WORKING PAPER
No. 31 | November 2015

Towards Sustainable Development Goals: Indexing the performance of Bangladesh (division-wise and district-wise) in achieving the MDGs

Nabila Zaman

BRAC Institute of Governance and Development
BRAC University

WORKING PAPER

No. 31 | November 2015

Towards Sustainable Development Goals: Indexing the performance of Bangladesh (division-wise and district-wise) in achieving the MDGs

Nabila Zaman

BRAC Institute of Governance and Development
BRAC University

BRAC Institute of Governance and Development (BIGD)
BRAC University, Dhaka

Working Paper Series
No. 31, November 2015

Towards Sustainable Development Goals: Indexing the performance of Bangladesh (division-wise and district-wise) in achieving the MDGs

By
Nabila Zaman

Copyright © 2015 BIGD, BRAC University

Disclaimer

The views expressed in this paper are those of the authors and do not necessarily reflect the views of BIGD, BRAC University. This volume is a product of the BRAC Institute of Governance and Development (BIGD), BRAC University. The findings, interpretations and conclusions presented in this document do not necessarily reflect the views of BRAC University authorities.

Terms of use

"All rights reserved. This book or any portion thereof may not be reproduced or used in any manner whatsoever without the expressed written permission of the publisher except for the use of brief quotations in a book review."

Cover design: Amal Das, Color Line

Published by

BRAC Institute of Governance and Development (BIGD)
BRAC University
SK Centre (3rd - 7th Floor), GP, JA-4, TB Gate
Mohakhali, Dhaka 1212, Bangladesh
Tel : (+88 02) 5881 0306, 5881 0326,5881 0320, 883 5303
Fax : (+88 02) 883 2542
Email : info@bigd.bracu.ac.bd, Web: www.bigd.bracu.ac.bd

Table of Contents

Acknowledgements.....v

About Authors.....vi

Abstract.....vii

1. Introduction.....1-2

2. Background

2.1 Bangladesh's Achievements in achieving MDG goals attainment 2-5

3. Data and Methodology

3.1 Data Type and Indicators Used.....6-7

3.2 Method..... 7

4. Empirical Results.....7-11

5. Discussion of findings 11-12

6. Conclusion.....12

References.....13

List of Figures

Figure.1: Trends in Enrollment Rates, Drop-out Rates, Primary Completion Rates and Literacy Rates

Figure.2: Trends in Birth Rate, Infant Mortality Rate, Maternal Mortality Ratio

Figure.3: Assessment of development across Divisions

Figure.4: Assessment of development across Districts

List of Table

Table.1: Development Indicators used

Table.2: Values of Constructed MPI across Divisions

Table.3: Values of Constructed MPI across Districts

Acknowledgements

I am grateful to Dr. Sultan Hafeez Rahman for providing me with valuable insights for this research. I would also like to show gratitude to Bangladesh Bureau of Statistics (BBS) for cooperating with data provision.

About Author

Nabila Zaman is a Research Associate at BRAC Institute of Governance and Development, BRAC University, Bangladesh. She holds Masters Degree in Economics from Lund University. Prior to this, she also did another Masters in Economics with a specialization in Development Economics from East West University, Bangladesh. Her field of interest is Macroeconomics, Quantitative/Survey Research, Development Economics and Health Economics.

Abstract

The study is conducted to evaluate the performance of regions of Bangladesh, both across divisions and districts, in their attainment of Millennium Development Goals (MDGs). Based on the data from Multiple Cluster Survey and applying the formulated Mazziotta Pareto Index (MPI), the findings show that there remain contradictory results across divisions and districts. Although Bangladesh is performing well at national level for its attainment of MDG goals, at more micro level, the analysis suggests that Bangladesh is yet to outperform in achieving all health and education social developments. Thus, the paper makes a policy suggestion for the policy-makers, academicians and development practitioners to identify these governance gaps for better achievements of the Sustainable Development Goals.

Key words

Millennium Development Goals, Regional Performance, Social Development, Social Indicators, Composite Index

1. Introduction

Bangladesh has shown rapid growth in social development and poverty alleviation since mid 1980s. Both public policies and institutional innovations (NGO paradigm) have contributed towards an impressive progress in social development indicators. Improvements in social indicators are a key measure of social development which leads to sustainable human development in a country. With its notable progress in economic growth, Bangladesh has lifted to middle-income country; however, challenges prevail at grass-root levels to eradicate poverty and inequalities amongst all levels. What is of interest for global policy-makers and academicians is to know and define how these massive achievements took place over last three decades to a country left adversely damaged in a post-liberation period. Promising is the fact that despite being a relatively low per capita country, Bangladesh has paced up in the social progress since two decades or so ago.

Mahmud (2008) mentions that for consolidating the transition from stabilization to growth, improvements are needed in many areas such as revenue mobilization, the efficiency of the financial system and the overall investment environment. There is critical need for policy reform and better governance if Bangladesh is to combine its development gains and make further progress in poverty alleviation and social development (Khandker and Samad, 2013).

