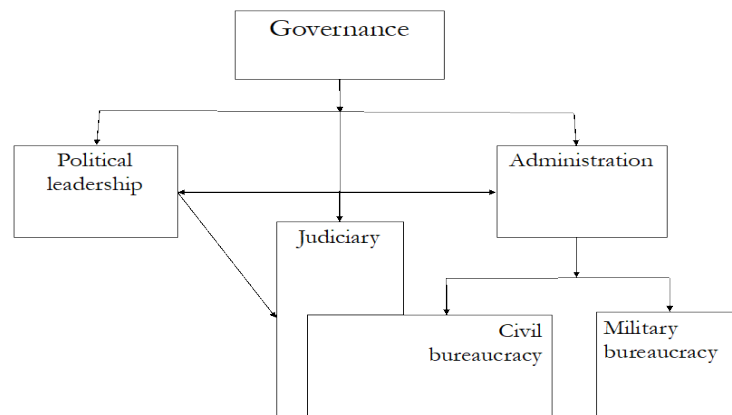
¹¹ The discussion here also points to the possibility of distinguishing among different factors influencing the efficiency of public investment. Among such factors are (i) choice of sub-optimal projects, (ii) high cost of chosen projects, and (iii) low quality of implementation. Such a disaggregation can be helpful in identifying the exact determinants and policies, which can address these. (I am grateful to a referee for pointing this out.)

Figure 4: Inefficiency of public investment: causes and consequence

Source: Islam (2014)

Reducing waste and corruption and raising the efficiency of public investment requires improvement of governance. However, governance has two sides: political leadership and bureaucracy (Figure 5). Unfortunately, Bangladesh has problems with both (see Islam 2016a for details). For example, the cadres of the ruling party often obstruct the selection of competent contractors to implement public investment projects. Further, they frequently harm the implementation of projects by resorting to extortion and other malpractices.

Various elements of the bureaucracy, meanwhile, play a willing role in initiating and sustaining corruption and waste. Together with political cadres, they often act as “partners in crime.” Reforms are therefore necessary to improve the quality of both political leadership and bureaucracy. The issue of political reforms is discussed later in sub-section (e). As for bureaucracy, it is necessary to initiate a comprehensive reform, involving rationalization of both its size and compensation. The steps that the government has taken so far are partial and of *ad hoc* nature.¹²

Figure 5: Structure of governance

Source: Islam (2016a, Chapter 1, p. 4)

¹² For example, the government has recently doubled public employees' salary following the recommendation of the Farashuddin Commission.

The judiciary has an important place in the governance structure, and the effectiveness of its role depends, largely, on the degree of its independence from political leadership and bureaucracy. In Bangladesh, a struggle is going on for an independent judiciary, with limited success however. Within the limitations, the judiciary in Bangladesh (particularly, its upper level) occasionally displays positive initiatives. However, some members of the (even upper level) judiciary are often caught in the web of corruption and malpractice. A comprehensive reform of the governance system is therefore necessary to make public investment more efficient (see Islam 2016a for suggestions on reform).

(b) Strengthening of local government

One reason for widespread corruption and waste in Bangladesh is the over-centralization of administration and development activities. The local people, where these projects are implemented, remain in the dark about the physical specifications and budgets of the projects.

Ideally, local government institutions should serve as mechanisms through which the local people would play an active role in the selection and implementation of projects that serve their needs. Unfortunately, local governments are weak in Bangladesh, in part, because the civil bureaucracy does not want to dilute its authority. Another reason is the encroachment by MPs on local government affairs, often with the approval of the central government.

Going forward, Bangladesh therefore needs to rethink the appropriateness of its current geographic constituency-based election of the members of the National Parliament. This system allows MPs to assume a dual role. On the one hand, they serve as lawmakers at the national level, and, on the other hand, they strive to be the chief authority for local affairs in their respective constituencies. While in countries with strong traditions of local government, the MPs restrain themselves from meddling in local affairs; this is not the case in countries with weak traditions of local government. In Bangladesh,

the MPs have enacted self-serving laws, giving them jurisdiction over local affairs. Under the present system, it has therefore become difficult to end the meddling of MPs in the affairs of the local governments.