With the new goals proposed by UN to eradicate poverty by 2030, there is drawn attention on Bangladesh's performance in achieving last decades Millennium Development Goals (MDGs). Although the country has shown promising progress in attaining many of the targets at national level, but it is of paramount importance to assess the performance of the country at more micro level. This will depict the picture to what extent the country is capable to fulfill the Sustainable development goals by 2030 and will hold pre-advocacy policies for policy-makers working in the field of Sustainable Development Goal targets. UNICEF with support of Government of Bangladesh (GoB) has conducted a study to investigate the effectiveness of attainment of MDG goals at district level in Bangladesh[1]. Based on a household survey of approximately 60,000 household over 64 districts and conducted for three years: 2000, 2003 and 2008, the study shows that some of the districts were well performing such as Jhenaidah, Munshigani, Meherpur, Dhaka, Narail and Khulna while some others such as Bandarban, Cox's Bazaar, Sherpur, Rangamati and Jamalpur could not accelerate much in the progress of MDGs. However, the assessment were based on individual 20 indicators only and additionally the study brings forward that the driving causes behind the inequality in MDG achievement are poverty and geographic locations that substantially reduced people's access to healthcare (Rooy and Wang, n.d).

Similarly, another attempt of UNICEF along with BBS brings forward a similar survey for regional assessment of Bangladesh in the form of MICS survey entitled as 'Bangladesh Multiple Indicator Cluster Survey'. The survey was conducted using a set of MDG indicators[2] and was conducted for a period of three years notably: MICS 2000, MICS 2003 and MICS 2006. Though there has been attempt by the development institutions in collaboration with Government of Bangladesh (GoB)

---

1 The report is titled as 'Assessment of district performance in making progress towards MDGs in Bangladesh' accessed via < http://www.unicef.org/bangladesh/Assessment.pdf >

2 UNICEF supports governments in carrying out these household surveys through a global programme of methodological research and technical assistance in settings as diverse as Argentina, Bhutan, the Democratic Republic of the Congo and Iraq. MICS findings have been used extensively as a basis for policy decisions and programme interventions, and for the purpose of influencing public opinion on the situation of children and women around the world. It conducts a household survey in every three years in each of the partnering countries, everytime conducting on different set of indicators. For the purpose of our studies we only choose the indicators are well suited to the need of the paper and are common in the MICS surveys conducted in all the three years.

to evaluate the MDG achievements in Bangladesh at district level, however, there is a deficit of an aggregate or formulated analysis of the overall assessment. An evaluation of regional performance may require a set of index or indicator normalized to compile the individual MDG goals that would give a better picture of the overall achievement. Literatures from World Bank and UNDP has acknowledges the use of indicator based evaluation of social development that depicts are a constructive picture to scrutinize the situation. At the same time it would also provide a picture of governance gaps that led to the consequence and why the overall achievement of goals hinders (Lusthais, 2002). Thus, the paper aims to assess the performance of Bangladesh in its attainment of MDG goals as an evaluation of the performance at division and district levels using. To conduct the study a well-defined and established index is used as developed by Muro et al (2010) as an alternative to the conventional Human Development Indicator (HDI) and Human Poverty Indicator (HPI).

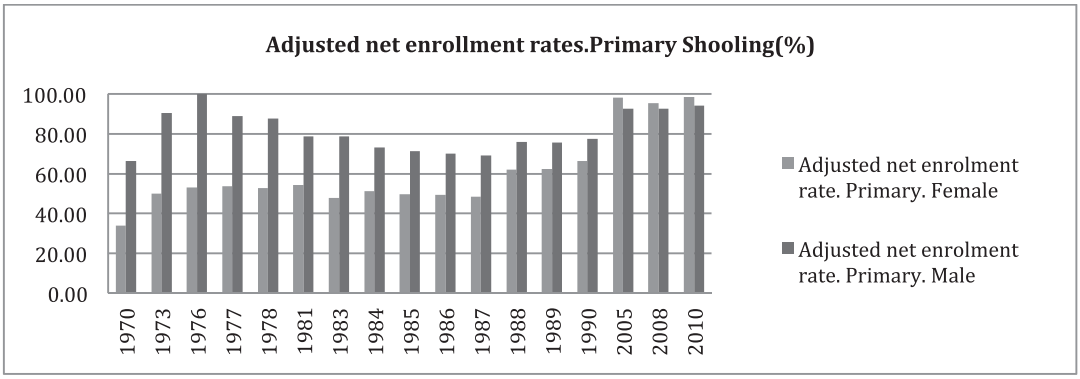
The paper is divided into 4 main sections: Section 2 briefs about the performance of Bangladesh in attaining the previous MDG goals in a mainly health and education sector; section 3 briefs the methodology of formulation of the index and the data compilation and use; following this section 4 briefs the results and section 5 discusses the findings under the sphere of policy recommendations. Finally the papers draws conclusion in section 6.