To end the above duality and encroachment by MPs on local affairs, it is necessary to switch from the current constituency-based system of election to the *proportional* election. Under the latter, MPs are not tied to individual constituencies and therefore can focus more on lawmaking at the national level. This switch will free up local governments to develop and perform their roles properly (see Islam 2016a, Chapter 7, for details).

Another important weakness of the local government in Bangladesh is the absence of a tier at the village level. This absence is striking because villages have always been the basic social unit in Bangladesh, and the country has a long tradition of self-governance at the village level. The absence of a village-level local government in Bangladesh is also conspicuous given that the neighboring countries, such as China and India, are both using successfully local governments at the village level.

Some initiatives were taken to introduce the village-level local government in Bangladesh (Table 2). However, these initiatives were weak and not properly carried through (see Islam 2017 for a detailed discussion). As a result, there is currently a *vacuum* in the local government structure at the village level. Villages are now like *orphans* with no effective mechanism for self-governance and representation at higher levels of government. This vacuum is proving damaging in several ways. First, it is reinforcing the *top-down* character of the current development process, along with the inefficiency of public investment, discussed above. Effective self-governance at the village level could go a long way in changing the development process into a *bottom-up* one and in reducing waste and corruption. Second, effective self-governance at the village level would have been helpful in mobilizing the labor and material resources that remain unutilized in the villages. With their mobilization, the development process could have been more self-reliant.

Table 2: Initiatives for setting up local government at the village level in Bangladesh

<i>Year</i>	<i>Government taking the initiative</i>	<i>Initiative</i>
1975	Bangabandhu Sheikh Mujib	<i>Samabayi Gram</i> (Villages as production cooperative)
1980	Ziaur Rahman	<i>Swanirvar Gram Sarkar</i> (Self-reliant village government)
1989	Husain Muhammad Ershad	<i>Palli Parishad</i> (Village Council)
1991	Khaleda Zia	<i>Gram Shabha</i> (Village Meeting)
1997	Sheikh Hasina	<i>Gram Parishad</i> (Village Council)
2003	Khaleda Zia	<i>Gram Sarkar</i> (Village Government)

Source: Islam (2017, p. 94)

Bangladesh declared 2020 as the “Mujib-year,” marking the centenary of Bangabandhu’s birth. In celebrating this important milestone, there is a lot of talk about fulfilling Bangabandhu’s dreams. A genuine way of doing so would be to revisit his idea of transforming Bangladesh’s villages into cooperatives. Though the international experience since 1975 has demonstrated that collective farming at low levels of technology is not effective, the general idea of transforming villages into cooperatives -- creating the mechanism for collective efforts by villagers, using the Village Fund as an instrument -- still holds considerable potency in propelling a self-reliant, bottom-up development process in Bangladesh.

The experience of China and India shows that effective village governments can play an important role in the development of a country. Hence, Bangabandhu’s idea of transforming villages into production cooperatives can be modified in the light of the current national and international situation and be implemented to benefit the nation (Islam 2017). In celebrating the Mujib year, the government may want to pay attention to this idea.¹³

¹³ The fact that successive governments failed to set up a local government at the village level, despite many initiatives, suggests that there are important obstacles in this regard in the socio-political structure of the economy. Grassroots level mobilization is necessary to overcome these obstacles. See Islam (2019) for the case that setting up village councils can be one of the best ways to honor Bangabandhu, who dreamt of village cooperatives.

(c) Achieving greater equity and social cohesion

Rise of inequality in Bangladesh

Rising income and social inequality pose a serious challenge to Bangladesh’s development prospects. Traditionally, Bangladesh has been an equitable and socially homogeneous nation. After the abolition of the Zamindari system in 1950, Bangladesh did not have a socially distinct upper class. The Liberation War reinforced the social homogeneity of the Bangladeshi population in 1971, when the rich and the poor, urbanites and rural folks, educated and the illiterate, people of different religions and ethnicity, fought and endured the sacrifices together. One of the profound expectations generated by the Liberation War was of a socially cohesive and equitable Bangladesh. Unfortunately, Bangladesh has moved away from this goal.¹⁴