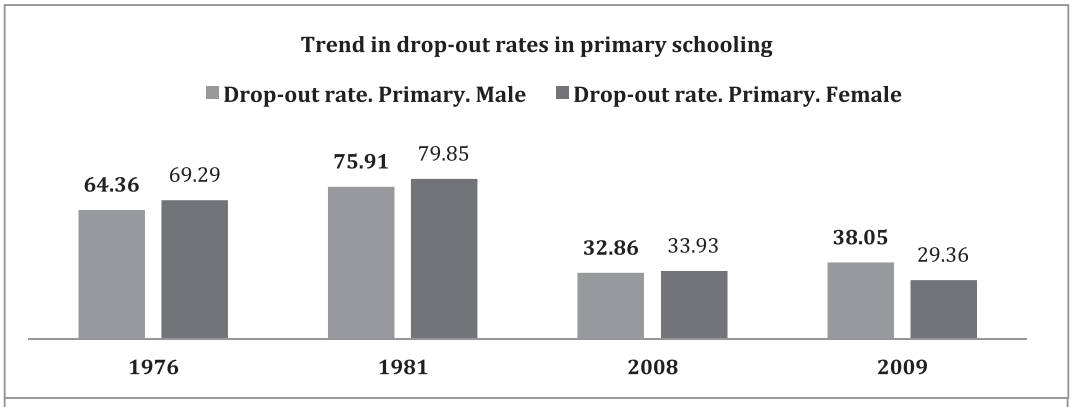
2. Background

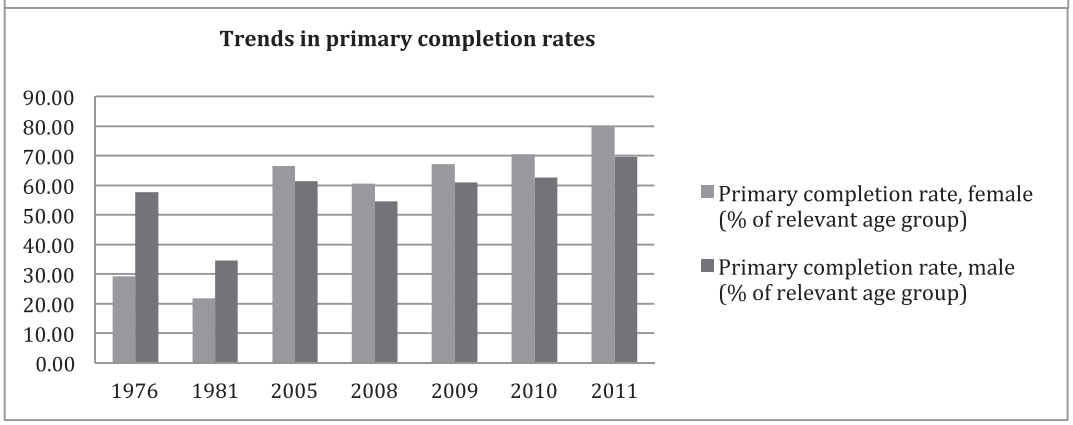
2.1 Bangladesh's Performance in MDG goals attainment:

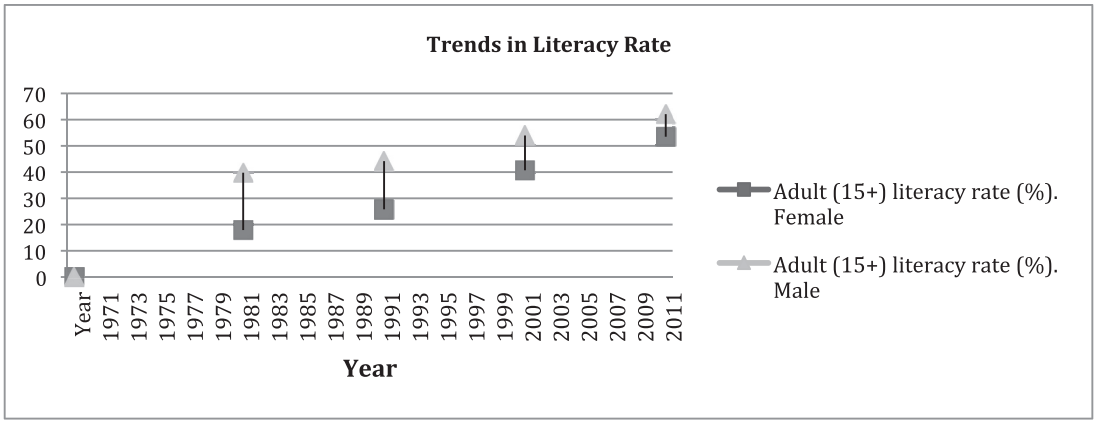
Bangladesh has achieved notable success in achieving its millennium development goals among other South-Asian nations. Being one of the few countries in the line, it received the UN award for its remarkable success in attaining the MDG goals particularly in child mortality rates (MDG Bangladesh Report, 2008). A comparison of the MDG achievement of Bangladesh along with other leading Asian countries depicts a positive picture as well.