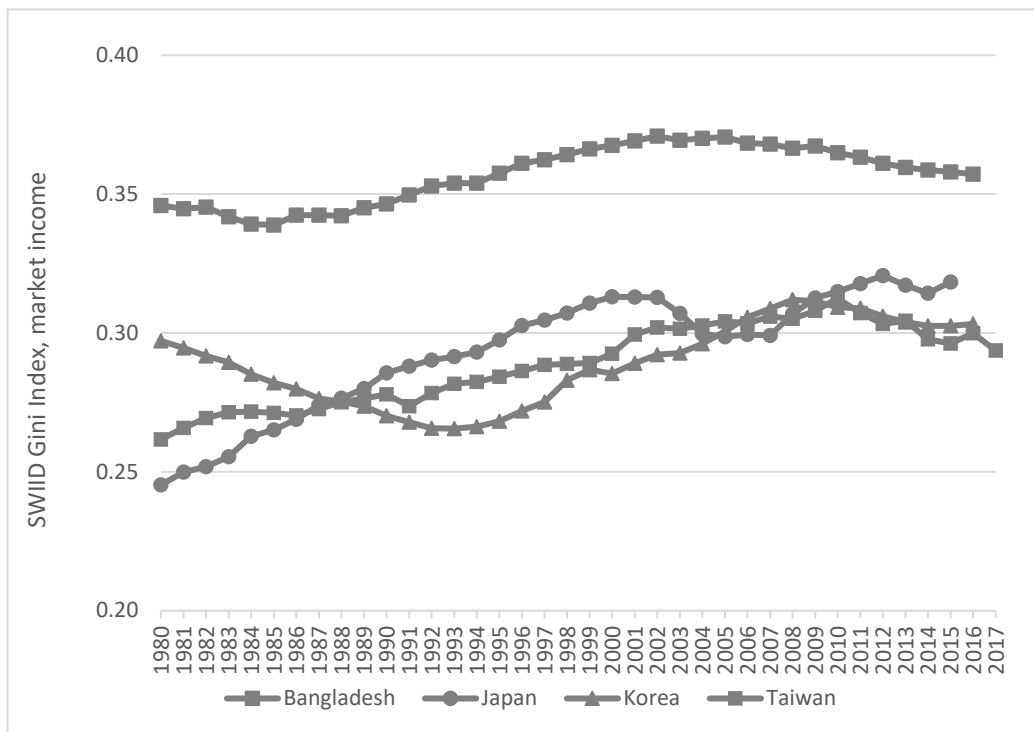
Following the overthrow of the Bangabandhu’s administration in 1975, the new government embraced capitalism, with its inherent tendency to increase income and wealth disparities. However, even within the capitalist path of economic development, there are

¹⁴ There are lingering controversies and dissatisfactions over the implementation of the Treaty. Tensions persist in the Chittagong Hill Tracts. Other ethnic and religious groups also have grievances, particularly regarding the capture of their land and violations of other rights.

strategies to keep inequality low. Successful East Asian economies – such as Japan, South Korea, and Taiwan – combined fast economic growth with equity. The Gini Coefficient of income distribution in these countries remained around 0.3 despite rapid growth in the GDP. However, successive governments that came to power in

Bangladesh after the August 1975 coup, have paid little attention to the equitable distribution of income. As a result, the Gini Coefficient of inequality for both market and disposable income in Bangladesh has increased to much higher levels than those in the East Asian countries (Figure 6).¹⁵

Figure 6: Inequality of distribution of market income – Bangladesh as compared with Japan, South Korea and Taiwan



Source: Author, based on data from SWIID¹⁶

Emergence of “two countries” in one country

The rising income inequality has led to a bifurcation of the Bangladeshi society. In fact, there are now “two countries” in the one country of Bangladesh -- one for the rich and the other for the poor. This bifurcation is most vivid in the nation’s education and health sectors. In education, there has emerged a sub-sector of high-cost, private, English-medium schools and colleges, catering to

the children of the rich. The rest of the population has to remain content with low-quality education offered in the public, Bangla-medium schools and colleges.¹⁷ A similar

situation can now be observed in the health sector, where a sub-sector comprising private, costly clinics and hospitals have emerged, catering to the rich, while the vast

¹⁵ In comparing inequality levels and trends among countries as presented in Figure 6, it should be noted that these countries were at very different stages of their development during this period (1980-2017). Despite this, Figure 6 shows that inequality in Bangladesh has remained higher than in Japan, Korea, and Taiwan during this period.