Figure.1- Trends in Enrollment Rates, Drop-out Rates, Primary Completion Rates and Literacy Rates









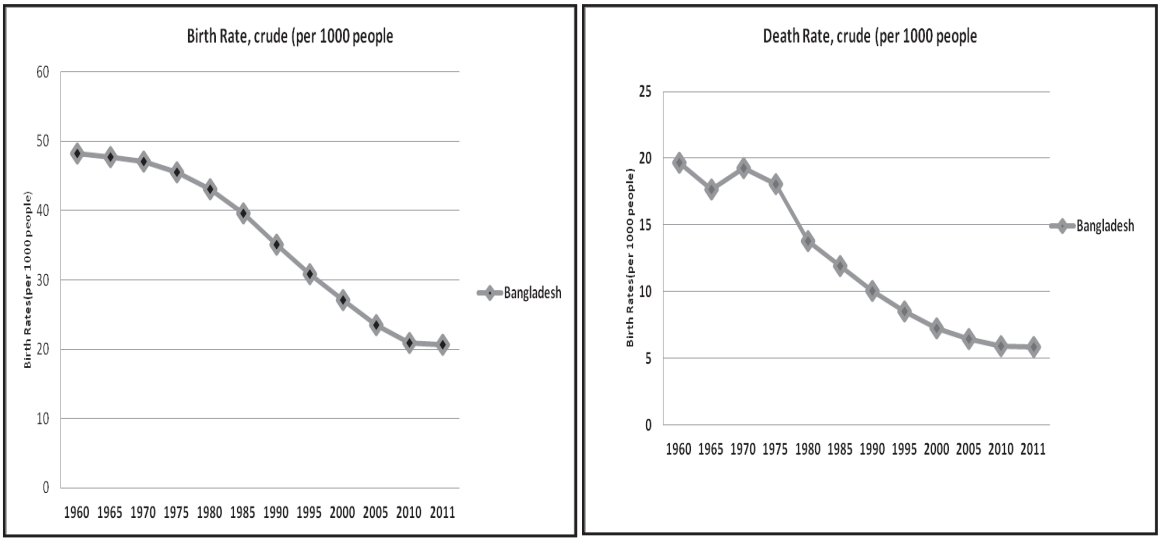
Source: Calculation made using World Bank Data extracted from http://databank.worldbank.org/data/home.aspx

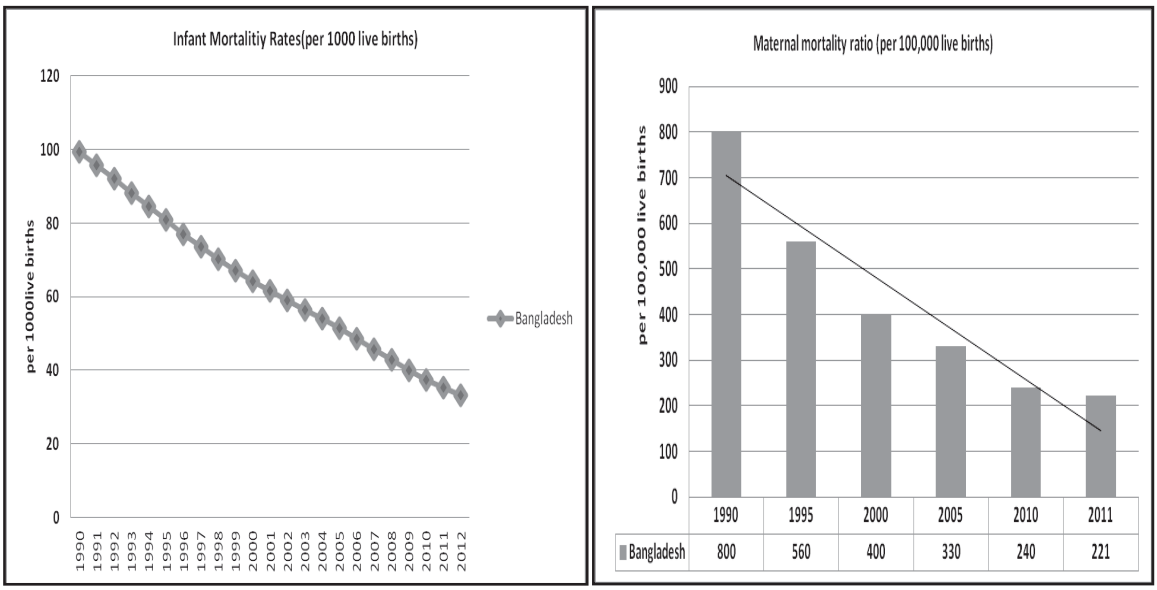
Many literatures and reports have acknowledged the achievement of MDG goals by Bangladesh ever since 2010 particularly in terms of the health and education indicators. We will begin our analysis by discussing few such achievements that will develop the basis of our further analysis in this paper. Thus Figure-1 presents trends in enrollment rates, drop-out rates, primary completion rates and literacy rates dated since early 1970s. The graph for enrollment rates depicts that total net enrollment rate has significantly increased over decades with exception between 1978-1987, where total enrollment rate has declined. Female net enrollment has remained steady between 1970s till1990s and the increase has been significantly less compared to male net enrollment rates over the same decades. However, female net enrollment rates took a sharp rise in the post 1990 period and the rate of increase was higher than that for male.

Given the enrollment rates has seen a significant rise, a comparison of the drop-out rates and the primary completion rates depicts a positively correlated scenario. The figure depicts that both male and female drop-our rates declined over time substantially nearly halved between 1980-2000 compared to 1970s-1980s. Drop-out rates for female(69% in 1976 and 79% in 1981) was higher than that for male (64% in 1976 and 75% in 1981). But over time female drop-out rates reduced over male drop-out rates (29% for female and 385 for male in 2009). Likewise trends in the primary completion rates between 1976-2011 depicts that female completion rates remained lower and nearly half as that for male between 1976 and 1981. However, there is an indication that the completion rates for female started rising from post 2000 era, as noticed from the graph, where it increased significantly from 2008 till 2011 ; thus the rate of increase was higher for female completion rates compared to men . Trends in literacy rates suggest that over te decade the literacy rates rose and the gap between female and male literacy rates declined. Wheres in 1981 statistics suggests that female literacy rates approximates to 20% compared to men which approximates to 40%, by 2011, female litaracy rates rose to 50% and male literacy rates rose to 60%. This corresponds to previous findings where it was found that there was a significant positive changes in both primary completion rates and drop-out rates for female comapred to men.

Other than the education indicators, health indicators have also seen acclaimed accomplishments since early 1970s. Figure-2 summarizes trends of few major MDG indicators notably birth rates, death rates, Infant Mortality Rate and Maternal Mortality ratio.

Figure.2- Trends in Birth Rate, Death Rate, Infant Mortality Rate, Maternal mortality ratio





Source: Calculation made using World Bank Data extracted from http://databank.worldbank.org/data/home.aspx

As the figures suggests, there was a sharp decline in all these health indicators over time. However, between1960-1980, the decline in birth rates was relatively steady whereas in case of death rates there were some massive fluctuations. Between 1980 and 1995, both the birth rate and the death rates fell sharply followed by a steady decline from 1995 onwards. Thus, in context of basic health indicators, Bangladesh witnessed massive changes between the period 1980s till 1990s. While the changes went sharp, it should be noted that most of the noteworthy changes started as soon as the post-liberation phase, that is, in early 1970s. The pictorial analysis presents strong depiction of the fact that Bangladesh has always been in an improved position in its social development indicators. While the achievements of MDG goals by Bangladesh are perceived on a successful ground on aggregate/national level, there has been debate on how its achievement is perceived at regional level. In this regard, there have been several attempts by UN to analyze the effectiveness of MDG achievements at district levels. The Multiple Cluster Survey (MICS) Report was conducted at district level for three years which measure the success of MDG achievements at district level for few selective indicators. While the MICS report presents the performance of districts for the indicators, there has not been any attempt to evaluate the district wise and division wise evaluation of performance in MDG achievements. Thus, with the formulation of an index as proposed by Muro et al (2010), this paper attempts to make an assessment of the performance of districts and divisions of Bangladesh in attaining the MDG goals. The formulation of the index is done with a set of MDG indicators which put forward a cumulative assessment of the regional performance of the country.

3. Data and Methodology

3.1 Data Type and Indicators used: The study has been conducted using the data from Multiple Cluster Indicator Survey for the year 2000, 2003 and 2006. The survey was conducted to collect regional (district wise) data for eight MDG indicators only as follows:

Table.1: List of Indicators Used

Infant Mortality Rates	D1
Under-5 Mortality Rates	D2
Number of women aged 15-24 years who have comprehensive knowledge/knows two ways to prevent HIV transmission	D3
Correctly identify three misconceptions about HIV transmission	D4
Have comprehensive knowledge (identify two methods and three misconception unions)	D5
Percentage of children of primary school age attending primary schooling	D6
Number of children who attended primary school in 2008 but dropped out.	D7
Percentage of women who aged 15-24 years who are literate	D8

Given that data on all MDG indicators surveyed on household at district level is not available, our analysis uses the above mentioned social indicators for the construction of index and the subsequent analysis which imitates the real MDG indicators.

In this regard, the work by Muro et al (2010) attempts to construct the index which, however, uses a total of 14 MDG indicators, classified as seven Human Development Indicators and seven

Poverty Indicators for the year between 2006-2008. Based on this rationale, our study also attempts to choose the indicators from the source as discussed above, with the only exception that the indicators are not necessarily categorized as either human development or poverty indicators and we have used only 8 set of indicators collected from the MICS report while the Muro et al (2010) uses 14 set of indicators.

3.2 Method: Muro et al (2010) in their empirical work propose a composite index called the 'Mazziotta-Pareto Index' (MPI) as an alternative to the use of conventional HDI and HPI. The idea was to construct a composite index that assembles a set of indicators and give a measure of development/assessment just like the Human Development Indicator or Human Poverty Indicator. However, in the empirical work by Muro et al (2010) necessitates to make a comparison between their constructed indicators with the other indicators (such as HDI and HPI). For the purpose of our analysis, we will only use the established MPI index to analyze the progress/development of districts and divisions in achievement of MDG goals in Bangladesh.