¹⁷ There is yet another sub-sector, comprising Madrasahs, which cater to orphans and children from families in the lowest income groups in the society. However, some differentiation has developed among the madrasahs, so that some also attract children from relatively well-off families.

¹⁶ Standardized World Income Inequality Database, available at <https://fsolt.org/swiid/>. For an explanation of the data, see Solt (2016, 2019).

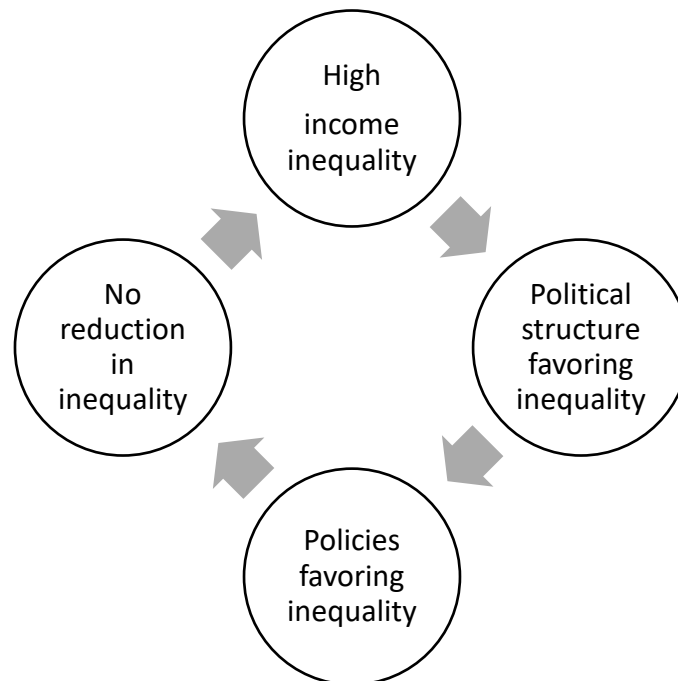
majority of the population depend on low-quality, government clinics and hospitals.¹⁸ Similar dichotomy can be seen in many other areas of life in Bangladesh as well.¹⁹

Inequality Trap

What is alarming is that the growing income inequality can lead the country into an “Inequality Trap,” where the rich and wealthy capture the political institutions and obstruct any future effort aimed at reduction of inequality. Instead, they use the political institutions to enact laws aimed at regressive redistribution of income, thus

aggravating inequality (Figure 7). With increasing consolidation of the capitalist class, Bangladesh may be falling deeper into this Inequality Trap. More than sixty percent of MPs in the recent parliaments of Bangladesh are rich industrialists and business executives.²⁰ Many of the rest depend on wealthy businesses for financial support. Clearly, it is difficult for such parliaments to enact laws favoring the poor. As recent events show, most current MPs of Bangladesh are more interested in using their power and privilege to get duty free cars, allotment of land in government financed land-development projects, and other personal benefits, further increasing their own income and wealth, rather than helping the poor.

Figure 7: Inequality Trap



¹⁸ As with education, in healthcare there is a sub-sector, comprising of village quacks who are the only option for people with very little means.

¹⁹ It should be mentioned that Bangladesh has a large and dynamic NGO (non-government organizations) sector comprising many developmental NGOs offering various services, including education and healthcare. Going forward, it may also be possible, through appropriate guidance, to make use of private sector initiatives and ventures under public-

private-partnership to bridge the current divide in education and healthcare services.

²⁰ According to “Sujan,” a civil society organization of Bangladesh, 61.07% of the members of Bangladesh’s 11th Parliament, elected in December 2018, have a business background. See <https://www.thedailystar.net/bangladesh-national-election-2018/61.07-percent-elected-mp-are-business-persons-shujan-1683718>

Inequality leading to wrong social and policy choices

Also of concern is the fact that rising income and wealth inequality lead to wrong social and policy choices. For example, partly because of the lack of social cohesion and empathy, the government is pushing the private car model, which is wholly unsuitable as a mode of transportation for Bangladesh because of its extremely low land-man ratio. A similar situation can be seen regarding housing and settlement policy. RAJUK, the authority responsible for supervising the development of the capital city, has itself become a developer, acquiring people's lands and developing them using public money, and then distributing them as plots among members of the elite at nominal prices. This housing policy is both socially regressive, and physically unsuitable for Bangladesh because of its low land-man ratio. There are other examples of such wrong-headed policies and social choices that are driven by economic, social, and political inequality.

Inequality as an obstacle to utilization of the "Demographic Bonus"

Another way in which the rising inequality can be harmful is by obstructing effective utilization of the demographic bonus. The bifurcation of the education and health systems means that the bulk of the youth entering the workforce has poor education and physical fitness. They have little proficiency in English, which is now necessary for success in the current globalized economy with fast technological progress.²¹ The Digital Divide will thus widen, making large parts of the younger generation unprepared for jobs of the new era. It should be noted that the era of industrialization based on low-cost unskilled labor is ending. Instead, the world is entering the stage in which knowledge and skills are becoming the pre-conditions for even entry-level manufacturing jobs.

There is also the problem of mismatch between the education received by the young, including those at the tertiary levels and even in English medium schools, and the actual requirements of the economy. This mismatch is

evident in the rising problem of educated unemployed. The curriculum and the education system must be reoriented more toward imparting technical skills required by the new economy – skills that can allow young people to become entrepreneurs, without waiting for employers to hire them.

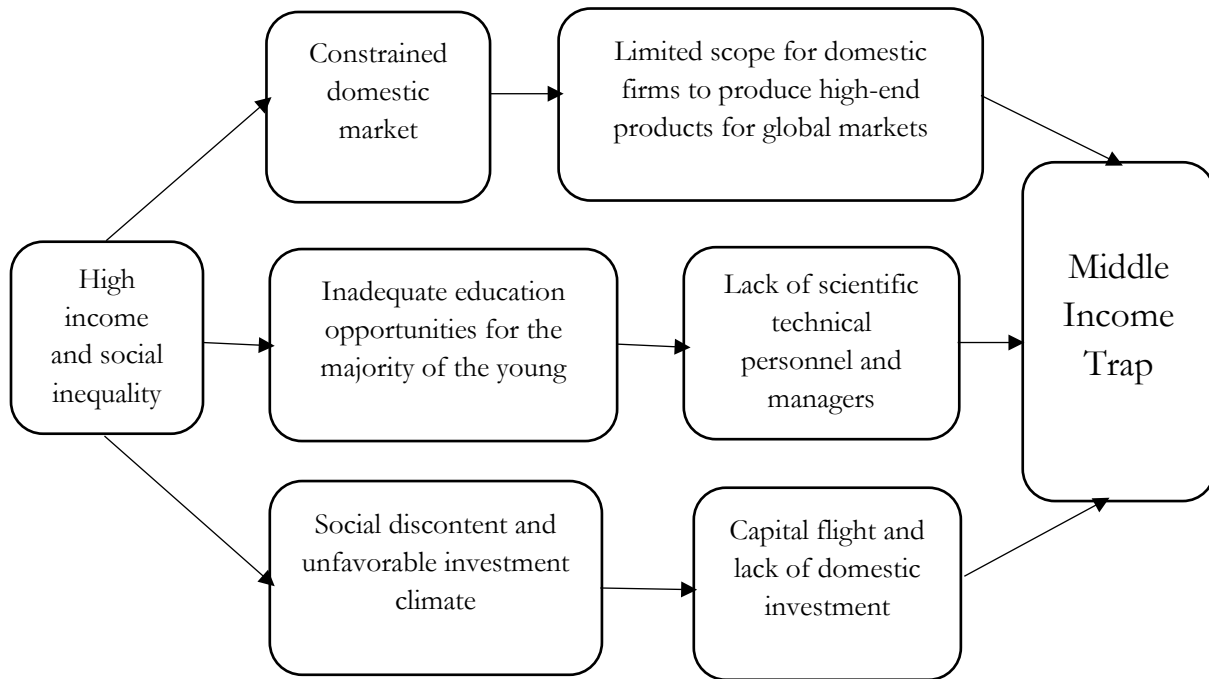
Inequality and social discontent

Rising inequality is straining the social fabric and leading to social pathologies. This is in part because a significant part of the recent inequality increase is due to illegal and corrupt earnings. For example, the amount of default on credits from banks is estimated to be between two and three lakh crores Taka, which is almost equal to the size of the country's annual development budget. Every day, newspapers and the electronic media carry reports on corruption, malpractice, and plunder of public resources. The rampant corruption and illegality of the earnings undercut the social legitimacy of the *nouveau riche* and the capitalist class of Bangladesh. The illegitimacy of much of the gains made by the *nouveau riche* is creating resentment and creating a socially volatile situation, which in turn is one of the reasons for increasing capital flight from Bangladesh.