The MPI index is constructed through the following steps:

i. Normalization:

Let X= x_ij be the matrix with 'n' rows (districts and divisions) and 'm' columns (social indicators used for the study). Thus M_(x_j) and S_(x_j) represents mean and the standard deviation of the j-th indicator as follows:

$$M_{x_j} = \frac{\sum_{i=1}^{n} x_{ij}}{n} \quad \text{and} \quad S_{x_j} = \sqrt{\frac{\sum_{i=1}^{n}\left(x_{ij} - M_{x_j}\right)^2}{n}}$$

The standardized matrix $Z = \{z_{ij}\}$[1] is defined as follows:

$$z_{ij} = 100 \pm \frac{(x_{ij} - M_{x_j})}{S_{x_j}} 10$$

i. Aggregation: This step involves formulation of the parameter called

'coefficient of variation' for the i-th units concerned. Thus, the generalized form of

Mazziotta-Pareto Index (MPI) is as follows:

$$MPI_i = M_{z_i}(1 \pm S_{z_i} * cv_i)$$

4. Empirical Results:

MPI is a composite index based on the property of non-substitutability of indicators (Muro et al, 2010). The application of index as proposed by the authors was mainly conducted to draw a comparison between the different types of index that can be applied to measure the development progress, such as 'Human Development Indicator (HDI)' and 'Human Poverty Indicator (HPI)'. However, for the purpose of our research, the application of MPI over the district-wise indicators based will provide an implication of the progress of these regions in

[3,5] It must be noted that the ± sign depends on the jth indicator to be measured. This means if decreasing value of the corresponding indicator implies a positive change then a plus sign is used and vice versa. For example over time as under-5 mortality rates value declines it would infer a positive change for the geographical region to be concerned.

Bangladesh. The individual indicator is converted into a common scale with a mean M=100 and standard deviation=10; thus the mean values greater than 100 portrays ideal situation while those below 100 represents less ideal situation (Muro et al, 2010). In other words, we interpret our findings of the composite index to be illustrating a better performance of the district if the index for the particular region is greater than the mean.

Figure 3 and figure 4 depict the progress of the regions of Bangladesh; first for divisions followed by the districts. Thus it can be depicted that while Barisal (102), Dhaka (105) and Khulna (108) are better performing in terms of social development indicators success, other divisions are less than average in their performance, notably, Sylhet(96), Rajshahi(98) and Chittagong(95). However, an aggregate measure may not provide any conclusive interpretation of the country's performance. This leads us to essentially conduct the assessment at more micro level, particularly at district level. In this regard, figure-4 provides the scenario of performance evaluation at district-level. It can be seen that among the 64 districts, 33 districts are above average performing while 31 districts are performing below average[4]. While it is numerically difficult to classify, which better or below-average performing districts fall within the divisions stated in figure 3, both the figures infers contrasting observations. Thus, it implies that while on aggregate level, the divisions of Bangladesh are performing well in terms of social development particularly the former MDG goals; at micro level the scenario is less impressive.

Figure.3: Assessment of development across Divisions[5]

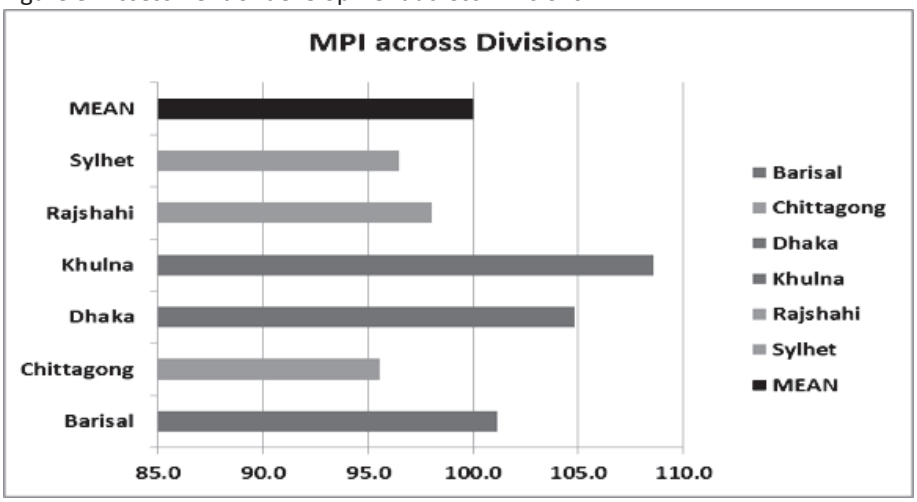


Table.2: Values of Constructed MPI across Divisions

Division	MPI
Barisal	101.2
Chittagong	95.6
Dhaka	104.8
Khulna	108.6
Rajshahi	98.1
Sylhet	96.5
MEAN	100.0

[4] Districts performing above average are marked in red while below average marked in blue

[5] It must be noted that the pictorial display represents only 6 divisions of Bangladesh and Rajshahi and Rangpur are not separately classified as divisions. This is because the MICS survey data used are from the year 2000, 2003 and 2006 and Rajshahi and Rangpur was not classified as separate divisions until the year 2010.

Figure.4: Assessment of development across Districts

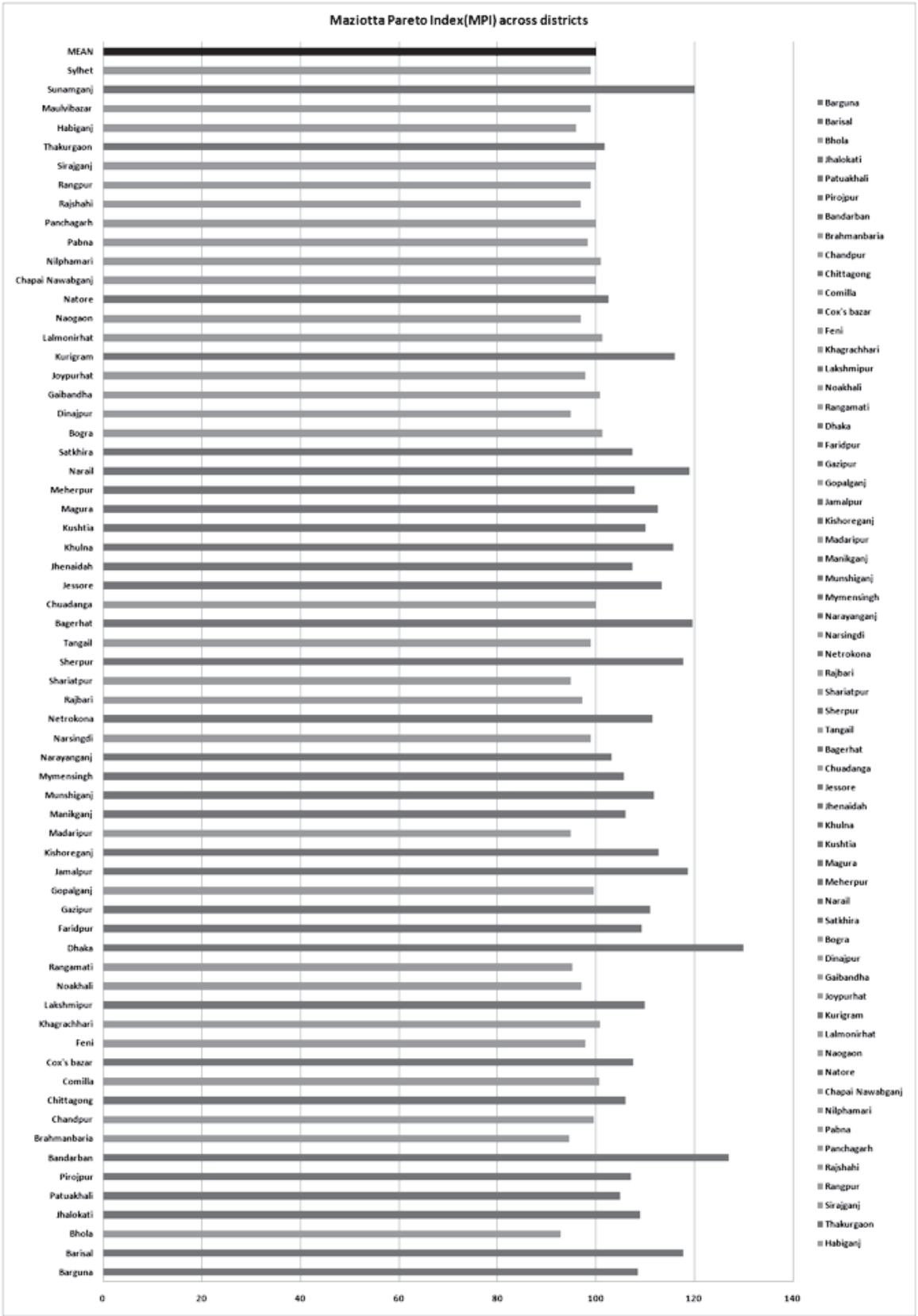


Table-03: Values of Constructed MPI across Districts

Division	Districts	MPI
Barisal	Barguna	109
	Barisal	118
	Bhola	93
	Jhalokati	109
	Patuakhali	105
	Pirojpur	107
Chittagong	Bandarban	127
	Brahmanbaria	95
	Chandpur	100
	Chittagong	106
	Comilla	101
	Cox's bazar	108
	Feni	98
	Khagrachhari	101
	Lakshmipur	110
	Noakhali	97
	Rangamati	95
Dhaka	Dhaka	130
	Faridpur	109
	Gazipur	111
	Gopalganj	100
	Jamalpur	119
	Kishoreganj	113
	Madaripur	95
	Manikganj	106
	Munshiganj	112
	Mymensingh	106
	Narayanganj	103
	Narsingdi	99
	Netrokona	111
	Rajbari	97
	Shariatpur	95
	Sherpur	118
	Tangail	99
Khulna	Bagerhat	120
	Chuadanga	100
	Jessore	113

	Jhenaidah	108
	Khulna	116
	Kushtia	110
	Magura	113
	Meherpur	108
	Narail	119
	Satkhira	107
Rajshahi	Bogra	101
	Dinajpur	95
	Gaibandha	101
	Joypurhat	98
	Kurigram	116
	Lalmonirhat	101
	Naogaon	97
	Natore	103
	Chapai Nawabganj	100
	Nilphamari	101
	Pabna	98
	Panchagarh	100
	Rajshahi	97
	Rangpur	99
	Sirajganj	100
	Thakurgaon	102
Sylhet	Habiganj	96
	Maulvibazar	99
	Sunamganj	120
	Sylhet	99
	MEAN	100