Inequality and the Middle-Income Trap

The rising inequality may also lead Bangladesh to the Middle-Income Trap, thus thwarting its goal to become a high-income country by 2041. Inequality may trigger several interrelated processes leading to this outcome (Figure 8). First, it may limit the size of the domestic market, obstructing domestic firms from using the domestic market to test and develop high-end, technologically sophisticated products, before launching these successfully in the global market. Second, rising inequality may limit education and health opportunities for the bulk of the young, constricting the pipeline of scientific-technological personnel and managers. Third, as noted above, high inequality may create social discontent and risks, thereby discouraging investment and encouraging capital flight (see Islam 2014 for details).

²¹ In this regard, there is the additional problem of a match between the skills taught (even in the universities) and the requirements in the labor market. This is manifested in the rising number of unemployed educated youth in the country.

Figure 8: Inequality and “Middle Income Trap”

Source: Author

There are symptoms of all three above processes at work in Bangladesh. Unless reversed through effective policy measures, Bangladesh may be stalled in the Middle-Income Trap, unable to reach the High-Income status.

(d) Protecting the environment

An important challenge that Bangladesh faces is protection of environment. In its drive toward industrialization, policymakers of Bangladesh have not paid adequate attention to protecting the environment. Because of this neglect, the country's environment has suffered terribly (see BAPA and BEN, 2010 and Islam, 2018). For example, the capital city Dhaka is regularly ranked as one of the worst livable cities in the world.²² The rising levels of pollution are now affecting the growth prospects of the country.

It is already difficult to industrialize a country as densely populated as Bangladesh. The area is small and the scope for spatial maneuvering is limited. Any contamination can affect rapidly millions of people. Thoughtful policies and careful implementation are necessary to avoid environmental disasters. Unfortunately, the government has taken risky decisions in going forward with the Rampal coal-fired power plant, in close proximity of the Sundarbans, and the nuclear power plant in Rooppur, to be located deep inside the country and in the middle of densely populated areas. The government's decision to make coal the main fuel for expansion of power generation capacity is misdirected from the viewpoint of environmental protection, and it is incongruent with the global trend of moving away from coal. Similarly, the government is persisting with the Cordon approach (see GoB, 2017), which has disrupted the country's river system and given rise to the ubiquitous problem of waterlogging. Yet, Bangladesh's sixty years of experience with water development has shown that the

²² For example, Dhaka has been ranked third from the bottom on the list of most polluted cities, with only Aleppo in war-torn Syria and Lagos in Nigeria ranked below it.

Cordon approach is inappropriate for the deltaic setting of Bangladesh, characterized by high and extreme seasonality of river flow (Islam 2016b).

A comprehensive effort is necessary to make Bangladesh's economic growth and industrialization environmentally sustainable. The problems of environmental protection are closely related to the overall problem of good governance. Since the improvement of governance is a difficult challenge and is time-consuming, and many environmental problems require urgent action, policymakers must design incentives so that consumers (citizens) themselves adopt pro-environment behavior, without active intervention from the government machinery. Bangladesh also needs to invest in technologies (such as monitoring through sensors) to monitor the polluters, as a way of overcoming the governance-deficit in protecting the environment.²³

(e) Ensuring political stability and inclusion

Finally, needless to say that political stability is a precondition for continued progress in Bangladesh. Political stability however can be achieved through several ways. For example, autocracy or a one-party rule can deliver political stability. However, political stability is more durable and commendable when it is achieved through democratic inclusion.

A particular reform that may be helpful in achieving political stability is switching from the current "majority system" of election to the "proportional system," as noted above in the context of development of the local government. Most developed countries practice proportional elections. Many developing countries are also choosing this method. Nepal recently adopted a constitution allowing a part of the parliament to be elected following the proportional method.

In the specific case of Bangladesh, the proportional system can help to achieve political inclusion and stability by (i) preventing large impact of small changes in vote shares of the parties, (ii) reducing the objective scope and subjective incentives for voter manipulation, (iii) promoting better quality candidates, (iv) improving the quality of election campaigns, (v) eliminating the necessity of pre-election electoral alliances, (vi) increasing the authority of political parties, (vii) creating a level playing field for smaller parties, and (viii) being more fair and just.

Other reforms are also necessary for political inclusivity and stability. Becoming complacent with the current political stability may prove myopic (see Islam (2016b, Chapter 5) for a more detailed discussion of the merits of the proportional election system for Bangladesh and of some of the other reforms that can be helpful for political stability and inclusiveness).

5 Conclusions

Bangladesh has come a long way from the precarious economic situation it faced at its birth in 1971. Since then, it has achieved commendable economic growth and social progress. The nation can look forward to the next thirty years with confidence and optimism.

There are many factors working in favor of Bangladesh. However, the positive potential of these factors will not be automatically realized. Instead, creative policies and careful implementation will be necessary. The emphasis in recent years on raising the level of public expenditure without paying adequate attention to the quality of the investments has sown seeds of many destabilizing processes, some of which are now surfacing. Bangladesh, therefore, faces many challenges. Among these are the challenges of raising the efficiency of public investment, strengthening local government, achieving greater equality and social cohesion, protecting the environment, and ensuring political stability and inclusion.

Bangladesh is poised to celebrate the Golden Jubilee of its independence. This jubilee provides a good opportunity to consider the future challenges the nation faces. In 1971, the nation emerged with hopes that were sky-high and enthusiasm that could move the Himalayas, so to speak. Some of that enthusiasm has dissipated over the years because of many unfortunate events. There was a concern that with the passage of the generation which fought in the Liberation War, none will be left to embody the spirit of that War and the enthusiasm for nation building generated by that victory. However, it is heartening to see that the new generations of Bangladesh are equally patriotic and enthusiastic about their country. They are scaling the Himalayas, doing well in the World Cup cricket, and traveling to furthest corners of the globe for a better life, without forsaking their motherland. At home, they formed the *Gonojagoron Moncho* and rose to impose discipline

²³ I would like to thank one of the reviewers for emphasizing these options. However, even designing and implementing necessary

incentives for the use of technologies require policy-implementation capability. Thus, the problems of poor governance cannot be avoided.

on Dhaka traffic, something the older generation had failed to do. Thus, there is much to be hopeful about the new generation of Bangladesh. With appropriate leadership, they can certainly meet the challenges and take Bangladesh to new heights in the next thirty years.