5. Discussion of findings: The results of the analysis with MPI depict that despite Bangladesh making significant progress in achieving the MDG goals, the regional assessment of development with some of these MDG goals shows a contradictory picture. Bangladesh has made significant progress in health, education and other social indicators. There has been surprising improvements in the child mortality rates including elimination of gender disparity since early 1990s (Mahmud et al, 2013) which led Bangladesh stand out in the ranking ahead of neighboring countries like India in many indicators despite having a significantly low average income (Mahmud et al, 2013). Many literatures acknowledge the role of NGO-led development paradigm and how it's broader role in sensitizing the mass population about the importance of contraception, women empowerment and child's education (Mahmud et al, 2013). Eventually there exist strong implication of the role of NGO and the development sector towards the human development progress in Bangladesh because NGO are directly involved in channeling these services to the grass root and scaling up of interventions through programme (World Bank, 2006; Mahmud et al, 2013). This being said, it leads us to the argument of the newly set Sustainable Development Goals and how far Bangladesh is to outperform in achieving the declared vision 2021. The newly set Sustainable Development

Goals (SDGs) aims to propose improvise the MDG goals so that the targets are more specifically addressed thus eliminating the core institutional weakness and policy gap that led to some of the MDG targets to be unaddressed[6]. Thus, to address the policy gap that led to unattainment of some of the MDG targets in Bangladesh, it is required to run a regional level analysis to address the gap. This will ensure the policy-makers, government bodies and the academicians about the loopholes that need to be attended so as that the SDG goals can outperform and lead Bangladesh towards a better and sustainable human development. In this regard, our regional analysis of few social indicators depicts a contradictory picture against the aggregate country performance. A careful scrutiny of the progress across districts and divisions suggest that the country is yet to achieve all of its development goals. Although the findings suggest that across divisions, the indicator based result remains above mean, however, across districts almost 31 out of 64 districts remain below mean. Our findings also shed light on the role of resource mobilization across districts for the development activities. The development of Bangladesh remains a paradox to many policy-makers despite Bangladesh having a relatively low per capita income and low per capita public spending on health and education (Mahmud et al, 2013).

6. Conclusions:

The paper attempts to investigate the regional performance of the districts and divisions of Bangladesh in attaining the progress of MDG goals. Due to the unavailability of data, the study is conducted using eight indicators form the Multiple Cluster Survey and by the formulation of a normalized indicator: Mazziotta-Pareto Index (MPI). Findings suggest evidence of poor scaling-up of the development progress across districts though cumulatively the divisions represent to outperform. This recommends policy suggestions to the policy-makers, government bodies and the respective stakeholders working for the SDGs in Bangladesh on to make a more regional approach to address the policy and advocacy gap in order to ensure that effectiveness of the SDG goals can be attained all over Bangladesh. Furthermore, the findings also advocates that there needs to be goal-specific regional assessment targeting each of the fields, such as health, education, gender, environment and energy, industry, innovation and infrastructure that will provide a better understanding of the performance of the country in social development.

[6] Report entitled Review of targets for the sustainable development goals: The scientific perspective accessed via <http://www.icsu.org/publications/reports-and-reviews/review-of-targets-for-the-sustainable-development-goals-the-science-perspective-2015 >

References

De Muro, P., Mazziotta, M. and Pareto, A. (2010). Composite Indices of Development and Poverty: An Application to MDGs. Soc Indic Res, [online] 104(1), pp.1-18. Available at: http://www.researchgate.net/publication/227113176_Composite_Indices_of_Development_and_Poverty_An_Application_to_MDGs [Accessed 22 Nov. 2015].

Rooy, C. and Wang, S. (n.d.). Assessment of district performance in making progress towards MDGs in Bangladesh. Dhaka: UNICEF.

General Economics Division (GED), Bangladesh Planning Commission, (2014). MILLENNIUM DEVELOPMENT GOALS Bangladesh Country Report 2013. Dhaka.

Bangladesh Bureau of Statistics (BBS), (2000). Multiple Indicator Cluster Survey Report. Progotir Pathey. Dhaka, p.Bangladesh Bureau of Statistics (BBS) Statistics and Informatics Division (SID) Ministry of Planning.

Bangladesh Bureau of Statistics (BBS), (2003). Multiple Indicator Cluster Survey Report. Progotir Pathey. Dhaka, p.Bangladesh Bureau of Statistics (BBS) Statistics and Informatics Division (SID) Ministry of Planning.

Bangladesh Bureau of Statistics (BBS), (2006). Multiple Indicator Cluster Survey Report. Progotir Pathey. Dhaka, p.Bangladesh Bureau of Statistics (BBS) Statistics and Informatics Division (SID) Ministry of Planning.

The World Bank Office, (2006). Economics and Governance of Nongovernmental Organizations in Bangladesh. Bangladesh Development Series Paper No: 11. [online] Dhaka: The World Bank. Available at:
http://siteresources.worldbank.org/BANGLADESHEXTN/Resources/NGOreport_Dev_Series.pdf [Accessed 22 Nov. 2015].

Mahmud, W., Asadullah, M. and Savoia, A. (2013). Bangladesh's Achievements in Social Development Indicators: Explaining the Puzzle. 1st ed. International Growth Centre London School of Economics and Political Science 4th Floor, 32 Lincoln's Inn Fields Houghton Street London WC2A 2AE United Kingdom.

Khandker, S. and Samad, H. (2013). Microfinance Growth and Poverty Reduction in Bangladesh: What Does the Longitudinal Data Say?. [Working Paper No. 16] Institute of Microfinance (InM), Dhaka.

Lusthaus, C. (2002). Organizational assessment. Ottawa: International Development Research Centre.