References

- Abdullah, Abu. (1976). The Peasant Economy and Agrarian Change in Bangladesh. *Bangladesh Development Studies*, Vol. 4, No. 1 (January), 67-114.
- Ahmed, Abu. (2012). Highway and flyover construction costs too high in Bangladesh. *Business Outlook*, available at: http://businessoutlookbd.com/old/index.php?option=com_content&view=article&id=2519:highway-flyover-construction-costs-too-high-in-bangladesh-&catid=43:magazine-news
- Alam, Muhammad Imam, Dowla, Asif and Rashid, Salim. (1995). Capital Flight from Bangladesh. *The Bangladesh Development Studies*, Vol. 23, No. 1/2 (March-June 1995), 67-87.
- Aziz, Shawkatul Islam Md., Khayyum, Md. Omer, Uddin, Md. Minhaj. (2014). Determinants of capital flight in Bangladesh: An econometric investigation. *Developing Country Studies*, Vol. 4, No. 25, 121-135.
- BAPA and BEN. (2010). *Dhaka Declaration on Bangladesh Environment*, Resolution adopted by the 3rd International Conference of Bangladesh Environment (ICBEN). Dhaka: Bangladesh Poribesh Andolon (BAPA) and Bangladesh Environment Movement (BEN).
- Behrman, Jere R. (1991). Investing in Female Education for Development, in Jandhyala B. G. Tilak (ed.) (1991), *Education, Society, and Development - National and International Perspectives*, 235-254, New Delhi: A P H Publishing Corporation for National Institute of Educational Planning and Administration (NIEPA).
- Chua, Hak B. (1993). *Regional Spillovers and Economic Growth*, Economic Growth Center, Center Discussion Paper No 700, Yale University.
- CPD. (2018). *Bangladesh Economy in FY2017-18: Interim Review of Macroeconomic Performance*, Dhaka: Centre for Policy Dialogue.
- Faaland, Just and Parkinson, Robert. (1976). *Bangladesh – A Test Case for Development*. Dhaka: University Press Limited.
- Gallup, John Luke, Sachs, Jeffrey D. and Mellinger, Andrew D. (1999). Geography and Economic Development. *International Regional Science Review*, Vol. 22, Issue 2, 179-232.
- Global Financial Integrity (GFI) (2014). *Illicit Financial Flows (IFFs) to and from Developing Countries: 2005-2014*. Washington DC, May 2. <https://www.dhakatribune.com/tribune-supplements/business-tribune/2017/07/09/unstoppable-growth-capital-flight>.
- Government of Bangladesh. (2017). *Bangladesh Delta Plan 2100*. Dhaka: General Economics Division, Planning Commission.
- International Monetary Fund (IMF). (2019). *Country Data: Bangladesh*, available at: <https://www.imf.org/en/Countries/BGD#countrydata>
- Islam, Nazrul (1981), *Politics of JSD -- An Up-close Analysis*, Dhaka: Prachya Prokashoni
- Islam, Nazrul (1984), *On Development Strategies of Bangladesh*, Dhaka: Centre for Social Studies
- Islam, Nazrul. (2014). Will Inequality Lead China to the Middle-Income Trap? *Frontier of Economics in China*, Vol. 9, Issue 3, 398-437.
- Islam, Nazrul. (2016a). *Governance for Development Political and Administrative Reforms in Bangladesh*, Chapter 2. New York: Palgrave Macmillan.
- Islam, Nazrul. (2016b). *Let the Delta Be a Delta! The Way to Protect Bangladesh Rivers*, Dhaka: Eastern Academic.
- Islam, Nazrul (2017), *Bangabandhu's Dreams and Bangladesh Villages*, Dhaka: Eastern Academic
- Islam, Nazrul. (2018). *Bangladesh Environment Movement: History, Achievements, Challenges*, Dhaka: Eastern Academic.
- Islam, Nazrul. (2019). How to Show Proper Respect for Bangobandhu? *Nagorik*, Year 3, Issue 4 (Winter), 1-6.
- Lincove, Jane Arnold. (2008). Growth, Girls' Education, and Female Labor: A Longitudinal Analysis. *The Journal of Developing Areas*, Vol. 41, No. 2 (Spring), 45-68.

Rahman, Rushidan Islam. (2014). *Demographic Dividend and Youth Labour Force Participation in Bangladesh*. BIDS Research Report No. 187, July, Dhaka: Bangladesh Institute of Development Studies.

Rostow, W. W. (1960). *The Stages of Economic Growth*, Cambridge: Cambridge University Press.

Sachs, Jeffrey D. and Rappaport, Jordan. (2003). The United States as a Coastal Nation. *Journal of Economic Growth*, Vol. 8, Issue 1, 5-46.

Schwab, Klaus. (2019). *The Global Competitiveness Report 2019*, Geneva: World Economic Forum.

Sohel, Mamun. (2016). Highway costs exorbitant in Bangladesh. *Dhaka Tribune*, June 30, 2016. <https://www.dhakatribune.com/bangladesh/2016/06/30/highway-costs-exorbitant>

Solt, Frederick. (2016). The Standardized World Income Inequality Database. *Social Science Quarterly*, Vol. 97, Issue 5, <https://doi.org/10.1111/ssqu.12295>.

Solt, Frederick. (2019). *The Standardized World Income Inequality Database*, Version 8, <https://doi.org/10.7910/DVN/LM4OWF>, Harvard Dataverse, V2

UNDP (2019). *Human Development Data (1990-2017)*, <http://hdr.undp.org/en/data>

World Bank. (2019a). *Bangladesh - Seizing the Opportunity* (English), Bangladesh Policy Notes. Washington, D.C. World Bank Group.

World Bank. (2019b). *World Development Indicators*, <https://datacatalog.worldbank.org/dataset/world-development-indicators>



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